Great Lakes Commission Semiannual Meeting

FEBRUARY 23-25, 2016 • WASHINGTON, D.C.

WESTIN WASHINGTON, D.C. CITY CENTER
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<tr>
<th>Time</th>
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<tr>
<td>11:00 a.m.</td>
<td>Registration</td>
<td>Monticello Ballroom</td>
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<td>1:00 p.m.</td>
<td>Call to order, opening remarks</td>
<td>Jon Allan, (MI), Chair</td>
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<td>1:10 p.m.</td>
<td>Roll call</td>
<td>Tim Eder, Executive Director</td>
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<td>1:15 p.m.</td>
<td>Keynote Address</td>
<td>Gina McCarthy, Administrator, U.S. Environmental Protection Agency</td>
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<td>1:40 p.m.</td>
<td>Report of the Chair and Executive Director</td>
<td>Jon Allan, Chair</td>
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<td>- Approval of final agenda and minutes from the 2015 Annual Meeting</td>
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<td>- Looking to the future for the Great Lakes Commission: Themes for a new five-year strategic plan</td>
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<td>- Our message for Congress and the Administration: Overview of the Commission’s 2016 federal priorities</td>
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<td>2:10 p.m.</td>
<td>Nutrient reduction strategies for the Great Lakes: Spotlight on Lake Erie</td>
<td>Karl Gebhardt, Moderator</td>
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<td>- The Lake Erie Collaborative Agreement: State and provincial strategies to reduce phosphorus</td>
<td>Karl Gebhardt, Deputy Director, Ohio EPA and Alternate Commissioner, Ohio</td>
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<td>- The Great Lakes Water Quality Agreement Annex 4: Progress on federally-led nutrient reduction strategies</td>
<td>Tinka Hyde, U.S. EPA Region 5 Water Division and GLWQA Nutrients Annex Co-Chair</td>
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<td>- The Great Lakes Commission’s Blue Accounting Source Water Initiative</td>
<td>Victoria Pebbles, Program Director</td>
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<td>- Economic impacts of harmful algal blooms</td>
<td>Frank Lupi, Professor of Environmental and Natural Resource Economics, Michigan State University</td>
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<td>3:25 p.m.</td>
<td>Break</td>
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<td>3:45 p.m.</td>
<td>Keynote Address</td>
<td>U.S. Senator Tammy Baldwin (WI)</td>
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<td>4:15 p.m.</td>
<td>Business of the Great Lakes Commission</td>
<td>Jon Allan, Chair</td>
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<td>Presentation of resolutions</td>
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<td>4:30 p.m.</td>
<td>Observer comments</td>
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<td>5:15 p.m.</td>
<td>Adjourn</td>
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<td>5:15-7:15 p.m.</td>
<td>Reception</td>
<td>Vista Terrace – Mezzanine Level</td>
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<td>• Environmental Quality Management, Inc.</td>
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<td>• EA Engineering, Science, and Technology, Inc., PBC</td>
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<td>7:00 a.m.</td>
<td>Continental breakfast</td>
<td>Monticello Ballroom</td>
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<td>8:30 a.m.</td>
<td>Call to order</td>
<td>Jon Allan, Chair</td>
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<td>8:35 a.m.</td>
<td>Oil Transportation Update</td>
<td>Eric Marquis, Quebec delegation chair</td>
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<td>8:50 a.m.</td>
<td>Report on aquatic invasive species prevention and control activities</td>
<td>Moderator: Dan Injerd, Illinois Commission Delegation Chair and Illinois DNR</td>
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<td> Ballast water treatment technology and regulations</td>
<td>Allegra Cangelosi, Northeast-Midwest Institute</td>
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<td> Asian carp status in Illinois waterways and response planning</td>
<td>Robert Lambe, Great Lakes Fishery Commission</td>
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<td> Army Corps of Engineers update on Asian carp activities</td>
<td>Yvonne J. Prettyman-Beck, U.S. Army Corps of Engineers</td>
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<td>9:50 a.m.</td>
<td>Strengthening commercial navigation through the Governors and Premiers Great Lakes-St. Lawrence Maritime Initiative</td>
<td>David Naftzger, Conference of Great Lakes Governors and Premiers</td>
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<td>10:05 a.m.</td>
<td>Break</td>
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<td>10:25 a.m.</td>
<td>Safe drinking water and aging infrastructure: Washington D.C.’s strategic vision</td>
<td>George Hawkins, Esq., Chief Executive Officer and General Manager, D.C. Water</td>
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<td>10:55 a.m.</td>
<td>Business of the Great Lakes Commission</td>
<td>Jon Allan, Chair</td>
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<td> Action Item</td>
<td>Tim Eder, Executive Director</td>
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<td> Review of past resolutions</td>
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<td> Resolutions</td>
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<td> Outreach on aquatic invasive species</td>
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<td> 2016 federal priorities</td>
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<td> Great Lakes priorities in the presidential campaign platforms</td>
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<td> Lead pipes and aging infrastructure</td>
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<td>11:40 a.m.</td>
<td>Great Lakes federal priorities update</td>
<td>Matt Doss, Erika Jensen, GLC staff</td>
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<td>Preparation for Great Lakes Day and Capitol Hill meetings</td>
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<td>11:55 a.m.</td>
<td>Invitation to 2016 Annual Meeting</td>
<td>Ontario Delegation</td>
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<td>Oct. 6-7, 2016, Toronto, Ontario</td>
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<td>12:00 p.m.</td>
<td>Adjourn for Great Lakes Day lunch</td>
<td>Jon Allan, Chair</td>
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Great Lakes Day

Draft Agenda: January 28, 2016

All times are EST

Wednesday, February 24

8:00 a.m.  
Great Lakes Commission (GLC) Semiannual Meeting  
Monticello Ballroom, Lower Ballroom Level, The Westin Washington, D.C., City Center

10:00 a.m.  
Healing Our Waters® - Great Lakes Coalition (HOW) Issue Briefings  
National Ballroom, Ballroom Level, The Westin Washington, D.C., City Center

12:30 p.m.  
GLC and HOW Joint Lunch  
National Ballroom, Ballroom Level, The Westin Washington, D.C., City Center

1:00 p.m.  
GLC and HOW Joint Session  
National Ballroom, Ballroom Level, The Westin Washington, D.C., City Center
  • Welcome
  • Priorities for Great Lakes Restoration

1:30 p.m.  
HOW Preparation for Congressional Office Visits  
National Ballroom, Ballroom Level, The Westin Washington, D.C., City Center

GLC and HOW Congressional Office Visits  
Capitol Hill

6:00 p.m.  
Reception Sponsored by Government of Canada and HOW  
Canadian Embassy  
Advanced registration required; no on-site registration or walk-ins will be accepted. Please bring a government issued photo ID.

Great Lakes Day

Thursday, February 25

8:15 a.m.  
Congressional Breakfast Reception Sponsored by GLC and Northeast-Midwest Institute  
Room 902, Hart Senate Office Building

8:40 a.m.  
Welcome

8:45 a.m.  
Remarks by Members of Congress

9:45 a.m.  
Adjourn

10:00 a.m.  
Congressional Office Visits  
Capitol Hill
Minutes

Attached, for review and approval, are minutes from the Commission’s 2015 Annual Meeting, held Sept. 29-30, 2015, in Chicago, IL.

Included for your information are minutes of the Board of Directors meetings held on Aug. 20, Nov. 19 and Dec. 16, 2015.
Summary of Actions

1. Approved minutes of the 2015 Semiannual Meeting, held Feb. 24-25, in Washington, DC.

2. Elected Jon Allan as chair and John Stine as vice chair of the Commission.

3. Approved four resolutions:
   - Support for prohibiting the import of harmful aquatic invasive species
   - Advancing coastal community revitalization through strengthened federal legislation and programs
   - Healing the fractured urban water cycle through integrated water management
   - A Joint Action Plan for Lake Erie


Minutes

The meeting was called to order at 9:03 a.m. CDT by Acting Chairman Jon Allan (MI). The following Commissioners, Associate Commissioners and alternates were present.

Wayne Rosenthal, Ben Brockschmidt, Daniel Injerd, Stephanie Comer
Kay Nelson, Steve Fisher
Jon Allan, Helen Taylor, Sen. Rebekah Warren, Peter Manning
Jim Tierney, Don Zelazny
James Zehringer, Karl Gebhardt, Craig Butler, Jim Weakley, Michael Bailey
Bill Carr
Tim Bruno
Eric Marquis, Julie Grignon, Daniel Richard, Marc Gagnon
Steve Galarneau, Dean Haen

Illinois
Indiana
Michigan
Minnesota
New York
Ohio
Ontario
Pennsylvania
Québec
Wisconsin

Staff present: Tim Eder, Tom Crane, Steve Cole, Matt Doss, Victoria Pebbles, Becky Pearson, Stuart Eddy, Michele Leduc-Lapierre, Sam Molnar, Mélanie Adam, Erika Jensen, Pat Gable.

1) Call to order, opening remarks: Acting Chairman Allan called the meeting to order by extending a welcome to all those in attendance. He reviewed the agenda and spoke about the importance and value of the Great Lakes and St. Lawrence River resources. He noted the durability of the Great Lakes Commission and collective regional governance. Allan recognized all the official observers and other partners in attendance. He recognized newly appointed Great Lakes commissioners: Wayne Rosenthal (IL), Ian Davidson (MI), Ben Brockschmidt (IL), Daniel Richard (QC), Julie Grignon (QC), Rep. Jennifer Schultz (MN), and Rep. Paul Torkelson (MN).

2) Roll Call: Executive Director Tim Eder called the roll. A quorum was present and all states were represented.

3) Welcome: Commissioner Wayne Rosenthal (IL), Director of the Illinois Department of Natural Resources, provided welcoming remarks on behalf of the Illinois delegation and Illinois Governor Bruce Rauner. He said
that the Great Lakes resource is unlike any other in the world, and that the challenges and opportunities we face as a region are almost as big as the lakes themselves. He said we need to provide opportunities for business and keep the lakes clean and safe for recreation and drinking water. He thanked those in attendance for all they do for the people that depend on the Great Lakes resource.

4) **Approval of meeting agenda:** Allan asked for a motion to accept the agenda for the meeting. Ontario moved to accept the agenda; Minnesota seconded the motion. The agenda for the meeting was accepted.

5) **Approval of minutes:** Allan called for a motion to approve the minutes of the 2015 Semiannual Meeting held February 24-25, 2015 in Washington, DC. Illinois moved to approve the minutes; Wisconsin seconded the motion. The minutes were approved unanimously.

6) **Report of the Nominating Committee:** Jim Tierney (NY) provided a report on behalf of the Nominating Committee to nominate a new chair and vice chair of the Commission. The Nominating Committee included commissioners Tierney, Marquis (QC) and Galarneau (WI). The committee nominated Jon Allan (MI) to serve as chair and John Stine (MN) as vice chair. There were no additional nominations from the floor. Commissioner Tierney (NY) moved to close nominations and cast a unanimous ballot. Commissioner Taylor (MI) seconded the motion. The election was approved unanimously.

7) **Presentation of Action Items:** Chairman Allan presented and provided information on the four resolutions to be acted on during the business session on September 29. He asked for any clarifying questions and non-substantive discussion or changes. He said that all resolutions are on the agenda for consideration on Tuesday.

   - **Resolution – Support for listing new species as injurious under the Lacey Act:** The resolution acknowledges the upcoming proposal by the U.S. Fish and Wildlife Service (FWS) to list eleven new species as “injurious” under the Lacey Act; acknowledges the recent FWS risk assessment screening of approximately 2,000 species; reiterates the Commission support for strengthened federal laws for screening species and preventing the importation of those with a high risk of causing ecological and economic damage; and supports the FWS’s proposed listing.

     Commissioner Nelson (IN) requested clarification of the $75 million in federal funds figure included in the second “Whereas” clause. Eder said that the figure included only federal funds spent on Asian carp ($55 million) and sea lamprey control ($20 million).

   - **Resolution – Support for revitalizing coastal communities through federal legislation and programs:** The resolution recognizes the importance of waterfront communities and the need to clean up and restore many coastal areas previously used for industry; supports environmental cleanup and economic development; acknowledges the regional interest in revitalizing waterfront areas for multiple beneficial uses; and urges federal agencies to align programs and provide funding to support these revitalizations. It also calls on the Commission to support these efforts and advance the “Blue Economy.”

     Commissioner Marquis (QC) agreed with the intent of the legislation and proposed to work with staff on minor modifications to reflect provincial work that is ongoing on this issue.

   - **Resolution – Support for integrated water management:** This resolution acknowledges that aging water infrastructure and poor land use planning threaten freshwater resources; encourages policies that restore the natural hydrology within urban areas; and calls on the Commission to work with regional partners to support sustainable water use and management.

     There were no questions or suggestions.

   - **Resolution – Support a joint action plan for Lake Erie:** The resolution acknowledges the work of the Lake Erie Nutrient Targets (LENT) Working Group to develop a final Joint Action Plan; supports actions for reducing sources of nutrient pollution in Lake Erie; and endorses the final LENT Joint Action Plan.
Commissioner Butler (OH) recommended removing the final “resolved” clause calling for additional funding as the funding is called for elsewhere. Commissioner Injerd (IL) asked for clarification on using 2008 as the baseline year for reduction targets and if a 40 percent reduction would restore Lake Erie to full health. Commissioner Gebhardt (OH) said that 2008 has been used because there is good data for that year and it is fairly representative of a cross-section of years, including weather-driven dynamics. Commissioner Butler (OH) added that while a 40 percent reduction would not yield a complete return to full health, it would result in a significant reduction for potential impairments in the lake. Eder also said there is recognition in the report and among working group members that there needs to be adaptive management and ongoing monitoring because our understanding of harmful algal blooms (HABs) is limited and, as a result, reduction targets may need to be adjusted in the future. Chairman Allan recognized the importance of baseline data and targets as a mechanism for measuring progress. Commissioner Tierney (NY) voiced support for the final clause, noting that Lake Erie is a shared water body and that the issue of large-scale algal blooms is worthy of national importance and attention. Commissioners from NY and OH agreed to discuss the clause during meeting break(s) and develop compromise language.

8) Welcoming Remarks, Senator Richard Durbin: Commissioner Rosenthal (IL) introduced the first speaker of the day, Senator Richard Durbin (IL). Senator Durbin spoke about the importance of Great Lakes restoration efforts as a multi-national and multi-state initiative. He commented on a number of specific issues, including preventing toxic pollution, stormwater runoff and combined sewer overflows (CSOs) to Lake Michigan, which provides drinking water to over 10 million people. He said that more needs to be done to develop water management policies that are more thoughtful for the 21st century. This includes efficient use of water and collecting rainwater. Senator Durbin called the Great Lakes Restoration Initiative (GLRI) a great success and mentioned the restoration work done at Northerly Island in Chicago as an ecological and thoughtful investment for people and migratory waterfowl and fish. The Senator also acknowledged the serious federal budget issues being tackled in Washington and that funding for Great Lakes is tied up in the debate to agree on a federal funding plan. He encouraged the Commission to be part of conversations on water quality to ensure that standards are reasonable, thoughtful and enforced. He said that there is more that can be done to work with farmers to protect water quality without making farming prohibitively expensive. Senator Durbin spoke briefly about Asian carp, saying that we also have more to do in terms of stopping these invasive species. He encouraged oil and natural gas companies to be more thoughtful in their inspection of pipelines and to ensure they all have the necessary shut-down valves. Senator Durbin closed his remarks once again encouraging the Commission and its members to be engaged in political debates at the state and federal level around these issues.

9) Keynote Address, Minister Christine St-Pierre: Christine St-Pierre, Minister of International Relations and La Francophonie, Province of Québec, provided the first keynote address. She began by recognizing the Commission’s 60th anniversary as a cause for rejoicing and a chance to reflect on progress and future challenges. She reflected on the development of a “regional consciousness,” which occurred over decades beginning with the building of the St. Lawrence Seaway. The Minister commended the Commission for contributing not only on issues of the day, but also in shaping the future of the region. She spoke about the value of the Commission in providing a platform where each delegation, with its own identity and rich diversity of perspectives, can be heard. She congratulated the Commission, Eder and staff on their hard work to address complex issues and commitment to the Great Lakes and the St. Lawrence.

Minister St-Pierre went on to speak specific issues going on in Québec related to the maritime economy and environment. She spoke about the close ties between Québec’s economy and the U.S. Recognizing these important relationships, the province recently released the Québec Maritime Strategy, which calls for public and private investment of $9 billion over the next 15 years and focuses on three main objectives: sustainable development of the maritime economy, protection of ecosystems, and improving the quality of life for citizens. As part of the strategy, the Quebec government has already committed to investing $3 billion in marine infrastructure over the next few years. The strategy will also support efforts to enhance biodiversity, including meeting international targets and creating a network of protected maritime areas by 2020. The Minister said the province is committed to working through regional initiatives to address other threats including Asian carp and invasive species and nutrients. Overall, she said the strategy seeks to achieve a sustainable balance between economy and environment. In closing, Minister St-Pierre spoke about the threat of climate change to Québec and the region, highlighting the province’s leadership on this issue. She encouraged the states and provinces to actively engage in international climate talks and mitigation efforts. She said that regional forums such as the Commission provide and exceptional platform for exchanging ideas and best practices, and to develop strong
regional policies and mitigation strategies. Finally, she thanked and congratulated the Commission for remaining committed to the ideals and values that led to its creation.

10) **Report from the Great Lakes Protection Fund:** Russ Van Herik, Executive Director of the Great Lakes Protection Fund, began his report congratulating the Commission and its commissioners for bringing new thoughts, concerns and opportunities forward. He spoke about drivers of harmonization and integration in the region and efforts to establish shared goals and objectives. He described the Great Lakes Protection Fund (GLPF) as a permanent source of innovation that supports groups doing work on Great Lakes issues and taking risks on developing new approaches that can change how money is spent and how decisions are made throughout the region. Van Herik noted that $15 billion is spent annually on Great Lakes issues by local, regional, federal, private sources; the GLPF is .03 percent of that funding. He outlined the main objectives of the GLPF and its board: to invest public money so that, in turn, the states can invest it in their priorities and, at the board’s discretion, support regional teams for innovative projects. The GLPF board has accomplished increasing the endowment up to $120 million. To date, the GLPF has served 35 governors and 67 board members and had an average annual investment return of 7 percent. Since its inception, the GLPF has awarded more than $73 million in support of 261 projects; the Commission is one of largest recipients, receiving $3.1 million over the years. Van Herik said there is roughly $12 million to $15 million of regional project activity going on at any one time. He outlined the GLPF current special areas of interest including effects of climate change, effects of industrial agriculture, governing biological change, and upcoming demographic and economic shifts. He said the GLPF is looking to help build teams to find solutions to try on the landscape that will lead to more effective action by the people attending this meeting. Such solutions may include new technologies and information systems, the ability to track and trace activity and product all the way through the value stream, and market and market-assurance solutions. Van Herik highlighted water quantity and quality, biodiversity, and the value of water as important issues requiring further investment to develop innovative decision-making criteria and processes.

Commissioner Zehringer (OH) highlighted agriculture at all scales, subsurface drainage and the use of herbicides as important issues that need to be further examined.

Commissioner Allan (MI) underscored understanding and managing water across its hydrology in a connected system as one of the most compelling questions we face.

Van Herik concluded his remarks, saying that the Great Lakes is a managed system and that the hydrology is being managed invisibly and not at a system scale. He encouraged those present to think about what ability the system has to provide feedback back to its inhabitants. He emphasized the importance of adaptive management and thinking about how to govern ourselves in order to get the best feedback from the system.

11) **Keynote Address, Jeff Malehorn:** Jeff Malehorn, President and CEO of World Business Chicago (WBC), provided the next presentation. He said the mission of WBC is to drive economic growth through working with mayors, attracting businesses and promoting Chicago as best city. In 2011, Chicago Mayor Rahm Emanuel called for an economic plan for growth in Chicago, which WBC led in partnership with other organizations. The plan outlines 10 strategies that are not specific to any industry; all industries can benefit. Malehorn said that these strategies can also be leveraged across the entire Great Lakes and St. Lawrence region. He called out the impressive economic footprint of the region, which represents $5.5 trillion in gross domestic product and is third in the world behind the U.S. and China. He said the city and the Mayor recognize the lakes and the Chicago River are a tremendous economic resource. Connectivity and location make the region a critical shipping hub, including more than 100 ports and more than 160 million tons of cargo transported via water through region. He noted that metropolitan Chicago is the largest point of origin and termination for intermodal shipments. Malehorn described how when deciding where to locate their business, CEOs consider three factors: can I get talent, can I get access to products, and can I get great quality of life. He highlighted Lake Michigan as a significant contributor to great quality of life in Chicago.

Malehorn then posed the question “How can we position our region for the future and take advantage of our biggest asset?” He highlighted a number of global threats and risks associated with water quality and quantity, concluding that access to clean water will become a key factor for industry relocation and decision-making. Because of this, Malehorn said we need to be stewards for the resource, including protecting it from pollutants, stopping invasive species, reducing nutrient pollution, and preserving the source. He emphasized partnerships as the way forward, noting that WBC convenes public and private sectors. He gave a number of examples of
partnership-based initiatives that align with the strategies of Chicago’s economic plan. He described how Chicago is poised to be a global leader in urban water systems and how the city can use water strengths to leverage other strengths such as transportation, and talent. In terms of industry that is directly related to water, there are over 9,000 establishments in Chicago generating $14 billion in economic activity. Chicago and the region also have a strong base for water research through universities, labs and institutes. Again, Malehorn emphasized the importance of partnerships and the need for strong private sector support to advance initiatives. He said WBO is also thinking about the future of the region, including what industries may come here in the future (e.g., food, chemical), and is working with the Chicago Counsel on Global Affairs regarding the water-food-energy nexus. They are also working to make connections with other similar initiatives. He concluded saying the Mayor believes water a strategic asset and there is more we can do to leverage that asset.

12) **Keynote Address, Stan Meiburg:** Next, Stan Meiburg, Acting Deputy Administrator, U.S. Environmental Protection Agency (EPA), provided the third keynote address of the day. Meiburg first mentioned a letter from EPA Administrator Gina McCarthy on new opportunities for state participation in the GLRI Regional Working Group that was delivered to Chairman Allan that day. He said the EPA is grateful to the states for acting as partners in implementing the GLRI and will provide opportunities for Great Lakes states to participate in future Regional Working Group discussions. Meiburg spoke about his own appreciate for the Great Lakes, having spent time in Rochester, N.Y., on Lake Ontario. The lakes have been a center of transportation and trade as long as America has been around and are a feature of the environmental movement that led to creation of EPA. He recognized the regional community as having a national reputation for constructive collaboration and being a place where business and environment groups communicate with each other.

Meiburg said that EPA relies on the expertise of the Commission and the interests it represents. The Obama Administration has worked hard to sustain the GLRI, and will continue to do so, and recognizes that it has tremendous bipartisan support that is rare today. He further acknowledged the role of the states in implementing commitments under the GLRI and the Great Lakes Water Quality Agreement. He spoke about the active role of states in accomplishments associated with the activities of the Asian Carp Regional Coordinating Committee (ACRCC), delisting Areas of Concern, and implementing Lakewide Action and Management Plans. He highlighted the continued threat to water quality presented by HABs and efforts by EPA to target grant funding at nutrient reduction. He also noted that the focus of the Clean Water Act has been shifting in recent years away from addressing point source pollution, for which significant progress has been made, toward nonpoint sources of pollution. The agency is now working on health advisory values for elevated levels of algal toxins in drinking water and recreational waters. The agency is also focused on protecting wetlands by improving the wetland delineation process. Finally, Meiburg discussed efforts to streamline the processes through which EPA interacts with states and to modernize data systems and reporting. These efforts will make sure information is searchable and accessible, and available to analyze to inform our work. In closing, he thanked the Commission and its members for their support of the GLRI and their work to ensure that states are complete and full partners in the effort.

Commissioner Stine (MN) asked Meiburg to comment on how public health outcomes are improving or changing as a result of EPA’s ongoing efforts to address public health issues. Meiburg noted that most environmental programs arose from departments of public because of a direct link on issues like drinking water. Many of those linkages have been lost in the division into separate agencies. He noted that those in the public health community are in some ways better skilled in public communication and dealing with public anxiety regarding health issues. He said that there is a new EPA Science Advisor from the public health field and that the agency is bringing in human infrastructure to help build those partnerships.

Chairman Allan asked about the importance of data and data integration to support systems management and how EPA will continue to work towards a long-term goal of true systems management. Meiburg responded that the agency is taking an adaptive management approach to data management. In addition, he said that more needs to be done to remove institutional barriers, including attitude and culture, to technology innovation.

Commissioner Tierney (NY) asked about the Clean Water Act as both a regulatory and infrastructure funding law. Water infrastructure funding programs were originally envisioned as a one-time federal push that would evolve to a local and state responsibility. Meiburg mentioned the “out of sight, out of mind” problem with aging infrastructure. This is a public health challenged and there are many communities that can’t afford even no-interest loans. He acknowledged the need to address this large infrastructure funding need as a significant challenge.
13) **Introduction to Joint Session with the Great Lakes Fishery Commission**: Following a break, Chairman Allan called the meeting back to order. He briefly introduced the next session as a joint session with the Great Lakes Fishery Commission (GLFC). The joint session, focused on invasive species, is the first in the 60-year history of both organizations. Chairman Allan introduced the six commissioners of the Great Lakes Fishery Commission:

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<td>David Ullrich</td>
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14) **Keynote Address, Jo-Ellen Darcy**: To open the joint session on invasive species and the Chicago area waterway system (CAWS), Assistant Secretary of the Army for Civil Works, Jo-Ellen Darcy, provided a keynote address. Secretary Darcy noted that the Army Corps of Engineers (Corps) has been working to restore the Great Lakes for many years and is one of 16 federal agencies working on the GLRI. The agency is also working in partnership with the Commission to reduce nutrient loading, accelerate the cleanup and delisting of AOCs, and develop long-term solutions for dredged material disposal. She also highlighted the Corps’ work with the GLFC on projects implemented under the Great Lakes Fishery and Ecosystem Restoration (GLFER) program.

She next spoke about Corps efforts to control the spread of aquatic invasive species (AIS) in CAWS. The Corps is taking a four-pronged approach: operating the electric barriers, studying barrier effectiveness, conducting extensive monitoring of the waterways, and working on the Great Lakes and Mississippi River Interbasin Study (GLMRIS). She emphasized that this issue is a shared responsibility and that the Corps is part of the ACRCC along with the Commission and GLFC. She recognized the Commission’s leadership in efforts to convene stakeholders and reach consensus on a long-term solution through the CAWS Advisory Committee. She said the status of the electric barriers remains relatively unchanged and that the new barrier will be completed in 2017. Secretary Darcy next spoke about opportunities for reducing risk of AIS transfer at the Brandon Road lock and dam, specifically establishing a single point to control one-way, upstream transfer. Such an effort would enhance protections for the Great Lakes basin while providing additional information and experience to prevent two-way transfer. She explained that under GLMRIS, “prevent” is interpreted as maximum risk reduction to the extent possible. Coordination among jurisdictions is needed to develop resilient and risk-informed decisions to these issues.

Secretary Darcy emphasized that the Corps works to reduce flood risk to communities, restore degraded ecosystems, and maintain transportation for the nation. She said that unprecedented environmental challenges impact operations and safety. The Corps is now factoring climate change into missions and planning and, in collaboration with other federal agencies, jointly developed a sea level rise planning tool. The agency is also providing $31 million to communities for technical and planning assistance to manage and reduce flood risk. She highlighted a number of other Corps initiatives to increase renewable energy consumption and reduce GHG emissions across Corp operations, and work with the EPA to finalize the Clean Water Rule to clarify which waters are covered by the Clean Water Act. In closing, she said that we owe it to future generations to protect and preserve the precious water resources of this country.

15) **Panel: Invasive Species and the Chicago Area Waterway System**: Chairman Allan introduced the panel and the first set of speakers to present background information and the current status of Asian carp, invasive species and the CAWS.

**Background and Status**

Kevin Irons, Illinois Department of Natural Resources, provided the first presentation. He reviewed the various regional mechanisms for collaboration on AIS in the region, including the Council of Great Lakes Governors initiative that has led to the development of a least wanted species list, a Mutual Aid Agreement among the states and provinces, and is paving the way for harmonization of regulations. In addition, the GLRI, ACRCC, GLMRIS, CAWS Advisory Committee all provide opportunities for collaboration on invasive species and Asian carp. Irons said that a majority of the current work that is ongoing is a result of concerns raised in 2009 when population numbers were increasing downstream, the electric barriers were shut down for maintenance, and new
findings of carp eDNA in the system. When the electric barriers were shut down for maintenance, an intensive rotenone exercise was conducted and only one Asian carp was found near the barrier. Monitoring efforts above the electric barriers were increased in 2009-2010 and during that time two bighead carp were discovered, one of those was found in Lake Calumet. Next Irons reviewed activities conducted under the annual ACRCC Framework, including harvesting to reduce the Asian carp population in Illinois River and other monitoring and response actions on the CAWS. Population assessments for the Illinois River using hydroacoustic tools show a decline in the population in the upper Illinois waterway from 2012-2014. Work is underway to conduct population modeling to help target removal efforts. Irons described other state efforts including live bait retail surveys and urban pond surveys. He showed a slide characterizing the current risk of Asian carp populations in the area. He noted that 2014 and 2015 were prolific spawning years for Asian carp and, as a result, juvenile fish were found significantly further upstream in 2015 at a location 54 miles downstream of the electric barriers. Despite this, the adult population front remains the same.

Paul Dierking, HDR Engineering, provided background and an update on technical work to support the deliberations of the stakeholder CAWS Advisory Committee. The committee is building consensus on recommendations to prevent two-way AIS transfer in the CAWS. Dierking provided an overview of a conceptual framework the committee is using to evaluate different components of a long-term solution, including a buffer zone that would be created by establishing three control points at different locations in the system. The conceptual framework effectively allows for two-way prevention by setting up one-way control points in each direction with a buffer zone in between. Dierking further explained that different components of a long-term solution would likely be implemented in phases, resulting in incremental risk reduction over time. Dierking and HDR evaluated different ANS control measures that could be implemented at control points. In their evaluation, HDR attempted to quantified risk reduction achieved by various control measures, with a focus on the probability of a species passing through the control point. He acknowledged that the movement of an invasive species past a control point is only one of several steps that would be needed for a successful invasion. HDR’s evaluation of risk reduction focused specifically on an ANS lock system and technologies that could be applied into or next to a lock. Dierking said that other implications of an ANS lock system need additional investigation, e.g. potential impact on maritime transportation. He also explained that cumulative risk reduction effects could be achieved as a result of redundancy in control measures. Dierking said in closing that the components of a potential long-term solution will need further evaluation on their implications for water quality, flood risk management and transportation, as well as cost-sharing for control measures and mitigation needs.

Commissioners asked about the cost to operate the electric barriers, which is information the Corps will have to provide. There was also discussion about the definition of movement in terms of the Asian carp adult population front and what constitutes a change in that location. Irons said that there are intensive efforts to evaluate the population front and that fish do not appear to stay in the area below Brandon Road. He said there is a different in the movement of individual fish and the movement of the population. In regards to the movement of juvenile fish, he said that there is some capacity to harvest those fish and there are currently no signs that they will overcome the current population front.

The Path Forward

Commissioner Hecky (GLFC) introduced the next panel of speakers to discuss the path forward.

Tim Brown of Wabashco and one of two facilitators for the CAWS Advisory Committee spoke first on opportunities for moving forward on this issue. He focused on the CAWS Advisory Committee process mentioned previously by Dierking. He explained that the committee was originally convened to provide input on the Restoring the Natural Divide study led by the Commission and the Great Lakes and St. Lawrence Cities Initiative. Following the completion of that study and an interim phase, the advisory committee was asked to participate in a consensus-building process to agree on a long-term solution that meets set of criteria established by the committee. Brown summarized the criteria as prevent two-way AIS, maintain transportation, reduce flood risk, reduce CSOs, improve water quality, reduce the need for discretionary diversions and facilitate cost-sharing. He said that the committee has worked to develop scenarios that attempt to meet these criteria, with the support of technical work completed by HDR to answer questions and evaluate scenarios against the criteria. The consensus building process started in April 2014. Since that time, the committee has issued two consensus letters focused on advancing work at the Brandon Road lock and dam. Brown described the committee’s current work on another letter on a narrowed down set of options on for a long-term solution including Brandon Road, evaluation ANS lock systems, and a buffer zone concept. He said the committee has not yet reached consensus

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Brown also shared some observations about the process, saying it is a unique effort to address a large, complex effort. This effort is bringing stakeholders together to develop a solution, not just react to one. In closing he acknowledged that although consensus is not easy, it is valuable.

David St. Pierre, Executive Director of the Metropolitan Water Reclamation District of Greater Chicago (MWRD), spoke next. He focused his remarks on two fundamentals he proposed need to be resolved in order to move forward. The first is working on the “art of compromise.” He noted that polarized positions keep us from moving forward. There are two extreme points of view that are continually brought up in discussions: one is to separate and one is to do nothing. He advised that neither is the answer and that discussions need to move beyond those two points to decide what can be done in a realistic framework. For example, an ANS lock has been identified as something to look at further and something that needs to be studied further by the Corps, agencies and universities to determine if it can be effective. The second fundamental St. Pierre spoke about is funding and the need to be realistic about whether proposed solutions can be funded. Measures implemented to control AIS transfer are tied to regional invasive species benefits and would warrant regional support and a regional funding structure to move them forward. St. Pierre said he believes this to be an important issue that needs to be addressed as a region, and that the process for answering questions raised by the Advisory Committee needs to be accelerated. He also challenged the Commission to tackle the funding issue so that when a solution is put forward, funding can be secured to act.

Ben Brockschmidt, Executive Director of the Infrastructure Council of the Illinois Chamber of Commerce and member of the CAWS Advisory Committee, provided information and his perspectives on the path forward. He noted that a fourth to a third of the nation’s freight comes through Chicago carried on various modes. He said that the business community is fully behind addressing the issue of AIS. Brockschmidt also encouraged the group to not place protection of one asset as more important than the protection of another. He emphasized that when considering a long-term solution, we should ask the questions “what infrastructure improvements are necessary” and “what are the impacts.” He explained that the existing freight network is not designed to shift products unexpectedly when one mode is impacted and gave the example of several years ago when low water levels prevented barges from passing a certain point on the Mississippi River. Moving freight from water to other modes would create impacts on congestion and public health, among other impacts, if more trains or trucks are needed to move those goods. He also mentioned a study, due out in October, being conducted by the Illinois Chamber Foundation. The study is examining the river system, its users, and public-private partnership opportunities. Brockschmidt said he was intrigued by the ANS lock concept, not just as an AIS prevention mechanism, but also as a way to address infrastructure maintenance needs.

The final panelist to speak was Joel Brammeier, President and CEO of the Alliance for the Great Lakes and member of the CAWS Advisory Committee. Brammeier spoke first about the urgency of the situation; emphasizing young Asian carp were found just 60 miles from Lake Michigan. He encouraged the group to take that information and convert it to action. He acknowledged that physical separation achieves two-way prevention of AIS transfer, but does not meet the needs of multiple stakeholders around the table. Further, Brammeier described the CAWS as not only suboptimal, but as broken for providing efficient transportation, for providing good water quality, and for providing experiences for residents and visitors. He said he was pleased with the agreement among the Advisory Committee that work at Brandon Road needs to move forward and that accomplishing two-way prevention would require the involvement of local partners and the states (not just the federal government). He agreed that more work needs to be done to determine the return on investment of an ANS lock. Brammeier also mentioned the challenge of resolving hydrologic questions if proposed solutions are going to change the way the system currently operates. He would like to see the group move forward in a way that will lead to actions, not more studies. He re-emphasized the additional challenge of building network of federal and non-federal sponsors to ensure that a solution is implemented. He recognized the drive to collaborate among the members of the committee.

