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DRAFT AGENDA (updated Feb. 17)

**Great Lakes Commission 2015 Semiannual Meeting**

February 24-25, 2015

The Hamilton Crowne Plaza Hotel • 14th and K Street NW; Washington, D.C. 20005

**Tuesday, February 24**

All times are EST

11:00 a.m. **Registration**

1:00 p.m. **Call to order, opening remarks**

1:10 p.m. **Roll call**

1:15 p.m. **Report of the Chair and Executive Director**

- Approval of final agenda
- Approval of minutes from 2014 Annual Meeting
- Approval of Observer request

2:00 p.m. **Strategies for Reducing Nutrients**

Moderator: Russ Rasmussen (WI), Commissioner

- Cities perspective
- NGO perspective
- Agriculture industry perspective
- GLC Initiatives – Fox P Trading and Lake Erie Nutrient Targets Working Group

3:15 p.m. **Break**

3:30 p.m. **Presentation – Oil Transportation in and through the Great Lakes-St. Lawrence River region**

4:00 p.m. **Business of the Great Lakes Commission**

Presentation of resolutions

4:30 p.m. **Observer comments**

Great Lakes Commission’s Official Observers
Wednesday, February 25

7:00 a.m.  Continental breakfast  Hamilton Ballroom

8:00 a.m.  Call to Order  Kelly Burch, Chair

8:00 a.m.  Keynote address  Congressman David Joyce (R-Ohio)

8:45 a.m.  Maritime Transportation  Moderator: Bill Carr (ON), Associate Commissioner

- New provisions in WRRDA and infrastructure investments  Steve Fisher, American Great Lakes Ports Association
- Update on governors’ and premiers’ initiative  Dave Naftzger, Council of Great Lakes Governors
- Dredging disposal challenges  Steve Galarneau, Wisconsin DNR

10:00 a.m.  Break

10:15 a.m.  Keynote address  Dr. Suzette Kimball, Acting Director, U.S. Geological Survey

10:45 a.m.  Business of the Great Lakes Commission  Kelly Burch, Chair

- Resolutions
  - Oil transport
  - Federal priorities
  - International Great Lakes Datum  Tim Eder, Executive Director

11:45 a.m.  Great Lakes federal priorities update  Matt Doss, Erika Jensen

Preparation for Great Lakes Day and Hill meetings

11:55 a.m.  Invitation to 2015 Annual Meeting  Illinois Delegation

Sept. 28-29, Chicago, IL

12:00 p.m.  Adjourn for Great Lakes Day lunch  Kelly Burch, Chair
Great Lakes Day
Draft Agenda: February 13, 2015

All times are EST

Wednesday, February 25

8:00 a.m.  Great Lakes Commission (GLC) Semiannual Meeting
Hamilton Ballroom, Hamilton Crowne Plaza Hotel

10:00 a.m.  Healing Our Waters® - Great Lakes Coalition (HOW) Issue Briefings
Sphinx Grand Ballroom, Almas Temple (Adjoining the Hamilton Crowne Plaza Hotel)

12:15 p.m.  GLC and HOW Joint Lunch
Sphinx Grand Ballroom

1:00 p.m.  GLC and HOW Joint Session
Sphinx Grand Ballroom

2:00 p.m.  HOW Preparation for Congressional Office Visits
Almas Temple

   GLC and HOW Congressional Office Visits
Capitol Hill

6:00 – 8:00 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 26

8:15 – 9:45 a.m.  Congressional Breakfast Reception Sponsored by GLC and Northeast-Midwest Institute
Room 902, Hart Senate Office Building
   ● Welcome
   ● Remarks by Members of Congress

10:00 a.m.  Congressional Office Visits
5:00 p.m.  Capitol Hill
Minutes

Attached, for review and approval, are minutes from the Commission’s 2014 Annual Meeting, held Sept. 29-30, 2014, in Buffalo, N.Y.