Commissioner Stine (MN) asked the panelists about deferred maintenance impacts and needs in the system. Brockschmidt responded that the Chamber study is examining the impacts of delays in the system. He also said that tonnage and value have changed, and that more high value cargo is moving, although he did not have the numbers readily available.

Commissioner Zelazny (NY) asked the panel about the risk Asian carp pose to the Great Lakes and if impacts of the fish have been documented in river systems where they have become the dominate biomass. St. Pierre responded that we don’t really understand the impact of an invasion until it happens, although there are
examples of invasive species across the U.S. that are destroying ecosystems in which they are thriving. He said the real question then is do we want to allow that to continue or do we want to take steps to ensure that devolution of ecosystems doesn’t occur. He said if an invasive species can be stopped, then it is worth doing. Brammeier added that predicting avoided costs is extremely difficult and that the Mississippi River and Great Lakes habitats, ecosystems and economies are not necessarily comparable as it relates to tourism spending in those regions.

Commissioner Swerdflager (GLFC) asked the panelists what they learned from the committee process and if there are things they would have done differently. Brockschmidt responded that initial steps and direction are important for setting the tone for discussions; that it may be necessary to make extra effort to be inclusive of all view points; and that lead time is important to answer unknowns and bring information to the table. Brammeier reflected on the challenges of getting local input on re-envisioning the system to solve multiple problems. Brown recommended involving neutral parties to facilitate at the beginning of a process and noted that the biggest challenge is to get people to talk to one another.

16) Discussion with Commissioners of GLC and GLFC: Chairman Allan opened the floor to broader discussion with Commissioners on these issues. He first asked what a regional cost-share model would look like and what elements might be included. Subsequent discussion with commissioners acknowledged this question was noted as a significant challenge. One suggestion is to identify where cost avoidances and benefits will be realized at local, regional and national levels, which may not be equal. Commissioners were also interested in better understanding what level of risk reduction could be achieved for what level of funding.

Given the long timeframe for implementation of solutions, there was some discussion about ongoing efforts that are being undertaken in the interim, including enhanced monitoring and adaptive management approaches to continue to improve efforts. The idea of urgency was mentioned again, and the need to find a way to move forward with less than perfect information to avoid potentially serious consequences. Commissioners also share their views and discussed the value and role of shipping and transportation in the Chicago area as a factor in decision-making.

Further discussion focused on the role of the Commission and the CAWS Advisory Committee on this issue. It was noted that the Commission has played different roles. Most recently, the Commission has been acting as convener and member of the CAWS Advisory Committee. The Advisory Committee will be developing recommendations, and each member of the Committee will have to decide whether to sign on to the recommendations. Also mentioned was supporting the work of federal and state agencies moving forward, including communicating with Congress and insuring the states and provinces have input. Encouragement was expressed that the region has a history of working together to solve complex problems such as this one.

Chairman Allan brought the discussion to a close, recognizing the complexity of the problems and depth of the issue. He thanked the GLFC Commissioners for participating in the session.

17) 60 Years of Binational Collaboration and Progress, and Challenges for the Coming Decades: Chairman Allan introduced Tracy Mehan, former Commissioner and current Executive Director of Government Affairs, American Water Works Association. He also recognized the presence of Frank Kudrna, another former Commissioner and former Chairman. Mehan opened his remarks on by calling the Commission a landmark binational gathering and congratulating everyone that has been part of the Commission community and policy and integrated management of Great Lakes basin. He said that the Commission has been addressing economic, environmental and social needs of the region. He reflected on and expressed pride the dramatic changes that have occurred in water bodies across the region, including the Chicago River, Detroit River and Lake Erie. These formally heavily degraded waterways have improved significantly, as seen in restored fisheries, decreases in mercury contamination, and increased populations of peregrine falcons and bald eagles. Mehan noted other major historical milestones that occurred in 1955: the Montgomery Bus Boycott began led by Rosa Parks, General Motors became the first corporation to earn a profit of over $1 billion, and the first McDonald’s opened in Des Plaines, Ill.

Looking ahead, Mehan noted “all is change,” and that society, ecosystems and economies are all dynamic and continually present new challenges. New challenges for the Great Lakes region come in the form of climate change requiring new infrastructure investments; nutrient pollution from unregulated, nonpoint sources; invasive species threats to biological integrity; and increased pressures on resources from growing population and
economies. He said these challenges also create opportunities for the Commission and suggested avenues to explore and a framework for optimizing and prioritizing work going forward. He described Venn diagram of the water, nutrient and carbon cycles; the three circles representing three highly dynamic natural cycles that have each been distributed by human activity. Mehan suggested prioritizing investments between adaptation and mitigation. The three cycles overlap and the overlapping areas should be where the Commission targets its investments to create synergistic and cost-effective results. Overall, he recommended looking for projects that have the greatest economic, environmental and social benefit.

18) What’s next for the Great Lakes Commission?: Chairman Allan spoke next about the future of the Commission and offered that a state of Michigan effort to develop a water strategy yielded outcomes that are regionally applicable. It is incumbent upon the Commission to figure out how to manage life in the Great Lakes region and this is not a small undertaking. He discussed the need for better understanding and further integration of data systems in order to help manage the Great Lakes system, including managing and monitoring in real-time. Allan recognized that the system is changing and that our governance system will have to keep up with those changes. The Great Lakes region represents the world’s third largest economy; he asked how we capture a piece of that wealth and use it to manage the system that allows us to create that wealth. He proposed that new and innovative tools will be needed for nonpoint source management; as well as further integration of economic and environmental issues, as opposed to viewing them as trade-offs against one another. He also spoke about the importance of coastal communities and creating a sense of place and stewardship. He recognized in importance of the intersection of water and energy. He asked the Commissioners to consider not only threats to the Great Lakes, but also the philosophical underpinnings of stewardship in order to foster that sense of care.

Eder spoke next about the Commission and where it’s headed. He noted that the Commission will be starting a process to update its Strategic Plan and that we are starting this process from a solid foundation that includes sound resources and staff. Financially, the GLC is as strong as it’s ever been; like many of the states, it has experienced an influx of funding due to the GLRI. Eder acknowledged that the GLRI will not last forever and is trying to manage growth of the Commission accordingly. The Commission is an organization that serves the needs of its member states and provinces through four core areas. Eder said that how resources are deployed and how those core services are fulfilled is an area for discussion.

The Commission is a collaborative organization, internally and with other regional organizations. Although governance of the region is complex, it works because we collaborate. Eder gave the example of Great Lakes Day in Washington as an example of the success of this collaboration. The result of these joint priority setting and communication efforts is the GLRI and the broad-based support it receives from decision-makers in Washington. He also spoke about the partnership with the Council of Great Lakes Governors on the Lake Erie nutrient reduction project. Working together, the Commission and the Council were able to develop recommendations and elevate them to policy. The issues on the agenda for this meeting are ones we will be facing in the near-term, including nutrients, algal blooms, capturing and addressing storm water and invasive species. Eder also talked about coastal communities and how the Commission might help communities redefine themselves in their relationship to waterfronts, ports, and coastal assets. He called out energy production and transportation as other important issues. Building off Chairman Allan’s remarks, he mentioned improving information management and developing better adaptive management systems to tell us how we’re doing. He said we also need the right forums to use that information and make decisions to manage the system. In closing, he said the Commission is well-positioned to take on these challenges in the future.

There was discussion about how to better involve the business community in the work of the Commission, including engaging representatives prior to developing resolutions. Work on the oil transportation study was mentioned as an example of an effort with greater private sector involvement. The relationship with the Council was also emphasized as important. Agribusiness was mentioned as a specific community to engage to help address nutrient enrichment issues. It was suggested that, in some cases, the Commission could ask other partners to do that convening. Commissioners also discussed how to better forecast future issues and factors that will influence those such as population and the demand for water and resources. In closing the discussion, Chairman Allan noted that we have made tremendous strides, but there is a lot more to do.

Day Two

19) Call to Order: Chairman Allan called the meeting back to order at 8:33 a.m. CDT. He thanked the Shedd Aquarium for hosting a reception the evening before and reviewed the remaining agenda items.
20) **Keynote Address, MarySue Barrett:** MarySue Barrett, President of the Metropolitan Planning Council (MPC), provided a keynote address to begin the meeting. She first provided some background on the Metropolitan Planning Council, a nonprofit organization advancing ideas and solutions for growth in the greater Chicago region. Barrett mentioned the improvement in Chicago’s water quality since the 1970s and noted that Chicago has 26 miles of lakefront and more than 100 miles of riverfront. She spoke about the recent increase in interest in the region’s rivers as areas for recreation, real estate development and cultural attractions. Recognizing this shift, MPC is working with the City of Chicago and Friends of the Chicago River, and with support from the Joyce Foundation, ArcelorMittal and the Chicago Community Trust, to develop a vision for the rivers of the Chicago area, including the Calumet, Chicago and Des Plaines rivers. The project was initiated through a bilingual online survey asking the community what the rivers mean to them today. Results of that survey, “dirty” was one of the adjectives most frequently volunteered, but also “potential” and “tourism” were frequently used. When asked what they want, respondents said: “clean,” “east to get to” and “parks.” Barrett noted that the adjectives used were about experiences and not specific uses. She also said that while the lakefront has special zoning ordinances, the riverfront can offer a wide range of uses. She expressed a desire to open up access along the riverfront where appropriate and integrated with other uses and she acknowledged safety as a concern as use of rivers increases. Barrett also spoke about issues with water quality and how the current stormwater system’s capacity is easily exceeded. She highlighted opportunities for development and the need to broker competing interests for land, noting that these resources have gone underinvested in and underappreciated in the past.

Chairman Allan asked Barrett about how a relationship to water changes people. Barrett referenced their survey and the feedback they received with “active use descriptors,” such as walking and exercising, and noting a connection to physical and mental health.

Commissioner Zelazny (NY) spoke about similar challenges with the Buffalo River in New York. He asked about maintaining investments in property and public access long-term, given strained city budgets. Barrett said they are grappling with this challenge and developing a financial model for the vision they are creating. She suggested looking for set asides, learning from other major metropolitan areas, and treating this as the same as other infrastructure needs. Chairman Allan also mentioned the example of the city of Detroit, which waited for the creation on endowment to support operation and maintenance of a $350 million investment in the city’s riverwalk.

Commissioner Torkelson (MN) requested additional detail on sewage discharge trends. Barrett said the long-term trend is that occurrences have been increasing. She noted that progress is falling behind due to climate change impacts.

21) **Panel: Healing Fractured Water in our Urban Environments:** Commissioner Carr (ON) introduced the topic for the next session and moderated a panel of speakers.

John Jackson, Commission contract employee, presented first and spoke about the Commission’s Greater Lakes project. Working in partnership with the Great Lakes and St. Lawrence Cities Initiative and two consulting firms with technical expertise – ECT and Alliance for Water Efficiency – the Greater Lakes project is helping communities to improve water management by identifying and testing the ecological and financial rationales for pursuing water conservation and green infrastructure practices. The project focused on five municipalities including cities of Waterloo and Guelph, Ontario, and Lyon Township, Commerce Township and Oakland Townships, Mich. The project is in the final stages and planning is underway for next steps. Problem identified – urban areas have fractured water systems that disrupt natural water flows. Jackson explained that the project is trying to address changes to the natural water cycle created by development which increases runoff. He summarized lessons learned from the project, including the need for strong source watershed protection programs, water efficiency and conservation, wastewater reuse, and integrating green infrastructure with traditional “gray” infrastructure. He shared one example from the city of Waterloo: the city has plans to build a pipeline to Lake Erie to meet peak demand; however now they are focusing on changing behavior to reduce peak demand to a point where the pipeline will no longer be needed.

Christine Zimmer, Credit Valley Conservation Authority, presented next. She spoke about lessons learned from efforts to improve water management in their region near Toronto, Ontario, on Lake Ontario. She said that the social barriers to change are common between the U.S. and Canada. An integrated water management study for their region found that to meet wastewater management needs, the region could upgrade its wastewater
treatment plants (WWTP) at a cost of $25.5 million, or it could retrofit its stormwater systems with green infrastructure for a cost of $15.5 million. They found that the green infrastructure plan would provide multiple benefits at a lower cost. Zimmer shared how the region is dealing with larger, more frequent storm events and increased urban flooding. As a result, she said they are rethinking how to meet needs of municipalities. She talked about the struggle to invest in infrastructure. They are also struggling with increases in salinity and sediment settling closer to the shore, potentially contributing to algal growth. She talked about the need for alternative solutions such as those provided by green infrastructure. She said that green infrastructure is capable of capturing 90 percent of rainfalls. Case studies have also found that green infrastructure is less expensive and reduces maintenance costs. Implementing green infrastructure can also decrease energy usage; she noted that 50 percent of their energy costs go to water treatment. In closing, she emphasized the need to integrate water management and green infrastructure in local planning.

Aaron Koch, City of Chicago, presented on green infrastructure and other sustainability plans for the city. He said that there have been many changes to the water system yielding negative impacts to the lake. One example he gave was a large storm event leading to 10 billion gallons of rainwater and CSOs to the lake. One solution that is underway is construction of the tunnel and reservoir project (TARP), which will help reduce CSOs and flood risks; however he acknowledged that there will still be problems. Koch said that the Mayor is very interested in this issue and recently doubled the water rate to allow the city to replace water mains at 100 miles a year (up from 30 miles/year). Last year, the city produced a Green Stormwater Infrastructure Strategy outlining investments and planning for long-term needs. Koch gave examples of how the city has been a leader on green infrastructure through the construction of permeable alleys, the Space to Grow program, the Argyle Sustainable Streetscape and the Wilson Ave. parking lot. He said that there are currently 72 projects complete or in the design and planning phases. Overall the city is trying to think about new ways to manage stormwater to keep it out of the sewers and the lake and provide a better quality of life for citizens.

Harriet Festing, Center for Neighborhood Technology, was the final panelist. She presented on the Rain Ready program which was designed to help home owners and communities deal with issues of too much or too little water. The program was piloted in the Chicago area and focused on trying to remove two barriers: public and political mandates and sense of urgency. They conducted two years of research to better understand the barriers. Festing provided an overview of the two communities they worked with to pilot the program, both with severe flooding issues: Midlothian and Chatham. She said they worked to design an approach that can be taken to any community and includes 10 key principles. Working under the theory that there needs to be a public mandate for change, she said they worked with community members to document the problems and present their concerns to local agencies. They put together and implemented swift, low costs solutions that could be installed on a home to reduce flooding. This would be done by first conducting a property assessment and then working with homeowner to implement changes. At the community level, the program focused on solutions at multiple scales, including property, neighborhood, community and watershed scales. Festing described how governments can support these initiatives by removing barriers to information disclosure and sustainable financing, conducting statewide assessments, promoting innovation and partnerships, and mapping and enhancing natural defenses.

Commissioner Nelson (IN) encouraged the panelists to incorporate the linkage between greenhouse gas emissions and water usage in their materials. Jackson said their efforts did illustrate to the communities the money and energy that would be saved by pumping and treating less water. Zimmer added that municipalities are not making the connection between energy and water.

Commissioner Gebhardt (OH) asked about the effectiveness of different green infrastructure materials and technologies. Zimmer responded that it differs by municipality and the composition of community’s land uses. She said some technologies fail due to construction error and that enforcement and inspection needs to be funded. Koch said that governments and NGOs can help provide that data and that data sharing could be improved. Zimmer also said that monitoring needs to be implemented more widely.

Commissioner Brockschmidt (IL) asked about operation and maintenance costs for green versus traditional infrastructure. Zimmer said they are monitoring their sites to collect data on long-term costs. She said it’s important to remember that green infrastructure is collecting small amounts and, as result, is not getting the same amount of loading and use as traditional end of pipe systems.

22) Report of the Oil Transportation Committee: Eric Marquis, Commissioner (QC), provided a report on the Commission’s oil transportation committee. He first provided background on the impetus for the Commission’s
involvement in oil transportation issues. He explained that over the past several years, production of crude oil has accelerated in both the U.S. and Canada, leading to growth and changes in the transportation of oil, which poses potential risks to the Great Lakes and St. Lawrence region. The Commission adopted an action item at its September 2013 meeting in Milwaukee, Wis., to study the risks and benefits and regulatory structure of oil transportation. An issue brief was later expanded to a full-scale report that included a series of findings outlining additional work to be done. Most recently, the Commission formed an advisory committee to work on consensus recommendations. The committee, chaired by Marquis and Chairman Allan, includes approximately 18 people and seeks to be as inclusive and representative as possible of the various interests. Marquis said the work of the committee has gone well and that they are making steady progress with active engagement from members. The committee is currently working on guiding principles around which all stakeholders can find agreement. These principles will reflect common ground among the stakeholders and will provide a foundation for developing consensus recommendations. Marquis briefly outlined a process for the committee once it committee finalizes its principles, including identifying areas for recommendations, drafting recommendations, and presenting recommendation at the Commission’s 2016 semiannual meeting. He also noted that the Commission received a small grant from the Mott Foundation to support this work.

23) **Observer Comments:** Chairman Allan opened and moderated a comment period for Commission Observers. Observers were instructed to keep comments to three minutes or less.

- **Molly Flanagan, Alliance for the Great Lakes:** Flanagan thanked the Commission for convening the CAWS Advisory Committee and recognized the committee’s letters on Brandon Road as important signifiers that the committee can reach consensus on solutions. She reiterated that issues including an ANS lock, water quality and hydrology need to be better understood. She commented on the Lake Erie Nutrient Targets workgroup report, noting that monitoring is important in order to measure progress and adaptively manage. She also said that more work is needed to identify sources of nutrients with more specificity. She recognized the Commission’s work on oil transportation and said the Alliance is endorsing pipeline legislation introduced by Senator Gary Peters (MI).

- **Brigadier General Richard Kaiser, U.S. Army Corps of Engineers:** General Kaiser thanked and congratulated the Commission. He recognized the collaborative efforts ongoing with state and local partners to make the Great Lakes even greater on issues of beneficial use of dredged material, combating AIS, and navigation. He called out dredging projects at Cat Island, Wis., and Toledo and Ashtabula, Ohio. He highlighted the importance of the Soo Locks to the economic viability of the U.S., noting ongoing maintenance challenges and an upcoming economic assessment of building a new lock. The Corps is also working on sea lamprey barrier projects in Ohio and New York and ecosystem restoration projects at Northerly Island, Ill., Milwaukee and Menominee River, Wis. General Kaiser noted the progress being made on the dispersal barrier system in CAWS and the Brandon Road Feasibility Study.

- **Simon Belisle, Great Lakes and St. Lawrence Cities Initiative:** Belisle first commented on ongoing work to reduce nutrient loadings in Michigan and Ontario and Québec. He shared concerns with recent findings of grass carp in Lake Ontario and underscored the need to prevent AIS transfer in the CAWS. He said the Cities Initiative supports physical barriers as most effective for preventing AIS transfer, but will consider other technologies as compared to the effectiveness of barriers. Belisle also mentioned the recent report on the deep geological repository for nuclear waste that is proposed in Ontario. The Cities initiative opposed this proposal due to its proximity to Lake Huron.

- **RDMIL June Ryan, Commander, U.S. Coast Guard District 9:** RDMIL Ryan began her comments focusing on rules for the concentration of allowable organisms in ship’s ballast water. She said that three vendors have completed the type approval process for ballast water treatment technologies. In addition, the Coast Guard has issued 51 alternative management system determinations as a bridging strategy. She noted that the International Maritime Organization standards are to come into force in 2016. Ryan also noted the Coast Guard’s participation on the oil transportation committee as the agency will be part of regulations to prevent a spill and resources to respond to any spills. She said the agency is not currently aware of any plans to transport oil via ship, but they are preparing for this possibility. Finally, she highlighted the recent successful oil spill response exercise held in the Mackinac Straits in partnership with the state of Michigan and other federal agencies.

- **Tim McHale, U.S. Geological Survey, Midwest Region:** In his comments, McHale highlighted 2012 Memorandum of Understanding between his agency and the Commission that allows for a strong partnership on common issues. The MOU provides a foundation for collaborating on several initiatives, including the Great Lakes and St. Lawrence river system.
Lakes Phragmites and invasive mussel collaboratives, the coastal science strategy, nutrients and harmful algal blooms, and urban hydrology. These initiatives are guided by annual implementation plans and are providing valuable information to researchers, managers and decision-makers across jurisdictions.

**Trish Morris, International Joint Commission (IJC):** Morris highlighted the seamless collaboration between the three commissions: IJC, GLFC and GLC. She noted the nutrient and HABs work as an example, as the LENT report is consistent with the IJC’s Lake Erie ecosystem report. The IJC is encouraged that the LENT report provides supportive evidence necessary to take action. Next year the U.S. and Canada will be reporting on progress on Great Lakes Water Quality Agreement; the IJC will conduct a triennial assessment of progress on all of the goals and objectives of the Agreement. Morris said they welcome input of the Commission on this assessment.

**Debbie Lee, National Oceanic and Atmospheric Administration (NOAA)-Great Lakes Environmental Research Laboratory:** Lee provided a brief overview of GLRI supported projects at NOAA. For AIS this includes the GLANSIS database to enhance access to information on non-native species. NOAA is supporting assessments of the economic benefits of green infrastructure in Duluth, Minn., and Toledo, Ohio, through development of a process guide. Decision support tools are also being developed for nutrient loading to Lake Erie using HABs observations from buoys, modeling and forecasting, and spatial assessments.

**Jack Darin, Sierra Club-Illinois Chapter:** Darin thanked the Commission for its recent approval of the Sierra Club as an official observer. He focused his comments on the future of the GLRI, noting the tremendous benefits of the program. He noted that the program is a voluntary initiative of the current Administration and is not authorized in legislation. The next Administration is likely to face enormous fiscal challenges and he encouraged the Commission to make that case to leaders in Washington of the importance of the initiative. He said the Sierra Club is ready to work with any and all in this effort to ensure that progress made so far is just a down payment on the future and not the end of the story.

**Kristin Schrader, Great Lakes Observing System (GLOS):** Schrader voiced support for the Blue Accounting initiative as a valuable contribution to the region. She noted that GLOS has datasets that support researchers, managers and citizens, and could also support Blue Accounting. She framed the initiative as an opportunity for everyone to assess what data is being gathered and to what end, and encouraged commissioners to ensure their agency is willing and able to provide data as needed to support the initiative. Schrader said GLOS is committed to supporting several initiatives aligned with Commission activities and expressed a willingness to coordinate to ensure the best outcomes for both GLOS and the Commission.

**Michelle Parker, Shedd Aquarium:** In her comments, Parker encouraged the commissioners to keep organizations like the Shedd in mind as you are doing work. The Shedd and similar organizations have a varied skill set that can contribute to messaging and other aspects of your work. She shared an example of the Shedd’s recent partnership with the GLFC to develop a sea lamprey exhibit. She specifically mentioned Rochester Parks, Toronto Zoo, and the Duluth Aquarium as other potential partners.

**Cameron Davis, U.S. Environmental Protection Agency:** Davis highlighted the success of the GLRI, which has been captured in recent reports to Congress and the President. He underscored that the GLRI works because of ongoing consultation, collaboration and coordination. He spoke about the Great Lakes Advisory Board (GLAB), which reports to the EPA Administrator and Deputy Administrator, as an opportunity for greater collaboration. Notifications of GLAB meetings are announced in the Federal Register. Davis said that investments under GLRI need to be more permanent over time, especially for issues like nutrient runoff.

24) **Business of the Great Lakes Commission:** Chairman Allan introduced the business portion of the meeting, reviewing the process for considering four proposed resolutions presented the previous day.

- **Resolution – A Joint Action Plan for Lake Erie:** Ohio moved to approve the resolution; Minnesota seconded the motion. In discussion, Indiana reiterated comments made previously on the draft resolution. There was additional discussion on the process for transmitting resolutions with specific reference to communicating requests of the U.S. and Canada that are made in the resolution. Eder recommended that the resolution be shared with the GLWQA Annex 4 subcommittee and further that it be formally transmitted to the governments via a letter with the resolution and recommendations of the report. Ohio proposed an amendment to the final clause reflecting language developed in
consultation with New York. New York moved to adopt the amendment; Ohio seconded the motion. There was no discussion and the amendment passed unanimously. There was no further discussion on the amended resolution. The resolution, as amended, was approved with unanimous agreement.

- **Resolution – Support for Prohibiting the Import of Harmful Aquatic Invasive Species:** Ohio moved to approve the resolution; New York seconded the motion. There was no discussion on the resolution. The resolution was approved with unanimous agreement.

- **Resolution – Advancing Coastal Community Revitalization through Strengthened Federal Legislation and Programs:** Wisconsin moved to approve the resolution with amendments; Minnesota seconded the motion. Additional amendments were proposed by Québec and Minnesota and incorporated into the original motion. The amended resolution was approved with unanimous agreement.

- **Resolution – Healing the Fractured Urban Water Cycle through Integrated Water Management:** Ohio moved to approve the resolution; New York seconded the motion. Two amendments were proposed by Québec and incorporated into the original motion. The amended resolution was approved with unanimous agreement.

25) **Invitation to 2016 Semiannual Meeting and Great Lakes Day Events:** Eder invited the Commissioners to the GLC’s Semiannual Meeting and Great Lakes Day events, February 23-25, 2016 in Washington, D.C.

A motion to adjourn the meeting was made by Commissioner Injerd (IL), seconded by Commissioner Marquis (QC). The meeting adjourned at 11:58 a.m. CDT.
The meeting was called to order at 3:00 p.m. EDT by Jon Allan, Acting Chair. The following members were present:

- Dan Injerd - Illinois
- Jon Allan - Michigan
- John Linc Stine - Minnesota
- Don Zelazny - New York
- Andy Ware - Ohio
- Kerith Iverson-Vosters - Québec

Staff present: Tim Eder, Tom Crane, Matt Doss and Steve Cole.

1) **Introductions and Call Objectives**: Acting Chair Allan welcomed everyone to the call and reviewed the agenda.

2) **Minutes**: A motion was made by Commissioner Stine, seconded by Commissioner Injerd to approve the minutes from the June 18, 2015, board call. No changes were suggested. The minutes were unanimously approved.

3) **Annual Meeting Plans and Action Items**: Commissioner Injerd reported that he has checked with the governor’s office to see if a decision has been about him speaking at the Commission’s upcoming meeting. This is complicated by ongoing work on the state budget, which as due July 1. Kevin Irons from IL DNR is confirmed. Tim Eder noted that Steve Koch, deputy mayor, has confirmed, and we are awaiting confirmation from Tom Powers, the water commissioner. MarySue Barrett from the Metropolitan Planning Commission has been added as a keynote speaker to address the Chicago Great Rivers project. The U.S. EPA Acting Deputy Administrator, Stan Meiburg, will speak in place of the Administrator. The rest of the meeting arrangements are in place, including a great suite of speakers on invasive species in the Chicago waterways and a keynote address by Tracy Mehan on our 60th anniversary and the value of regional collaboration. There will be a joint reception with the Great Lakes Fishery Commission at the Shedd Aquarium Monday night. If Governor Rauner does not attend a backup plan is to invite Russ Van Herik to discuss funding priorities for the coming year and outcomes from recently completed projects of the Great Lakes Protection Fund. Commissioner Zelazny expressed interest in hearing more from NOAA on their push for approval of marine sanctuaries in the Great Lakes. Commissioner Allan expressed strong support for marine sanctuary program. Eder suggested that we can ask NOAA to address this issue in their Observer comments.

4) **Annual Meeting Resolutions**: Tim Eder reviewed the four resolutions proposed to be considered by the full Commission at the annual meeting. Briefing books with the resolutions and other meeting materials will be mailed by Sept. 15. He emphasized that the Board just needs to approve forwarding the resolutions to the full Commission.

- **Joint Action Plan for Lake Erie**: Commissioner Allan asked if this resolution concludes the work of the Commission’s Lake Erie Nutrient Targets Working Group. Eder confirmed and noted the need to assess progress in achieving the reduction targets and the effectiveness of current practices, which could provide the basis for further work. Allan suggested that this be incorporated into the resolution, outlining next steps for the Commission in this area. Eder proposed that the resolution recommend that the Commission and the working group continue to provide the parties with on information/data management and progress toward achieving the reduction targets. Commissioner Zelazny suggested that the resolution direct the Commission to
seek funding to support the information and data management platform for this work. Eder welcomed this addition; he committed to crafting an additional “resolved” clause calling for development of an information management platform and directing the Commission to seek funding to develop this. He will review this with the working group.

- Listing of Injurious Species under the Lacey Act: Eder reviewed that USF&WS expects to propose the listing of 11 non-native species as injurious under the federal Lacey Act, and the Commission plans to support this action. The resolution puts the Commission formally on record supporting this. He noted that he would like to revise the resolution to include parallel action in Canada. He will suggest revisions toward this end and will consult with the Board on this, including Ontario and Quebec. It also will list the 11 species proposed for listing. Commissioner Zelazny noted some inconsistency in the species in the materials sent previously. It was also noted that the resolution suggests that Asian carp are established in the Great Lakes. These corrections will be made and transmitted to the Board.

- Healing the Fractured Urban Water Cycle through Integrated Water Management: Eder emphasized that we will not suggest combining municipal agencies, but that integrated planning be pursued. Commissioner Allan suggested that this recognize the funding sources for the Commission’s work in this area, including the Great Lakes Protection Fund. He also asked what “greater coordination” means in the first “resolved” clause. We need to consider the practical actions being envisioned. Commissioner Injerd suggested, for the second “resolved” clause, that we reconsider asking for increased federal funding for water infrastructure, and instead emphasize the need for proper local funding in this area. We don’t want to send the message that local agencies should depend on federal funding, rather than setting rates appropriate to meet their needs. Commissioner Allan approved and suggested that Commissioner Injerd draft a new “resolved” clause expressing support for local units of government properly planning for maintaining water infrastructure. Eder noted that their intent was to improve federal incentives for water infrastructure improvements, but this language needs to be improved. Commission staff will revise this.

- Advancing Coastal Community Revitalization: Eder noted that resolution was spurred by legislation recently introduced by Sen. Tammy Baldwin (D-WI). The resolution puts the Commission on record supporting legislation that achieves certain ends, and with that the Commission can work with the Senator to further improve the legislation. He noted that her staff has been very receptive to input. There were no substantive comments on this resolution.

Commissioner Injerd asked about how long Commission resolutions last, and what happens when a past resolution no longer reflects the position of a state. Eder noted that we have a long body of policy resolutions and there is no formal mechanism to revisit them. We use our judgment about how to advance policy positions, but they do not formally expire unless they are replaced or amended by new policy positions, which can be proposed at any time by a member state. Eder suggested that this would be a good topic for discussion in the Commissioners-only lunch on Monday at the meeting. Commissioner Allan expressed concern about instituting a formal process for rescinding policy resolutions, aside from adopting new resolutions.

We will seek signoff from the Board on the resolutions to be presented to the full Commission by Sept. 11.

5) Coordination with U.S. EPA and GLRI Implementation: Eder reviewed the draft letter to the U.S. EPA Administrator, which is a continuation of the discussions on state capacity grants for support to the GLRI and other Great Lakes programs. Steve Galarneau and Don Zelazny spoke to the Regional Working Group recently on this issue and Commission staff has interviewed staff in several states on their concerns related to the GLRI and state support. Commissioner Zelazny reported on the call with the Regional Working Group: they were very receptive to the Commission providing recommendations on implementation of the GLRI. He and Steve did not address state capacity funding, which likely will be negotiated by the individual states. He doubted that U.S. EPA will revise the formula for state funding. However, they do seem interested in state input on improved state engagement on GLRI funding priorities and projects. They seem amenable to meeting with the states and see the states as key partners and want to increase the states’ role, particularly in strategic planning related ecological monitoring and
adaptive management. Eder noted that the letter has some specific recommendations for improved engagement with the states. Commissioner Allan posed the question of how to leverage various funding programs to support multiple programs within the state. Commissioner Zelazny noted that Susan Hedman emphasized that non-competitive, project specific funding can come to the states, and she hoped this would build on state capacity funding. However, there are concerns among the states about the feasibility of supporting state programs with project-specific funds. Tim will send the draft letter out again with a deadline for final comments by next Friday, Aug. 28.

6) **Upcoming Meetings:**

- **Sept. 17** – GLC Board call, 3 p.m. EDT
- **Sept. 28-29** – Annual Meeting, Chicago
- **September 28** – Joint Reception at Shedd Aquarium with GLFC
- **September 29** – Joint Luncheon with Healing Our Waters
- **September 30-Oct. 1** – Healing Our Waters Conference

The meeting adjourned at 4:00 p.m.

Respectfully submitted,

Tim A. Eder
Executive Director

/md
The meeting was called to order at 3:00 p.m. EDT by Jon Allan, Chair. The following members were present:

- Dan Injerd - Illinois
- Jody Peacock, Kay Nelson - Indiana
- Jon Allan - Michigan
- John Linc Stine - Minnesota
- Jim Tierney, Don Zelazny - New York
- Mike Bailey - Ohio
- Bill Carr - Ontario
- Steve Galarneau, Pat Stevens - Wisconsin

Staff present: Tim Eder and Matt Doss.

1) **Introductions and Call Objectives**: Chairman Allan welcomed everyone to the call and reviewed the agenda. He welcomed Pat Stevens as the new Board member from Wisconsin; he is administrator of the WI DNR Environmental Management Division.

2) **Minutes**: A motion was made by Chairman Allan to approve the minutes from the August 20, 2015, Board call. No changes were suggested. The minutes were unanimously approved.

3) **Draft Letter on Chicago Area Waterway System**: Tim Eder explained that the facilitators for the CAWS Advisory Committee have received input recently on the committee’s draft letter and recommendations, so there could be changes from the draft provided to the Board. The one area that he has highlighted is the question of “sufficient funds” and how much funding should be requested. The best we can come up with is $1 million for FY 2017. The Corps likely will need more funding to complete the GLMRIS study, but for now our request would need to comply with the Corps’ “3x3x3” policy limiting studies to $3 million and taking no more than three years to complete. Chairman Allan asked what happens if the Advisory Committee agrees to the letter, but some GLC Board members have concerns. Eder responded that this is what he needs the Board's help with today. He would like to have the authority to further negotiate on the letter, with general direction on changes the Board wants, and then authority to sign the letter on behalf of the GLC, or a request for the Board to see the final version of the letter before signing on the GLC. The next meeting of the Advisory Committee is Dec. 17. It is expected the comments and proposed revisions from other committee members will be compiled and discussed at that time. The hope is to finalize the letter at that meeting.

Eder invited questions about the process. Commissioner Peacock asked if there is any specific timeframe driving the letter other than completing it by next month. Eder noted the letter’s reference to the President’s FY 2017 budget, although it (the budget) likely is very far long in being developed. At some point it will become difficult to influence the FY ’17 budget. Commissioner Peacock asked about the technical report. Eder responded that it is expected to be released to the Advisory Committee tomorrow (it was provided to the committee the following week). It should be a summary of technical research conducted and not recommendations; it should reflect what we have already seen.

Chairman Allan asked about substantive input on the content of the letter. Commissioner Tierney expressed confidence in Tim’s ability to manage review of the letter and bring the necessary issues back to the Board. He suggested giving him authority to move forward to work on the letter. Regarding “sufficient funds,” he recommended just requesting $3 million and saying “allocated by the Corps internally” in addition to “budgeted;” in reviewing the seven bullet points, he suggested that these will add cost and complexity and suggested paring them down. He asked if we can increase the focus on the Brandon Rd. study and recommendations to encourage the Corps to move more quickly on this.
Chairman Allan is comfortable with the $3 million request as is Commissioner Stine, who also supported shortening the letter by condensing the bullets into a sentence and giving Eder authority to finalize the letter. Eder noted that the bullets are directly from the Advisory Committee’s principles, so it would be hard to drop some and retain others. We might be able to paraphrase this information. Commissioners Injerd and Peacock stated that they wanted to see the final letter before authorizing the GLC to sign on. Chairman Allan cautioned against putting the GLC in the position of “trumping” the committee’s work.

Commissioner Injerd asked about the status of consensus on the letter within the Advisory Committee. The facilitators have reported that the environmental caucus has some language and that Kay Nelson and Lynne Muench have issues. Kay Nelson noted two issues of concern: signing onto a letter referencing a report we haven’t seen is unacceptable; this is a timing issue and we want to see the report before signing onto the letter. Also, Indiana won’t accept barriers being put on the Grand and Little Calumet rivers. There is an option that could require this. She has spoken with the facilitators about these concerns. Eder noted that further study is needed on the potential location of control points. Chairman Allan noted that letter calls for “study” of these issues. Commissioner Peacock noted that there is concern among industry about the language in the letter, so he would like to see how this is addressed. This is partly over control points and over the broad request and the rationale for choosing locations. Chairman Allan suggested that there is value in giving direction to the Corps of Engineers. Nelson asked what input has been received from the environmental interests. Eder said his understanding is that they are seeking more specificity on the location of control points. Nelson suggested that we may not be as close to achieving consensus on a letter as was previously thought. Eder noted that GLC has invested a great deal of funding and effort into this process. He invited input from the Board on how this process has worked and what we might learn from it.

4) **Federal Policy Priorities:** Eder invited comments on the GLC’s 2016 federal priorities, which will be developed in coming months. Chairman Allan reiterated that resolution topics can and should come from Commissioners as well as staff. He suggested something related to data management. Kay Nelson had concerns about the VIDA bill and the issue of state authority and the impact of New York’s ballast water regulations. Eder clarified that the GLC is not proposing to address this in its federal priorities; it was referenced in a separate memo on the current status of federal legislation, including VIDA. The GLC has remained silent over the past year on this issue because there is not agreement among the states on this issue. Chairman Allan noted that Michigan opposed the pre-emption of state authority, but recognized the lack of consensus on this issue. Eder emphasized that it is not communicating any position on VIDA to congress. Commissioner Tierney noted that it is not relevant to SRFs to discuss national standards related to toxins. Commissioner Injerd referred to emergency actions related to Asian carp in the Illinois River and expressed concern about what is intended by this and whether there may be efforts that conflict with state authorities. There are a lot of disparate efforts underway in this area and it is unclear how it will all fit together. He suggested that reference to emergency actions be removed unless it refers to something very specific. Kay Nelson echoed this concern.

5) **Semiannual Meeting and Great Lakes Day:** This topic was deferred to the next call due to the lack of time. Eder invited input on resolutions and meeting topics and speakers.

6) **Update on Federal Policy and Legislation:** Eder reported that both the House and Senate are making progress in advancing legislation that would authorize the GLRI.

7) **Upcoming Meetings:** The next meeting of the Advisory Committee conflicts with the normal date for the next Board call, so it will have to be re-scheduled. Eder will be in touch shortly with a new proposed date and time for the call.

The meeting adjourned at 4:05 p.m.
Respectfully submitted,

Tim A. Eder  
Executive Director

/md
The meeting was called to order at 10:00 a.m. EDT by Jon Allan, Chair. The following members were present:

Dan Injerd - Illinois
Jody Peacock, Kay Nelson - Indiana
Jon Allan - Michigan
John Linc Stine - Minnesota
Jim Tierney, Don Zelazny - New York
Jim Zehringer, Mike Bailey - Ohio
Bill Carr - Ontario
Steve Galarneau - Wisconsin

Staff present: Tim Eder, Tom Crane, Steve Cole, Joe Bertram and Matt Doss.

1) **Introductions and Call Objectives**: Chairman Allan welcomed everyone to the call and reviewed the agenda.

2) **Minutes**: Chairman Allan invited a motion to approve the minutes from the November 19, 2015, Board call. A motion was made by Ohio and seconded by New York and the minutes were approved as submitted.

3) **FY 2015 Audit Report**: Chairman Allan introduced this agenda item and asked Commission Executive Director Tim Eder to review the process for approving the audit. Eder recognized Joe Bertram, the Commission’s financial officer, for his work on the audit. The auditors presented the Commission with a final draft clean audit report for Board approval. It includes two sections: one on the Commission’s financial statements and a separate report (A-133) required by federal law related to the receipt of federal funds. Approving the audit report now will help the Commission secure its new approved federal indirect cost rate. Eder thanked the members of the audit committee and asked for comments. Commissioner Peacock recognized the work done and noted it was a clean report. He reviewed some items discussed by the audit committee, particularly being proactive in anticipating new upcoming requirements. He noted the percentage of the budget that comes from dues vs. grants; the 40% increase in employment in the last two years; and the difference in revenues vs. expenses. Eder explained that about 8% of the budget is generating operating funds from state dues and indirect costs, which have remained pretty constant in recent years. This is an important part of our budget that provides stability in comparison to grants and contracts and enables us to conduct policy and advocacy on behalf of members. There has been an increase in employment to fill vacant positions and some new positions with GLRI funding as well as new work related to Blue Accounting and information management. Regarding actual vs. budgeted revenue and expenses, Eder noted that we have been challenged in accurately projecting what our expense will be: we too often estimate high when preparing budgets 15 months in advance. In some cases we have not expended as much as projected based on the actual needs and timing of work on some projects. The bottom line is that we only spend money that we are reimbursed for, so it evens out in the end: if revenues are lower than budgeted so too will expenses be lowered. However, we are making improvements to be more accurate in our budget projections. Peacock noted recommendations from the auditors for upcoming federal accounting standards, including federal reporting requirements in some areas, such as procurement policies. Staff will be working to strengthen internal procedures in anticipation of these new requirements. Commissioner Zelazny emphasized that it was a strong and positive audit report that showed the Commission to be in good fiscal condition. Commissioner Stine asked when dues were last increased? Eder responded 2002. It was suggested that the status of state dues be put on the Board’s agenda for discussion. Chairman Allan stated that, from Michigan’s perspective, they receive a good deal for their dues. He called for approval of the audit report, which was approved unanimously. He thanked
Eder, Joe Bertram and the audit committee for their work on the audit. Chairman Allan asked for an estimate of what state dues would be if it had kept up with inflation. (Staff subsequently calculated that, if adjusted for inflation, state dues would be approximately $80,000, up from their current rate of $60,000 annually.)

4) **2016 Federal Policy Priorities:** Chairman Allan noted the draft 2016 federal priorities statement and invited Eder’s report. Eder reviewed the draft statement and said that we have tried to “freshen up” the look of the document by emphasizing key statistics on the cover with the content of the priorities discussed on the inside pages. He invited the Board’s input on the federal priorities to enable staff to finalize and print them in early February in preparation for Great Lakes Day. Commissioner Injerd expressed concern about the statement about the 66 mile movement of young Asian carp and associated language related to Asian carp, including referring to Brandon Rd. as a key point of control and emergency actions in the Illinois River. There is much activity underway right now and this text will have to be substantially edited to have Illinois’s support. Commissioner Peacock echoed these concerns. Eder noted that these concerns were anticipated and need to be discussed. Commissioner Stine said it was a good list and asked if anything had been added or removed from previous years. Eder noted that Farm Bill and Water Resources legislation were adopted in recent years, so the language has been revised to focus on funding and implementation. Commissioner Tierney expressed support for the priorities. Chairman Allan suggested that we consider a priority related to monitoring and information management, including a more holistic information management system, data integration, etc. Commissioner Stine agreed, emphasizing better integration of data and information from federal agencies. Commissioner Tierney raised the issue of nutrients in Lake Erie and consideration of a specific request for action to address this problem. Commissioner Zehringer said there is much already underway and suggested that maybe these actions be allowed time to move forward. Commissioner Bailey noted calls for development of a TMDL, which Ohio does not support at this time. Commissioner Tierney suggested perhaps funding could be highlighted as a fundamental need. Perhaps a resolution could be drafted emphasizing that the states and local partners can’t do this work alone and a separate pool of funds might accelerate progress. Eder noted the challenge of integrating federal programs with initiatives and priorities of the states and others, so there is a need in this area that could be highlighted. Eder asked for additional, detailed suggestions, after which revised text will be reviewed with interested states, with final text presented at the January board call. Chairman Allan noted that the priorities are all U.S. focused; he invited input on from Ontario and Quebec to ensure it is holistic in its view.

5) **Semiannual Meeting and Great Lakes Day in Washington:** Eder reviewed that the semiannual meeting will be held Feb. 23-24 in Washington, followed by Great Lakes Day on Feb. 25. He noted the list of potential items for the meeting agenda sent to the Board and invited input. He emphasized the significance of the recent Paris climate change accord and implications for the Great Lakes regional economy. Commissioner Stine listed his priorities: emerging leaders (Sen. Baldwin and the new Canadian federal government); oil transportation; and Asian carp and invasive species. He supported all of the potential resolutions and action items. Commissioner Nelson suggested the governors’ maritime strategy be presented. Recognizing continued funding for the GLRI, Commissioner Tierney suggested thanking congressional leadership for their support for the program. Chairman Allan invited additional input and asked staff to get these ideas on paper, recognizing the agenda as a work in progress.

6) **Previous Resolutions:** Chairman Allan noted the proposal submitted for reviewing previous resolutions. Eder reviewed that the Commission has a long body of policy resolutions going back many years and the question came up in Chicago if these are ever reviewed or sunsetted. He emphasized that at any time any resolution can be reviewed by Commissioners and, if supported by a majority of Commission states, may be amended or rescinded. As a process, staff suggested that at each meeting resolutions adopted ten years prior be reviewed and considered by the Board. All resolutions older than 10 years would automatically be rescinded. Commissioner Stine said that it is constructive not to leave resolutions on the books indefinitely, so a process for their periodic review is important. Eder suggested that this approach be tried for the upcoming meeting and perhaps the annual meeting next fall to assess how it works and refine as necessary. Staff will prepare a memo explaining this process to Commissioners. Commissioner Zelazny suggested that a committee be formed to address this and make recommendations to the full Commission.
7) **Chicago Area Waterways and AIS – Advisory Committee Letter:** Eder noted that he had sent out a follow-up message with the current draft letter from the Advisory Committee. The committee is meeting tomorrow and we will know at that time if it approves a letter. The board has asked that any final letter be reviewed with them. Eder asked for input for any key needs or problems with the letter. Commissioner Injerd said Illinois approves the letter as currently drafted. Eder said he expected there will be some amendments to the current letter coming out of the meeting, but he hoped that they will be consistent with its current spirit and intent. Commissioner Peacock expressed Indiana’s approval for the current letter, and asked Eder to coordinate with the Illinois and Indiana representatives on the committee on any changes. Commissioner Injerd noted sensitivity to anything related to emergency actions on the Illinois River.

8) **Upcoming Meetings:** The next Board call is scheduled for January 21, 2016 at 3:00 p.m.

The meeting adjourned at 11:03 a.m.

Respectfully submitted,

Tim A. Eder
Executive Director

/md
Action Items

- **Memo** – Sunset policy for old resolutions of the Great Lakes Commission.

- **Resolution – Advancing outreach efforts to support prevention and control of Great Lakes aquatic invasions:** This resolution updates and, if approved, replaces a resolution adopted at the Commission’s May 2006 Semiannual Meeting. It recognizes outreach and education as essential to preventing the introduction and spread of aquatic invasive species (AIS) and commits the Commission to collaborating with the Great Lakes Water Quality Agreement Annex 6 Subcommittee, national Aquatic Nuisance Species Task Force, the Great Lakes Panel on Aquatic Nuisance Species, and other partners to advance AIS prevention and control campaigns, and encourages its members, observers and other partners collaborate on AIS outreach, prevention and control efforts.

- **Resolution – Great Lakes restoration and economic revitalization: Great Lakes Commission federal priorities for 2016:** The resolution endorses a suite of federal priorities for 2016 and calls on Congress and the Administration to continue to sustain progress and strengthen collaboration with the eight Great Lakes states in the implementation of the Great Lakes Restoration Initiative.

- **Resolution – Embracing Great Lakes priorities in 2016 presidential campaign platforms:** This resolution calls on the 2016 presidential candidates to recognize the Great Lakes as a national treasure and a vital asset for the eight-state Great Lakes region and to sustain the Great Lakes Restoration Initiative and associated efforts. It highlights a suite of Great Lakes priorities and urges the 2016 presidential candidates to address them in their platforms and – if elected – advance them as policy and funding priorities of their administration. It calls on the next president to collaborate with the Great Lakes states and governors to advance common goals for the Great Lakes and St. Lawrence River.

*Note that the Board of Directors is reviewing an additional resolution that may be considered at the meeting regarding lead in drinking water and aging infrastructure.*
Memorandum

To: Great Lakes Commissioners, Associate Commissioners and Alternates

Fr: Tim Eder, Executive Director and Tom Crane, Deputy Director

Date: January 22, 2016

Re: Sunset policy for old resolutions of the Great Lakes Commission

Background

At the 2015 Annual Meeting in Chicago, Commissioners discussed the organization’s resolution process and the need for a policy to review and then affirm, rescind or modify old resolutions. Since no formal sunset policy currently exists, staff and Board members have developed the plan described herein for old resolutions.

This plan will be implemented in part at the upcoming Semiannual meeting, will be modified as necessary, and implemented in full with the 2016 Annual Meeting in October. At the February 2016 meeting, a motion will be presented to rescind resolutions approved prior to and including all those approved at the Commission’s meeting in May 2006 in Sheboygan, WI. Staff has reviewed the three resolutions approved at that meeting, which can be accessed here. One of those three, regarding education programs for aquatic invasive species, has been determined by staff to still be important. This revised resolution will be presented for consideration by the Commissioners in Washington next month.

General Provisions

1) All resolutions – regardless of when they were approved – may be updated at any time by a majority vote at a Commission meeting. All Commissioners, acting through their delegation chair, may at any time request the review of any resolution approved by the Commission within the previous 10 years.

2) All Commission resolutions that are 10 years old or older (when first passed) will be rescinded. These resolutions will be removed from the Commission website. Historic resolutions approved prior to May of 2006 may be reviewed by staff later in 2016 and any considered to still be important will, with concurrence from the Board of Directors, be reintroduced for action at an upcoming annual or semiannual meeting.

3) Beginning with the 2016 Annual Meeting and continuing at subsequent meetings, resolutions that were passed at the corresponding meeting 10 years earlier will be formally reviewed with recommended action to be taken by the Commissioners at the meeting. That is, resolutions that were passed at the 2006 Annual Meeting will be
formally acted upon at the 2016 Annual Meeting. Resolutions passed at the 2006 Semiannual Meeting or earlier will be rescinded per item 2 above.

The formal process for reviewing and acting upon these 10 year old resolutions is described below.

**Sunset Plan Process and Implementation**

A) In March, 2016, the Board Chair will appoint an ad-hoc committee of Commissioners to work with the staff on the review of resolutions to be acted upon at the upcoming Annual meeting. This committee will consist of four members of the Commission; two members of the Board and two other Commissioners. This committee will provide input and guidance to the staff in the review process. This committee will report the recommended actions on the resolutions to the Commission Board, prior to the resolutions being placed on the docket at the upcoming full meeting of the Commission.

B) At least 90 days prior to the 2016 annual meeting (and each subsequent meeting), Commission staff will review the resolutions passed from the corresponding meeting of 10 years prior. The staff will consider whether the resolutions are still valid and will recommend one of three actions be taken for each resolution:

- The resolution be retained as originally approved;
- The resolution be retained but amended to bring it current; or
- The resolution be rescinded.

Staff will then convene the ad hoc resolutions committee to review these recommendations and forward them to the Board of Directors.

C) Beginning with the 2016 Annual Meeting, the Commissioners will receive as part of their briefing packets, the original resolution as passed 10 years prior, a brief background statement on the resolution and a recommendation from the ad-hoc review committee to retain, amend or rescind the resolution. Commissioners will then formally take action on the resolutions.

Actions taken at each semiannual or annual meeting will be documented in the meeting minutes. Any rescinded resolution will be removed from the Commission’s website. As with all approved resolutions, retained resolutions (either as originally passed or amended) will be posted on the website with the current date of approval.

This process will be implemented beginning in March 2016 following the February 23-24 Semiannual meeting.
RESOLUTION – DRAFT

This DRAFT updates and, if approved, will replace a resolution approved in May, 2006 by the Great Lakes Commission at its Semiannual meeting in Sheboygan, Wis.

Advancing Outreach Efforts to Support Prevention and Control of Great Lakes Aquatic Invasions

Whereas, the Great Lakes-St. Lawrence ecosystem is a highly valued freshwater resource facing ongoing damage from aquatic invasive species (AIS); and

Whereas, to sustain the value of this region’s freshwater resources, both coastal and inland, new invasions must be prevented and established AIS populations must be effectively managed; and

Whereas, significant federal, state and provincial resources have been invested in educational outreach programs on AIS prevention and control that are being implemented on a state, regional, national and binational scale; and

Whereas, effective outreach must be conducted to target high risk behaviors of user groups associated with AIS pathways including recreational activities, ballast water, aquaculture, and water garden and aquarium trade, among others;

Whereas, Annex 6 of the binational Great Lakes Water Quality Agreement calls on the U.S. and Canada to “implement programs to prevent the introduction and spread of AIS by... undertaking education and outreach efforts;” and

Whereas, in the U.S., the Aquatic Nuisance Species Task Force recently re-established a Communications, Education, and Outreach Committee and is investing in two national public education/partnership campaigns, Stop Aquatic Hitchhikers™ and Habitattitude™, to optimize effectiveness of AIS outreach efforts; and

Whereas, the Great Lakes Panel on Aquatic Nuisance Species is charged under U.S. law with coordinating the prevention and control of AIS in the Great Lakes region, including inland waters and its Information/Education Committee supports the coordinated development and dissemination of outreach products to advance AIS prevention and control on a multijurisdictional level in the Great Lakes region; and

Whereas, the Great Lakes Commission has a history of supporting and advancing communication and outreach on AIS issues through publications and initiatives including the Great Lakes Aquatic Invasions and the Great Lakes Phragmites Collaborative; and

Therefore Be It Resolved that the Great Lakes Commission acknowledges the value of coordinated outreach to increase awareness and educate stakeholders as an essential component of efforts to prevent the introduction and spread of AIS in coastal and inland waters; and

Therefore Be It Further Resolved that the Great Lakes Commission is committed to collaborating with the Great Lakes Water Quality Agreement Annex 6 Subcommittee, national Aquatic Nuisance Species Task Force, the Great Lakes Panel on Aquatic Nuisance Species, and other partners, to advance coordinated AIS prevention and control campaigns and outreach efforts in the Great Lakes-St. Lawrence River region as well as other regions country contending with similar AIS problems; and

Therefore, **Be It Finally Resolved**, that the Great Lakes Commission encourages its members, Observer agencies and other partners to coordinate and collaborate on AIS outreach through regional, national and binational forums to advance their own prevention and control efforts.
RESOLUTION – DRAFT

Great Lakes restoration and economic revitalization: Great Lakes Commission federal priorities for 2016

Whereas, the Great Lakes and St. Lawrence River are a binational treasure and an environmental and economic asset of vital importance to the eight Great Lakes states, two provinces and the North American economy; and

Whereas, more than 48 million Americans and Canadians depend on and use the Great Lakes-St. Lawrence River for drinking water, recreation, manufacturing of products, power generation, commercial fishing and navigation, among other benefits; and

Whereas, benefits from the Great Lakes-St. Lawrence River basin continue to be threatened by the release of untreated sewage, invasive species, toxic contaminants, nutrient pollution, deteriorating water infrastructure, inadequately maintained ports and harbors, degraded and under-utilized waterfront areas, and other causes; and

Whereas, Congress and the Administration are supporting an unprecedented partnership with the Great Lakes states and other partners to implement the Great Lakes Restoration Initiative (GLRI), which is strategically targeting the most critical problems facing the Great Lakes; and

Whereas, the GLRI is generating real results, with more than 2,900 restoration projects implemented, six Areas of Concern cleaned up, farmland enrolled in conservation programs increased by 70 percent in priority watersheds; 150,000 acres of habitat restored or protected; 500 barriers removed or bypassed to open more than 3,400 miles of rivers and streams for fish; and monitoring and response actions implemented and new control technologies developed to prevent the introduction of Asian carp; and

Whereas, the 2014 Farm Bill and Water Resources Reform and Development Act provide important new programs and authorities that, if fully funded and effectively implemented, can protect the Great Lakes and strengthen the economic vitality of our region’s maritime transportation system.

Therefore, Be It Resolved, that the Great Lakes Commission endorses a suite of federal priorities for 2016, with a focus on:

• Providing at least $300 million for the GLRI in FY 2017 with a focus on cleaning up heavily degraded Areas of Concern, controlling invasive species including Asian carp, preventing polluted runoff that causes toxic algae, and restoring habitat for valuable fish and wildlife resources;
• Passing comprehensive legislation that formally authorizes the GLRI and other critical, existing Great Lakes programs;
• Preventing the introduction of aquatic invasive species (AIS), including Asian carp, by sustaining successful monitoring and control efforts under the Asian Carp Control Strategy Framework in coordination with Illinois and other states; completing the Brandon Road Feasibility Study as quickly as practicable; continuing investigations of a long-term solution to prevent AIS transfer between the Great Lakes and Mississippi River watersheds while maintaining or enhancing beneficial uses of the waterway system for flood control, water quality, recreation and barge transportation; strengthening federal programs to prevent the importation of new invasive species; and supporting the Great Lakes Fishery Commission’s sea lamprey control program and other federal and state programs to prevent and control invasive species;

• Safeguarding drinking water by funding the Clean Water and Drinking Water State Revolving Fund programs to help local communities repair failing water infrastructure and protect drinking water systems, and implementing the new strategic plan for protecting drinking water from harmful algal blooms; and
• Ensuring Farm Bill conservation programs target watersheds that contribute polluted runoff to the Great Lakes, with a focus on effective implementation of state and provincial initiatives, including the Western Basin of Lake Erie Collaborative Agreement on phosphorus reduction and projects implemented under the Regional Conservation Partnership Program; and
• Strengthening the Great Lakes navigation system by managing the Great Lakes as a single, integrated navigation system as directed by the 2014 Water Resources Reform and Development Act; advancing a new large lock at Sault Ste. Marie, Mich; increasing appropriations from the Harbor Maintenance Trust Fund, including dedicated funding for Great Lakes ports and recreational harbors; and promoting beneficial alternatives to the disposal of dredged material in the Great Lakes; and

Be It Further Resolved, that federal agencies are called upon to share information and cooperate in implementing a Blue Accounting information management strategy to improve regional decisionmaking, enable adaptive management, and help Great Lakes leaders guide investments and measure progress toward our common goals for the Great Lakes; and

Be It Further Resolved, that the GLRI is intended to supplement, not supplant, base funding for Great Lakes programs and the Great Lakes Commission calls on Congress and the Administration to maintain funding for core programs; and

Be It Further Resolved, that the Great Lakes Commission calls on Congress and the Administration to continue to strengthen collaboration with the eight Great Lakes states in the implementation of the GLRI, recognizing that elevating their role will improve administrative efficiency and ensure that resources are directed at the most important on-the-ground restoration priorities in shoreline communities; and

Be It Finally Resolved, that the Great Lakes Commission calls on the Obama Administration and Congress to sustain the progress being made in restoring the Great Lakes and leveraging them as an economic asset for the eight-state Great Lakes region by supporting these priorities, maintaining core programs that provide for ongoing conservation and management of the Great Lakes, and establishing the legal and statutory foundation needed to ensure current efforts are sustained into the next presidential administration.
RESOLUTION – DRAFT

Embracing Great Lakes priorities in 2016 presidential campaign platforms

Whereas, the Great Lakes and St. Lawrence River contain 95 percent of our nation’s fresh surface water and are a national treasure and an environmental and economic asset of vital importance to the eight Great Lakes states, two provinces and the North American economy; and

Whereas, more than 48 million Americans and Canadians depend on the Great Lakes and St. Lawrence River for drinking water, recreation, manufacturing of products, power generation, commercial fishing and maritime navigation, among other benefits; and

Whereas, the Great Lakes fuel our regional economy, generating more than 1.5 million jobs and $62 billion in wages annually, and providing an efficient maritime transportation network that connects 140 ports and harbors and links our industrial heartland with world markets, contributing more than $30 billion to the U.S. and Canadian economies; and

Whereas, the Great Lakes are the foundation of our region’s outdoor recreation economy, with more than 4 million recreational boats registered in the eight Great Lakes states generating nearly $16 billion in spending annually, and more than 12 million anglers and hunters spending $24 billion annually; and

Whereas, these benefits from the Great Lakes and St. Lawrence River could be enhanced by addressing ongoing problems that include deteriorating water and navigation infrastructure, inadequately maintained ports and harbors, the release of untreated sewage, invasive species, toxic contaminants, nutrient pollution, and degraded and under-utilized waterfront areas; and

Whereas, restoring, enhancing and caring for the Great Lakes is a longstanding and bipartisan priority for federal, state and local leaders in the region, with our current restoration strategy guided by priorities established by the region’s governors and developed by more than 1,500 stakeholders across the eight-state region; and

Whereas, the past two presidents and their administrations have made Great Lakes restoration a national priority and have provided critical leadership in developing and implementing our regional restoration strategy; and

Whereas, the Great Lakes Restoration Initiative (GLRI), begun in 2010, is supporting an unprecedented partnership with the Great Lakes states and other partners that has enjoyed enthusiastic and bipartisan support among Great Lakes leaders, regional organizations and the Great Lakes congressional delegation;

Whereas, the GLRI is strategically targeting the most critical problems facing the Great Lakes, with more than 2,900 projects implemented to clean up heavily degraded Areas of Concern, control Asian carp and other invasive species, prevent polluted runoff that causes toxic algae, and restore habitat for valuable fish and wildlife resources; and

Whereas, additional challenges and opportunities exist to repair and upgrade infrastructure to safeguard drinking water, and enhance maritime commerce through a new strategy being developed by our region’s governors and premiers.

Therefore, Be It Resolved, that the Great Lakes Commission calls on the 2016 presidential candidates to recognize the Great Lakes as a national treasure and a vital asset for the environmental health, cultural richness and economic prosperity of the eight-state Great Lakes region; and

Be It Further Resolved, that the Commission calls on the 2016 presidential candidates to embrace and sustain the GLRI and associated Great Lakes restoration and protection efforts as a key component of our region’s broader strategy to create jobs, stimulate economic development, strengthen waterfront communities and sustain a vibrant regional economy; and

Be It Further Resolved, that the Commission highlights the following Great Lakes priorities and urges the 2016 presidential candidates to address them in their platforms and – if elected – advance them as policy and funding priorities of their administration:

- Sustaining funding for the GLRI to achieve the goals outlined in our Great Lakes restoration strategy and adapting it and related programs to focus on the most critical challenges facing the lakes;
- Reducing nutrient pollution that causes harmful algal blooms and threatens drinking water supplies;
- Recognizing aquatic invasive species as a national problem with regional significance by promoting programs to prevent the introduction of new species and controlling those already present;
- Investing in water infrastructure to safeguard drinking water and prevent the release of sewage and polluted stormwater that closes beaches, threatens public health and damages local economies;
- Strengthening the Great Lakes navigation system by upgrading locks, ports, harbors and related infrastructure;
- Supporting healthy fish and wildlife populations to maintain ecological diversity and strengthen economic benefits from fishing, hunting and wildlife watching; and
- Helping local communities revitalize waterfront areas, leverage the value of water resources and adapt to impacts from climate change; and

Be It Finally Resolved, that the Commission calls on the next president to collaborate closely with the Great Lakes states and build on the leadership of governors to sustain current successful efforts, shape future priorities, and direct federal programs and investments to align with state and local efforts to advance common goals for the Great Lakes and St. Lawrence River.
Long-term economic return on investment from fully implementing our Great Lakes restoration strategy. Progress to date is impressive. It is essential that Congress formally authorize the Great Lakes Restoration Initiative to sustain it through the transition to the next presidential administration. **OUR PRIORITY:** Pass authorizing legislation to strengthen and accelerate efforts to revitalize the Great Lakes economy and environment.

Economic loss from a 30-day closure of the Soo Locks. The Great Lakes Navigation System links 140 U.S. ports to the world economy, moving 181 million tons of cargo annually and generating more than 225,000 jobs. **OUR PRIORITY:** Provide resources to maintain and enhance critical infrastructure that supports the Great Lakes Navigation System, including dredging and a new lock at Sault Ste. Marie, Mich.

Heavily polluted Areas of Concern cleaned up so far under the Great Lakes Restoration Initiative. With continued funding, another 10 will be cleaned up in the next phase of the program, along with other critical actions to restore the Great Lakes. **OUR PRIORITY:** Continue progress in restoring the health of the region’s most polluted areas by sustaining funding for the Great Lakes Restoration Initiative in Fiscal Year 2017.

Amount of Asian carp removed from the Illinois River as part of state and federal control efforts, reducing the carp population by 68 percent in the most upstream areas where they are found. However, concerns remain about the downstream presence of young carp and successful spawning in the past two years, underscoring the need to sustain and strengthen effective removal efforts while longer-term plans to keep carp and other invasive species out of the Great Lakes evolve. **OUR PRIORITY:** Coordinate with Illinois and other Great Lakes states and federal and local partners to maintain successful monitoring and control efforts that have reduced the carp population in the Illinois River. Provide the necessary funding to the Army Corps of Engineers to complete the current study to fully assess the viability of strengthening a single control point at the Brandon Road Lock and Dam to prevent the one-way, upstream transfer of aquatic invasive species while maintaining or enhancing beneficial uses of the waterway system for flood control, water quality, recreation and barge transportation.

U.S. and Canadian citizens who receive their drinking water from the Great Lakes-St. Lawrence River basin. Failing water infrastructure threatens public health, pollutes our waterways and damages local economies. **OUR PRIORITY:** Help communities upgrade aging water infrastructure and safeguard drinking water.

Surface area of Lake Erie covered by dense algae caused by the 2015 bloom—the largest on record. Programs to prevent polluted runoff that causes harmful algae blooms must be strengthened and targeted to the highest priority watersheds. **OUR PRIORITY:** Ensure Farm Bill programs are effectively targeting watersheds contributing the most polluted runoff to the Great Lakes.
Sustain Progress under the Great Lakes Restoration Initiative

Continued funding for the Great Lakes Restoration Initiative (GLRI) will build on our investments and help the region advance long-term goals for a healthy economy, sustained by a revitalized ecosystem. The GLRI is generating real results, with more than 2,500 restoration projects implemented, six Areas of Concern cleaned up, a 70 percent increase in farmland enrolled in conservation programs, 150,000 acres of habitat restored, and more than 3,400 miles of rivers opened for native fish. During its next phase – FY 2015-2019 – the GLRI will focus on cleaning up ten more Areas of Concern, reducing phosphorus runoff that causes harmful algal blooms, controlling invasive species, and restoring habitat for native species. The Commission urges Congress and the Administration to continue this successful program to ensure complete implementation of our regional restoration strategy.

REQUEST: Provide at least $300 million for the GLRI in FY 2017 with a focus on cleaning up heavily degraded Areas of Concern, controlling Asian carp and other invasive species, preventing polluted runoff that causes toxic algae, and restoring habitat for valuable fish and wildlife resources.

Protect the Great Lakes and St. Lawrence River from Asian Carp and other Invasive Species

Congress and federal agencies must recognize that aquatic invasive species threaten our nation’s environment and the economic health of local communities. Asian carp are just the latest example of a national problem. The U.S. should strengthen federal programs to prevent harmful species from being introduced via the trade in live animals. Congress and the administration should maintain support for successful programs, including those under the National Invasive Species Act and the Great Lakes Fishery Commission’s sea lamprey control program.

Congress and federal agencies should also support effective monitoring, research and control efforts under the Asian Carp Control Strategy Framework. These efforts must be developed in close coordination with Illinois and include input from other Great Lakes states and provinces. Congress and the Administration should provide funding and direction to the Army Corps of Engineers, U.S. Fish and Wildlife Service and U.S. EPA to coordinate with Illinois and other states and provinces as they implement existing Asian carp monitoring and response plans. Complete the Brandon Road Feasibility Study as quickly as practicable. The Corps of Engineers and other partners should continue work on a comprehensive, long-term solution to prevent all aquatic invasive species from transferring between the Great Lakes and Mississippi River watersheds, with further study of a system of possible control points in Chicago-area waterways, as recommended by the Chicago Area Waterway System Advisory Committee. All efforts must carefully consider impacts on flooding, water quality, recreation and barge transportation in northeast Illinois and northwest Indiana.

REQUEST: Build a more effective, comprehensive, national program to protect aquatic resources from invasive species by expanding programs under the National Invasive Species Act, including the national task force, regional panels, state management plans and the Great Lakes Fishery Commission’s sea lamprey control program. Strengthen federal programs to prevent the importation of invasive species not already established in North America. Provide funding and direction to the Army Corps of Engineers, U.S. Fish and Wildlife Service and U.S. EPA to coordinate with Illinois and other states and provinces as they implement existing Asian carp monitoring and response plans. Complete the Brandon Road Feasibility Study as quickly as practicable and continue investigations of a long-term solution to prevent all aquatic invasive species transfer between the Great Lakes and Mississippi River watersheds.

Pass Comprehensive Legislation to Enhance and Accelerate Great Lakes Conservation Efforts

Congress should formally authorize the GLRI and other critical, existing Great Lakes programs to strengthen coordination with regional stakeholders and binational cooperation with Canada. The Commission supports legislation that

- Formally authorizes the GLRI to provide clear legislative direction and funding for Great Lakes restoration efforts;
- Authorizes U.S. EPA to lead the Federal Interagency Task Force to coordinate activities among federal agencies; and
- Advances implementation of the Great Lakes Water Quality Agreement with Canada.

REQUEST: Pass comprehensive legislation that authorizes and funds important existing Great Lakes programs and provides a strong regional framework to sustain effective restoration, protection and ongoing management of the Great Lakes.
Help Communities Safeguard Drinking Water by Upgrading Aging Water Infrastructure

Failing wastewater infrastructure continues to release sewage and polluted stormwater into local waterways every year, contaminating Great Lakes beaches, threatening public health and damaging local economies. Similarly, aging drinking water infrastructure is a costly challenge for many communities, as illustrated by threats to drinking water in Toledo, Ohio, from toxic algae in Lake Erie, and in Flint, Michigan, from aging water pipes. These incidents underscore the need to help public agencies detect, manage and treat contaminated drinking water. The Clean Water and Drinking Water State Revolving Fund (SRF) programs are the primary vehicles to assist states and local communities in upgrading water infrastructure. Additionally, U.S. EPA and state and local agencies should collaborate in implementing the recently released strategic plan for protecting drinking water from harmful algal blooms.

REQUEST: Provide funding for the Clean Water and Drinking Water SRF programs in FY 2017 to repair failing water infrastructure, including replacing lead pipes in drinking water systems, treating or avoiding toxic algae, separating combined sewers and upgrading sewage treatment plants. Federal agencies should collaborate with state and local officials on standards and practices to detect toxic algae and safeguard drinking water supplies.

Support Infrastructure Improvements and other Needs to Maintain the Great Lakes Navigation System

The economic viability of our water transportation system is at risk due to insufficient funding for dredging, diminishing options for disposing dredged material and aging navigation infrastructure, including the Soo locks in Sault Ste. Marie, Mich. The 2014 Water Resources Reform and Development Act (WRRDA) included provisions that will benefit the Great Lakes region, including reform of the Harbor Maintenance Trust Fund (HMTF); dedicated funding for Great Lakes ports and recreational harbors; and direction to the Army Corps of Engineers to manage the Great Lakes as a single, integrated navigation system. These important changes must be fully implemented and closely coordinated with the Great Lakes states, the navigation industry and local stakeholders. In addition, other options for using dredged material are critical to reduce the need for its disposal in the open waters of the Great Lakes. A study is underway on the costs and benefits of building a new large lock at Sault Ste. Marie, Mich. This project should move forward to modernize this infrastructure that is critical to our national security and our regional and national economies.