Included for your information are minutes of the Board of Directors’ meetings on Nov. 20 and Dec. 18, 2014; and Jan. 15, 2015.
Summary of Actions

1. Approved minutes of the 2014 Semiannual Meeting, held March 4-5, 2014, in Washington, D.C.

2. Approved four resolutions:
   - Lake Erie water pollution and drinking water crisis, which recognizes the recent contamination of drinking water supplies in the western Lake Erie region and actions needed to address the challenges associated with protecting drinking water and preventing algal blooms.
   - Flexibility in the federal standard for navigation dredging projects in the Great Lakes basin, which calls for flexibility and a consideration of alternatives by the U.S. Army Corps of Engineers in applying a federal standard that often identifies open water placement as the preferred alternative for disposing of dredged material.
   - Establishing Blue Accounting: A collaborative re-engineering of Great Lakes information strategy and delivery, which directs the GLC to begin implementing recommendations from its recent Blue Accounting report to the governors and premiers.
   - Support for the Great Lakes Restoration Initiative Action Plan II in fiscal years 2015-19, which commends U.S. EPA and its federal partners for updating the GLRI Action Plan for fiscal years 2015-19 and urges its effective implementation; calls on federal agencies to carry out the updated Action Plan in close consultation with the Great Lakes states; and calls on Congress to continue funding for the GLRI through Fiscal Year 2019.

3. Approved an action item: Presentation, review and process for finalizing the draft report on oil transportation

4. Elected Kelly Burch (PA) as chair and Jon Allan (MI) as vice chair of the Commission.

5. Announced dates for the Commission’s 2015 Semiannual Meeting and Great Lakes Day events, Feb. 24-26 in Washington, D.C.

Minutes

The meeting was called to order at 8:05 a.m. EDT by Kelly Burch (PA), acting chair. The following Commissioners, Associate Commissioners and alternates were present:

Todd Main, Marc Miller, Stephanie Comer, Karen May - Illinois
Kay Nelson - Indiana
Jon Allan, Helen Taylor, Peter Manning, Bruce Rasher - Michigan
Jim Tierney, Don Zelazny, Phil Reed - New York
Jim Zehringer, Karl Gebhardt, Jim Weakley, Gail Hesse - Ohio
Bill Carr, Eric Boysen, Mike Bailey - Ontario
Kelly Burch, Pat Lupo, Herb Packer, Timothy Bruno - Pennsylvania
Eric Marquis, Marc Gagnon - Québec
Russ Rasmussen, Steve Galarneau, Dean Haen - Wisconsin

Staff present: Tim Eder, Tom Crane, Christine Manninen, Matt Doss, Victoria Pebbles, Bryan Comer, Margaux Valenti, Michele Leduc-Lapierre, Pat Gable.

1) **Call to order, opening remarks:** Acting Chairman Kelly Burch welcomed everyone to the meeting and provided some background on his career with Pennsylvania DEP. Burch also acknowledged the reception sponsors (Honeywell and the Consulate General of Canada in NY) and those who organized and sponsored the field trip on the Buffalo River the day prior. Burch noted the new NOAA funding that is supporting the Buffalo River cleanup. Burch introduced Immediate Past Chair Jim Tierney from New York. Tierney noted that 1 million cubic yards of sediment (over 50 large truckloads) have been removed from the Buffalo River thus far. Tierney introduced Rep. Brian Higgins (26th Dist.-NY) and thanked him for all his leadership in Congress representing New York and the Great Lakes.

2) **Welcoming keynote:** Congressman Higgins noted that the Buffalo River story is a personal story for many of us. The Buffalo River was declared biologically dead in 1968. The new threats to our waterways today are more dispersed and are a great challenge. Buffalo has had to change its image from one of industrial significance to one of youthful vibrance. After great economic prosperity, the city of Buffalo started to fall short when businesses closed and industries dried up. A $279M settlement from the hydroelectric power companies in the late 1990s was the start of Buffalo's resurgence. Numerous new buildings are now popping up along the Buffalo River linking canalside to the other harbor. The Buffalo River is afflicted but also represents a significant restoration success. Public and private reinvestment is happening. Buffalo has learned some great lessons. Buffalo historically has been a great waterfront city and is becoming a truly great waterfront city again. Higgins noted the important work of the Great Lakes Commission. He encouraged participants to explore Buffalo, where it’s been and where it’s going.

3) Eder called the roll. Kay Nelson (IN), Mike Bailey (OH), Tim Bruno (PA) and Russ Rasmussen (WI) were welcomed as newly appointed commissioners or alternates. Burch recognized IJC Commissioner Dereth Glance and Great Lakes Fishery Commissioner Dave Ullrich who were in attendance.

4) **Approval of final agenda:** Acting Chairman Burch called for approval of the agenda. One addition: GLRI Action Plan resolution. A motion to approve the agenda with this addition was made by Commissioner Prettner Solon (MN), seconded by Commissioner Zelazny (NY). The agenda was unanimously approved.

5) **Approval of minutes:** Burch called for approval of the minutes from the 2014 Semiannual Meeting in Washington, D.C. A motion to approve the minutes was made by Commissioner Zehringer (OH), seconded by Commissioner Allan (MI). The minutes were unanimously approved.

6) **Report of the Chair:** Burch noted the outstanding progress of the GLRI. He noted the theme of the GLC Annual Meeting, *Turning Rust to Blue: The Great Lakes New Economy.* In Buffalo more than $75M has been invested in restoring and enhancing economic and waterfront development. Burch also noted Pennsylvania’s Presque Isle Bay, which was delisted as an AOC in 2013.

7) **Presentation of action items and report of Nominating Committee:** The resolutions and action items were presented.
• **Resolution – Lake Erie water pollution and drinking water crisis:** This resolution recognizes the recent contamination of drinking water supplies in the western Lake Erie region and the challenges associated with protecting drinking water and preventing algal blooms.

An amendment was suggested to the third “Resolved” clause that recognizes an existing working group under the GLWQA, Annex 4 Nutrient subcommittee. Commissioner Nelson suggested that this existing workgroup be leveraged. Commissioner Tierney suggested that a state/province workgroup, as suggested in the resolution, would have the delegated authority to implement the Clean Water Act. This workgroup would have the authority to act directly. Commissioner Allan suggested that the resolution say “in collaboration and in cooperation with the Annex 4 Nutrient subcommittee.”

Commissioner Allan asked what would trigger an “impaired” designation for western Lake Erie if, in the future, we want to move in that direction. Commissioner Tierney noted that this would be a welcome task or endpoint for the state/province workgroup to strive for. Commissioner Gebhardt asked what the goal would be by pushing for this designation.

The third “Resolved” clause was reworded as follows:

**Be It Further Resolved,** that the members of the Great Lakes Commission commit to forming a working group to:

- develop new and refine existing practices, programs and policies (i.e., TMDL and GLWQA Annex 4 processes), or specify nutrient concentration guidance value(s) by jurisdiction(s), working collaboratively, necessary to achieve pollutant reduction targets or remedies as might be identified by the working group and to achieve objectives set forth in the U.S. Clean Water Act and the Great Lakes Water Quality Agreement; and

- explore and advance market-based and other cost-effective incentive programs to complement regulatory and non-regulatory approaches to strengthen the effectiveness and sustainability of the overall management regime for improving water quality and safeguarding drinking water in Lake Erie and other Great Lakes; and

There were no further amendments, concerns or objections to presenting the resolution for consideration later in the day.

• **Resolution – Flexibility in the federal standard for navigation dredging projects in the Great Lakes basin:** The resolution recognizes the current practice of the U.S. Army Corps of Engineers to apply a federal standard that often identifies open water placement as the preferred alternative for disposing of dredged material, and encourages the Corps to use greater flexibility in making these determinations.

There were no amendments, concerns or objections to presenting the resolution for consideration later in the day.