REQUEST: As directed in WRRDA, increase appropriations from the HMTF, including dedicated funding for Great Lakes ports and recreational harbors. The Corps of Engineers should implement a new funding approach that manages the Great Lakes as a single, integrated navigation system, with close consultation with the Great Lakes states and regional stakeholders. Allow flexibility in applying federal standards to promote beneficial alternatives to the disposal of dredged material in the Great Lakes. Advance efforts to study and build a new large lock at Sault Ste. Marie, Mich.

Support Information Management to Improve Regional Decisionmaking in the Great Lakes

Decisionmakers need improved information to guide investments and measure progress toward our common goals for the Great Lakes. At the request of the Great Lakes governors, the Great Lakes Commission is implementing Blue Accounting (http://bit.ly/BlueAccounting), a regional information strategy that provides Great Lakes leaders with measures of progress being made toward shared desired outcomes on a broad range of human uses, economic activities and conservation priorities. To be effective, this strategy requires sustained support and cooperation from government agencies, business and industry, and other partners.

REQUEST: Ensure federal agencies support Great Lakes information management efforts by providing technical expertise, collaboration, data access and support for informed decisionmaking.

Ensure that Farm Bill Conservation Programs Target Watersheds Contributing Polluted Runoff to the Great Lakes

Soil erosion and runoff of nutrients, fertilizers and other chemicals from agricultural lands can pollute rivers and streams and contribute to harmful algal blooms, such as those impacting Lake Erie. The 2014 Farm Bill created a new Regional Conservation Partnership Program to support locally-led conservation projects and prioritized the Great Lakes as a Critical Conservation Area with a focus on actions to prevent algal blooms. The Great Lakes states, landowners, conservation groups and other partners are using this program to reduce nutrient pollution in our region’s most heavily impacted areas, such as Western Lake Erie, Saginaw Bay and Green Bay. The Lake Erie states and the Province of Ontario have committed to reduce phosphorus introduced to Lake Erie by 40 percent by 2025. Continued effort is needed to prioritize conservation activities in watersheds with the greatest needs and to coordinate these efforts with related initiatives. The new strategic plan for Western Lake Erie, currently being developed by USDA-NRCS, should be completed soon and implemented in a way to deliver on-the-ground actions to achieve nutrient reduction targets for Lake Erie.

REQUEST: Ensure full funding for the Regional Conservation Partnership Program and effective implementation and oversight to focus resources on watersheds affecting water quality in the Great Lakes. The Natural Resources Conservation Service should collaborate with the Great Lakes states to coordinate delivery of Farm Bill programs to support state priorities and regional initiatives.

Previous page: Lake Superior and Duluth, Minn., as seen from Enger Tower. ©flickr/ Tony Webster. | Below: A panoramic view of Presque Isle Bay in Presque Isle, Pa. In February 2013, after reviewing the success of cleanup activities, Presque Isle Bay was removed from the binalist of Great Lakes Areas of Concern. ©flickr/ Richard Yuan.
Maintain Base Funding for Federal Programs

Congress has been clear that GLRI funding is intended to be in addition to base funding for many essential programs.

REQUEST: Support federal programs that contribute to the ongoing restoration, protection and effective management of the Great Lakes. Examples of important programs include, but are not limited to, the following:

Department of Agriculture
- Natural Resources Conservation Service
- and the new Regional Conservation Partnership Program
- Farm Service Agency
- U.S. Forest Service conservation programs

Department of the Interior
- U.S. Fish and Wildlife Service, Aquatic Invasive Species Program
- U.S. Fish and Wildlife Service, Great Lakes Fish and Wildlife Restoration Act
- U.S. Geological Survey, Great Lakes Science Center
- U.S. Geological Survey, National Streamflow Information Program

Department of State
- Great Lakes Fishery Commission, Sea Lamprey Control Program
- International Joint Commission, U.S. Section

Environmental Protection Agency
- State Revolving Funds for Clean Water and Drinking Water
- BEACH Act Grants
- Clean Water Act Section 106 Water Pollution Control Program and Section 319 Watershed Restoration Program
- Great Lakes National Program Office
- Office of Research and Development Labs in Duluth, Minn. and Grosse Ile, Mich.

National Oceanic and Atmospheric Administration
- Center for Sponsored Coastal Ocean Research
- Coastal and Estuarine Land Conservation Program
- Coastal Zone Management Act Grants
- Great Lakes Environmental Research Laboratory
- Great Lakes Habitat Restoration Program
- Integrated Ocean Observing System, Great Lakes Observing System
- National Sea Grant College Program

U.S. Army Corps of Engineers
- Great Lakes Fishery and Ecosystem Restoration Program
- Great Lakes Navigation Operations and Maintenance
- Great Lakes Recreational Harbors Dredging
- Great Lakes Remedial Action Plan Program
- Great Lakes and Mississippi River Interbasin Study

About the Great Lakes Commission: The Great Lakes Commission was established by the Great Lakes states in 1955 to coordinate management of the water resources of the Great Lakes basin and to represent the states’ interests on Great Lakes matters before the federal government. Based in Ann Arbor, Mich., the Commission promotes the concept that a healthy environment and prosperous economy should be mutually dependent, not exclusive, goals. With appointees from the eight states, the Commission serves as a forum for the development of regional policy, and as an advocate for legislation and programs to benefit the Great Lakes. The Canadian provinces of Ontario and Québec participate in all Commission deliberations and activities as associate members.
Speaker Topics

Under this tab are background materials provided to inform the meeting presentations:

Memo on the process and schedule for developing the new Great Lakes Commission strategic plan and workplan

Nutrient reduction strategies for the Great Lakes: Spotlight on Lake Erie

- Western Basin of Lake Erie Collaborative Agreement
- Fast Facts on Michigan’s Implementation Plan for the Western Basin of Lake Erie Collaborative Agreement
- Western Lake Erie Basin Collaborative Ohio Implementation Plan Outline
- Great Lakes Water Quality Agreement – Annex 4 Nutrients Update
- Slides for presentation on the Great Lakes Commission’s Blue Accounting Source Water Initiative
- Executive summary of the report Economic Benefits of Reducing Harmful Algal Blooms in Lake Erie

Oil transportation update

- Memo with update from the Great Lakes Commission’s Oil Transportation Advisory Committee
- Oil Transportation in the Great Lakes-St. Lawrence River Region – Preamble to the Guiding Principles
- Oil transportation in the Great Lakes-St. Lawrence River region – Guiding Principles

Report on aquatic invasive species prevention and control activities

- Chicago Area Waterway System (CAWS) Advisory Committee letter to President Obama with recommendations on long-term measures to prevent Asian carp and other aquatic invasive species from moving between the Mississippi River and Great Lakes basins through the CAWS (January 2016)
- CAWS Advisory Committee letter to President Obama with recommendations on the Brandon Road Feasibility Study (August 2015)
- Small Asian Carp Found in Marseilles Pool of Illinois River (Asian Carp Regional Coordinating Committee, October 30, 2015)
- Asian Carp eggs and larvae identified in the Upper Illinois Waterway during 2015 (Asian Carp Regional Coordinating Committee)
- Brandon Road Feasibility Study Schedule (U.S. Army Corps of Engineers, January 2016)

Strengthening commercial navigation through the Governors and Premiers
Great Lakes-St. Lawrence Maritime Initiative

- Executive Summary, Strategy for the Great Lakes-St. Lawrence River Maritime Transportation System – Draft for Public Comment

Safe drinking water and aging infrastructure: Washington D.C.’s strategic vision

- Green Infrastructure Modification Approved, George Hawkins, January 29, 2016

Memorandum

To: Great Lakes Commissioners, Alternates and Associates

From: Tim Eder, Executive Director
      Matt Doss, Policy Director

Date: February 8, 2016

Re: Process and Schedule for developing new strategic plan and workplan

Overview

With guidance from the GLC Board, Commission staff are beginning work on an updated five-year strategic plan and workplan to guide the Commission from 2016 through 2020. Our aim is to complete this process and seek board approval for an updated document by June 2016. We plan to develop a combined strategic plan and workplan to take the place of what were previously two separate documents (available online at http://glc.org/about/glc-strategic-plan/). Below is the proposed structure of the new document and the process and timeline for preparing it in consultation with the Board, Commissioners, Observers and other partners.

Structure and outline for new strategic plan and workplan

As currently structured, the strategic plan is a statement of the Commission’s vision and mission, and the goals, objectives and strategic actions that guide its work. It addresses how the Commission accomplishes its work in four core service areas (which correspond to the strategic plan goals). The workplan addresses the kinds of work the Commission pursues, focusing on six broad program areas, each of which encompasses specific initiatives that the Commission is working on. The graphic on the following page illustrates this structure. The program areas are intended to address the needs of our member states/provinces, reflect current regional priorities and identify emerging issues and ways the Commission can address them. Each program area includes a goal and a series of objectives and specific actions for accomplishing them. The actions provide metrics to evaluate progress and are reported on to the Commission at each annual and semiannual meeting.

We propose to retain this structure for the new strategic plan and workplan, except that we will drop the strategic actions currently included for each strategic plan objective, as this level of detail is not warranted in this part of the document. The following is a proposed outline for the document:

<table>
<thead>
<tr>
<th>Strategic Plan</th>
<th>Workplan</th>
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<tbody>
<tr>
<td>• Vision for the Region</td>
<td>• Introduction</td>
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<tr>
<td>• Vision for the GLC</td>
<td>• Program Areas</td>
</tr>
<tr>
<td>• Mission</td>
<td>• Problem Statement</td>
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<tr>
<td>• Goals (core service areas)</td>
<td>• Goal</td>
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<tr>
<td>o Objectives</td>
<td>• Objectives</td>
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<tr>
<td>• Guiding Principles</td>
<td>• Actions</td>
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Ensuring environmental and economic prosperity for the Great Lakes-St. Lawrence region through communications, policy research and development, and advocacy.
Some elements of the current document, such as the vision and mission statements, guiding principles, and the four core service areas (stated as goals in the strategic plan) may not require much updating. Similarly, the objectives in the strategic plan should be generic and “timeless.” A key question for Board and Commissioners is: do the four core service areas (goals) in the current strategic plan remain valid or should they be modified? In contrast, the workplan objectives and actions are the “meat” of the document and likely will change the most. These should reflect the Commission’s current work, the work we anticipate doing over the next five years, as well as work that we believe we should do. A key question to guide the workplan development is: regardless of funding or staff capacity, what should the Commission be working on over the next five years? Input from Commissioners is vital to answering this question.

Process and timeline for preparing the new strategic plan and workplan

The following is a proposed schedule for key steps in developing the new strategic plan and workplan. Additional opportunities may arise for securing board and commissioner engagement and this process and schedule could change to reflect that.

- Memo to Board with outline, process and schedule (for Jan. 21 board call)
- Staff meeting for initial discussion (late January)
- Work session with staff (February)
- Presentation to Commissioners and initial discussion (Feb. 23 at Semiannual meeting and Commissioner dinner)
- Input from Commissioners, possibly via state/province delegation meetings and conference calls (March)
- Input from key partners and funders (March-April)
- Staff committee incorporates input (late April)
- Draft strategic plan and workplan reviewed with staff (late April)
- Draft strategic plan and workplan reviewed with Board (May)
- Staff committee incorporates final input (May)
- Strategic plan and workplan presented for approval by Board (June)

Figure 1: CURRENT STRATEGIC PLAN AND WORK PLAN

[Diagram of Core Service Areas (GLC Strategic Plan) and Program Areas (Workplan)]

Current focus areas for projects and program development:
WESTERN BASIN OF LAKE ERIE COLLABORATIVE AGREEMENT

The Governors for the Western Lake Erie Basin States of Michigan and Ohio and the Premier of the Province of Ontario (collectively, “the Parties”)

ACKNOWLEDGE the vital importance of the Western Basin of Lake Erie to the social and economic well-being of the States and Province and the close connection between the water quality of the Western Basin of Lake Erie and health of the entire lake;

ACKNOWLEDGE that the water quality and environmental conditions of Lake Erie are being impacted by nutrients and other factors to the point that it poses a barrier to achieving the economic value and environmental well-being of the entire lake;

ACKNOWLEDGE the need to address point and nonpoint derived nutrients, especially phosphorus, and other biological and ecological factors in the Western Lake Erie Basin that may result in impairments to the water quality and ecology of Lake Erie in its entirety;

ACKNOWLEDGE the Parties’ right and obligation to continue to support efforts under national or binational initiatives and agreements and to individually develop and implement the necessary programs, actions and polices to carry out their commitment to protect, restore and enhance the water quality of the Western Lake Erie Basin and recognize the quantifiable early actions that have already been taken by the Parties to reduce nutrient loadings;

ACKNOWLEDGE that the goals and timelines are set based on the best understanding of current Lake Erie conditions and processes and will need continual updating and assessment over time through an adaptive management process;

REAFFIRM that restoration and enhancement of the Western Basin of Lake Erie cannot be achieved solely by the Parties in isolation, but rather, it is dependent upon the collaboration between the Parties to address the water quality of the Western Basin of Lake Erie;

CONCLUDE that the best means to improve and protect Lake Erie’s water quality is through a collaborative initiative between the Parties that has a defined goal, establishes specific implementation plans with timetables and is measured against expected results;

THE PARTIES AFFIRM TO

A Goal:
Through an adaptive management process, work to achieve a recommended 40 percent total load reduction in the amount of total and dissolved reactive phosphorus entering Lake Erie’s Western Basin by the year 2025 with an aspirational interim goal of a 20 percent reduction by 2020;

A Base Year:
To use phosphorus loading data from 2008 to the Western Lake Erie Basin as the basis from which progress will be measured;
An Implementation Plan:
Each state and province commits to developing, in collaboration with stakeholder involvement, a plan outlining their proposed actions and timelines toward achieving the phosphorus reduction goal.

Signed this 13th day of June 2015.

Rick Snyder
Governor of Michigan

John Kasich
Governor of Ohio

Kathleen Wynne
Premier of Ontario
Fast Facts on Michigan’s Implementation Plan

for the Western Basin of Lake Erie Collaborative Agreement

On January 14, 2016, the state of Michigan, acting through its Water Resources Division, finalized its Implementation Plan for achieving the Western Basin of Lake Erie Collaborative Agreement’s phosphorus reduction goals. While focused on the Collaborative Agreement, Michigan’s Implementation Plan establishes a broad purpose:

*The purpose of the Michigan Implementation Plan is to define actions toward the collaborative goal, serve as interim approach to domestic action plans to be developed under the Great Lakes Water Quality Agreement Annex 4 process, provide focus for allocation of resources for actions, and identify actions and potential policy and/or program goals.*

Michigan is focused on three main geographic areas for phosphorus reductions: the Detroit River, the Raisin River, and Michigan’s portion of the Maumee River basin. The state’s plan for continuing reductions in phosphorus loads to Lake Erie consists of seven actions:

1. Maintain the reductions achieved in the Detroit Water and Sewerage Department (DWSD) discharge as a result of tightened National Pollutant Discharge Elimination System (NPDES) permit limits.
2. Achieve reductions in the Wayne County Downriver Wastewater Treatment Plant (WWTP) discharge by modifying that NPDES permit to include phosphorus limits consistent with those in the DWSD permit.
3. Achieve target reductions in the Maumee River basin in Michigan by developing a specific plan for these watersheds, in cooperation with Indiana and Ohio.
4. Help monitor and understand harmful algal blooms’ presence, timing, and causes in Michigan waters, including the Great Lakes.
5. Help understand the role of invasive mussels in causing Lake Erie algae blooms and the effect of potential invasive mussel control options.
6. Understand the specific mechanisms supporting Raisin River phosphorus reductions in order to share success stories and continue to reduce nutrient loads. Work will include an evaluation of the Monroe WWTP’s discharge of phosphorus.
7. Michigan will continue to investigate many issues associated with dissolved reactive phosphorus.

The state will measure its progress through annual benchmarks tracked for the Detroit River (calculated primarily using the DWSD and Wayne County discharge monitoring) and Raisin River (relying upon monitoring data at the USGS gauging station and Monroe WWTP). A monitoring strategy will also be developed for Bean Creek and the St. Joseph River, as Michigan’s tributaries to the Maumee River.

More details on Michigan’s Implementation Plan, Seven Action Items, and supporting data are included in the complete document, available at:

Western Lake Erie Basin Collaborative
Ohio Implementation Plan Outline
10-1-15

1. Purpose
   A. Implement actions toward stated goals
   B. Serve as interim approach to Domestic Action Plans
   C. Provide focus for allocation of resources
   D. Identify actions and potential policy/program needs

2. Background
   A. Why the Collaborative was needed

3. Goals
   A. 40% reduction by 2025
   B. 20% aspirational goal by 2020
   C. Use 2008 as base year to measure results
   D. Stakeholder engagement in the development and implementation of the Plan

4. Objectives
   A. Regional
      1. Provide a consistent framework across the WLEB (Ohio-Michigan-Ontario) for implementing programs and monitoring success
      2. Establish accountability for actions and results

   B. State Specific
      1. Review applicability of individual TMDL implementation plans within WLEB watersheds
      2. Establish policy/criteria to determine “watersheds of focus” for the allocation of resources
      3. Watershed specific characterization of loads
      4. Define specific programs, actions and delivery mechanisms by watershed and Lake Erie
      5. Establish timelines and accountability metrics for the measuring of results by watershed and Lake Erie
      6. Develop a “trigger mechanism” and enable the modification of programs and actions based on results and new information (adaptive management)
5. Tactics
   A. Current – evaluation of change since 2008 base year
      1. Programs implemented since 2008 and currently being implemented or have been implemented
      2. Metrics used for determining changes since 2008
   B. New
      1. Program authority granted or implemented within past 12 months or programs to be implemented within 12 months.
      2. Identify areas of priority for program implementation
   C. Proposed
      1. Future programs, processes or policy needs which may require new authority, funding, etc. beyond 12 months but within 36 months.
      2. Identify areas of priority for program implementation

6. Measuring Progress & Achieving Consensus
   A. Establish timelines
   B. Establish benchmarks (watersheds & Lake Erie)
   C. Establish reporting process to other Collaborative partners and interested parties
   D. Establish measuring protocols for watersheds and Lake Erie
The Nutrients Annex Subcommittee conducted a comprehensive science-based assessment of the phosphorus reductions needed to meet Lake Ecosystem Objectives in Lake Erie. New binational phosphorus load reduction targets were made available for public comment during the summer of 2015. In general, there was strong public support for the targets. The U.S. and Canada expect to formally adopt the new targets through an exchange of letters in early 2016.

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<td>Minimize the extent of hypoxic zones in the Waters of the Great Lakes associated with excessive phosphorus loading, with particular emphasis on Lake Erie</td>
<td>40 percent reduction from 2008 levels in total phosphorus entering the Western Basin and Central Basin of Lake Erie to achieve 6,000 MT Central Basin load. This amounts to a reduction from Canada and the United States of 212 MT and 3,316 MT, respectively.</td>
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<td>Maintain algal species consistent with healthy aquatic ecosystems in the nearshore Waters of the Great Lakes</td>
<td>40 percent reduction in spring total and soluble reactive phosphorus loads from the following watersheds where localized algae is a problem:</td>
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<td>Thames River - Canada Maumee River - U.S. River Raisin - U.S. Portage River - U.S. Toussaint Creek - U.S. Leamington Tributaries - Canada</td>
<td>Sandusky River - U.S. Huron River, OH - U.S.</td>
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<td>Maintain cyanobacteria biomass at levels that do not produce concentrations of toxins that pose a threat to human or ecosystem health in the Waters of the Great Lakes</td>
<td>40 percent reduction in spring total and soluble reactive phosphorus loads from the Maumee River (U.S.)</td>
<td>N/A</td>
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Next steps

- The US and Canada have begun work to develop domestic action plans and anticipate releasing draft action plans by late 2016/early 2017 – well in advance of the 2018 deadline in the Agreement. These plans will outline in more detail the specific implementation strategies needed to achieve the 40% reductions.
- While the above reductions to the Western and Central basins are expected to improve eutrophic conditions lake-wide, further reductions may be needed to curb shoreline fouling by nuisance benthic algae (*Cladophora*) in the Eastern basin. We are committed to continue research, monitoring and modeling efforts that will improve our scientific understanding of *Cladophora* growth and the viability of setting targets for the Eastern basin.
- We have begun laying the groundwork to initiate nutrient target development in Lake Ontario – by first identifying what additional monitoring and modeling is needed – so that when we start work on setting nutrient targets for Lake Ontario, we’ll be ready.
Great Lakes Blue Accounting
Delivering Information, Supporting Collaboration

Nine Desired Outcomes

- **Social Values and Quality of Life**
  - Awareness of water value
  - Stewardship of, and investment in, water resources

- **Sustainable Human Uses**
  - Safe and sustainable domestic water supply
  - Flourishing and sustainable natural resource-based economies
  - Flourishing and sustainable water-withdrawing economies
  - Flourishing and sustainable non-consuming, water-based economies

- **Healthy Aquatic Ecosystems**
  - Functional nearshore and coastal processes
  - Healthy, diverse and connected habitats
  - Healthy and abundant wildlife

Pilots

- **Connectivity**
  - Healthy, diverse and connected habitats

- **Aquatic Invasive Species**
  - Early detection and rapid response
  - Healthy and abundant wildlife

- **Source Water Initiative**
  - Safe and Sustainable Domestic Water Supply
  - Phosphorous Reduction Tracking System

Consistent Process to Measure Progress

- Desired Outcomes
- Shared Goals and Strategies
- Agreed Upon Performance Metrics
- Effective Management and Delivery of Information
Source Water Initiative Objectives

- Domestic Water Supply Pilot
- Phosphorous Reduction Tracking System

Demonstrate establishing shared goals and metrics for Safe and Sustainable Domestic Water Supply

Demonstrate establishing shared metrics and delivering information to track 40% Phosphorous reduction targets

Parallel Activities for Source Water Initiative

Establish workgroup
Shared goals
Metrics
Pilot locations
Data sources
Information delivery

Domestic Water Supply Pilot

- Group establishes specific goals
- Agreed-upon metrics to address goals
- Select 2 small watersheds as pilot locations
- Iterative data–metric matching

Phosphorous Reduction Tracking System

- 40% reduction in phosphorous load
- Track phosphorous loads
- Western Lake Erie
- Phosphorous loads, complement data–metric matching

Establish workgroup: regional water & phosphorus experts

Shared goals

- Working group: regional water & phosphorus experts
- Agreed-upon metrics to address goals

- Iterative data–metric matching

Whole Watershed View (Example)

Domestic Water Supply Example

- Working group establishes specific goals
- Agreed-upon metrics to address goals
- Iterative data–metric matching

Goal
- All users in watershed share responsibility for water quality point of intake

Metrics
- Amortized treatment costs at DWWTP plant
- Relative pollution contributions by sector/user
- Costs of reducing pollution loads
- Water quality at various points in watershed
- Invertebrate/fish community health

Data Sources
- Treatment plant CAPX and O&M budgets and asset value
- TMDLs
- Industry or literature documentation
- State and local monitoring of WQ (e.g., sediment, pH, DO) and stream health

State and local monitoring of WQ (e.g., sediment, pH, DO) and stream health

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State and local monitoring of WQ (e.g., sediment, pH, DO) and stream health
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Information Management Systems

- Create the metrics and information streams that support strategic decision making
- Acquire and transform data; provide quality control
- Support adaptive management programs

Source Water Initiative Workgroup Members

- Cluster 1: Elected and appointed officials from state, provincial and federal governments and agencies.
- Cluster 2: Institutions and organizations whose mission aligns with improving the Great Lakes and whose role it is to help monitor or report on progress
- Cluster 3: Municipal officials and business interests who depend on reliable source water

Source Water Initiative Potential Structure

- Domestic Water Supply
- Technical Support Team
- Phosphorus Reduction Tracking System
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ACKNOWLEDGEMENTS

Environmental Consulting & Technology, Inc. (ECT) and Veritas Economic Consulting, LLC (VEC) wish to extend our sincere appreciation to the International Joint Commission (IJC) for funding this project. In addition, thanks are due to Steven Renzetti (Professor of Economics, Brock University, Ontario) for reviewing and commenting on early versions of this report, and to three anonymous reviewers for their comments on the draft report.

For purposes of citation of this report, please use the following:


Lastly, any related communications can be directed to Sanjiv Sinha at ssinha@ectinc.com.
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1.0 EXECUTIVE SUMMARY

The International Joint Commission (IJC) sponsored this study to better understand the socioeconomic and policy implications of Harmful Algal Blooms (HABs) in western Lake Erie. This study is the second phase of an IJC-funded study (Weickel and Lupi, 2013) and further examines the implications of extensive HAB events like the ones that occurred in 2011 and 2014. The previous study identified many important issues, and quantified some - but not all - of the socioeconomic implications of western Lake Erie HABs.

This project extends that Phase 1 study by further evaluating HAB effects to regional economic welfare including effects to recreation, water withdrawals, tourism, and property values. Results of the Phase 1 study indicated that western Lake Erie HABs can affect inter-related economic systems over a broad, geographic area, and that little information has been collected to specifically support economic benefit studies. This study has benefited from the previous work conceptually and methodologically, however, the problem of information limitations persists. For example, certain information such as timing and severity of HABs at a micro-level (beach, marina, neighborhood, etc.) as well as short-run responses of people (such as recreators and/or tourists) and markets (rental, hotel, housing, restaurants) to the HABs are not available.

An additional challenge has been that certain responses of people and markets may not result directly from any specific HAB incident. Rather, these responses (termed lagged and halo effects in the Phase 1 report) occur in different places and time periods than HABs, and result from more complex cognitive and economic processes than the comparatively easy to measure (with appropriate data) economic effects that arise from ecological service reductions. As a result of these two factors, it is not currently feasible to quantify the economic effects of HABs using statistically-significant parameters within rigorous econometric models. Not having that capability, this effort relies on available secondary data and studies. To further illustrate possible effects, this information is incorporated by an evaluation of “value at risk,” which employs scenarios and sensitivity analyses to characterize ecological service interruptions and their immediate economic effects. In addition, this study presents a HAB severity index, created for 2011 and 2014 events, that varies by week and county. This construct is used to generate estimates of economic effects for these years; it could also be employed to evaluate future HABs events on Lake Erie. Less immediate (i.e., lagged and halo) effects are discussed and quantified in the context of these effects.

This study is not a marginal analysis of the benefits of reducing HABs by some amount. Rather, it strives to identify the economic benefits of reductions in future HABs and does so by evaluating the benefits of avoiding a recurrence of certain, previous HAB events. Thus, although the scenarios considered are based on past events (i.e., ex post), these events are considered as they would occur in the future.
This study presents a HAB severity index, created for 2011 and 2014 events, that varies by week and county. This construct can easily be employed to evaluate future HABs events on Lake Erie.

Toledo, Ohio, and on Pelee Island, Ontario. In Toledo, the municipal water system was disrupted leading to severe economic effects on households and businesses. The city has since initiated preventative measures, so water services are unlikely to be similarly interrupted in the future due to HABs. Well water on Pelee Island was affected, but there is no indication that steps have been taken to avoid interruption of water services in the future. Consequently, when evaluating the benefits of future HAB reductions: a) past damages incurred on Pelee Island are measured, and b) past damages incurred in Toledo are not measured, although ongoing expenditures to protect Toledo’s water system from HABs are counted.

A summary of the project’s findings related to property values, tourism, recreation, and water withdrawals (in U.S. dollars) are outlined below.

- **Property Values:** This study quantified $3.458 billion in residential housing stock that are located on the shore or in the nearshore (within 0.5 mile of the shoreline) of the western basin of Lake Erie. Part of this value is at risk for being impacted by HAB events. Because Lake Erie HABs are unique, it is challenging to identify the degree of these impacts. This effort did not link market prices directly to the 2011 and 2014 HAB events. Even though the impact is unknown, given the value of the nearby stock, HABs causing a 5 percent impact to near-shore values and a 10 percent impact to shoreline properties would result in $242.1 million in property value impacts.

For another perspective, this study evaluated specific impacts from 2011 and 2014 HAB events by applying a lost property value services approach. This approach identifies economic effects based on interruptions to Lake Erie ecological services. For 2011, this approach estimates lost property value services of $9.781 million for shoreline property owners and $7.087 million for nearshore property owners. For the 2014 HAB event, shoreline property owners are estimated to have lost $10.05 million in property value services, while nearshore owners lost $7.864 million.

- **Tourism:** Every year, millions of out-of-town trips are taken to counties adjacent to western Lake Erie with billions of dollars in expenditures boosting those communities’ economies. Although not all of this is directly related to Lake Erie, and only a portion occurs during prime, potential HAB time periods, it is clear that significant tourism revenue is at risk due to HABs. A portion of this revenue is profits. Retaining these profits would constitute a direct benefit, which would also be reflected in the value of businesses and commercial property.

This study quantified $3.458 billion in residential housing stock that are located on the shore or within the nearshore (within ½ mile of the shoreline) of the western basin of Lake Erie that are potentially at risk for being impacted by HAB events. To further get an idea of the scale, a 5 percent impact to near-shore values and a 10 percent impact to shoreline value translates into a total of $242.1 million impact in property values.

Very little specific and useful data regarding Lake Erie-related tourism and the effects of HABs is available and more thorough research is recommended. The approach used to assess tourism impacts in this report apportions aggregate estimates of tourism to identify tourism dollars that are at risk. This approach indicates that Ohio tourism dollars at risk range from $66 million to $305 million. Associated high-end lost profits are $20.79 million, and low-end lost profits are $165,000. In Michigan, a total of $24.78 million in tourism income is
at risk. This is associated with high-end lost profits of $1.685 million and low-end estimates of $124,000. Similarly, Canadian tourism economic impacts total of $17.3 million with high and low profitability impacts ranging from $1.6 million to $59,000. Because of the lack of information that directly links tourism to HABs, these estimates are indicative of the sort of effects that could have occurred with the 2011 or 2014 HABs; however, the estimates are not specifically associated with the 2011 or 2014 events through quantification. Rather, they are preliminary indications of how HABs could affect income from tourism and the potential magnitude. In years and areas without significant blooms, lagged and halo effects may nevertheless result in tourists foregoing trips. Currently, there is no information available to quantify such effects and they are not distinguished from the high-level characterization summarized above.

- **Recreation**: Benefits lost to recreation activities included beach-going, fishing, and boating. Although no studies were available to directly link HABs to lost recreation, benefits were derived by transferring information from related literature. Quantified loss of benefits for beach-going are $14 million for 2011, and $11 million for 2014. For fishing, the benefits are estimated at $10 million for 2011, and $7 million for 2014. For boating, the benefits are $7 million for 2011, and $5 million for 2014. The overall benefits to recreation from the lack of a HAB event are $31 million for 2011, and $23 million for 2014. Specific studies directly quantifying how recreation activities respond to HABs are recommended.

- **Potential implications of HABs for water treatment**: The only information available identifying the costs for water treatment indicates that approximately $3 million per year is being incurred to deal with HABs (Ohio EPA, 2014). These expenditures will ensure a steady water supply, even during severe HAB events. In other words, repeats of the 2011 and 2014 events are not expected to cause service interruptions for these municipalities. For this reason, this study did not consider the welfare impacts of future interruption events in Toledo. Pelee Island’s well water, however, is actually Lake Erie water, and there is no indication that expenditures have been undertaken to move well owners to municipal water. Consequently, an HAB event similar to 2014 would result in similar effects. The availability of Information to assess this effect is limited; however, these are estimated at $750,000.

- **Overall impacts**: Overall, under the scenarios developed here, the total impact of ecosystem service interruptions due to the 2011 HAB event is found to cost roughly $71 million ($16 million for property value, $20 million for tourism, $31 million for recreation, and $4 million for water treatment). For the 2014 HAB event, the estimate is roughly $65 million ($18 million for property value, $20 million for tourism, $23 million for recreation, and $4 million for water treatment.

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*This study developed scenarios that indicate nearly $71 million in lost economic benefits from the 2011 HAB event, and an additional $65 million in lost benefits from the 2014 event.*

*In addition, applying the commonly used 3% discount rate, for recurring HABs similar to 2011, the 30-year present value of lost benefits is $1.463 billion. Similarly, if the 2014 event were to be repeated over 30 years, also using a 3% discount rate, the 30-year present value of lost benefits is $1.339 billion.*
These estimates of lost benefits arise from the welfare economic measures of producer surplus and consumer surplus. Producer surplus is quantified as profits, while consumers’ surplus is quantified as resource user’s willingness-to-pay. For example, expenditure changes affecting tourism are identified, but only losses in profits are considered in total benefits. In addition, this report’s estimates do not include the willingness to pay to reduce HABs by non-users, namely people who don’t use Lake Erie or live near it, although these nonuse values could sum to a substantial total. In summary, tourism related expenditure divergences and impacts to non-use values (both of which could be substantial) are not included.

- **Business-as-usual scenario - HABs recurring every year:** Project Team evaluated the effect of annually recurring HABs similar to 2011 and 2014 by present value calculations that assist in characterizing continual effects. Present value, also known as discounted present value, is the value of an expected income stream determined as of the date of valuation, and is a good measure of understanding policy implications. Applying the commonly used 3% discount rate, for recurring HABs similar to 2011 the 30-year present value of lost benefits is $1.463 billion. Similarly, if the 2014 event were to be repeated over 30 years, also using a 3% discount rate, the 30-year present value of lost benefits is $1.339 billion.

As indicated previously and repeated throughout this report, these estimates are based on sound methods, but are preliminary due to the lack of data. The project team proposes the following points are investigated further:

- Develop an econometric model that links data on the presence and severity of HABs with sales data on the properties at risk to scientifically quantify the relationship between the presence and severity of HABs and property value losses. Such a study would replace the transfer and scenario-based evaluations conducted for this analysis with a parametrized evaluation of the property value effects of HABs.

- Identify if property effects of HABs, which differ in their impact every year, more closely resemble short-term disasters or events with effects spanning several years.

- Future work could also involve a more detailed study that accesses tax assessor data and more fully describes all the property values along the shore and in the nearshore areas where HABs are a risk.

- A related line of research could also incorporate homeowner preference data from surveys. Since shoreline and nearshore property owners are important stakeholders, a viable option for addressing the impacts of HABs on property values is to combine survey-based research approaches with formal property value models, as was done for contaminated sediment remediation in Waukegan Harbor (Braden et al, 2004).

- There are numerous parameters relating the presence and severity of HABs to changes in tourist activity that are not well understood and were specified as defined scenarios for this analysis. A key next step would be to develop scientifically-based evaluations of the following:
  - The proportion of late summer and early fall trips to counties that border western Lake Erie and are Lake Erie related.
  - Develop a scientific evaluation of the relationship between the presence of HABs and diverted tourist trips.
  - The relationship between the types of trips that are diverted because of the severity of HABs, where those trips are diverted to, and the amount of spending on those diverted trips.
• There is currently no study that links the presence and severity of HABs with changes in recreation demand. The analysis conducted for this report transfers results from other relationships to parameterize the effect that HABs have on beach use, fishing, and boating. However, a key next step would be to undertake a recreation demand study to quantify the effect that changes in the presence and severity of HABs have on recreational beach use, fishing, and boating demand. The study would also better quantify the baseline level of beach use, fishing, and boating trips to western Lake Erie.

• If current averting and treatment costs do not adequately protect against HAB interruptions to potable water supply or do not change individual, consumer behavior, further documentation on and research into losses of such events are highly warranted.