• **Resolution – Establishing Blue Accounting: A collaborative re-engineering of Great Lakes information strategy and delivery:** This resolution directs the Commission to begin implementing recommendations from its recent report, *Great Lakes Blue Accounting: Empowering Decisions to Realize Regional Water Values.*

Commissioner Taylor (MI) suggested opening it up to additional pilot projects, beyond municipal water. The fourth Resolve clause was reworded as follows:
Be It Further Resolved, the Great Lakes Commission urges partners to work collaboratively to conduct one or more pilots of the Blue Accounting framework; one around municipal water services (safe drinking water, runoff and waste treatment) and that factors leading to the Toledo water crisis be used to guide planning in the development of the pilot; and others within the desired outcomes of healthy aquatic ecosystems; and

There were no further amendments, concerns or objections to presenting the resolution for consideration later in the day.

- **Action Item – Presentation, review and process for finalizing the draft report on oil transportation:** This action item accepts the discussion draft summary report, requested at the Commission’s 2013 Annual Meeting, which evaluates the potential benefits, risks and mitigation options surrounding the transportation of crude oil in the Great Lakes-St. Lawrence River region. It directs Commission staff to publicize and solicit input on the information presented. Staff will consolidate input for future consideration by the Commission’s Board of Directors and Commissioners in formulating policy recommendations and next steps.

There were no amendments, concerns or objections to presenting the Action Item for consideration later in the day.

- **Resolution – Support for the Great Lakes Restoration Initiative Action Plan II in fiscal years 2015-19:** This resolution commends U.S. EPA and its federal partners for updating the GLRI Action Plan for fiscal years 2015-19 and urges its effective implementation with a continued focus on the key goals to clean up Areas of Concern, prevent and control invasive species, reduce nutrient runoff that contributes to harmful algal blooms, and restore habitat for native species; calls on federal agencies to carry out the updated Action Plan in close consultation with the Great Lakes states; and calls on Congress to continue funding for the GLRI through Fiscal Year 2019.

There were no amendments, concerns or objections to presenting the resolution for consideration later in the day.

8) **Report from Nominating Committee, election of officers:** Commissioner Tierney, representing the GLC Nominating Committee, delivered the report. Kelly Burch was nominated as chair. A request for additional nominations was made. No nominations were made from the floor. Commissioner Tierney moved that Kelly Burch be elected as chair, seconded by Commissioner Prettner Solon (MN). The election was unanimously approved. Jon Allan (MI) was nominated as vice chair. A request for additional nominations was made. No nominations were made from the floor. Commissioner Tierney moved that Jon Allan be elected as vice chair, seconded by Commissioner Miller (IL). The election was unanimously approved.

Burch and Allan thanked everyone for their support.

9) **Report of the Executive Director:** Tim Eder discussed the GLC strategic plan and workplan and thanked the staff for their many contributions. Eder reported that the GLC’s budget is healthy at over $16M. Eder acknowledged the new habitat partnership with NOAA for restoration support of the Buffalo River and recognized Debbie Lee, new director of NOAA GLERL, who will assume the job at GLERL on Dec. 1, 2014. The Little Rapids restoration project, near Sault Ste. Marie, Mich., ($5.9M) and continued work to restore Muskegon Lake ($5.45M) were also discussed.
Eder provided an update on the Chicago Area Waterways (CAWS) project, including hiring mediators and development of a framework plan for negotiation. The CAWS Advisory Committee is recognized as the group where consensus can occur. 15/16 Great Lakes senators sent John Goss, Asian carp coordinator, a letter expressing their desire that he work with the CAWS Advisory Committee. Short-term, risk reduction is the first priority. The GLC is making progress on a project tracking the internet sales of “organisms in trade” (i.e., invasive species). Preliminary results show more than 600 sale pages have been found. 57 unique species were identified, including more than 40 invasive plant species. The web crawler that is being developed is a good early warning tool. The GLC is working with law enforcement officials. Eder reported that progress is being made on ballast water treatment through the Great Ships Initiative. The GLC has a task force of state/province members who are discussing the next phase of ballast water permitting. The Vessel Incidental Discharge Act (S. 2094) was introduced in Congress this year. The GLC is not in favor of state pre-emption and communicated these concerns on the legislation, which has since stalled.

Eder discussed the Blue Accounting project – a system of dashboards that track the long-term status of infrastructure status, source water quality, health alarms, etc. Indicators could be pulled out geographically, based on desired ecosystem “outcomes.” The Blue Accounting project would create this toolkit. The GLC has received a small grant from the Great Lakes Protection Fund to support bringing on fellows to start this initiative.

Eder noted the Lake Erie toxic algal blooms issue and the August 2014 drinking water crisis in Toledo, Ohio. This crisis poses an opportunity to ask whether our programs are working to adequately protect drinking water supplies and identifying the sources of pollution causing HABs and declines in water quality. Are we effectively targeting voluntary approaches? The Fox P Trade project, focused on the lower Fox River watershed in Wisconsin, is investigating a new approach.

10) **Update on safe drinking water and Lake Erie:** Commissioner Gebhardt (OH) noted thankfully that there was no loss of life or serious illnesses associated with the Toledo water crisis. He quoted Teddy Roosevelt: “Rhetoric is a poor substitute for action.” The Ohio incident is an isolated one. Gebhardt recognized Ohio EPA Director Craig Butler and Mike Bailey, chief of the ODNR division of surface and groundwater. Ohio EPA began sampling for algal toxins at public water systems in 2010. A State of Ohio HAB Response Strategy was established in early 2011, updated annually. There are 25 public water systems serving a combined population of more than 2.6 million people that use Lake Erie as their source water. There is an early detection system developed by ORSANCO. On Aug. 1 presence was confirmed of microcystin above the drinking water advisory threshold. Ohio officials suspect that a sudden spike in the bloom overwhelmed the water treatment plant before they could adjust the treatment. Ohio EPA recommended that the City of Toledo issue a “Do Not Drink Advisory,” which affected close to a half million people and the Ohio Emergency Operations Center was activated. This incident was a teaching moment. The infrastructure was old and sole source dependent (no backup), testing protocols were questionable, and there were delays in the increased treatment process. There are no national standards for cyanotoxins and public water systems are not required to monitor for cyanotoxins such as microcystin. Impacts include taste and odor problems, increased organic carbon loading, nuisance, cost to communities. Economic impacts include Toledo historically spending $200K/month on carbon treatment. Other cities in Ohio and elsewhere are spending similar and greater amounts. Next steps include analytical methods and cyanotoxin treatments; and routine outreach, training and technical assistance to public water systems. Work is continuing with point sources dischargers on permit limits and increased monitoring, targeted work in HUC 12 watershed on agricultural and other nonpoint sources, base resources and program emphasis on nutrient impaired watersheds as identified in TMDLs, and failing and malfunctioning home sewage systems.
Pennsylvania has introduced a HAB monitoring task force. Erie, Pa., has multiple intakes and redundant systems. Michigan reported that one water intake in Michigan (Monroe) was affected by the algal bloom that affected Toledo. Michigan is active on Annex 4 of the GLWQA and partnering with neighboring states. In New York, alarm bells went off after the Toledo news. Water intakes were tested for microcystin. HABs are monitored in New York State though they have, thankfully, not been hitting the water intakes but they have a severe impact on tourism and other economies.

Comment from Commissioner May (IL): have you discovered what the primary drivers are for the Toledo issue? Answer (Gebhardt): Direct phosphorus discharges into Lake Erie are already very low. Home septic systems are being examined. The agriculture community, which is heavy around western Lake Erie, is likely a considerable contributor. The majority of the phosphorus is coming in from the Maumee basin, which is heavily farmed.

Commissioner Zehringer (OH) said farmers in the Toledo basin have been very cooperative and an increasing number are certified in handling fertilizer and following guidelines to minimize phosphorus inputs.

Comment from Commissioner Main (IL): This is clearly a “wake up” moment for the GLC and the region. He encouraged more monitoring of open lake disposal of dredged material be considered.

Comment from Commissioner Allan (MI): We should remember as a body working on Great Lakes issues for decades that this is one episode but we have made stunning progress and the lakes are in better shape than they were in the past.