• Lastly, a key next step may also involve gathering behavior-specific and cost data on what residents of Pelee Island did to mitigate the 2014 HAB, how much they spent on their mitigation efforts, and identify whether they have made any capital investments or behavioral changes to avoid having to undertake those mitigation activities under future HAB events.

In what follows, Section 2 presents a background of Lake Erie, discusses HABs and its various drivers, and concludes with a summary of recent HAB events. Section 3 presents a summary of economic methodology adopted in this report, and describes the novel approach used to quantify HAB severity by county/island and week. An analysis of value at risk and value lost due to ecosystem service interruptions for residential properties in shoreline and nearshore areas is presented in Section 4; Section 5 evaluates economic benefits of HAB reductions for three, interrelated sectors, namely tourism, business profitability, and commercial property values. The implications of HAB reductions on fishing, boating, and beach-going are evaluated in Section 6. This is followed by an evaluation of potential implications of HABs for water withdrawers in the western Lake Erie basin in Section 7. The report concludes by presenting a summary of proposed next steps in Section 8.
Memorandum

To: Great Lakes Commissioners, Associate Commissioners and Alternates

Fr: Eric Marquis, Quebec Government Office in the Midwest
    Tom Crane, Stuart Eddy and Michele Leduc-Lapierre, Great Lakes Commission staff

Da: February 9, 2016

Re: Update from the Oil Transportation Advisory Committee

This memo provides an update on the work and progress of the Oil Transportation Advisory Committee formed at the request of the Great Lakes Commission members at its 2015 Semiannual Meeting in Washington, D.C.

Since the spring of 2015, the Oil Transportation Advisory Committee has met monthly via conference call and has continued to do so since the last update provided to the Commission at its 2015 Annual Meeting in Chicago.

In December, the Committee – which includes representatives from the Commission’s member governments, as well as representatives from NGOs, industry, and local and tribal governments - finalized a set of 10 guiding principles accompanied by a preamble representing ideas around which all members were able to find common ground for agreement. These principles reflect the ideals that the committee is working toward. They will provide the foundation and inform the process for developing consensus recommendations. The preamble and guiding principles follow this memo in the “information” section of the briefing book and are presented as a product of the Committee.

Since its December conference call, the Committee has begun to examine several issues on a more in-depth basis. These include:

- the concept of risk and how it can be associated with oil transportation;
- the importance of communication (especially between different levels of government and the two countries);
- the definition of and difference between worst case discharge and worst case scenario;
- technology-based standards and how these standards inform the discussion on risk, especially regarding comparative risk between different modes of transportation.

Ensuring environmental and economic prosperity for the Great Lakes-St. Lawrence region through communications, policy research and development, and advocacy.
Since then, staff has held conference calls with experts to educate themselves and gather information that was shared with the Committee. Experts were also invited to talk on specific topics during the Committee’s conference calls.

One topic that has generated particular interest is information from both the U.S. and Canada on environmentally sensitive areas along the Great Lakes and St. Lawrence River coasts. Of special note is the Committee’s interest in making sure that the environmental sensitivity index (ESI) maps produced by NOAA for the coastal areas of the United States are kept current and that the information in both countries is uniform and consistent so that it can be applied effectively to planning and response efforts in the event of a spill incident. The Committee may soon be working with the Commission’s Board of Directors to communicate to NOAA the need to revise the ESI maps for the Great Lakes, which were last updated in the early 1990s.

The Committee will also be reviewing abstracts prepared by the staff to solicit briefing papers on some of the topics described above. These briefing papers will be supported by funds provided by the Mott Foundation to help the region better understand the issues surrounding oil transportation. In addition, the Commission has discussed with the Joyce Foundation the opportunity of convening a symposium on risks associated with oil transportation. If support from Joyce (and possibly other regional funders) is made available, this risk symposium would take place sometime in 2017.
Oil Transportation in the Great Lakes-St. Lawrence River Region  
– Preamble to the Guiding Principles –

Over the past ten years, there has been a significant increase in the production of crude oil from the western oil fields of the U.S. and Canada. In the U.S., 2014 production of crude was 75% greater than 2009 levels. Similar increases have occurred in Canada. These increases in crude oil production have created a demand to transport large volumes of oil quickly and efficiently from production fields to refineries and export facilities along the Great Lakes-St. Lawrence River to the Gulf, Atlantic and Pacific coasts. The surge in oil production, the challenges of oil transport and the publicity surrounding a series of recent spills has prompted the United States, Canada, states, provinces and local units of government to examine ways to minimize the economic, environmental and social risks.

The Great Lakes Commission has also taken notice of this important issue. Concerns raised following notable incidents that occurred near Marshall, Michigan, in 2010 and in Lac-Mégantic, Québec, in 2013, coupled with the desire for information regarding the implications of the dramatic increase in the movement of crude oil to and through the Great Lakes-St. Lawrence River region, prompted the Commission, at its 2013 Annual Meeting, to instruct its staff to prepare an issue brief on oil transportation. In February 2015, the Great Lakes Commission staff completed a report titled: Issues and Trends Surrounding the Movement of Crude Oil in the Great Lakes-St. Lawrence River Region. The report, which included four in-depth briefs and a series of findings to guide future discussion, was presented and received by the Great Lakes Commissioners at the 2015 Semiannual Meeting.

In receiving the report, the Commissioners recognize the complex nature of the issues and the need to properly understand what government and industry have done and are currently doing to improve transportation safety and decrease risks. The Commission recognizes the benefits of oil to the region and its economy. The oil and natural gas industry is one of the world’s largest industries and the North American economy has been dependent on oil for the past century. Other organizations involved with the Great Lakes Commission hold the view that the region should reduce reliance on oil and develop a more balanced energy portfolio and take advantage of economic opportunities in the renewable energy sector. The Great Lakes-St. Lawrence River region is particularly dependent on oil and is a hub of oil transportation and refining activity. As such, the region is directly experiencing many of the challenges posed by oil transportation due to the increases in domestic production. The region has begun to grapple with issues surrounding modal shifts in transportation, public health and safety issues surrounding increased oil movement, absolute and relative risks of transporting oil, industry responsibility, government oversight and many more.

In addition, oil production and use have made significant contributions to global greenhouse gas emissions, increases in carbon dioxide concentrations in the atmosphere and the consequent changes to our climate. Climate change adds yet another stress to an ecosystem already struggling with aquatic invasive species, deleterious land use changes, nonpoint source pollution, toxic chemical contamination, and coastal habitat degradation/wetlands loss.
To help further this important discussion, the Great Lakes Commission approved a resolution at its 2015 Semiannual Meeting acknowledging receipt of the oil transportation report and directing the staff to form an Advisory Committee to work with its Board of Directors to review the report findings and begin the development of recommendations. The Advisory Committee has met monthly via conference call since May 2015.

In July, the Advisory Committee began working on a series of guiding principles representing fundamental concepts where there is consensus among committee members. Development of these principles was a valuable way for Advisory Committee to define the scope of the issues being addressed, to establish a common language for building consensus, and inform the development of future recommendations.

The guiding principles that follow begin with the premise that the unique geographical, ecological and climatological characteristics of the Great Lakes-and St. Lawrence River make them critically important to the region’s economy, environment and quality of life, and that they must be protected from the increased risks posed by the dramatic increase in oil transportation to and through the region. The principles also note the unique and well-developed regional governance structure and recognize the historic emphasis and the importance of “polluter pays” principles, public trust doctrine obligations, and the numerous state, provincial, federal, regional and international laws and agreements that govern environmental protection activities for the region. These include the Great Lakes Water Quality Agreement of 1972 (amended in 1978 and revised by protocol in 1987 and 2012) and the Boundary Waters Treaty of 1909 among others.

The guiding principles are a framework that provide the basis for future work of the Great Lakes Commission in areas related to risk reduction, evaluation of preparedness and response programs, regulatory inspection and enforcement, fostering communication and coordination between jurisdictions and industry, industry and government accountability, identification and update of “worst case” scenarios by transportation modes, and others.
Oil transportation in the Great Lakes-St. Lawrence River region
– Guiding Principles –

1. The Great Lakes and St. Lawrence River together comprise the largest body of fresh surface water in the world. More than 40 million U.S. and Canadian citizens depend on them for drinking water, recreation, agriculture, transportation, and to support the region’s economy, business and industry mix, and quality of life.

2. The oil transportation industry serves important sectors of the regional economy and oil will continue to be transported across the Great Lakes-St. Lawrence River region by one mode or another for the foreseeable future.

3. The transportation of oil in the Great Lakes-St. Lawrence River region should be accomplished in ways that minimize risk to property and the environment.

4. The release of significant quantities of oil could have immediate and lasting adverse ecological and economic consequences for the Great Lakes-St. Lawrence River region.

5. The unique cultural, economic, public health and environmental value of the waters of the Great Lakes-St. Lawrence River region requires a high level of stewardship by governments, companies, communities and individuals. Reasonable stewardship obligations for this region may compel programs, operations, standards and practices that go above and beyond the normal and required obligations applied elsewhere.

6. Companies and individuals engaged in the transportation of oil in the Great Lakes and St. Lawrence River region should, at a minimum, be in full compliance with existing regulations, but also recognize the gaps in regulations and strive to mitigate those voids within their operations.

7. Companies and individuals engaged in the transportation of oil in the Great Lakes-St. Lawrence River region must carry the necessary financial reserves or insurance to cover the consequences of a worst case release of oil.

8. Infrastructure associated with oil transportation in the Great Lakes-St. Lawrence River region should be safe, in good condition, and appropriate to the product being transported. Regulatory agencies involved with oil transportation infrastructure must have sufficient resources to carry out monitoring, inspections and enforcement actions in a timely and effective fashion. Agencies should provide regular updates on their activities and their outcomes related to infrastructure.

9. Communities and the general public in the Great Lakes–St. Lawrence River region have the right to know what products and raw materials, and maximum amounts of those materials, that are expected to be transported to and through the region on a regular basis. Companies engaged in the transportation of oil in the region can and should expect that business confidential information, business sensitive security information and proprietary information will be safe-guarded as described under state, provincial and/or federal laws.

10. Regulations aimed at reducing risk from the transportation of oil must be sufficiently stringent and consistent across modes so that any one mode is not conferred a special economic advantage.
January 25, 2016

The Honorable Barack Obama  
President  
The White House  
1600 Pennsylvania Ave., NW  
Washington, DC 20500

Dear President Obama:

This letter is written on behalf of the Chicago Area Waterway System (CAWS) Advisory Committee, whose members have met since 2014. The Committee includes representatives from 30 public and private stakeholders that benefit from and have responsibilities related to the CAWS, as well as regional stakeholder groups representing commercial, recreational, and environmental interests. The goal of the Committee is to reach consensus on a set of recommendations to elected and appointed local, state, and federal officials and to the public on short and long-term measures to prevent Asian carp and other aquatic invasive species (AIS) from moving between the Mississippi River and Great Lakes basins through the CAWS.

The CAWS Advisory Committee has concluded that a system of possible control points in the CAWS to address AIS is worth further study. The Advisory Committee requests that sufficient funds be allocated, beginning with the proposed fiscal year 2017 budget, that will allow the U.S. Army Corps of Engineers (USACE), under existing authorities, to complete specific studies necessary to develop a Chief's Report on a system of control points, as described below, to prevent the transfer of AIS to and from the Mississippi River and Great Lakes basins through the CAWS. The Advisory Committee anticipates this work will involve a multi-year effort. We must emphasize the urgency of this situation, and request that USACE complete the process as soon as possible, recognizing that certain process requirements, including compliance with the National Environmental Policy Act, must be met. The Chief's Report and accompanying information should be in sufficient detail for decisionmakers at the local, state, and federal levels to determine how to move forward with a long-term solution.

The CAWS Advisory Committee has considered options in the Great Lakes Mississippi River Interbasin Study (GLMRIS) developed by USACE, along with additional information provided by technical consultants, and has identified further information needed to design and select a long-term solution. This includes assessing in more detail, with respect to all of the criteria below, the following questions regarding a system of control points:

1. Whether an AIS lock or system of AIS locks can be designed and implemented in the CAWS to be effective at two-way prevention, compared to other alternatives, including what is known to be most effective; and
2. Whether and how control points could be implemented consistent with the mid-system locations identified in several GLMRIS alternatives.

Nothing in this letter is intended to limit USACE and/or other federal or state agencies from analyzing or implementing other AIS control measures that might be needed and have been shown to be feasible and effective.
Further information and analyses on these topics are necessary in order to reach consensus among Advisory Committee stakeholders on what specific control measures are needed or on the specific locations for control points. The Advisory Committee identified significant information needs on a number of topics, not sufficiently developed in GLMRIS. Assessment of these topics necessitates selecting possible control point locations to analyze. USACE also should not unduly restrict its consideration of other possible control locations, if the results of the initial analyses indicate that these locations are more appropriate.

The long-term solution in the CAWS should be designed with the following criteria in mind, which have guided the Advisory Committee:

- Prevent two-way interbasin transfer of invasive species between the Great Lakes and Mississippi River System through the CAWS in Illinois and Indiana.
- Maintain or enhance efficient maritime transportation and commerce through and on the CAWS.
- Reduce flood risk in Illinois and Indiana.
- Reduce impacts of Combined Sewer Overflows in Illinois and Indiana.
- Protect or improve water quality in the CAWS, Lake Michigan and the Illinois River Basin, and meet federal and Illinois and Indiana environmental regulations.
- Reduce the need for discretionary diversions from Lake Michigan.
- Create local benefits sufficient to facilitate local cost sharing.

In assessing an AIS lock system, USACE should build on studies conducted since GLMRIS, including a report by the U.S Geological Survey\(^1\), and evaluate treatment and other control measures that could be applied to a full range of taxa and life stages. In this assessment, USACE should interface and collaborate with the member agencies of the Asian Carp Regional Coordinating Committee, representatives of Mississippi River basin agencies, and private entities.

Evaluation and research into a one-way lock treatment system is already underway for the Brandon Road Lock and Dam through the USACE Brandon Road Feasibility Study. As design studies are conducted, it is important that current nonstructural control measures for Asian carp, such as harvesting, be maintained and expanded downstream, and be fully funded. Actions to stop other AIS of concern from moving between basins should also be expanded and fully funded with appropriate congressional approval.

The City of Chicago, Metropolitan Water Reclamation District of Greater Chicago, other local governments, the State of Illinois, other Great Lakes and Mississippi River states, Canadian interests, tribes/First Nations, environmental and industrial nongovernmental organizations and the private sector should be involved in the process to ensure that they are engaged and have the information needed to assess recommended actions, using criteria of importance to all stakeholders. The Committee also requests that USACE provide opportunities for meaningful public participation and transparency throughout the study process.

This request reflects the consensus of the CAWS Advisory Committee.

Respectfully submitted,

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cc: Great Lakes and Mississippi River Congressional Delegation
Asian Lakes Regional Coordinating Committee
Honorable Barack Obama
President
The White House
1600 Pennsylvania Avenue NW
Washington, DC 20500

Dear President Obama:

This letter is written on behalf of the Advisory Committee for the Chicago Area Waterway System (CAWS). The committee urges you to recommend that Congress provide the necessary funding for the Army Corps of Engineers’ FY 2017 budget to conduct engineering and design activities to complete the Brandon Road Feasibility Study. This study will assess the viability of establishing a single control point at the Brandon Road Lock and Dam to protect against the one-way, upstream transfer of aquatic invasive species (AIS) from the Mississippi River into the Great Lakes Basin.

The committee includes representatives from 30 public and private stakeholders that benefit from and have responsibilities related to the CAWS, as well as regional stakeholder groups representing commercial, recreational, and environmental interests. The committee is working to find a long-term solution that prevents the inter-basin transfer of AIS between the Great Lakes and the Mississippi River basins while also maintaining or enhancing maritime transportation, reducing flood risk and the impact of combined sewer overflows in Illinois and Indiana, and protecting or improving water quality in the region.

The Committee requests that you direct the U.S. Army Corps of Engineers to complete the study as quickly as possible, consistent with the 3X3X3 project preconstruction, engineering and design reforms enacted in the Water Resource Reform and Development Act of 2014. We ask that the Feasibility Study result in a decisionmaking Record of Decision and Chief’s Report to Congress.

Given the challenges and lengthy timeframe associated with a long-term solution for two-way inter-basin transfer, advancing work at Brandon Road should be one of the Corps’ top priorities for achieving greater protection from AIS in the nearer term. Not only is Brandon Road an important control point for the movement of AIS such as Asian Carp, it also presents an opportunity to evaluate the effectiveness of a range of control technologies and how to ensure their compatibility with transportation, the natural environment, and other important factors on the waterway.

These requests reflect the consensus of the Advisory Committee. We appreciate your support for the resources and actions needed to achieve the strongest possible protections against the movement of aquatic invasive species into the Great Lakes.

Sincerely,
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<td>Marc Smith, Policy Director, Great Lakes Regional Center</td>
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UPDATE: Small Asian Carp Found in Marseilles Pool of Illinois River

October 30, 2015

On October 22, 2015, as part of an on-going comprehensive monitoring plan for assessing location and populations of Asian carp in the Illinois Waterway, U.S. Fish and Wildlife Service (USFWS) sampling crews detected two small silver carp in the Marseilles Pool of the Illinois River. This site, near Moody Bayou, upstream of Seneca, Illinois, marks the furthest upstream location fish of this size have been captured. The fish, captured via electrofishing and measuring about 6.5 inches in length, will be aged by researchers to determine what year they were spawned.

These small fish are approximately 12 miles closer than our previous finding. Currently, there are three locks and dams, the electric dispersal barriers and more than 76 miles between them and Lake Michigan. This finding brings the leading edge of juvenile Asian carp detections about 66 miles closer to Lake Michigan than it was at the beginning of 2015.

Monitoring for juvenile Asian carp in the Illinois River, Des Plaines River, and the Chicago Area Waterway System (CAWS) takes place through sampling identified in the 2015 Monitoring and Response Plan by the Illinois Department of Natural Resources, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, and research organizations from throughout the state. Most notably, USFWS targeted these smaller fish with standard and experimental gears to increase detection of these sizes of Asian carp, concentrating on the historical locations and identifying any upstream movement. This sampling targets a segment of the Asian carp population typically missed with adult sampling gears and provides information to help determine where Asian carp are successfully spawning.

Complete details of the 2015 Monitoring and Response Plan for Asian carp in the Illinois River and CAWS can be found online at [www.asiancarp.us](http://www.asiancarp.us/news/Map103015.htm).
Presence of Bighead and Silver Carp in Illinois Waterway

Distance From Lake Michigan
- Presence of adults (47 Miles)
- Presence of adults with observed spawning (62 Miles)
- Verified spawning (76.5 Miles)
- Dispersal Barrier (37 Miles)
- Lock and Dam

Date and Location of Collections
- 2014 (RM 190, Henry, IL)
- April 2015 (RM 211, Spring Valley, IL)
- April/June 2015 (RM 223, Peru, IL)
- July/August 2015 (RM 236, Ottawa, IL)
- Sept. 2015 (RM 242) & Oct. 2015 (RM 244, Heritage Harbor Marina, IL)
- Oct. 2015 (RM 256.5, Moody Bayou, IL)

Map Created by: Jeena Credico
Date: 10/30/15
Projection: USA Contiguous Albers Equal Area Conic USGS Version
Scale: 1:1,600,000
Source: USFWS, City of Chicago Data Portal, Esri Software, USGS NHD
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Asian Carp Response in the Midwest

Asian Carp eggs and larvae identified in the Upper Illinois Waterway during 2015

On June 18, 2015, three Silver Carp larvae were collected, approximately a mile-and-a-half upstream of the I-55 Bridge (Channahon, Illinois), in the Dresden Island Pool of the Des Plaines River (River Mile (RM) 279.3). These individuals ranged from 8.5 – 10.0 mm (0.33-0.39 inches) total length. Asian carp eggs (either Silver or Bighead Carp) were also identified from samples collected from Marseilles and Starved Rock pools of the Illinois River, as well as from downstream pools (LaGrange and Peoria). These detections are within areas that Bighead and Silver Carp have historically been captured; however, this is the first collection of larval fish upstream of Henry, Illinois (approximately 90 miles downstream on the Illinois River from this detection location in Dresden Island Pool). No additional Asian carp larvae were collected in this 90-mile stretch of the Illinois River in 14 sampling visits from April 27, 2015 to September 14, 2015.

Since 2011, as part of the Asian Carp Regional Coordinating Committee (ACRCC) Monitoring and Response Work Group (MRWG) Asian Carp Monitoring Plan, the Illinois Natural History Survey (INHS) has been sampling for the presence and abundance of Asian carp eggs and larval life stages throughout the Illinois Waterway using 0.5 m diameter push nets with a 500µm mesh. While sampling throughout the year (April –October), weekly samples are preserved and returned to the lab for sorting and identification. Presumptive visual lab identifications for either of two Asian carp species (Bighead or Silver Carp) were made in August 2015 for the June 18, 2015 samples discussed here, and genetic analyses were necessary to confirm lab identification. For genetic confirmation, one of the assumed Asian carp larvae from the Dresden Island Pool and five Asian carp eggs from the Starved Rock and Marseilles pools, were sent to the US Geological Survey (USGS) Upper Midwest Environmental Sciences Center for analyses. On November 2, 2015, USGS confirmed the larval specimen from the Dresden Island Pool as Silver Carp; all eggs from the Starved Rock and Marseilles pools were genetically identified as being Asian carp, either Bighead Carp or Silver Carp. More than 78,000 individual larval fish, including 62,170 larval Asian carp have been identified from samples collected in 2015, all at or downstream of Henry, Illinois (RM) 190, except the three Silver Carp larvae confirmed in Dresden Island Pool, RM 280. Additionally, 71,367 Asian carp eggs have been identified from 2015 Illinois Waterway ichthyoplankton samples. More than 98% of Asian carp larvae and 55% of Asian carp eggs were collected in the downstream, LaGrange and Peoria pools. Given the estimated age of these larval fishes (200 hours) and the high flow in the waterway prior to and during the sampling period, a time-of-travel analysis of USGS streamflow gage data suggests that the larval fishes are not likely to have originated in the Chicago Area Waterway. However, alternative means of conveyance may have been utilized as this larval stage cannot move upstream or laterally on its own at this stage. Contamination or mislabeling of samples could also contribute to misinformation, but after review of these items, scheduling of sampling events, and proximity of like samples it is not evident this occurred. Finally, visual confirmation of attempted Asian carp spawning in the Marseilles Pool has occurred over the past three seasons; however, high river flows suggest any hatching of these eggs or movement of larvae from the drift are expected below Starved Rock Lock and Dam, where larval fish have been historically detected. No eggs were collected and identified as Asian carp in these prior years despite similar sampling events.
Asian carp egg found on outside of net in 2007 from Illinois River near Havana, Illinois. Photo by Kevin Irons/IDNR.

Sampling for larval fish continued throughout the 2015 summer months with no additional larval fish identified in upstream reaches. The ACRCC Monitoring and Response Plan continues to sample with a variety of small fish detection techniques in the Dresden Island, Brandon Road and Lockport pools, routinely finding no evidence of small fish in these most-upstream reaches, or near the U.S. Army Corps of Engineers Electric Dispersal Barrier system.

In a proactive response to this preliminary information, ACRCC Monitoring and Response Work Group (MRWG) agencies deployed electrofishing crews in the Dresden Island Pool with additional and substantial effort, deployed contracted fishers using a novel tool, a 200-meter small mesh seine designed to catch gizzard shad, a small native fish species that resembles Asian carp and inhabits their same niches. Furthermore, electrofishing efforts were used to drive fish into seines combining two effective sampling gears to maximize detections. These small meshed seine hauls were pulled in the Marseilles and Dresden Island pools. In all of the additional response efforts with these gears, no small Bighead or Silver Carp less than 6 inches were collected.

Given the concern about these findings, the Monitoring and Response Plan for 2016 is expected to contain heightened efforts to detect such spawning events, although the MRWG does not believe that either Asian carp species is established in the upper Illinois River. Monitoring efforts will also increase to further inform managers on the location and distribution of small Asian carp resulting from the recent record spawns in downriver locations and their movement above Starved Rock Lock and Dam.

Lastly, and most encouraging, is that Asian carp abundance in the most upstream pool in which they are found (Dresden Island), have shown significant declines (68%) between 2012 to 2014. This reduction is most likely attributed to contracted fish removal efforts. Recommendations to increase fish sampling efforts by 50% in this and other pools are being developed.
Bighead and silver carp distribution in IWW and CAWS. Download PDF version.

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http://asiancarp.us/news/CarpEggs.htm
Brandon Road Study
Schedule

SMART Feasibility Study Process 46 Months

SCOPING
- Alternatives Milestone
  Vertical Team concurrence on array of alternatives
  Completed
  June 2015

1. TSP Milestone
   Vertical Team concurrence on tentatively selected plan
   Jan 2017

ALTERNATIVE FORMULATION & ANALYSIS
- TSP Milestone
  Vertical Team concurrence on tentatively selected plan
  Jan 2017

2. Agency Decision Milestone
   Agency endorsement of recommended plan
   Nov 2017

FEASIBILITY-LEVEL ANALYSIS
- Civil Works Review Board
  Release for State & Agency Review
  Jul 2018

3. Agency Decision Milestone
   Agency endorsement of recommended plan
   Nov 2017

CHIEF’S REPORT
- Chief’s Report
  Jan 2019

5. Chief’s Report
   Jan 2019

*Study schedule dependent on the receipt of timely funding

Activities and documentation to support a decision document
- NEPA Scoping for BRLD, three public meetings
  December 2014
- Model Certification for selected Planning Models
  April 2016
- ATR, IEPR, Policy Review, & NEPA Review
  May 2017
- Agency Decision Milestone
  November 2017
- Civil Works Review Board
  July 2018
- Chief’s Report
  January 2019
The Conference of Great Lakes and St. Lawrence Governors and Premiers launched its Maritime Initiative to improve the region’s maritime transportation system and sustainably grow the regional economy. The Governors and Premiers created a Maritime Task Force to help rejuvenate this critical component of the region’s transportation and infrastructure system.

Since 2013, the Task Force has taken a series of important actions:

- Completed a State and Provincial maritime asset inventory to identify key components and needs of the regional maritime system.
- Developed regional maritime priorities to establish regional consensus and guide future management and funding.
- Created a regional maritime entity model to better coordinate maritime planning and management according to regional priorities.

Building on these accomplishments, the Task Force is working with industry, governmental, and nongovernmental partners to develop the first regional strategy for the Great Lakes-St. Lawrence River maritime system. This strategy will include recommended policies, programs, and projects designed to maintain and improve system assets, and align them with regional priorities including optimized connectivity and linkages with other transportation modes. Rather than continue managing a system built to meet yesterday’s needs, the maritime strategy will anticipate tomorrow’s needs and create a vision for a 21st century system.

The Great Lakes-St. Lawrence maritime transportation system is one of the region’s competitive advantages, a backbone of the $5 trillion regional economy, and a key to the region’s continuing prosperity. The States and Provinces will continue working together to capitalize on this interconnected, inter-jurisdictional transportation system and increase the economic competitiveness of the entire region.

For More Information
The Conference of Great Lakes and St. Lawrence Governors and Premiers is located at 20 North Wacker Drive, Suite 2700, Chicago, IL 60606. Our phone number is (312) 407-0177. For additional information, we encourage you to visit our website at www.cglslgp.org.
EXECUTIVE SUMMARY

The Conference of Great Lakes and St. Lawrence Governors and Premiers launched the “Great Lakes-St. Lawrence Maritime Initiative” in 2013 to improve the efficiency and competitiveness of our maritime transportation system, to grow our regional economy, to increase the internal movement of goods across the region, to expand the movement of goods to and from foreign markets, and to create jobs. The initiative has cemented the importance of managing the Lakes and River as one single, integrated maritime transportation system (MTS) and not as a series of loosely related or connected parts.

Since its launch, the initiative created the first-ever inventory of regional MTS assets, maritime priorities and a Regional Maritime Entity to coordinate ongoing work. The Governors and Premiers have each designated a representative to serve on this Regional Maritime Entity and charged it with coordinating State-Provincial actions and spearheading system-wide improvement.

Globally, maritime transportation is growing rapidly shaped by continuously expanding international trade and increased efficiency in global shipping. Drivers include the continuous innovations seen in the expansion of the Panama and Suez Canals, increases in the size and efficiency of container transport, expanded coastal ports and major investment in ports and maritime infrastructure in the Baltic Sea region, across Europe and throughout Asia and other parts of the world. The MTS must keep pace with this trend and become more efficient and effective in order to better attract traffic and stay globally competitive.

Primary Objectives: The MTS Strategy’s primary objectives are to double maritime trade, shrink the environmental impact of the region’s transportation network and support the region’s industrial core. Toward this end, specific actions are organized around the following themes including a blend of policies, programs and projects.

- Increasing Efficiency and Reducing Costs;
- Building New Markets;
- Growing Economic Activity around the Maritime System; and,
- Delivering Results while Managing for the Future.

This Strategy was developed under the leadership of the Great Lakes and St. Lawrence Governors and Premiers. Their Regional Maritime Entity led the drafting process in partnership with its advisory committee including carriers, shippers, non-governmental organizations and other stakeholders.

This finalized Strategy reflects the region’s consensus on steps to improve the MTS. Some steps are near term and more easily achieved while others are aspirational and will require additional time and effort. The shared vision, however, is to ensure that the region exploits the full range and depth of its maritime cluster and attracts inward investment in ports and other maritime business, contributing to our national and regional economies. Successful follow-through will help transform the MTS to meet 21st century needs and capitalize on 21st century opportunities.
Figure 1 | Maritime Transportation System Map

Source: Unlocking the Value of the Great Lakes-St. Lawrence River Maritime Transportation System.
Testimony of:

George Hawkins

General Manager
District of Columbia Water and Sewer Authority
Washington, DC

Chair, Money Matters Task Force
National Association of Clean Water Agencies
1816 Jefferson Place, NW
Washington, DC

Subcommittee on Water Resources and Environment
House Transportation and Infrastructure Committee
U.S. House of Representatives
July 25, 2012
Introduction
Chairman Gibbs, Ranking Member Bishop, and members of the Subcommittee, thank you for the opportunity to appear before you today. My name is George Hawkins and I am the General Manager of the District of Columbia Water and Sewer Authority, now more commonly known as DC Water. I also serve as the Chair of the National Association of Clean Water Agencies’ (NACWA) Money Matters Task Force, responsible for providing strategic guidance on new approaches to Clean Water Act (CWA) affordability. It is my pleasure to be testifying on NACWA’s behalf today.

NACWA’s primary mission is to advocate on behalf of the nation’s clean water agencies, also known as publicly owned wastewater treatment works (POTWs), and the communities and ratepayers they serve. NACWA public agency members collectively treat approximately 80 percent of the nation’s wastewater. The employees of these agencies are public servants and true environmentalists who ensure that the nation’s waters are clean and safe, meeting the strict requirements of the CWA.

NACWA applauds the Subcommittee for holding this important hearing on the issue of the U.S. Environmental Protection Agency’s (EPA) final Integrated Municipal Stormwater and Wastewater Planning Approach Framework (the framework). NACWA has played a leadership role in advocating for an integrated planning approach and is pleased to see EPA’s continued leadership on the issue of prioritizing clean water investments to maximize water quality gains and minimize impacts on already burdened municipal budgets. EPA’s framework not only promises to provide significant and much-needed flexibility for many communities facing significant water quality challenges, it symbolizes the recognition that it is time to do things differently.

Affordability Concerns and the Clean Water Act
While there is little doubt that the nation’s water quality has improved as a result of the CWA, the command-and-control nature of the CWA has led to an accretion of costly regulations on the nation’s communities and on the rate-paying residents and industries that foot the bill to ensure CWA compliance. The list is well-known — from wet weather-based requirements including combined sewer overflows, sanitary sewer overflows, and stormwater regulations — to specific pollutant-based requirements, such as nutrient limits and numerous other total maximum daily loads and effluent limitations. At the same time that regulations continue to expand, so too have enforcement actions. Nearly 100 cities across the country have signed off on sewer overflow consent decrees, with some costing individual communities billions of dollars — often to meet a single CWA requirement. Recently, municipal clean water agencies were also hit with a stringent reinterpretation of the Clean Air Act (CAA), which if not overturned by judicial or legislative action would force enormous costs on communities who have sewage sludge incinerators. Ideally, CAA and Safe Drinking Water Act obligations should also be considered in terms of the overall costs and affordability burdens that public agencies face.

Separate and apart from regulatory requirements, POTWs face a looming crisis with their aging network of pipes and systems that EPA estimates will cost between $300-500 billion over the next twenty years. Communities are seeing the writing on the wall that the current prescription of rate increases and expanding municipal debt loads are not sustainable. Simply stated, absent a new approach to regulatory compliance, the future of maintaining — let alone adding to — the record of
water quality gains is at risk. POTWs are also seeing a troubling disconnect between the growing cost of additional regulatory requirements in order to achieve ever-decreasing water quality gains. In other words, communities are being forced to invest more but are increasingly getting less return on these investments. With ratepayers wanting to see the greatest bang for the buck the argument for rate increases grows more difficult as the benefits to the ratepayer become less clear.

EPA’s Integrated Planning Framework
NACWA has consistently played a leadership role in advocating for an integrated planning approach, including longstanding and related efforts over the past decades to advance a holistic watershed approach and to have EPA review and develop a more flexible and realistic approach to community affordability and financial capability determinations under the CWA. NACWA launched its Money Matters... Smarter Investment to Advance Clean Water™ campaign two years ago to shed light on the growing financial and compliance challenges posed by CWA regulations and call for an integrated approach based on prioritizing these competing requirements to achieve maximum water quality benefit.

NACWA commends EPA for producing an integrated planning framework that provides a strong foundation for new and continued discussions between clean water utilities and the government, whether state or federal, on how best to sequence their clean water investments. As stated earlier, the framework represents a recognition on the part of the EPA that the current approach to CWA compliance is not working for communities and that more flexibility, without sacrificing water quality, is necessary.

Improved flexibility and adaptability could help alleviate the massive burden placed upon DC Water and its ratepayers with respect to two of our largest capital projects.

The first initiative is our $2.6 billion Clean Rivers Project, aimed at controlling combined sewer overflows (CSOs) into the Anacostia and Potomac Rivers and Rock Creek. This enormous project is the result of a consent decree entered into with EPA, the United States Department of Justice, DC Water and the Government of the District of Columbia in 2005. Under the consent decree, DC Water has 20 years to construct massive conveyance and storage tunnels to capture rainwater and sewage during rain events, releasing it to our Blue Plains Advanced Wastewater Treatment Plant after storms subside. The $1.8 billion Anacostia River portion of this project is already underway, and will eliminate 98 percent of the combined sewer overflows into the river.

Since the negotiation of our 2005 consent decree, EPA has endorsed green infrastructure approaches such as green roofs, bioswales, pervious pavement, and water quality catch basins to address CSOs in jurisdictions similar to the District of Columbia. Further, more recent EPA consent decrees have provided jurisdictions with 25 years to address CSOs instead of the 20 years allowed under the District’s agreement. With that in mind, we are hopeful that the integrated planning framework may be an appropriate vehicle to help provide DC Water and EPA with additional flexibility to adapt our consent decree to allow for a rigorous pilot of green infrastructure as an alternative to the costly and large Potomac and Rock Creek tunnel projects mandated in the consent decree. If successful, this
alternative could reduce project costs and result in green job creation, improved air quality, enhanced green spaces, and expanded wildlife habitats.

Our second mammoth water quality initiative, also mandated, is the $950 million Enhanced Nutrient Removal Project. For decades, DC Water has been a leader in restoring the Potomac River and Chesapeake Bay by improving the performance and treatment capabilities of the 370 million-gallon-per-day Blue Plains plant. In fact, DC Water was the only entity to achieve the 2010 voluntary cleanup goals for Chesapeake Bay nitrogen removal and met the voluntary reduction goals of 2000 and 1987 as well.

In 2009, the EPA issued a National Pollutant Discharge Elimination System (NPDES) Permit to DC Water requiring a reduction in effluent nitrogen to 4.4 million pounds per year. The new permit required DC Water to design and construct nitrogen removal facilities to the limit of conventional treatment technology. The project includes more than 40 million gallons of additional new anoxic reactor capacity for nitrogen removal, new post-aeration facilities, an 890 million gallon-per-day lift station, new channels and conveyance structures, demolition of existing buildings, addition of a protective sea wall and modifications to the existing facilities to enhance performance.

DC Water is proud of our achievements to date in reducing nutrients discharged from our facility to the Chesapeake Bay. However, as permit requirements imposed on point sources like Blue Plains become more stringent, it is important to recognize the diminishing return on investment large capital projects such as the Enhance Nutrient Removal Project provide. Prior permits issued by EPA reduced nitrogen from Blue Plains by 58 percent at a cost of approximately $15 per pound of nitrogen reduced. Our new permit requires a 31 percent nitrogen reduction at a cost of approximately $476 per pound of nitrogen reduced. It is important to keep in mind that wastewater treatment facilities such as Blue Plains account for less than 20 percent of the overall nitrogen load to the Chesapeake Bay.

It is clear that the trajectory of these regulatory requirements is unsustainable in the long term. We are hopeful that EPA's integrated planning framework will allow DC Water to prioritize its future capital projects to ensure that limited ratepayer dollars are used in the most effective manner to achieve the maximum water quality benefits. Absent significant federal funding, projects such as Enhanced Nitrogen Removal place an impactful burden on the small pool of ratepayers in the District of Columbia, many of whom are low income.

NACWA’s Focus
While the final framework clearly is an important step toward realizing the goals of the Association’s Money Matters . . . Smarter Investment to Advance Clean Water™ campaign, key questions remain as to the extent to which the framework will prove to offer the type of broad-based relief many in the clean water community are seeking.

The issue of affordability remains one of NACWA’s top concerns. We will be looking closely at how this framework is implemented to assess how well it is actually saving communities and ratepayers money. We strongly believe that we can achieve water quality goals with fewer resources by using
innovative approaches and addressing the most challenging problems first. In addition, NACWA will be focused on making sure that all communities, not just those having faced or now facing enforcement actions, can use an integrated planning approach to meet their permit obligations. The true success of this approach will only occur through the normal course of the NPDES program and not through a court-driven consent decree process.

Congress’ Role
NACWA believes that Congress has an important role in ensuring the integrated planning approach is more than just a symbolic acknowledgment of the need for a new approach — Congress must help communities by encouraging broad implementation throughout the country and allowing flexible permit terms.

First, NACWA urges Congress to provide initial financial support for the development of municipal plans in pilot communities across the country. Developing an integrated plan can be a timely and resource-intensive process, and federal support can help cash-strapped communities seriously consider this new model for meeting CWA obligations. In addition, federally-funded pilot communities may report back to Congress on the cost-savings and environmental benefits they experienced under an integrated plan. Seeing wide-spread success, this may incentivize other communities around the country to embrace this approach as well. As part of this pilot effort, we suggest providing limited resources to States for them to undertake the necessary processes they need to work with communities interested in developing integrated plans.

Second, Congress should allow for NPDES permit terms to be extended up to 25 years for a community with an approved integrated plan. By allowing extended permit terms, communities who undertake the resource-intensive process of developing an integrated plan would have some assurance and certainty that their clean water investments will be secure for longer than five years. One of the drivers for seeking relief through a consent decree process is that the terms of a consent decree can extend to as many as twenty-five years. The NPDES permit process should provide the same degree of certainty. This should not be interpreted as a regulatory rollback as the core of this new initiative rests in the development of viable and prioritized compliance schedules with clear benchmarks/milestones for meeting the array of prioritized requirements.

Furthermore, EPA’s framework encourages the use of innovative, cost-saving tools such as green infrastructure and water quality trading as part of a community’s an integrated plan. These tools need time to develop and mature, and will not be considered viable options if only given a few years to employ.

Looking to the Future
EPA’s integrated planning initiative is a sign of the increasing awareness that the CWA is now forty years old and that existing interpretations of the Act, and perhaps the Act itself, are not ideally suited to meeting the needs of the 21st century. Often and for good reasons, discussions regarding clean water agencies focus on specific regulatory compliance issues under the CWA or how to best fund or finance an aging network of pipes and systems. NACWA hopes we can continue to work with this Subcommittee to consider targeted changes to the CWA – for example, changes to help communities
better manage wet weather issues - so that it can effectively address 21st century challenges and ensure another four decades of water quality improvement and unrivaled utility leadership.

NACWA has also long supported the creation of a dedicated source of funding for wastewater infrastructure investments to ensure that communities can meet their obligations under the Clean Water Act (CWA). A Clean Water Trust Fund, similar to those that finance highways and airports, would provide a federal contribution to supplement existing local and state revenue to address the enormous backlog of clean water projects and help communities meet CWA unfunded mandates. It would also spur efficiencies in utility management, new green technologies and research, and enhance fisheries. The time has come to embrace a 21st century approach to water that helps ensure community health and safety.

Conclusion
The CWA is at a crossroads. EPA’s integrated planning framework offers a unique opportunity to put the federal, state and local partnership back on track to help meet our communities’ water quality needs while addressing real affordability concerns. The Subcommittee can play a vital role by following this effort closely and urging EPA to stay on the right course to encourage municipalities to take advantage of the framework.

NACWA recognizes the Subcommittee’s concerns with the growing cost of compliance with CWA regulations — no entity is more concerned about this than NACWA — but we remain optimistic that EPA can advance its framework to address our mutual concerns. NACWA has also drafted legislation for a viable integrated planning approach that includes language to extend permit terms if necessary as well as an appropriations request for funding pilots, which we stand ready to advance with your help at the appropriate time if necessary. We look forward to continuing to work with the Subcommittee on this and other important clean water initiatives.

Thank you for the opportunity to appear before you today, I look forward to any questions the Subcommittee may have regarding my testimony.
DC WATER, INFRASTRUCTURE

Green Infrastructure Modification Approved

JANUARY 29, 2016  BY GEORGE HAWKINS
Last week a truly historic accomplishment came to a final resolution – the modification package to incorporate Green Infrastructure into our Clean Rivers Project Consent Decree was entered with the District Court. This modification enables DC Water to incorporate green infrastructure (GI) into the remedy we are building to solve the water quality problems associated with combined sewer overflows in the Potomac and Rock Creek. CSOs were an original part of the design of our sewer system from more than a century ago, and the challenge posed by overflows of a mixture of rainfall and sewage has existed since that time.

Our solution to that problem – the $2.6 billion Clean Rivers Project, led with extraordinary distinction by Director Carlton Ray and his team, is the most ambitious program DC Water has ever sought to build and the largest public works project in DC since the Metrorail. Our performance on that project — both in terms of maintaining a
stringent and demanding schedule and financial and quality controls — is second to none, and is designed to achieve performance standards that set the bar for the entire country. Even before the addition of GI, DC Water’s Clean Rivers Project has been performing at world class levels.

My hat is off to the entire team, led by the following people, but – as the photo clearly shows – supported by so many others: Leonard Benson (Chief Engineer), Carlton Ray (Director, Clean Rivers Project), Bethany Bezak, (Manager, Green Infrastructure), John Cassidy (Consulting Engineer, Greeley and Hansen).

The modification package entered with the District Court provides several key features. First, DC Water is enabled to invest at least $90 million dollars to build GI to capture rainwater before it can enter our sewer system. By doing so, we can eliminate one planned tunnel for Rock Creek and modify the design of another for the Potomac River.
Second, to accomplish the GI and modified tunnel plans, DC Water has five additional years to complete this mammoth project – a timeframe in line with other CSO jurisdictions in the country. Third, the package also memorializes an agreement in principle we had with USEPA and the US Department of Justice to modify the original tunnel remedy to accommodate our enhanced nutrient removal efforts by extending the Anacostia Tunnel down to Blue Plains. Any one of these outcomes is outstanding – all three are breathtaking!

Fort Reno Green Roof

This milestone achievement highlights what is best about DC Water. First, it was a team effort. Nearly every office in the enterprise stepped up to make this happen. Of course, our engineering teams have been stellar in developing the designs and performance specifications that are at the heart of these changes. Who would have thought we could
eliminate a challenging underground pump station, extend a tunnel design, and build green infrastructure – within the pre-existing budget?! The patience, determination, flexibility and fundamental excellence of our work through the seven long years it took to get us here cannot be overstated. I have never been more proud than when I have witnessed our team keeping on this path, even in days when the outcome seemed almost impossible, continuing to lean into the prevailing winds and relying on faith that the strength and wisdom of our ideas would prevail.

Our External Affairs team were instrumental in developing outreach materials and programs to explain our ideas to the public we serve, and to gain valuable insights and feedback that allowed us to improve our plans. It seems like just yesterday that we decided to rename the project “DC Clean Rivers” rather than the blandly bureaucratic though technically correct “Long Term Control Plan.” Our attorneys guided a complicated process through a legal thicket that in many respects was a first of its kind in the nation (reopening an existing consent decree, a step rarely if ever done); finance has run the numbers on almost an endless variety of options and alternatives; human capital management has recruited the best and brightest to join the Clean Rivers team – I could go on and on, but you get the idea though – everyone contributed to a brilliant outcome.

Mostly, though, I am ecstatic (can you tell?) by what this means for our ratepayers and the District. I believe that the modified remedy will
Rendering of proposed Green Infrastructure project along Kennedy St. NW yield improved results for our environment, provide important job opportunities for our residents in great need, offer rate relief over the next decade, and connect DC Water more directly to the people we serve as we design streets, sidewalks, alleys, pocket parks and a host of other locations to provide multiple environmental benefits while reintroducing mother nature to an otherwise concrete human landscape.

Last, I want to emphasize that DC Water is the beneficiary from profoundly important leadership from the Board of Directors and the District Government. The effort to modify the Clean Rivers Project dates back to a Board Chaired by Willy Walker, who was a strong proponent from the onset. It was also supported strongly by Board Chair Allen Lew and brought to the finish line by current Chair Matt
Brown. The Board itself has provided thoughtful oversight and resolute support. I also will forever be grateful to all three Mayors for whom I have served – Adrian Fenty, Vincent Gray and Muriel Bowser – each of whom offered absolutely essential support at critical moments. The list of other instrumental supporters is unfortunately too long to mention here, although Councilmember Mary Cheh, then-Councilmember Tommy Wells (now DOEE Director) and Congresswoman Eleanor Holmes Norton have all had important roles in our success.

When I reflect on this achievement I cannot stop smiling and I am reminded of what former Board Chair Willy Walker told me in response to reaching this important milestone:

“Ideas are just thoughts. What makes them good ideas or bad ideas is how they are implemented.”

I am honored to serve alongside some of the absolute best water professionals in the world. Their nearly flawless implementation of what began as just an idea is truly inspiring.

Take a look at some of my other blog posts on Green Infrastructure:

Green Infrastructure For DC. Green Jobs for DC Residents

Green Infrastructure Challenge Winners
Expert Council Recommends Eliminating Lead Drinking Water Lines

WEDNESDAY, 27 JANUARY 2016 12:30

Federal rules are not strict enough to prevent lead poisoning

Workers replace lead service lines in Washington, D.C. in July 2008. High lead levels in the drinking water of the nation’s capital found starting in 2001 prompted the D.C. Water and Sewer Authority to replace lead pipes. It also prompted the U.S. Environmental Protection Agency to revise its lead regulations, a process that is still ongoing. Click image to enlarge.

By Brett Walton
Circle of Blue

In December, just before the long holiday season, the National Drinking Water Advisory Council submitted to the U.S. Environmental Protection Agency a 49-page report with
recommendations for updating federal drinking water regulations to address lead contamination.

Acting on the advice of an expert working group, the council told the EPA that the current lead rules, established in 1991 with subsequent minor revisions, are too weak. The council argued that the country must act with greater resolve and ambition to protect the health and well being of its most vulnerable citizens. Instead of fiddling with water chemistry to reduce corrosiveness, as is now the first course of action for a city with high lead levels, agencies at all levels of government should strike at the heart of the problem and eliminate lead service lines, which are the source of pollution.

Moving to eliminate lead service lines would be a bold step. Obama administration proposals to strengthen federal environmental regulation — the Clean Water Rule for clarifying the Clean Water Act, the Clean Power Plan to cut carbon emissions, and rules to reduce methane emissions and coal mining on public lands — have been met with fierce opposition and lawsuits, mostly from Republican attorneys general, representatives in Congress, and industry groups.

Yet, there is also no more favorable time for the EPA to be bold on lead. The country is watching with revulsion at the outrageous failure of government that led to the poisoning of drinking water supplies for 100,000 people in Flint, Michigan.

“It no doubt adds electricity to the atmosphere,” Tracy Mehan, executive director of government affairs at the American Water Works Association, told Circle of Blue. “What is happening in Flint adds saliency and visibility to the problem.”

For more than a decade the EPA has been reviewing the Lead and Copper Rule, the 1991 statute that guides how utilities should respond to lead contamination. NDWAC’s recommendations are the final high-level submission before the EPA issues a draft rule, expected next year. The council’s position is clear: the country, as a whole, must do more to address lead.

“Every community has to start now to replace lead service lines,” Tom Neltner, a chemical safety expert with the Environmental Defense Fund and a member of the NDWAC working group, told Circle of Blue. “The priority has to be to get these lines replaced.”

Achieving that goal requires teamwork: not only the involvement of the EPA but also of state and local governments, water utilities, and their customers: a “comprehensive collaborative national effort to reduce lead in drinking water,” according to Jill Jonas, chair of the National Drinking Water Advisory Council (NDWAC).

Flint Not the First Case of Lead Poisoning in a Large U.S. City

Before Flint, there was Washington, D.C.

In 2001, household drinking water tests in the American University Park neighborhood began showing high lead levels.
Two years later, when the D.C. Water and Sewer Authority expanded testing, the scale of the problem began to emerge. Two-thirds of the 6,118 homes tested in the fall of 2003 had lead levels above federal thresholds that would trigger corrective measures.

Washington, D.C. embarked on a $US 408 million lead service line replacement program after finding high lead levels in drinking water between 2001 and 2004. Click image to enlarge.

Lead in the drinking water in the nation's capital struck a nerve. Investigations by the Washington Post revealed problems similar to Flint: utility officials more concerned about controlling costs than being cautious and public leaders who knew about the problems yet stayed silent. The D.C. Council held 11 oversight hearings and Congress held four.

In response, the EPA determined that the Lead and Copper Rule ought to be reviewed and made more effective.

**Lead Still a Problem**

The Lead and Copper Rule has many deficiencies, according to experts.

First, the rule does not protect everyone. Lead typically enters drinking water from service lines, which extend from the main distribution pipe to the house. Most utilities are required to test water at the faucet for a four-month period once every three years. Changes or spikes in lead concentrations during the other 32 months are not monitored. Apartment buildings are not required to be monitored at all under the current rule.

If more than 10 percent of the samples in a city show lead levels above 15 parts per billion, known as the "action level," then the utility must take corrective measures, outlined below. If fewer than 10 percent of the samples are above the action level, the utility, if it serves fewer
than 50,000 people, is not required to take any action, even though certain households may have dangerously high lead levels.

More attention ought to be granted to these outliers, according to the NDWAC recommendations. “We want utilities to act on all results,” Neltner said. “The process should be designed to encourage more sampling, to find out what is going on.”

Second, the rule focuses on manipulating water chemistry to prevent lead from leaching into water supplies. Utilities that serve more than 50,000 people are required to do “corrosion control” to keep lead from leaching into the water. This means changing the water’s pH or adding orthophosphates or silicates, which coat the inside of pipes. Flint officials did not undertake corrosion control measures when they switched from Detroit’s water system to the Flint River.

A third problem is partial lead service line replacement. If corrosion control does not reduce lead levels, the utility required to replace lead service lines. There is a catch. They are required to replace only the part of the line that they own, often the segment from the main distribution line to the meter. The homeowner is responsible for the portion from the meter into the house.

Partial replacements are problematic. According to a 2011 study from the EPA Science Advisory Board, partial replacement cause lead levels to increase in drinking water, not decrease. Those results were confirmed by a Virginia Tech study published earlier this month. Digging up old lines disturbs the ground and may shake lose lead in the pipes that remain in the ground. If the replacement pipe is copper, the corrosion rate increases as well.

Yet partial replacements are common. When D.C. Water and Sewer Authority embarked in 2004 on a $US 408 million program to remove lead service lines, only one out of seven homeowners during the first round of replacements choose to replace their segment of the line.

Lead pipes are widespread in the United States but concentrated in the Midwest, Deep South, and New England. There were 10.5 million lead service lines in the United States in 1988, three years before the Lead and Copper Rule went into effect, according to the EPA. There are approximately 7.3 million lead service lines still in use. Replacing all lines would costs billions of dollars, Mehan said.

NDWAC did not calculate the cost of its recommendation, but full lead service line replacements can be completed for as little as $US 1,000 per line, according to Neltner. Other estimates are as high as $US 8,000 per line.

Besides phasing out lead service lines, NDWAC’s recommendations for the EPA include:

- Establishing a “household action level” that would require a utility to notify local and state officials if lead levels at a single household are significantly above the federal threshold;
- Shifting to a customer-initiated water testing program in which concerned households could offer their water as a sample so that more data could be collected;
- Requiring more vigorous public education programs, particularly to high-risk areas (those with older plumbing) and vulnerable people (pregnant women and families with children);

“To phase out lead service lines will take a broader societal effort.”

—Tracy Mehan, American Water Works Association
• Making more data on the testing results available to the public;
• Stronger attention to compliance and enforcement.

Thinking Outside the Box

Other suggestions for addressing lead involve local or state agencies. Replacing lead service lines could be a mandated part of real estate transactions, and the cost could be incorporated into a 30-year mortgage. “It’s really an outside-the-box idea,” Derrick Dennis, water quality manager for the Washington State Department of Health and a member of the lead working group, told Circle of Blue.

“To phase out lead service lines will take a broader societal effort,” Mehan said, noting that the EPA probably does not have the legal authority to force utilities to pay for replacing lead lines on private property.

A first step, Mehan mused, will be an accurate inventory of lead service lines. Then, a plan for financing the replacement. A full turnover will take decades, he said.

Cost is always an objection to new regulations, Neltner said. But in the case of lead, a longer view is required.

“It’s not that expensive if we’re talking about a child’s brain,” Neltner argued. “Those exposed to lead are the ones who end up in jail. They are more expensive to educate. We’ve got to think about kids as the investment and not just about the lead service line replacement.”

Neltner is optimistic that a stronger rule will emerge. EPA officials were in the room when the working group held its meetings. “EPA staff were enthusiastic about the results of the working group,” he said.

The EPA press office had little to say about the NDWAC report.

“EPA will carefully review these recommendations and other stakeholder perspectives as it develops proposed revisions to the LCR,” Monica Lee, an agency spokeswoman wrote in a statement to Circle of Blue. “EPA will also consider the lessons learned from the experience in Flint.”

Lee did not respond to a request to interview the officials who participated in the working group meetings. Lee did note that the EPA expects to publish a draft rule in 2017, nearly 13 years after the agency began its review.

Share this article:

Brett Walton is a Seattle-based reporter for Circle of Blue. He writes our Federal Water Tap, a weekly breakdown of U.S. policy. Interests: Southwest, Pacific Northwest, Pricing, Infrastructure.

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January 20, 2016

The Honorable James Inhofe  
Chairman, Committee on Environment and Public Works  
United States Senate  
Washington, D.C. 20510

The Honorable Barbara Boxer  
Ranking Member, Committee on Environment and Public Works  
United States Senate  
Washington, D.C. 20510

Dear Chairman Inhofe and Ranking Member Boxer:

I am writing to express the Great Lakes Commission’s support for S. 1024, the Great Lakes Restoration Initiative Act of 2015, as introduced by Senator Kirk. This is a top priority for the Commission’s member states and we appreciate your marking up and advancing the bill in your committee.

This legislation provides formal authorization for the Great Lakes Restoration Initiative (GLRI), an innovative regional restoration program that is cleaning up degraded “toxic hotspots,” slowing Asian carp and other invasive species, and preventing polluted runoff that closes beaches and causes harmful algal blooms. It will provide a solid legislative platform to ensure our region continues to work together successfully to implement a science-based and outcomes-focused plan of action for restoring and protecting the Great Lakes as a natural treasure and vital economic asset for our region.

The Commission has long supported authorizing the GLRI at a minimum of $300 million annually and authorizing other important Great Lakes restoration and protection programs. We supported House passage of legislation identical to S. 1024 at the end of the 113th Congress.

We understand that U.S. EPA has suggested revisions to the substitute bill to be considered in tomorrow’s markup. We support these revisions, in particular the revised language for Section G (II)-Limitation. This is consistent with how the GLRI has been implemented and the intent that U.S. EPA will use currently authorized programs to carry out restoration projects to achieve the GLRI’s goals.

The GLRI is producing important results for the eight-state Great Lakes region; passing this legislation now will clarify the focus and accountability of our restoration efforts and ensure the program continues to achieve effective results. If you have questions, please contact the Commission’s Executive Director, Tim Eder (734-971-9135, teder@glc.org).

Sincerely,

Jon W. Allan, Chair

cc: Members of the Senate Great Lakes delegation
Memorandum

To: Commissioners, Associate and Alternate Commissioners, and Observers

From: Tim Eder, Executive Director

Date: February 12, 2016

Re: Workplan Update

On the following pages are updates prepared by staff on the Great Lakes Commission’s programs and projects, organized according to our current workplan priorities. A workflow diagram, illustrating the six program areas in the workplan, is shown on the next page.

The workplan is a companion document to the Commission’s Strategic Plan. The Strategic Plan addresses how the Commission accomplishes its work through four core services: Communication and Education, Information Integration and Reporting, Facilitation and Consensus Building, and Policy Coordination and Advocacy. The workplan addresses what projects and activities the Commission pursues, focusing on six broad program areas: 1) Clean Energy and Climate; 2) Water-dependent Economy and Infrastructure; 3) Invasive Species; 4) Water Resources Management; 5) Water Quality and Ecosystem Health; and 6) Habitat and Coastal Management. The program areas are intended to address the needs of Member states/provinces, reflect current regional priorities, and identify emerging issues and opportunities for the Commission to utilize our core services to address them. [Readers will note that the goal statements are intentionally far-reaching and probably beyond the scope of what can be achieved by the Commission’s work alone.]

We have initiated a process to update the workplan to reflect current regional priorities and emerging issues; for additional details, see the memo in the Speaker Topics section of the briefing book. As we begin this process, input from our Commissioners and Observers is always welcome. The Commission continually seeks to leverage our core services to address the needs of our Member states and provinces and the broader regional community.

We also invite you to visit the www.glc.org website, which mirrors the organizational structure of the workplan, to stay up to date on the Commission’s work throughout the year.
GLC Workflow Diagram

Core Service Areas (GLC Strategic Plan)
- Communications/Education
- Info Integration/Reporting
- Facilitation/Consensus Building
- Policy Coordination/Advocacy

The Commission’s mandated roles and primary services on behalf of member states and the region.

Administration
- Business Planning
- Business Operations
- Program Development

Day-to-day operations in support of the Commission, its projects and its regional services.

Program Areas (Workplan)

Clean Energy and Climate
- Climate change and variability
- Clean energy

Water-Dependent Economy and Infrastructure
- Tourism
- Commercial navigation
- Recreational boating
- Water-dependent economic development

Invasive Species
- Prevention & control strategies for new and existing pathways/vectors

Water Resources Management
- Support for Great Lakes-St. Lawrence River Basin Sustainable Water Resources Compact (and Agreement)

Water Quality and Ecosystem Health
- Water infrastructure
- Nonpoint source pollution
- Atmospheric deposition
- Oil and hazardous material spills
- Pollution loadings, beach health

Habitat and Coastal Management
- Coastal management
- AOCs, brownfields
- Habitat and land use

Current focus areas for projects and program development.
Invasive Species

**Goal:** Prevent the introduction and spread and, where necessary, promote management and control of invasive species that are or have the potential to negatively impact water resources or the economy of the Great Lakes-St. Lawrence River basin through a focus on canals/waterways, organisms in trade and ballast water as major pathways.

**Objectives and Actions**
1) **Objective:** Prevent the introduction and spread of invasive species from connecting waterways with a focus on the Great Lakes basin and Mississippi River watershed.

**ACTION:** The GLC continues efforts to investigate, forge consensus and advance solutions to the threat of Asian carp and other aquatic invasive species (AIS) passing through the Chicago Area Waterways System (CAWS) while maintaining current uses of the system. Specifically, the GLC supports and serves on a 30-member advisory committee that is the primary regional stakeholder forum seeking solutions to the problem of AIS transfer through the CAWS. The committee entered a new consensus-seeking phase in 2014 with support from an experienced facilitation team (Gail Bingham, president emeritus of RESOLVE, and Tim Brown, founder and president of Wabashco LLC) and has developed consensus positions on short- and long-term recommendations. The committee met ten times during the current phase, most recently on December 17. The Committee recently finalized its recommendations on the most promising avenues for a long-term solution to preventing AIS transfer through the CAWS. In a letter to President Obama and Congress, the Committee shared its conclusion “that a system of possible control points in the CAWS to address AIS is worth further study.” The Committee requested that “sufficient funds be allocated, beginning with the proposed fiscal year 2017 budget, that will allow the U.S. Army Corps of Engineers (USACE), under existing authorities, to complete specific studies necessary to develop a Chief’s Report on a system of control points” and that the USACE investigate two specific questions:

1. Whether an AIS lock or system of AIS locks can be designed and implemented in the CAWS to be effective at two-way prevention, compared to other alternatives, including what is known to be most effective; and
2. Whether and how control points could be implemented consistent with the mid-system locations identified in several GLMRIS alternatives.

In addition, the committee continues to support the evaluation of the Brandon Road Lock and Dam as a control point to prevent Asian carp and other species moving from the Mississippi River into the Great Lakes basin.

Significant technical analysis was conducted for the Advisory Committee by HDR Engineering, Inc. This has provided important new information on options for configuring control measures in a navigation lock and the level of risk reduction that can be achieved, which is estimated to be between 85% and 95%, depending upon species. While this level of risk reduction can be theorized, actual rates will depend upon the specific control measures selected and the targeted species. The uncertainty of control measure application, weakest pathway link, and potential cumulative effects of multiple control points drives overall risk reduction estimates.

This work likely will set the foundation for more extensive future studies and demonstrations to be conducted by the Army Corps of Engineers, MWRD, and other agencies. Further research and development, combined with adaptive management, is expected to improve efficiencies and reduce uncertainty, including investigation of a focused set of control measures and combinations, evaluation of mixing effects in lock chambers and interactions of control measure combinations, and assessment of criteria related to maritime safety and operations. Demonstrating how ANS locks can be incorporated into an AIS-free buffer zone concept, together with infrastructure to address existing problems in the CAWS, offers significant potential to couple a regional benefit (increased AIS risk reduction) with local benefits (reduced flooding and CSOs) to generate both regional and local cost-share partners.

The members of the Advisory Committee have expressed a desire to continue meeting to receive
information on the Brandon Road Feasibility Study, the work of the Asian Carp Regional Coordinating Committee, and related efforts. The committee likely will not work on new consensus statements at this time, although such statements could be developed if warranted.

The committee’s complete letters from January 2016 and August 2015 are included in the Speaker Topics section of the briefing book. All of the Advisory Committee’s products, along with the consultant’s report to the Commission summarizing technical research conducted for the committee, are available online at http://glc.org/projects/invasive/chicago-waterway/.

2) **Objective**: Advance federal programs to reduce the risk of releases of potentially invasive species through the trade in live organisms, including plants and animals sold for live bait, aquarium, aquaculture, water garden and horticulture, among other pathways.

**ACTION**: Work is wrapping up on a Great Lakes Restoration Initiative-funded project to develop software and tools to track, identify and monitor the sale of invasive species via the internet. The web-crawling software system – the Great Lakes Detector of Invasive Aquatics in Trade (GLDIATR) – is complete and in operation. The GLC will be reporting on the overall effort later this year and plans are underway to continue to make improvements and maintain and operate the software system for basinwide use. Funding proposals were submitted in 2015 to support continued enhancement and implementation of GLDIATR and coordinate outreach, and staff are optimistic that this work will be funded and sustained. Ongoing work will be coordinated with a multi-stakeholder team that includes NGOs, industry, and state and federal agencies.

The GLC continues to support federal efforts to prevent the importation of potentially harmful non-native species. The GLC responded in support of a recent move by the U.S. Fish and Wildlife Service to list eleven new species as “injurious” under title 18 of the Lacey Act. As the GLC is previously on record calling for more effective pre-import screening efforts, staff undertook several activities to communicate GLC support for this action, including a letter to the Service submitted through the public comment process, a press release, and a resolution passed at the 2015 Annual Meeting in Chicago.

3) **Objective**: Support initiatives to convene states and provinces in collaborative efforts (including Governor Snyder-led initiative) to develop, advance and fund effective and coordinated approaches to invasive species prevention and control.

**ACTION**: Working in partnership with USGS, the Great Lakes Fishery Commission and NOAA, the GLC is supporting the Invasive Mussel Collaborative, which is providing a framework for communication and coordination among scientists, managers and others to share information and lessons learned, guide supporting research, and inform management actions related to control of zebra and quagga mussels. A steering committee for the Collaborative has been convened and has met several times; a science team will be convened early in 2016 to develop a research and science agenda for mussel control. The Collaborative is hosting webinars to facilitate learning and information sharing on topics related to control of dreissenid mussels. The most recent webinar was held in January and focused on case studies in zebra and quagga mussel control for inland waterbodies (see www.invasivemusselcollaborative.net). An email listserv has been established to share information, webinar announcements and recent news, and to connect researchers and managers. Staff is also developing a more comprehensive web “hub” of invasive mussel information, to be released early this year.

The GLC continues to provide staff support to the Great Lakes Panel on Aquatic Nuisance Species (GLP) and its standing committees. The GLP held its fall meeting October 5-6, 2015 in Ann Arbor, Michigan. The meeting featured breakout sessions focused on three priority topics: grass carp, starry stonewort control, and economic impacts of AIS. The second day of the meeting included informational updates on U.S. and Canadian AIS related regulations; aquatic plant control efforts (starry stonewort and hydrilla); recent grass carp collections; efforts related to live organisms in trade; and the Chicago Area Waterway System (CAWS) interbasin connection. A significant outcome of this meeting is the decision to form a GLP Grass Carp Ad-
4) **Objective:** Support efforts to manage and eradicate priority invasive species established in the Great Lakes, such as non-native phragmites and sea lamprey.

**ACTION:** The GLC continues to expand a partnership with the USGS-Great Lakes Science Center to lead communications and research on the non-native plant *Phragmites.* The Great Lakes *Phragmites* Collaborative, established in 2012, engages the resource management community, reduces redundancy, links science and management, facilitates adaptive management, and encourages a systems approach to management and conservation efforts for this invasive species. The Collaborative supports an interactive web hub (www.greatlakesphragmites.net), webinar series, social media presence and email list, and is guided by a regional advisory committee, which is currently developing a formalized governance structure. The GLC also supports the Collaborative for Microbial Symbiosis and *Phragmites* Management, established in partnership with the USGS, to bring together researchers to explore symbiotic relationships to both control non-native *Phragmites* and encourage establishment of native plants. These collaboratives use the principles of Collective Impact to address this natural resource challenge and staff developed a manuscript to showcase this approach as a novel strategy to align priorities and resources for complex issues, which was submitted to the journal *Biological Invasions* for publication. Several products are being developed, including best practices case studies, a strategic plan, and an adaptive management decision tool.

The GLC, in collaboration with the Great Lakes Fishery Commission, has been enhancing the barrier mapping application. The application is available at http://data.glfc.org. Enhancements have been added to further improve the search, inset map and user interface. Approximately 7,000 more barriers have been added to the original ~900 in the system. Historical max extent data has been added to show how far up a given waterway sea lamprey larvae have been found, barrier fact sheets have been added, and images of lamprey traps where relevant.

5) **Objective:** Elevate awareness of AIS issues and solutions among decisionmakers and the public.

**ACTION:** GLC staff attended the national Aquatic Nuisance Species Task Force meeting in November 2015 and moderated a session on assessing economic impacts of invasive species. As discussed above, the GLC has supported the recent move by the U.S. Fish and Wildlife Service to list eleven new species as “injurious” under title 18 of the Lacey Act.

The GLC is working with the GLP Information/Education Committee and other GLP members to conduct a thorough review and update of the *Great Lakes Aquatic Invasions* booklet. GIS and data management staff are continuing their collaboration with the Michigan Department of Environmental Quality under a U.S. EPA Exchange Network challenge grant to develop a data integration tool for citizen-scientist observations of invasive species. The project is a test case for a larger regional data integration tool that will allow data from multiple species identification and tracking programs to be consolidated into a central database. Finalized data transformation protocols are being implemented on a database housed at Michigan State University. An online user interface and map viewer will be developed on GLIN during the final phase of the project.
Water Resources Management

**Goal:** Support the development of a water resources management regime that protects the ecological function of the resource while supporting the sustainable use and conservation of the waters of Great Lakes-St. Lawrence River basin in order to protect public and environmental health, assure economic well-being and sustain a high quality of life for the region’s residents.

**Objectives and Actions**
1) **Objective:** Compile and disseminate consistent water withdrawal, diversion and consumptive use information to support requirements of the Water Resources Compact and Agreement.

   ACTION: The GLC continues to provide annual water use reports to the Great Lakes-St. Lawrence River states and provinces in support of the Great Lakes Water Resources Compact and Agreement. The GLC compiled state and provincial water use data and collected associated metadata through the GLC online water use data management portal for the 2014 annual water use report, which was completed and presented to the Great Lakes-St. Lawrence River Basin Water Resources Compact Council and Regional Body during their joint annual meeting on December 3, 2015. The report is available on the GLC website at http://glc.org/projects/water-resources/water-use-database/. The GLC will continue to work with the states, provinces, Conference of Great Lakes and St. Lawrence Governors and Premiers and U.S. Geological Survey to improve the quality of data reported to the Great Lakes-St. Lawrence Regional Water Use Database.

   GLC staff submitted an abstract to present on Great Lakes Regional Water Use Database at the June 2016 International Association of Great Lakes Research Conference (IAGLR) in Guelph, Ontario. This presentation will be part of a session on the implementation of the science strategy under the Great Lake-St. Lawrence River Basin Sustainable Water Resources Agreement. The session will be chaired by the Ontario Ministry of Natural Resources and is hosted by the Conference of Great Lakes and St. Lawrence Governors and Premiers.

2) **Objective:** Support the Regional Body and Compact Council to track and share information on regional trends, policies and progress toward implementation of the Agreement and Water Resources Compact.

   ACTION: The GLC is in dialogue with the U.S. Geologic Survey and the Conference of Great Lakes and St. Lawrence Governors and Premiers on a proposed project to assess trends in water use in the Great Lakes thermoelectric sector. The GLC is exploring opportunities to convene an in-person water use data collection and reporting workshop with the water supply program managers of the Great Lakes and St. Lawrence states and provinces and may convene one or more informational webinars to discuss sector-specific water resources management challenges.

3) **Objective:** Assist in the development of the Water Resources Agreement’s Science Strategy including identifying and implementing activities to advance water conservation and efficiency within the states and provinces.

   ACTION: The GLC recently completed the Greater Lakes water management project, which identified and tested the environmental and financial rationale for municipalities to pursue water conservation and green infrastructure practices. This project also evaluated how information can drive innovation in water management throughout the Great Lakes region. The final products included factsheets, an online green infrastructure calculation tool, handbooks and videos. These are available on the Greater Lakes project at www.glc.org/projects/water-resources/greater-lakes.
4) **Objective:** Coordinate data and information sharing between the states and provinces to support the understanding of the Great Lakes-St. Lawrence River physical system and enhance implementation of the Agreement and Water Resources Compact.

**ACTION:** The GLC continues to work with the USGS science centers from Michigan and Ohio to explore new methods to coordinate data and information sharing and to help enhance the regional data reporting process. The GLC hopes to convene a meeting with the staff of these science centers in early 2016. These meetings have been held periodically over the past few years as a way to share ideas and improve collaboration between the GLC and USGS.

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### Clean Energy and Climate

**Goal:** Promote a regional energy mix that can be sustained over generations and is compatible with other uses of Great Lakes-St. Lawrence River water resources and promote policies and programs that provide a high level of resiliency to climate change and its impacts.

**Objectives and Actions**

1) **Objective:** Continue to serve as secretariat for the Great Lakes Wind Collaborative (GLWC), a multistakeholder forum dedicated to advancing the sustainable development of wind power in the binational Great Lakes region.

**ACTION:** As noted under Objective 4 in the Habitat and Coastal Management section, since the last update the GLC is carrying out phase three of Monitoring and Mapping Avian Resources over Selected Areas of the Great Lakes with a $260,000 grant from USF&WS. This project responds to the need to assist with the siting of offshore wind energy infrastructure. As noted in the last update, currently there is no funding available to continue support to the GLWC. The GLWC website and listservs remain operational, but the website now notes that it is inactive.

2) **Objective:** Foster dialogue and generate information on climate change adaptation issues with a focus on how they affect the water and related natural resources of the Great Lakes-St. Lawrence River basin.

**ACTION:** Currently there are no GLC projects specifically related to climate change adaptation. However, the impacts of severe storms, increased runoff, fluctuating water levels, warmer climate and the effect of habitat ranges shifting northward, has a significant impact on many GLC programs, projects and activities. Examples include our work to reduce and manage rural and urban runoff, invasive species expanding their ranges and ice cover on the lakes and related effects on shipping, navigation infrastructure and seasons. Staff continues to stay abreast of relevant policy and management developments as time and resources allow. Of particular interest is the recent release of a Great Lakes Climate Adaptation Network (GLCAN)—a spinoff of the Urban Sustainability Directors Network. GLCAN had its initial kickoff meeting in October 2015.

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### Water Dependent Economy and Infrastructure

**Goal:** Work with the states and provinces to develop and implement elements of regional strategies for economic growth and development based on the wise use of Great Lakes-St. Lawrence water resources.

**Objectives and Actions**

1) **Objective:** Promote “branding” of the Great Lakes St. Lawrence River region as a domestic and international travel and tourism destination.

**ACTION:** With the development of the Lake Michigan Trails Network now underway, the GLC will be
working with the Network’s member states – Michigan, Indiana, Illinois and Wisconsin – along with participating canoe/kayak and cycling organizations, to identify potential partnerships and synergies with the long-established Great Lakes Circle Tour for motorists. The Lakes Michigan Trails Network is seeking to create a connected set of nearshore routes for open-water kayakers and canoeists circling the lake, along with a corresponding route for bicyclists on land. Initial meetings involving the GLC’s Circle Tour and the Trails Network have explored cross-promotional marketing ideas and other potential cooperative approaches to boost overall interest in Great Lakes travel and tourism. With regard to the Great Lakes Circle Tour, trademark applications have been completed by the GLC and filed with the U.S. Patent & Trademark Office.

2) **Objective:** Work with other regional institutions and commercial navigation interests (including ports, vessel operators and governmental transportation agencies) to build regional consensus on maintaining and improving the Great Lakes St. Lawrence Seaway system as a safe, fuel-efficient, economically important and environmentally responsible marine transportation system serving the North American mid-continent.

**ACTION:** The GLC is a member of the Advisory Committee of the Governors’ and Premiers’ Maritime Task Force and provided input on that group’s draft strategy at a December workshop. The GLC serves as secretariat to the Great Lakes Dredging Team (GLDT), which works with state and federal agencies and industry partners to maintain navigation access to Great Lakes ports and harbors while pursuing sustainable and environmentally responsible dredging operations and management of dredged material. On November 17 the GLDT held its 2015 fall webinar with over 50 people attending. Informational presentations were given during the morning session and the afternoon was dedicated to the GLDT’s business. Also in November the second issue of the GLDT newsletter, *The Great Lakes Dredging Dispatch* was published At the 2015 Annual Meeting the GLDT proposed that a State of the Science and Policy Symposium be convened to help the members learn about how science and science needs influence policy and management decisions. Funds have been secured and a committee has begun planning the event. In late 2015 the GLC and the GLDT completed a project with the University of Wisconsin’s National Center for Freight and Infrastructure Research and Education (CFIRE) exploring the concept of recovering and recycling dredged material from confined disposal facilities (CDFs). Three Wisconsin CDFs at the commercial harbors in Milwaukee, Green Bay and Superior were used as case studies to assess the suitability of clean dredged material for uses such as habitat restoration and construction fill. The data produced is summarized in the publication *Building More Sustainability into Great Lakes Dredged Material* (see the GLDT website at http://greatlakesdredging.net/) and will be used to enhance the existing GLC-housed web tool that provides information on recycling of dredged material in the Great Lakes (see http://projects.glc.org/rsm).

3) **Objective:** Assist the states and provinces in growing the Great Lakes recreational boating and fishing industries as important generators of jobs and economic investment.

**ACTION:** Efforts to support harbor maintenance programs in the Great Lakes are ongoing, including those affecting shallow-draft, recreational harbors and small commercial ports. Re-prioritization of federal navigation dredging programs in recent years has significantly diminished availability of federal funding for the dredging of ports and harbors not involved in major commercial freight transport. The GLC continues to support the efforts of the Great Lakes Small Harbors Coalition, whose aim is to restore and increase federal harbor maintenance support for recreational harbors in the Great Lakes. The GLC supported passage of the Water Resources Reform and Development Act of 2014 (WRRDA), which not only established an incremental mandate to use 100 percent of receipts from the Harbor Maintenance Trust Fund for their intended purpose by 2025, but also contained a provision for funding maintenance of “emerging harbors” not necessarily handling major cargo tonnage. Looking forward, the GLC, through its annual legislative priorities and through the GLDT Legislative Committee, will seek commitment by Congress to support WRRDA provisions with ongoing appropriations to fulfill the intent of the WRRDA legislation.
4) **Objective**: Build partnerships among state, provincial federal and local entities from governmental, university, non-governmental and private sectors to build consensus on priority needs for the Great Lakes-St. Lawrence River regional economy.

**ACTION**: The GLC continues to explore how it can engage in and support efforts to advance coastal revitalization and leverage the “Blue Economy” in the region. Progress in cleaning up the Areas of Concern under the GLRI is generating important opportunities to revitalize formerly degraded or under-utilized waterfront areas and there is significant interest in leveraging Great Lakes restoration efforts to advance economic development. The Commission adopted a resolution at its 2015 Annual Meeting in Chicago calling for legislation that supports state and local efforts to revitalize waterfront areas by strengthening federal policies, programs and funding; facilitating state leadership; promoting the exchange of best practices; responding to climate change; and balancing multiple benefits. In December the Senate Commerce Committee passed the *Waterfront Communities Revitalization and Resiliency Act of 2015* (S. 1935), sponsored by Sen. Tammy Baldwin (D-WI), which would create a voluntary Resilient Waterfront Community designation, authorize funding for developing and implementing resilient waterfront plans, establish a Resilient Waterfront Communities network, and provide preferred status for Resilient Waterfront Communities in other U.S. federal grant and loan programs. Commission staff are consulting with federal and state agency staff and stakeholders involved in this issue to assess opportunities to better evaluate and strengthen economic needs and opportunities related to the Great Lakes.

### Water Quality and Ecosystem Health

**Goal**: Improve water quality and ecosystem health in the Great Lakes-St. Lawrence River basin through the reduction of pollution loadings into surface and ground waters and the coordination of monitoring, prevention and response strategies.

**Objectives and Actions**

1) **Objective**: Support regional efforts to secure investments in water infrastructure to end sewer overflows and safeguard drinking water supplies.

**ACTION**: The GLC is seeking collaborators and programmatic support for the Great Lakes Blue Accounting pilot to establish goals and metrics for the desired outcome of “a safe and sustainable domestic water supply” (see Objective #5 below for general information on the Blue Accounting project). GLC staff have engaged water system managers, industry experts and municipal leaders across the region to define the scope of the pilot and to create appropriate goals and metrics. Using their input, and in consultation with the Blue Accounting Advisory Committee and regional funders, the GLC will establish a Source Water Initiative comprised of a Domestic Water Supply pilot and a Phosphorous Reduction Tracking System. This initiative will use a watershed perspective that takes a holistic view of source water by considering all sources of water within a watershed from which water is drawn by public entities and delivered to residents for household use. The Blue Accounting Source Water Initiative will convene a working group that will establish shared goals and associated metrics for source water quality for domestic water supply and establish measures of phosphorous reduction in the Western Lake Erie Basin (see Objective #3 below for more information on the Phosphorous Reduction Tracking System). The watersheds for the Domestic Water Supply pilot will be selected by GLC staff in consultation with the Blue Accounting Advisory Committee and regional water supply experts.

The GLC continues to monitor the recent drinking water crisis in Flint and discuss internally, including with the GLC Board, opportunities we may pursue in the future to reduce risk of similar problems in other Great Lakes communities. We know that lead in pipes and aging infrastructure is a region-wide challenge. We continue to convey to Congress the critical need to support level or enhanced funding for the Clean Water and Safe Drinking Water State Revolving Fund (SRF) programs.
2) **Objective:** Reduce nonpoint source pollution and improve water quality by building partnerships with state, provincial and federal agencies to improve the efficiency of pollution prevention programs, target them to priority watersheds, and expand public awareness efforts.

**ACTION:**
- The GLC administers the Great Lakes Sediment and Nutrient Reduction Program (GLSNRP), formerly known as the Great Lakes Basin Program for Soil Erosion and Sediment Control, which has supported 74 active projects between 2010 and 2015. Since GLRI funding began in 2010, the program has passed through more than $12.1 million to local conservation projects in the region. The GLSNRP is funded by the U.S. Dept. of Agriculture-Natural Resources Conservation Service (NRCS) through a cooperative agreement under the Great Lakes Restoration Initiative (GLRI). The GLSNRP grants are awarded to local and state entities to install nutrient and sediment reduction practices in priority watersheds throughout the Great Lakes basin. Semiannual reports are prepared and submitted to NRCS for each of the program years. Final reports for the first two program years (2010 and 2011) will be prepared and submitted to NRCS by April. The conservation practices being implemented under the program range from cover crops to streambank stabilization to applying gypsum to reduce erosion and phosphorus runoff. The RFP for the 2015 program was released in January with applications due by the end of February.
- The GLC continues to provide technical and administrative support to the U.S. Army Corps of Engineers (USACE) Great Lakes Tributary Modeling Program. GLC staff facilitates communication among the Corps’ Great Lakes districts through participation in quarterly program teleconferences, as well as the convening of an annual Great Lakes Sedimentation Workshop. The next one will be held in late May or early June 2016. These annual meetings provide an opportunity for federal, state, NGO, university and private sector partners to come together to discuss priorities for Great Lakes soil conservation, sedimentation and NPS pollution prevention, control and planning. GLC and USACE staff provided a briefing on the program to U.S. EPA and USGS in September. During the last quarter of 2015 GLC staff worked with a design team to revise and update the program’s website. The redesigned website is planned to be launched in February 2016.

3) **Objective:** Develop recommendations and assist state and federal agencies in implementing actions to reduce the frequency and severity of harmful algal blooms in the Great Lakes by reducing the input of phosphorus and other nutrients through improved clean water infrastructure, research, technical assistance, outreach and education.

**ACTION:**
- The GLC, through a partnership agreement with the USDA-NRCS in Wisconsin, is in the final year of the 3.5 year Fox P Trade project to develop phosphorus credit trading program for the lower Fox River watershed in Wisconsin. Water Quality Trading (WQT) can provide a cost-effective means for permit holders to achieve compliance and holds potential to help address high nutrient levels and algal blooms. Stakeholder and partner engagement continues through weekly core team calls, monthly management team calls, and periodic meetings and webinars. Staff also continues to test the state WQT policy guidance through hypothetical trades among farmers and permit holders in the lower Fox River. Two farms participating in the Demo Farms Project (discussed below) are being assessed for their ability to generate water quality credits. Despite a soft market demand for trading due to conflicting and competing compliance options, GLC has been able to negotiate a commitment to purchase water quality credits from a WWTP that was participating in the “hypothetical” trade. GLC has contracted with a second former WI DNR employee to assist in the review of the trade application and associated permit modification. GLC is working with WI DNR to resolve uncertainties related to water quality trading in that TMDL watershed. This would be the first water quality trade in the Lower Fox. Documents and other forms have been developed (e.g., trading contract template, trading plan, credit certification, verification, and reporting forms, etc.) and a document flow process has been established to support point-to-point and point-to-nonpoint trades. A user-friendly web site is under development that will walk potential trading parties through the requisite steps to engage in water quality trading. The project is scheduled to wrap up in
September 2016. Other final products will include a “lessons learned” document and a handbook on water quality trading in the Lower Fox. See http://glc.org/projects/water-quality/foxptrade

- The Great Lakes Demonstration Farms Network is a program that demonstrates and provides outreach and education services related to conservation systems on working farms to reduce nonpoint source pollution to improve water quality in critical areas of the Great Lakes basin. The first Great Lakes Demonstration Farms project was established in Wisconsin. In late 2015 an outreach plan was developed and approved by the Lower Fox Demonstration Farms Network Project Management Team that will expand outreach activities and education opportunities focusing both within the watershed and especially in other areas of the Great Lakes Basin. The Lower Fox Demonstration Farms Network Project began in December 2013 and has started its third season of operation. The $1 million, five-year project is a partnership agreement between the GLC, USDA-NRCS, and Brown and Outagamie counties in Wisconsin. The Demonstration Farm Network objectives are to establish sites within the lower Fox River to test the effectiveness of innovative conservation systems. In addition, the project provides for the transfer of technology and conservation system effectiveness to land management agencies, producers and the public. Four cores farms are participating in the network. Two additional farms have been approved to participate in the project; one of these is a former satellite site involving a paired edge-of-field monitoring station. The conservation practices implemented for 2015 include the planting of multiple types of cover crops with different planting equipment at various times throughout the growing season. Outreach (both within the watershed and regionally) will be a higher priority for the Demo Farms Project Team in 2016. An outreach plan was developed and approved in December to guide outreach in the coming years. A Demo Farms field day was held on September 30, 2015 to showcase the practices put in place by participating farms. More than 50 people attended. Two additional fall tours were held on October 12 and October 22. The October 12 tour involved a small group of participants, including Wisconsin Senator Tammy Baldwin. They visited Van Wychen Farms and New Horizons Dairy. The October 22 tour involved a larger group from the Soil & Water Conservation Society, which visited the Van Wychen Farms, Brickstead Dairy and New Horizons Dairy. Staff from Brown County also attended two watershed-focused meetings hosted by Wisconsin Congressman Reid Ribble on November 6 and December 8.

- The GLC Lake Erie Nutrient Targets (LENT) Working Group, formed in response to the GLC’s 2014 Lake Erie Water Pollution resolution, completed a Joint Action Plan for Lake Erie, which was released and endorsed at the GLC’s Annual Meeting in September. The plan echoes the 40 percent phosphorus reduction target adopted by Lake Erie Collaborative Agreement signed by the governors of Ohio and Michigan and the premier of Ontario, which is also proposed in the Great Lakes Water Quality Agreement Annex 4 process. It sets a target date of 2025 and an interim target of 20 percent phosphorus reduction by 2020. The plan further identifies ten joint actions that each of the LENT jurisdictions have committed to pursuing as they formulate their individual policies and programs to address excessive nutrient-related problems in Lake Erie. Among the joint actions is development of an information platform to track progress toward nutrient reduction goals, which is also included in the GLC’s 2015 Lake Erie resolution. Such a platform is the objective of the Phosphorus Reduction Tracking System that is part of the Blue Accounting Source Water Initiative described in Objective #1 above. See: http://glc.org/projects/water-quality/lent/

- A HABs Collaboratory was launched in December 2015 after several months of interviews and online surveys to solicit interest in such an effort. Interest in a Great Lakes HABs Collaboratory has exceeded expectations. More than 50 scientists and practitioners from across the Great Lakes Basin participated in a workshop in December 2015 and more than 90 people have requested to be part of the effort. The workshop identified a series of priorities for the collaboratory to pursue to improve linkages among scientists and between science and management needs in the three GLRI priority watersheds (Maumee, Saginaw and Lower Fox/Green Bay). The GLC is leading the effort in partnership with USGS Great Lakes Science Center based on the collaborative approach to collective impact. The HABs Collaboratory is one of several joint initiatives under the GLC-USGS five-year Memorandum of Understanding.

- The GLC is a subcontractor on two GLRI grants awarded in the FY 2014 funding cycle. Both are five-year projects that will run from 2015-2019.
  - Targeting Outcome-Based Sediment Reduction in the Lower Fox Watershed is being led by the Fox
Wolf Watershed Alliance. The GLC will hold workshops and webinars to coordinate among GLRI grantees in the three GLRI priority watersheds and will conduct training on credit and cost quantification in the Lower Fox River. The first workshop is being planned for mid-March, 2016 in Chicago.

- **Accelerating Outcome-Based Ag Conservation in Saginaw Bay** is being led by The Nature Conservancy. The GLC will work with the Delta Institute to explore market-based mechanisms to support conservation after federal funding is exhausted.

- The GLC has been awarded a Conservation Innovation Grant from USDA-NRCS to explore a framework for water quality trading in the Western Lake Erie Basin: **Erie P Markets**. The funding awarded is about half of what was requested and staff has negotiated a modified workplan to reflect reduced funding. The project will officially launch in early 2016 and run for two years. Kieser and Associates is providing significant contractual support. The project is predicated on strong partnerships with agriculture, natural resource and water quality agencies in Michigan, Ohio, Indiana and Ontario.

4) **Objective:** Advance state, provincial and federal efforts to reduce Great Lakes impairments from atmospheric contaminants by supporting necessary research and information collection to drive risk assessment, priority setting and pollution reduction actions.

**ACTION:** The GLC has no active projects in the area of atmospheric contaminants. Previous work conducted for the Great Lakes Air Deposition Program and the Great Lakes PBDE Reduction Project, both completed in 2013, is summarized online at [http://glc.org/projects/water-quality/](http://glc.org/projects/water-quality/).

5) **Objective:** Enhance coordination, communication and data management among the many agencies and organizations that conduct or benefit from coastal and nearshore monitoring efforts in the basin.

**ACTION:**

- The development of **Blue Accounting** – an information monitoring, strategy and delivery system that supports the region’s priority water outcomes – has been initiated by the GLC in response to a 2013 request from the Great Lakes governors and premiers. The full report, *Great Lakes Blue Accounting: Empowering Decisions to Realize Regional Water Values*, is at [http://bit.ly/BlueAccounting](http://bit.ly/BlueAccounting). In May 2015 the GLC signed a Memorandum of Agreement with The Nature Conservancy (TNC) that formalizes a partnership between the two organizations with the purpose of collaborating to implement Blue Accounting and develop a new, regional online information management and delivery platform. This platform will combine the strengths of the GLC’s Great Lakes Information Network and TNC’s Great Lakes Information Management and Delivery System. A Great Lakes Blue Accounting Advisory Committee has been formed to support the initiative with representation from state, federal and local governments, business, academia and NGOs from the Great Lakes basin. The committee has met twice and plans to continue to meet quarterly. The GLC and a working group have initiated a Blue Accounting pilot project focused on the outcome “safe and sustainable domestic water supply” (see objective #1 above). The GLC’s work in building the Blue Accounting initiative and the domestic water supply pilot is funded, in part, by grants from the Great Lakes Protection Fund and the Joyce Foundation. On December 15 the Mott Foundation announced a $4 million grant to support Blue Accounting. The GLC and TNC are submitting additional proposals to other funders to build a strong financial base to support Blue Accounting governance, three pilot programs, and information management requirements.

- The GLC has previously served as secretariat for the Annual **Great Lakes Beach Association** conference, an event that attracts close to 200 participants and features more than 60 professional papers. The most recent conference was held Oct. 28-30 near Traverse City, Michigan in conjunction with the State of Lake Michigan Conference and was organized by the Michigan Department of Environmental Quality. The GLC is assessing its role as secretariat, which is currently unfunded.

- The GLC’s myBeachCast mobile app ([http://beachcast.glin.net](http://beachcast.glin.net)) increases the safety of beachgoers by providing real-time information on beach water quality advisories, weather and water conditions for
more than 1,900 Great Lakes and inland beaches. For the 2015 beach season the GLC partnered with LimnoTech to deliver an Android and iPhone version of the app and maintained a beach safety flag status database, which allows beaches to report their flag status and related conditions for inclusion in the mobile app. Funding for the app was through a grant from the NOAA Coastal Storms Program. There is no additional funding for this program so its status for summer 2016 is uncertain.

- The GLC administers the **Michigan Clean Water Corps (MiCorps)** program that funds two volunteer water quality monitoring programs, the collection and dissemination of volunteer monitoring data using standardized methodologies, small-scale stream cleanup events, and educational initiatives related to water quality in Michigan. In November 2015 staff convened the 11th annual conference at the Kettunen Center in Tustin, Mich., featuring presentations on monitoring and citizen science initiatives as a way to maintain the health of Michigan’s freshwater systems, as well as volunteer training from regional experts. The 2015 conference focused on utilizing the program’s monitoring data for management purposes, communicating information and outcomes to the public, reviewing studies on Michigan’s inland lakes, monitoring streams at road crossings, and lessons learned from monitoring for invasive species. GLC staff also launched the redesigned program website (https://micorps.net/), hosted by the GLC, and will be working on some additional website and data sharing enhancements in coming months.

- The **Lake Michigan Monitoring Coordination Council (LMMCC)** continues to bring together agencies and organizations involved in environmental monitoring on Lake Michigan and the data they collect. Following completion of the LMMCC’s 2015 monitoring survey staff developed the 2015 monitoring inventory, which holds numerous fields of metadata relating to all aspects of Lake Michigan monitoring. A second questionnaire collected input from Lake Michigan partners to assess and revise the current LMMCC charter. A workgroup is being formed to implement charter revisions. The LMMCC fall meeting took place in October in conjunction with the State of Lake Michigan Conference in Traverse City, Mich. Presentations focused on the Cooperative Science and Monitoring Initiative, the LMMCC role in the Lake Michigan Lakewide Action and Management Plan, the 2015 Lake Michigan monitoring inventory, and the LMMCC charter revision. A proceedings document for the meeting was completed and is available on the LMMCC website (http://glc.org/projects/water-quality/lmmcc/). Planning is underway for the spring LMMCC teleconference/web meeting.

- The GLC continues to support the data management efforts of the **Great Lakes Observing System (GLOS)**, including development of an enhanced GLOS Data Portal (see glos.us/data-access/data-portal). GLC staff is part of a larger Data Management and Communications team, which supports the maintenance and enhancement of GLOS’ databases and ensures access to GLOS data.

- The GLC wrapped up the **Coastal Science Strategy**—one of several joint initiatives between the GLC and the USGS-Great Lakes Science Center under the five-year MOU that aimed to build more effective communications between managers and scientists working on coastal issues/science in the Great Lakes region. The final product of this effort, *Practitioners’ Views of Science Needs for the Great Lakes Coastal Ecosystem*, was published in late 2015 and is available on the GLC’s website (http://glc.org/projects/habitat/coastal-ecosystem). A complementary effort led by USGS is underway to develop an article in a peer-reviewed journal.

6) **Objective:** Help coordinate spill prevention/response programs and build partnerships between state, provincial and federal agencies to improve planning, make response efforts more efficient, and expand public awareness of the risks associated with oil and hazardous material spills.

**ACTION:** GLC staff maintain statewide Inland Sensitivity Atlases (ISAs) for use by spill responders and response planners. Updates to the Ohio ISA were interrupted to incorporate new data on hazardous materials sites and rail lines. Mapping has resumed and an updated ISA will be released this summer. Staff continue to work closely with the federal Region 5 Regional Response Team to maintain the team’s website and the Region 5 Regional Contingency Plan. Updates to the Northern Michigan Subarea Spill Contingency Plan were completed and the plan was adopted by U.S. EPA and the U.S. Coast Guard. The response planning focus for staff has shifted to northeast Ohio along the Cuyahoga River. Staff may also begin working with U.S. EPA and the Coast Guard on contingency planning in southern Lake Michigan, depending on the availability of planning personnel from those two agencies.
7) **Objective:** Review the status of state emergency preparedness response programs and regulations and the adequacy of federal programs through a reestablished Emergency Preparedness Task Force.

**ACTION:** Emergency preparedness and response continues to be a high priority for the GLC. Following the report on issues and trends surrounding oil transportation in the Great Lakes-St. Lawrence River region submitted at the 2015 Semiannual Meeting in Washington, DC, staff were directed to form an Oil Transportation Advisory Committee to develop recommendations for next steps in the area of oil transportation in the region. The Committee has met monthly via conference call since May 2015 and has reached consensus on a series of guiding principles that identify key issues and will help guide the development of recommendations for addressing them. The Oil Transportation Advisory Committee will turn to developing these recommendations when they resume meeting in 2016.

8) **Objective:** Enhance protection of public health by improving the expediency and reach of communication mechanisms for broadcasting water quality advisories and beach health information.

**ACTION:** See the discussion above under Objective 5 about the GLC’s work on the myBeachCast mobile app, which provides real-time information on beach water quality advisories, weather and water conditions for more than 1,900 Great Lakes and inland beaches (http://beachcast.glin.net).

9) **Objective:** Support regional efforts to plan for and invest in green infrastructure to better manage stormwater and to improve the quality of urban water resources.

**ACTION:** The GLC is leading the Greater Lakes project, in collaboration with partners, to identify and test the environmental and financial rationales for municipalities to pursue water conservation and green infrastructure practices, and evaluate how this information can drive innovation in water management throughout the Great Lakes region. *(See the Water Resources Management section, objective 3, for additional details.)*

### Habitat and Coastal Management

**Goal:** Contribute to the preservation of diverse habitats and natural communities that sustain populations of desirable species; the restoration of degraded areas, such as the Areas of Concern; and the conservation of coastal resources to support sustainable activities that depend on access to the waters of the Great Lakes.

**Objectives and Actions**

1) **Objective:** Support the work of federal, state and local agencies and advisory groups to develop and implement restoration projects with a focus on Areas of Concern and place-based restoration that can achieve multiple ecosystem objectives (e.g., climate change, habitat restoration, sustainable water resource management, invasive species prevention and control).

**ACTION:** The GLC is leading a regional partnership, funded by NOAA under the GLRI, to support habitat restoration in Areas of Concern (AOC). Since 2013 more than $29 million has been allocated for restoration in the St. Marys River AOC in Michigan, Buffalo River AOC in New York and Muskegon Lake AOC in Michigan. Project implementation is scheduled through 2017. The GLC is working with state and local agencies to implement these projects over the next several years.

- St. Marys River AOC: $9,441,749 for the Little Rapids Restoration Project restoring 70 acres of river rapids and aquatic habitat, in partnership with the Chippewa County Road Commission.
- Buffalo River AOC: $6,276,558 for eight restoration and design projects that will restore 6,320 linear feet of shoreline habitat, 10.67 acres of riparian habitat and 3.31 acres of invasive species management in partnership with the Buffalo Niagara Riverkeeper.
• Muskegon Lake AOC: $13,912,119 for three restoration projects and an engineering design project that will restore 4,272 feet of shoreline, 11.8 acres of emergent wetland, 44.6 acres of open water wetland, and 22.6 acres of fill (242,328 tons) removed in partnership with the West Michigan Shoreline Regional Development Commission.

The GLC provides staff support to the Statewide Public Advisory Council (SPAC) for Michigan’s AOC Program. Recent actions include the SPAC’s fall meeting, held Nov. 16-17 near Lansing, Mich. Commission staff are also assisting with the annual conference for the U.S. Great Lakes AOC program, sponsored by U.S. EPA and being held March 2-3 in Dearborn, Mich. (for details see http://www.epa.gov/great-lakes-aocs/2016-great-lakes-areas-concern-conference).

2) **Objective:** Advance federal programs that support our habitat and coastal management goal.

**ACTION:** The GLC sits on the steering committee of the Upper Midwest and Great Lakes Landscape Conservation Cooperative and participates on the Coastal Conservation Working Group. The GLC cooperates with other federal partners, including NOAA, USGS and the Corps of Engineers on habitat and coastal projects and programs.

3) **Objective:** Ensure that the science needs of state natural resource managers are addressed by federal research laboratories and that environmental managers have access to the latest scientific information.

**ACTION:**
- As discussed above in the Water Quality and Ecosystem Health section, the GLC completed *Practitioners’ Views of Science Needs for the Great Lakes Coastal Ecosystem.* A pre-publication version was printed and shared at the 2015 GLC Annual Meeting in Chicago. The final report was made available on the GLC web site after going through formal Department of Interior review protocols (http://glc.org/projects/habitat/coastal-ecosystem/). This document is intended to inform science and monitoring priorities with the USGS-Great Lakes Science Center and potentially other federal science agencies working in the Great Lakes.
- The GLC is partnering with federal agencies to facilitate communication and coordination between states and federal research laboratories.
  - GLC staff, in cooperation with USGS staff, are engaged in multiple activities outlined in the third annual joint workplan under a five-year Memorandum of Understanding between USGS-GLSC and GLC. The joint workplan has three funded initiatives and four unfunded initiatives:
    1. **Phragmites (Great Lakes Phragmites Collaborative and Collaborative for Microbial Symbiosis and Phragmites Management)**
    2. **Invasive Mussels Collaborative**
    3. Coastal Science Strategy
    4. Urban Coastal Revitalization
    5. Beach and Coastal Health
    6. Coastal Infrastructure and Nearshore Habitats
    7. Lake Michigan Monitoring Coordination Council (2014-2015 funding from the GLC-USGS MOU and 2015-2016 funding via Michigan DEQ)

Those in bold are funded and detailed updates are provided elsewhere in this workplan update. The other initiatives are not yet funded but identify joint priorities and prospective actions around which funding can be pursued.
4) **Objective:** Respond to needs and interests of the states and provinces related to coastal management issues.

**ACTION:** The third phase of Monitoring and Mapping Avian Resources over Selected Areas of the Great Lakes is underway with a $260,000 grant from USF&WS. During phases 1 and 2 the GLC coordinated aerial bird surveys over selected areas of lakes Michigan, Huron, St. Clair and Erie, with more than 1.8 million bird observations collected from 2012-2014. In Phase 3 previously collected data will be used to develop a set of over-lake models for individual bird species. Data and information products derived from the models will be relevant to wildlife and natural resource managers. During the first six months of Phase 3 the GLC is leading a data and information needs assessment directed at wildlife and natural resource management. This assessment will culminate in a management engagement workshop, being held March 22-23, 2016 to explore how pelagic bird data and information can support wildlife and natural resource management decisions in the Great Lakes. The workshop will bring together a team of modelers and avian researchers with wildlife and natural resource managers, NGOs and coastal stakeholders to work on these issues.

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**Policy Coordination and Advocacy**

The centerpieces of the GLC’s policy coordination and advocacy program are its annual legislative priorities statement and Great Lakes Day in Washington. The 2015 statement, *Priorities for Sustaining Great Lakes Restoration and Economic Revitalization*, was released on February 26 – Great Lakes Day 2015 – and guided the GLC’s advocacy activities in 2015. The top priorities for 2015 were:

- Sustaining progress under the Great Lakes Restoration Initiative
- Passing comprehensive legislation to strengthen and accelerate Great Lakes conservation efforts
- Protecting the Great Lakes from Asian carp and other invasive species
- Helping communities upgrade aging water infrastructure and safeguard drinking water
- Ensuring Farm Bill conservation programs target watersheds contributing polluted runoff to the Great Lakes
- Providing resources for dredging and infrastructure improvements to maintain the Great Lakes Navigation System

Below is a brief summary of actions taken on these federal priorities since the 2015 Annual Meeting, as well as reports on other policy and advocacy issues affecting the Great Lakes that have come up since then.

**FY 2016 Appropriations for major Great Lakes programs**

In mid December Congress passed an omnibus appropriations bill for FY 2016. The table at the end of this section summarizes the final FY 2016 funding levels for selected Great Lakes programs. Some highlights include:

- **Great Lakes Restoration Initiative:** $300 million (equal to the FY 2015 level and $50 Million above the President’s request).
- **Clean Water and Safe Drinking Water SRFs:** $1.394 billion and $863 million, respectively ($55 million and $44 million below FY 2015 levels, respectively).
- **Corps of Engineers work on Asian Carp control:** $500,000 in FY 2016 for the Great Lakes and Mississippi River Interbasin Study. However the Corps has indicated that it will have $3.1 million for the Brandon Road Feasibility Study, which is adequate for their capacity in FY 2016. This includes $500,000 from congressional appropriations and $2.6 million from the GLRI.
- **Harbor Maintenance Trust Fund:** $1.2 billion ($100 million above the FY 2015 level).

**Sustain progress under the Great Lakes Restoration Initiative (GLRI)**

Congressional support for the GLRI continues to be strong, as evidenced by Congress providing level funding of $300 million for the Initiative in FY 2016, a $50 million *increase* from the president’s budget request. The GLC continues to devote substantial efforts to urging Congress to fully fund the GLRI, including factsheets showing
GLRI projects funded in each state and showcasing economic benefits from the Great Lakes, and outreach to the states and local stakeholders urging them to convey support for the GLRI to their congressional representatives. The Commission has urged the Great Lakes congressional delegation to sign on to several letters to appropriations committees urging continued funding for the GLRI in FY 2016.

In July the Government Accountability Office (GAO) issued a report on the GLRI focused on the expenditure of funds, how the Interagency Task Force identifies funding priorities, and information made available on GLRI projects and results. The report was positive on progress in these areas and provided the GLRI with a mostly “clean bill of health.” The full report is available online at http://www.gao.gov/assets/680/671543.pdf.

On Sept. 30, 2015 the House Transportation and Infrastructure Subcommittee on Water Resources and Environment held an oversight hearing on the GLRI. Commission Chair Jon Allan testified on behalf of the GLC and emphasized two top legislative priorities: sustain funding for the GLRI and pass legislation formally authorizing the program. The testimony, prepared by GLC staff, described the GLRI as a strong and well-managed program, but highlighted opportunities for improvement in the following areas:

- Coordination, consultation and engagement with the Great Lakes states
- State capacity and an effective federal-state partnership for long-term Great Lakes conservation
- Information management and reporting
- Long-term ecological monitoring to assess progress and adapt programs
- Integration with actions under the Great Lakes Water Quality Agreement
- Targeting conservation and nutrient reduction actions to priority watersheds

The complete testimony is available upon request.

Pass comprehensive legislation to strengthen and accelerate Great Lakes conservation efforts

Legislation has been introduced in both the House and Senate formally authorizing the GLRI. Rep. David Joyce and Sen. Mark Kirk have introduced the Great Lakes Restoration Initiative Act (H.R. 223 and S. 1024), which authorizes the GLRI at $300 million annually. Sen. Tammy Baldwin has introduced the Great Lakes Ecological and Economic Protection Act (S. 504), which authorizes the GLRI at $475 million annually; reauthorizes EPA’s Great Lakes National Program Office; reauthorizes the Great Lakes Legacy Act at $150 million annually; establishes a Great Lakes Advisory Board; and authorizes a Federal Interagency Task Force. Rep. Joyce’s GLRI authorization bill passed the House in late 2014 but was not taken up by the Senate. The FY 2016 appropriations bill authorized the GLRI for just one year, with the expectation that a five-year authorization bill would be taken up in 2016.

In January the Senate Environment and Public Works Committee marked up and passed Sen. Kirk’s GLRI authorization bill. The House Transportation and Infrastructure Committee was scheduled to mark up Rep. Joyce’s bill, but the hearing was cancelled due to the snowstorm that hit Washington the weekend prior. A new date for the House committee markup is pending. Staff in both chambers consulted with the GLC on amendments to the legislation, including suggestions from U.S. EPA. The House bill, as amended in committee, includes a new provision directing the U.S. EPA administrator to designate a point person from an appropriate federal agency to coordinate GLRI activities involving harmful algal blooms.

The GLC submitted a letter to the Senate committee supporting the bill; a similar letter the House committee is pending. We are cautiously optimistic that this legislation will be passed by Congress this year and will provide a strong legal foundation to sustain the GLRI into the next administration. This is a significant accomplishment and we are pleased that the GLC has been an influential voice – together with our regional partners – in supporting congressional action.

Protecting the Great Lakes from Asian carp and other invasive species

The GLC continues to work with Congress and regional stakeholders to advance measures to prevent the movement of Asian carp and other invasive species through the Chicago Area Waterway System (CAWS) and other pathways. Following release of the Great Lakes and Mississippi River Interbasin Study (GLMRIS) in January 2014, there is significant interest in Congress and among regional stakeholders to develop and implement short-term
actions to reduce the risk of Asian carp movement while a long-term solution is developed. Commission staff have communicated with congressional leaders on funding and legislative priorities in this area, consistent with the resolution adopted at the Commission’s 2014 Semiannual Meeting.

As discussed in detail above in the invasive species workplan update, the CAWS Advisory Committee submitted its final recommendations to Congress and the President in January, calling for funding for the Corps of Engineers to complete studies necessary to develop a Chief’s Report on a system of control points, with investigations focused on two specific questions: “1. Whether an AIS lock or system of AIS locks can be designed and implemented in the CAWS to be effective at two-way prevention, compared to other alternatives, including what is known to be most effective; and 2. Whether and how control points could be implemented consistent with the mid-system locations identified in several GLMRIS alternatives.” In August the committee wrote to the President and Congress supporting funding for the evaluation of the Brandon Road Lock and Dam as a control point to prevent Asian carp and other species moving from the Mississippi River into the Great Lakes basin.

The Advisory Committee’s three letters with recommendations to the President and Congress, along with the summary of technical investigations conducted for the committee, are available online at http://glc.org/projects/invasive/chicago-waterway/.

For the current fiscal year, we understand that the Corps will have $3.1 million for the Brandon Road study. This includes $500,000 from Congressional appropriations and $2.6 million from the GLRI. The Corps projects the study will cost $8.2 million and be completed by early 2019.

The FY 2016 omnibus appropriations bill included report language directing the Corps of Engineers to expedite authorized actions related to the threat Asian carp pose to the Great Lakes basin, including the Brandon Road Study, and upon completion of the study, to expeditiously pursue authorization of any proposed modification to Brandon Road Lock and Dam. The Corps is also directed to establish formal emergency procedures, including rapid response protocols, monitoring, and other countermeasures, to prevent Asian carp from passing beyond the Brandon Road Lock and Dam while complying with the lock’s existing authorized purposes. These procedures are to be established in coordination with the U.S. Fish and Wildlife Service and in consultation with the Asian Carp Regional Coordinating Committee. The complete language is provided below.

**Helping communities upgrade aging water infrastructure and safeguard drinking water**

As shown in the table below, final FY 2016 funding for the Clean Water and Drinking State Revolving Fund (SRF) programs is slightly below the FY 2015 levels. The President’s FY 2016 budget originally requested $279 million more for the Drinking Water SRF, with U.S. EPA justifying the increase “to support the higher documented needs for drinking water infrastructure, greater needs for smaller communities, and its lower revolving levels nationally compared to the Clean Water SRF.”

The FY 2016 omnibus appropriations bill included a new federal notification requirement for local municipalities to report any combined sewer overflow discharges into the Great Lakes, a measure sponsored by Illinois Senator Mark Kirk. Water treatment facilities will be required to publicly report the date of a discharge, the volume of the discharge and any public area affected by that discharge.

The drinking water crisis in Flint, Michigan likely will focus renewed attention on failing drinking water infrastructure and related policies and regulations.

**Providing resources for dredging and infrastructure improvements to maintain the Great Lakes Navigation System**

In 2014 Congress passed and the President signed a new Water Resources Reform and Development Act with important benefits for the Great Lakes, including increased funding for the Harbor Maintenance Trust Fund (HMTF); funding authorization for operating and maintaining the Great Lakes Navigation System; and direction to the Army Corps of Engineers to manage and allocate funding for the Great Lakes Navigation System (GLNS) as a single, comprehensive system. Since that time funding for the HMTF has increased each year, reflecting the legislation’s provisions directing incremental increases in expenditures until they reach 100 percent of the fund’s receipts in 2025.
In November the Corps of Engineers received approval to reprogram $1.3 million to complete an Economic Re-
evaluation Report on constructing a new large lock at the Soo Locks in Sault Ste. Marie, Michigan. The new report,
to be completed within two years, will update a previous cost-benefit analysis that may have used incorrect
assumptions about the capability for rail and truck infrastructure to move cargo if the locks become unavailable.
There is also interest in securing public release of a Department of Homeland Security report on the impact of an
unexpected closure of the Soo Locks on the nation’s economy. Concern over the reliability of the Soo Locks was
heightened after both operational locks were briefly closed this summer for maintenance.

The FY 2016 omnibus appropriations bill includes report language prohibiting the use of federal funds for open-
lake placement of dredged material, after evaluating the least costly, environmentally acceptable manner for the
disposal or management of dredged material originating from Lake Erie or its tributaries, unless approved under a
state water quality certification.

The Coast Guard Authorization Bill was passed by Congress and signed into law by the President on Feb. 9. It
authorizes funding for construction of a new freshwater icebreaking vessel for the Great Lakes. It also directs the
Coast Guard to conduct an assessment of the effectiveness of oil spill response activities in the Great Lakes,
including an evaluation of new research into oil spill impacts in fresh water under a wide range of conditions; and
an evaluation of oil spill prevention and clean up contingency plans to improve understanding of oil spill
impacts in the Great Lakes and foster improvements to safety technologies and environmental protection systems.
The report to Congress is due in two years.

Asian Carp Report Language in the FY 2016 Omnibus Appropriations Bill (Division D, Page 2)

Asian carp.-The Corps is directed to expedite authorized actions related to addressing the threat Asian carp
pose to the Great Lakes basin, including the Brandon Road Study. Given the promise Brandon Road Lock and
Dam holds as a single point to control upstream transfer of invasive species, delays to this study would
pose an unnecessary threat to the Great Lakes. Upon completion of the study, the Corps is directed to
expeditiously pursue authorization of any proposed modification to Brandon Road Lock and Dam through
the appropriate congressional committees. The Corps is further directed to establish formal emergency
procedures under the authorities provided under Section 1039 of the Water Resources Reform and
Development Act of 2014 (P.L. 113-121), including rapid response protocols, monitoring, and other
countermeasures, that are appropriate to prevent Asian Carp from passing beyond the Brandon Road Lock
and Dam while still complying with the Lock's existing authorized purposes and the River and Harbor Act
of 1899 (33 U.S.C. 401 et seq.). These procedures shall be established in coordination with the U.S. Fish
and Wildlife Service and in consultation with the Asian Carp Regional Coordinating Committee.

Appropriations (in millions of dollars) for selected Great Lakes programs for Fiscal Year 2015, the President’s budget request for FY
2016, and the final enacted funding level for FY 2016

<table>
<thead>
<tr>
<th>Program</th>
<th>FY 2015</th>
<th>FY 2016 Budget Request</th>
<th>Final FY 2016 Appropriations</th>
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<tr>
<td>Great Lakes Environmental Research Laboratory</td>
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<td>Dispersal Barrier and Interbasin Study</td>
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*An additional $2.6 million is being provided from the GLRI for the Brandon Road feasibility study in FY 2016, which is being conducted under GLMRIS.
Reference

This section includes:

- Great Lakes Basin Compact
- Commission Bylaws
- Membership lists
  - Commissioners, Associate Commissioners and Alternates
  - Observers
  - Staff
GREAT LAKES BASIN COMPACT

(With State & Federal Legislative History)

Reprinted by

Great Lakes Commission
Eisenhower Corporate Park
2805 S. Industrial Hwy., Suite #100
Ann Arbor, Michigan 48104-6791
GREAT LAKES BASIN COMPACT

The party states solemnly agree:

ARTICLE I

The purposes of this compact are, through means of joint or cooperative action:

1. To promote the orderly, integrated, and comprehensive development, use, and conservation of the water resources of the Great Lakes Basin (hereinafter called the Basin).

2. To plan for the welfare and development of the water resources of the Basin as a whole as well as for those portions of the Basin which may have problems of special concern.

3. To make it possible for the states of the Basin and their people to derive the maximum benefit from utilization of public works, in the form of navigational aids or otherwise, which may exist or which may be constructed from time to time.

4. To advise in securing and maintaining a proper balance among industrial, commercial, agricultural, water supply, residential, recreational, and other legitimate uses of the water resources of the Basin.

5. To establish and maintain an intergovernmental agency the end that the purposes of this compact may be accomplished more effectively.

ARTICLE II

A. This compact shall enter into force and become effective and binding when it has been enacted by the legislature of any four of the States of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin and thereafter shall enter into force and become effective and binding as to any other of said states when enacted by the legislature thereof.

B. The Province of Ontario and the Province of Quebec, or either of them, may become states party to this compact by taking such action as their laws and the laws of the Government of Canada may prescribe for adherence thereto. For the purposes of this compact the word 'state' shall be construed to include a Province of Canada.

ARTICLE III

The Great Lakes Commission created by Article IV of this compact shall exercise its powers and perform its functions in respect to the Basin which, for the purposes of this compact shall consist of so much of the following as may be within the party states:

1. Lakes Erie, Huron, Michigan, Ontario, St. Clair, Superior, and the St. Lawrence River, together with any and all natural or manmade water interconnections between or among them.

2. All rivers, ponds, lakes, streams, and other watercourses which, in their natural state or in their prevailing conditions, are tributary to Lakes Erie, Huron, Michigan, Ontario, St. Clair, and Superior or any of them or which comprise part of any watershed draining into any of said lakes.
ARTICLE IV

A. There is hereby created an agency of the party states to be known as The Great Lakes Commission (hereinafter called the Commission). In that name the Commission may sue and be sued, acquire, hold and convey real and personal property and any interest therein. The Commission shall have a seal with the words, 'The Great Lakes Commission' and such other design as it may prescribe engraved thereon by which it shall authenticate its proceedings. Transactions involving real or personal property shall conform to the laws of the state in which the property is located, and the Commission may by by-laws provide for the execution and acknowledgment of all instruments in its behalf.

B. The Commission shall be composed of not less than three commissioners nor more than five commissioners from each party state designated or appointed accordance with the law of the state which they represent and serving and subject to removal in accordance with such law.

C. Each state delegation shall be entitled to three votes in the Commission. The presence of commissioners from a majority of the party states shall constitute a quorum for the transaction of business at any meeting of the Commission. Actions of the Commission shall be by a majority of the votes cast except that any recommendations made pursuant to Article VI of this compact shall require an affirmative vote of not less than a majority of the votes cast from each of a majority of the states present and voting.

D. The commissioners of any two or more party states may meet separately to consider problems of particular interest to their states but no action taken at any such meeting shall be deemed an action of the Commission unless and until the Commission shall specifically approve the same.

E. In the absence of any commissioner, his vote may be cast by another representative or commissioner of his state provided that said commissioner or other representative casting said vote shall have a written proxy in proper form as may be required by the Commission.

F. The Commission shall elect annually from among its members a chairman and vice-chairman. The Commission shall appoint an Executive Director who shall also act as secretary-treasurer, and who shall be bonded in such amount as the Commission may require. The Executive Director shall serve at the pleasure of the Commission and at such compensation and under such terms and conditions as may be fixed by it. The Executive Director shall be custodian of the records of the Commission with authority to affix the Commission's official seal and to attest to and certify such records or copies thereof.

G. The Executive Director, subject to the approval of the Commission in such cases as its by-laws may provide, shall appoint and remove or discharge such personnel as may be necessary for the performance of the Commission's function. Subject to the aforesaid approval, the Executive Director may fix their compensation, define their duties, and require bonds of such of them as the Commission may designate.

H. The Executive Director, on behalf of, as trustee for, and with the approval of the Commission, may borrow, accept, or contract for the services of personnel from any state or government or any subdivision or agency thereof, from any inter-governmental agency, or from any institution, person, firm or corporation; and may accept for any of the Commissions purposes and functions under this compact any and all donations, gifts, and grants of money, equipment, supplies, materials, and services from any state or government of any subdivision or agency thereof or inter-governmental agency or from any institution, person, firm or corporation and may receive and utilize the same.

I. The Commission may establish and maintain one or more offices for the transacting of its business and for such purposes the Executive Director, on behalf of, as trustee for, and with the approval of the Commission, may acquire, hold and dispose of real and personal property necessary to the performance of its functions.
J. No tax levied or imposed by any party state or any political subdivision thereof shall be deemed to apply to property, transactions, or income of the Commission.

K. The Commission may adopt, amend and rescind by-laws, rules and regulations for the conduct of its business.

L. The organization meeting of the Commission shall be held within six months from the effective date of the compact.

M. The Commission and its Executive Director shall make available to the party states any information within its possession and shall always provide free access to its records by duly authorized representatives of such party states.

N. The Commission shall keep a written record of its meetings and proceedings and shall annually make a report thereof to be submitted to the duly designated official of each party state.

O. The Commission shall make and transmit annually to the legislature and Governor of each party state a report covering the activities of the Commission for the preceding year and embodying such recommendations as may have been adopted by the Commission. The Commission may issue such additional reports as it may deem desirable.

ARTICLE V

A. The members of the Commission shall serve without compensation, but the expenses of each commission shall be met by the state which he represents in accordance with the law of that state. All other expenses incurred by the Commission in the course of exercising the powers conferred upon it by this compact, unless met in some other manner specifically provided by this compact, shall be paid by the Commission out of its own funds.

B. The Commission shall submit to the executive head or designated officer of each party state a budget of its estimated expenditures for such period as may be required by the laws of that state for presentation to the legislature thereof.

C. Each of the Commission's budgets of estimated expenditures shall contain specific recommendations of the amount or amounts to be appropriated by each of the party states. Detailed commission budgets shall be recommended by a majority of the votes cast, and the costs shall be allocated equitably among the party states in accordance with their respective interests.

D. The Commission shall not pledge the credit of any party state. The Commission may meet any of its obligations in whole or in part with funds available to it under Article IV(H) of this compact, provided that the Commission takes specific action setting aside such funds prior to the incurring of any obligations to be met in whole or in part in this manner. Except where the Commission makes use of funds available to it under Article IV(H) hereof, the Commission shall not incur any obligations prior to the allotment of funds by the party states adequate to meet the same.

E. The Commission shall keep accurate accounts of all receipts and disbursements. The receipts and disbursements of the Commission shall be subject to the audit and accounting procedures established under the by-laws. However, all receipts and disbursements of funds handled by the Commission shall be audited yearly by a qualified public accountant and the report of the audit shall be included in and become a part of the annual report of the Commission.
F. The accounts of the Commission shall be open at any reasonable time for inspection by such agency, representative of the party states as may be duly constituted for that purpose and by others who may be authorized by the Commission.

ARTICLE VI

The Commission shall have power to:

A. Collect, correlate, interpret, and report on data relating to the water resources and the use thereof in the Basin or any portion thereof.

B. Recommend methods for the orderly, efficient, and balanced development, use and conservation of the water resources of the Basin or any portion thereof to the party state and to any other governments or agencies having interests in or jurisdiction over the Basin or any portion thereof.

C. Consider the need for and desirability of public works and improvements relating to the water resources in the Basin or any portion thereof.

D. Consider means of improving navigation and port facilities in the Basin or any other portion thereof.

E. Consider means of improving and maintaining the fisheries of the Basin or any portion thereof.

F. Recommend policies relating to water resources including the institution and alteration of flood plain and other zoning laws, ordinances and regulations.

G. Recommend uniform or other laws, ordinances, or regulations relating to the development, use and conservation of the Basin's water resources to the party states or any of them and to other governments, political subdivisions, agencies of inter-governmental bodies having interests or in jurisdiction sufficient to affect conditions in the Basin or any portion thereof.

H. Consider and recommend amendments or agreements supplementary to this compact to the party states or any of them, and assist in the formulation and drafting of such amendments or supplementary agreements.

I. Prepare and publish reports, bulletins, and publications appropriate to this work and fix reasonable sales prices therefore.

J. With respect to the water resources of the Basin or any portion thereof, recommend agreements between the governments of the United States and Canada.

K. Recommend mutual arrangements expressed by concurrent or reciprocal legislation on the part of Congress and the Parliament of Canada including but not limited to such agreements and mutual arrangements as are provided for by Article XIII of the Treaty of 1909 Relating to Boundary Waters and Questions Arising Between the United States and Canada. (Treaty Series, No 548).

L. Cooperate with the governments of the United States and of Canada, the party states and any public or private agencies or bodies having interests in or jurisdiction sufficient to affect the Basin or any portion thereof.

M. At the request of the United States, or in the event that a Province shall be a party state, at the request of the Government of Canada, assist in the negotiation and formulation of any treaty or other mutual agreement between the United States and Canada with reference to the Basin or any portion thereof.
N. Make any recommendation and do all things necessary and proper to carry out the powers conferred upon the Commission by this compact, provided that no action of the Commission shall have the force of law in, or be binding upon, any party state.

**ARTICLE VII**

Each party state agrees to consider the action the Commission recommends in respect to:

A. Stabilization of lake levels.

B. Measures for combating pollution, beach erosion, floods and shore inundation.

C. Uniformity in navigation regulations within the constitutional powers of the states.

D. Proposed navigation aids and improvements.

E. Uniformity or effective coordinating action in fishing laws and regulations and cooperative action to eradicate destructive and parasitical forces endangering the fisheries, wildlife and other water resources.

F. Suitable hydroelectric power developments.

G. Cooperative programs for control of soil and bank erosion for the general improvement of the Basin.

H. Diversion of waters from and into the Basin.

I. Other measures the Commission may recommend to the states pursuant to Article VI of this compact.

**ARTICLE VIII**

This compact shall continue in force and remain upon each party state until renounced by the act of the legislature of such state, in such form and manner as it may choose and as may be valid and effective to repeal a statute of said state, provided that such renunciation shall not become effective until six months after notice of such action shall have been officially communicated in writing to the executive head of the other party states.

**ARTICLE IX**

It is intended that the provisions of this compact shall be reasonably and liberally construed to effectuate the purposes thereof. The provisions of this compact shall be severable and if any phrase, clause, sentence or provision of this compact is declared to be contrary to the constitution of any party state or of the United States, or in the case of a Province, to the British North America Act of 1867 as amended, or the applicability thereof to any state, agency, person or circumstances is held invalid, the constitutionality of the remainder of this compact and the applicability thereof to any state, agency, person or circumstance shall not be affected thereby, provided further that if this compact shall be held contrary to the constitution of the United States, or in the case of a Province, to the British North America Act of 1867 as amended, or of any party state, the compact shall remain in full force and effect as to the remaining states and in full force and effect as to the state affected as to all severable matters.
STATE LEGISLATIVE HISTORY:

Illinois: (69th GA House Bill, No. 983, 1955)
Indiana: (Chapter 220 (H. 216, Approved March 10, 1955)
Minnesota: (Laws of Minnesota 1955, Chapter 691; S.F. No. 1982)
New York: (Chapter 643, Laws of 1960)
Ohio: (Amended House Bill 415, Effective October 9, 1963, 105 General Assembly)
Wisconsin: (No. 294 A, Chapter 275, Laws of 1955)

The Commission was officially organized and established December 12, 1955 subsequent to ratification of the compact by five states (Illinois, Indiana, Michigan, Minnesota and Wisconsin). The Commission office was established on the Campus of the University of Michigan in early 1956.

CONGRESSIONAL CONSENT - LEGISLATION

All interstate compacts require Congressional consent (Article I, Sec. 10, Clause 3, Constitution of the United States) in order to achieve full force and effect. Numerous bills were considered beginning in 1956. In 1968, Congress enacted S. 660 (PL 90-419) giving limited consent to the compact as follows:

"Public Law 90-419  
90th Congress, S 660  
July 24, 1968  

"AN ACT  

"Granting the consent of Congress to a Great Lakes Basin Compact, and for other purposes.  

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the consent of Congress is hereby given, to the extent and subject to the conditions hereinafter set forth, to the Great Lakes Basin Compact which has been entered into by the States of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania and Wisconsin in the form as follows:
"GREAT LAKES BASIN COMPACT"

(The full text of the State adopted Compact text is included in PL 90-419 at this point.)

"SEC. 2. The consent herein granted does not extend to paragraph B of article II or to paragraphs J, K, and M or article VI of the compact, or to other provisions of article VI of the compact which purpose to authorize recommendations to, or cooperation with, any foreign or international governments, political subdivisions, agencies or bodies. In carrying out its functions under this Act the Commission shall be solely a consultative and recommendatory agency which will cooperate with the agencies of the United States. It shall furnish to the Congress and to the President, or to any official designated by the President, copies of its reports submitted to the party states pursuant to paragraph O of article IV of the compact.

"SEC. 3. Nothing contained in this Act or in the compact consented to hereby shall be construed to affect the jurisdiction on, powers, or prerogatives of any department, agency, or officer of the United States Government or of the Great Lakes Basin Committee established under title II of the Water Resources Planning Act, or of any international commission or agency over or in the Great Lakes Basin or any portion thereof, nor shall anything contained herein be construed to establish an international agency or to limit or affect in any way the exercises of the treatymaking power or any other power or right of the United States.

"SEC 4. The right to alter, amend, or repeal this Act is expressly reserved. "Approved July 24, 1968."

FEDERAL LEGISLATIVE HISTORY:

PL 90-419 (90th Congress, S 660)
HOUSE REPORT No 1640 (Comm. on Foreign Affairs)
SENATE REPORT No. 1178 (Comm. on the Judiciary)
CONGRESSIONAL RECORD, Vol. 114 (1968):
June 12: Considered and passed Senate.
July 15: Considered and passed House.
July 24: Signed by the President.
BYLAWS

Pursuant to the powers and authority vested in the Great Lakes Commission by paragraph K of Article IV of the Great Lakes Basin Compact, the following Bylaws are adopted and shall remain in force until amended.

ARTICLE I

COMPONENT STATES

The states of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania and Wisconsin having ratified the Great Lakes Basin Compact by act of their legislatures are recognized as the component states of this Compact which has become operative in view of the provisions of Article II, section A of this Compact. The provinces of Ontario and Québec, by actions of their governments through a Declaration of Partnership, are recognized as associate (non-voting) members of the Compact.

ARTICLE II

MEMBERSHIP

SECTION 1 - The members appointed by and certified to the Commission by the component states shall constitute the members of the Commission.

SECTION 2 - Pursuant to the provisions of the Compact, each state shall have a total of three votes on any matters coming before the Commission to be cast in accordance with the applicable laws of such state. Should any Commission or any committee, special committee, or task force member be absent from any Commission or committee, special committee or task force meeting, their vote may be cast by a duly appointed proxy in accordance with Article IV, Section E of the Compact, whose authority shall be in writing and filed with the Chair of the Commission or committee, as the case may be, at the time of or before said meeting.

SECTION 3 - Each state or the Commission itself shall be permitted to make use of advisors and consultants of its own choice at any meeting of the Commission or of any committee, special committee or task force. Such advisors and consultants may be permitted to participate in discussions and deliberations without the power to vote.

SECTION 4 - The Commission shall be permitted to designate observers representing the United States and Canadian federal governments, regional organizations, or any others it may so designate to advance the goals and objectives of the Great Lakes Basin Compact. Observers may be permitted to participate in discussions, deliberations and other activities as approved by the Commission, but shall have no vote.
ARTICLE III
BOARD OF DIRECTORS

SECTION 1 - There is established a Board of Directors (hereafter referred to as “the Board”) to be composed of a Commissioner from each component state. The governors of each state, where not inconsistent with state law, shall designate the person who shall serve on the Board. The Chairs of the Ontario and Québec delegations to the Commission shall serve in an associate (non-voting) capacity on the Board. The Chair and Vice Chair of the Commission shall be elected by the Commission from among the state delegation members and, upon election shall also be members of the Board. The Chair of the Commission shall also hold the title of Chairman of the Board.

SECTION 2 - The Board shall evaluate the work, activities, programs and policies of the Commission and shall recommend to the Commission the taking of any action by the Commission relative to such areas. It shall also serve in an advisory capacity to the Chair and Vice Chair of the Commission and shall perform such other duties and functions as the Commission shall delegate to it or otherwise authorize it to perform from time to time on behalf of the Commission. It shall meet on the call of the Chair.

SECTION 3 - The Board shall adopt budget(s) following review by the full Commission in accordance with Article VII. Pursuant to Section 8, Article VII, the Board shall authorize, by majority vote of members present, the adoption of changes to the general operating budget of the Commission. The Board may authorize increases or decreases of the budget by majority vote of members present. Alterations within previously approved amounts of spending categories, not changing the general operating budget amount, may be adopted by majority approval of the Board members present.

SECTION 4 - The Board shall, from time to time, review the personnel policies of the Commission and receive recommendations from Commissioners and the President/Chief Executive Officer on these personnel policies. The Board may authorize changes to the Commission’s "Personnel Policies and Procedures" and authorize changes in compensation for the President/CEO and staff personnel within available budget amounts. Compensation includes salary and fringe benefits available to staff.

SECTION 5 - The Board shall review proposed policies that are prepared for consideration by the Commission and shall report to the full Commission on the findings of the review and provide recommendations on adoption or suggested changes.

SECTION 6 - The Board shall report on all Board meetings at the next regularly scheduled or special Commission meeting. Draft minutes of Board meetings will be furnished to all Commissioners as soon as possible.

SECTION 7 - Board meetings will be held as needed, including by conference call or in conjunction with full Commission meetings to conserve travel costs to the extent practical for member states. Board meetings shall be open to all Commissioners as observers. All meetings will be announced to the entire membership. Board decisions will be made on the basis of a majority vote of those present.

SECTION 8 - The Board will act on Commission policy and budget matters in accordance with the following guidelines:
a) The Commission at a special or regularly scheduled meeting, refers the issues to the Board for action. All Commissioners may participate in discussions, but only Board members will be entitled to vote on the issue.

b) The Commission is unable to adequately resolve an issue (e.g., additional research, discussion or coordination is required, in a timely manner not available to the full Commission.) The Board may receive a referral from the Commission, or the Chair, and after discussion with the Vice Chair and President/CEO, may notify all Commissioners that an issue has been referred to the Board for action and resolution. Any objections shall be considered by the Chair. Other Commissioners desiring to participate may do so through the Board member representing their state or province.

c) For issues in which circumstances require an immediate decision or action, the Chair, after discussion with the Vice Chair and President/CEO, may refer the issue to the Board when a full Commission meeting is not an option for resolution. The Chair will report on all action taken by the Board to the full Commission by regular mail or equivalent as soon as practicable.

SECTION 9 - There is established the position of Immediate Past Chair to be held by the departing Chair for the period of his/her successor’s tenure as Chair. The Immediate Past Chair may be designated, by the Chair in consultation with the Board, to undertake special activities as deemed appropriate.

SECTION 10 - The Chair may designate members of the Board to undertake other special responsibilities as deemed appropriate.

ARTICLE IV
OFFICERS

SECTION 1 - Nominations for Chair and Vice Chair of the Commission shall be made by a nominating committee appointed by the current Chair, and election shall be held at the annual meeting of the Commission. Election to each office shall be by majority vote and each state shall be entitled to three votes. The Chair and Vice-chair shall hold office for one year or until their successors are elected and qualified. In the event the office of Chair becomes vacant, nomination and election to fill the vacancy shall be effected at any meeting of the Commission after due notice to all Commissioners.

SECTION 2 - Chair: The Chair shall take office immediately following adjournment of the meeting at which elected. The Chair shall preside at all meetings of the Commission and of the Board from such time until a successor shall take office. The Chair shall appoint, or establish the process of appointing, the members of committees, special committees, and task forces. The Chair shall serve as a voting member of the Board.

SECTION 3 - Vice Chair: The Vice Chair shall act for the Chair in the event of the latter’s absence or disability. The Vice Chair shall serve as a voting member of the Board.

SECTION 4 - President/CEO: Subject to the general supervision of the Commission, the President/CEO shall be the full time executive officer of the Commission. The President/CEO shall be employed by the Commission and shall hold office at the pleasure of the Commission; and shall:

(a) Carry out its policies;
(b) Serve as editor of any Commission publication;
(c) Coordinate the activities of all committees, special committees and task forces;
(d) Arrange details and facilities, including secretarial and other services for all Commission and Committee meetings;
(e) Serve as ex-officio member without vote for all committees, special committees and task forces;
(f) Cause to be made a record of the proceedings of the Commission and Board and preserve the same in the headquarters office;
(g) Give notice of all meetings;
(h) Make recommendations on programs, policies, and activities of the Commission;
(i) Exercise general supervision under the direction of the Commission of all the Commission programs and activities;
(j) Have immediate charge of the headquarters office and personnel.

SECTION 5 - Executive Staff: The executive staff of the Commission shall consist of President/CEO and such other staff members as may be designated by a majority vote of the Board from time to time.

ARTICLE V
COMMITTEES

SECTION 1 - The Commission may, from time to time and as deemed necessary, delineate committees, special committees, and task forces to carry out its initiatives. Each committee, special committee, or task force shall consist of persons from each interested state and province, nominated by the Chair of the delegation and appointed by the Chair. Each state shall be entitled to one vote on each committee, special committee and task force. In addition, the Chair of each committee, special committee or task force may arrange for associates or advisors, without payment of compensation or expenses to the same unless authorized by the Commission, to assist the committee, special committee or task force and participate in its deliberations and discussions without power to vote on recommendations.

SECTION 2 - The committees, special committees, and task forces shall conduct studies and research, prepare memoranda and reports in their assigned fields and on that basis make recommendations to the full Commission for specific action to be taken in a particular field. Any and all action on legislative recommendations of a committee, special committee or task force other than discussion, study and voting will be made only with the approval of the Commission.

SECTION 3 - Each committee, special committee or task force shall meet as needed to conduct assigned duties. Through its Chair, or the Chair’s designee, each committee, special committee or task force shall periodically submit a written report to the Commission at regular annual meetings of the Commission or at other times as deemed appropriate. Recommendations by the committees, special committees and task forces calling for action by the Commission shall be received in writing by the Chair of the Commission and the President/CEO at least one month prior to the date of the meeting of the Commission at which such action is to be sought, unless special permission is granted by the Commission Chair for a late report.

ARTICLE VI
MEETINGS

SECTION 1 - Annual and semiannual meetings: The Commission shall meet at least twice annually. The annual meeting normally shall be held during the month of October; the semi-annual meeting normally shall be held during the second half of the fiscal year (January – June). The Chair shall consider recommendations and invitations of Commissioners in selecting meeting locations, and views on conditions which tend to over-ride the normally established meeting dates.

SECTION 2 - Notice: The President/CEO shall mail notice in writing of the time and place of each regular meeting of the Commission to each member not later than 60 days prior to the date of the meeting.
SECTION 3 - Special meetings: Special meetings of the full Commission may be called by the Chair to be held at times and places identified in an official call for such meetings.

SECTION 4 - Order of business and rules: The order of business which may be developed by Bylaws, tradition or ruling of the presiding officer of the Commission or Board may be changed at any meeting of the body proposing a change in its order of business by vote of a majority of members present, except as otherwise provided by the Compact or the Bylaws. The usual applicable parliamentary rules and precedents will govern all proceedings.

ARTICLE VII
BUDGET AND FINANCE

SECTION 1 - All component states shall share equally in the expenses of the Commission. Each individual state shall bear the expenses of its Commissioners at Commission annual, semiannual and Board meetings, and such expenses shall not be paid out of funds in the Commission treasury.

SECTION 2 - In the case of committee, special committee or task force programs the Commission may authorize the payment of expenses of committee, special committee or task force members from Commission funds.

SECTION 3 - Financial remittances to the Commission by each member state shall be requested for each fiscal year. The amount of each remittance shall be determined by the Commission in accordance with Sections 1, 6, 7 and 8, this Article and Article V of the Compact.

SECTION 4 - The President/CEO shall, on a quarterly basis, prepare and submit to the Board a statement presenting the Commission’s financial condition.

SECTION 5 - With the approval of the Board, the President/CEO may make transfers of funds within the approved budget of the Commission.

SECTION 6 - The budget of estimated expenditures referred to in Article V of the Compact shall be adopted by the Board prior to the relevant fiscal year, and presented at the next meeting of the Commission.

SECTION 7 - The budget of the Commission shall consist of two parts:

a) The "general operating budget" shall include, but not be limited to funds remitted by each member state, Commission reserve funds and interest earned. Expenditures will normally include routine operating costs for the Commission.

b) The "restricted fund budget" shall include income from projects, grants and other sources not considered as a routine revenue. Expenditures will normally be made to fund costs of the projects or grants incurred by the Commission. Transfers to pay Commission operating expenses may be made in accordance with grant or project authorization.
SECTION 8  
a) The President/CEO shall prepare a proposed annual budget for review and evaluation by the Board at least 45 days prior to the new fiscal year. The proposal shall include estimated income and expenditures for each part of the budget.

b) The Board will make necessary changes to the proposal, will distribute a draft budget to the full Commission for review, and following consultation with the full Commission will adopt a final budget document. The general operating budget component shall be used to determine the financial remittance required by each member state. Only a majority vote by the full Commission shall authorize a change in a member state’s required financial remittances.

SECTION 9 - Certain changes and alterations are expected to occur within the approved budget. These will be handled as follows:

a) Changes in the general operating budget, not requiring a change in required member state remittances, may be made by majority vote of the Board or by a majority vote of the full Commission.

b) Changes in the restricted fund budget, not amending the general operating budget, may be adopted by a majority vote of the full Board or by a majority vote of the full Commission.

c) Changes in the budget, requiring alterations in the required member state remittance will only be authorized by majority vote of the full Commission.

d) Changes in the budget requiring immediate action, where a Board or full Commission meeting is not possible, may be made by the President/CEO in consultation with the Chair or Vice Chair, as available. A subsequent report to, and ratification by, the Board or Commission, as appropriate, will be sought.

ARTICLE VIII  
AMENDMENT OF BYLAWS

These Bylaws may be altered and amended at any regular meeting upon the affirmative majority vote of the Commission. However, no amendment may be considered at any such meeting unless the proposed amendment shall have been received by the Chair and President/CEO at least one month prior to the first day of the month of which said regular meeting shall be held. Immediately upon receipt of such proposed amendment the President/CEO shall refer it to the Board and shall send a copy thereof to each member of the Commission within fifteen days after the receipt thereof, together with notice of the date on which the proposed amendment will be acted upon by the Commission.

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February 2, 2016

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John Linc Stine, Vice Chair, Minnesota  
Kelvin Burch, Retired, Immediate Past Chair, Pennsylvania

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Jody Peacock, Indiana  
Jon W. Allan, Michigan  
John Linc Stine, Minnesota  
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