Invasive mussel control developments: Leon Carl, regional director of the U.S. Geological Survey spoke about new research on controlling invasive mussels. Zequanox is composed of dead cells and is not a human pathogen; no re-entry interval when it is applied to the waters. It has a demonstrated selectivity toward zebra and quagga mussels. There has been no observed effects on survival of native mussels. Zebra mussel mortality >90 percent for treated groups. Test applications were conducted at Lake Carlos (MN) and Shawano Lake (WI). An Invasive Mussel Collaborative, to include the GLC, is being discussed that would focus on a comprehensive management approach, aligning science/research and management. Ecosystem response will need to be assessed. Next steps include continuing to reach out to partners, further refine the prospectus for the Collaborative and common agenda.

Question from Commissioner Tierney (NY): Is this primarily for eradication or control? Answer: Control.

Question from Commissioner Zehringer (OH): What is the form and application of the product? Answer: Granular product and buoyance is a problem. The cost has not been determined yet.

Comment from Associate Commissioner Boysen (ON): There has been limited use of Zequanox in Ontario for hydroelectric facilities. Very interested in being involved in the Collaborative.

Question from Commissioner Zelazny (NY): What was the role of the states in the trials? Answer: Don’t have a lot of details on this. MN DNR and MN PCA were involved. 19 states, including Michigan, have approved the use of Zequanox so far.

Comment from Commissioner Allan (MI): We have to move quickly but some, understandably, will be cautious.
11) **Panel, part one: Advancing Remediation, Restoration and Economic Revitalization**: Commissioner Zelazny (NY) introduced the panel. The Great Lakes Legacy Act has instituted 21 projects, cleaning up 2.4 million cubic yards of sediment. Most of this work has been at Areas of Concern.

John Morris, remediation director at Honeywell, spoke of Honeywell’s approach to remediation and major redevelopment sites in New York and elsewhere. He said that engaging all stakeholders from the beginning is very important. Buffalo Color was profiled, which was entered into the state brownfields program. Honeywell worked closely with NYDEC to remediate the property. The Western Railway Historical Society has purchased the property. The Inner Harbor project in Baltimore, Md., was described. This development was very integrated into the community. New buildings are now being constructed on the site, including a significant amount of green space. The Bayfront site in New Jersey was also a heavy manufacturing site and needed to be remediated and reintegrated into the community. Honeywell turned a litigation scenario into a positive project moving forward. Back in New York, the Onondaga Lake Loop Trail has integrated public amenities into the restoration project, including a 1,700-seat amphitheater. The southwest lakeshore of Onondaga Lake is continuing to expand the trail system for recreational use. The Inner Harbor development in Syracuse is fostering university, commercial and recreational uses.

Jill Jedlicka, executive director for the Buffalo Niagara Riverkeeper, provided background on Riverkeeper, which includes engineers, landscape architects and other professionals. She described how no life existed in the Buffalo River after its heavy industrial history, but Buffalo is now reclaiming its riverfront. Western New York has access to 25 percent of the world’s freshwater. Buffalo’s restoration success is largely due to an audacious vision and shifting perspective. The goal was to drive economic revitalization through the restoration of the health and integrity of western New York’s freshwater systems. Key lessons: community engagement doesn’t need to give you heartburn, pursue unique collaborations, leverage inkind sweat equity, have the courage to lead, pursue innovative methods, don’t be afraid to mess up. Don’t underestimate the power of social media, communications and marketing. Nothing can succeed without public sentiment.

12) **Report on oil transportation**: GLC Deputy Director Tom Crane provided a report on the GLC’s draft oil transportation report. Crane explained that a lot has happened since the GLC’s 2013 Annual Meeting, including the release of dozens of reports since the Lac Megantic incident in Québec. GLC staff has prepared a summary report and four separate issue briefs. The commissioners are asked to approve an action item today to initiate a 60-day review by states, provinces and stakeholders. The final report will then be revised and presented at the GLC 2015 Semiannual Meeting. Key findings: dramatic increase in domestic oil production (and transportation of oil) over the past 10 years; all transportation modes have advantages, disadvantages and safety risks; risks are complex and difficult to quantify; and infrastructure issues are a concern, primarily for pipeline and rail transport. There’s high governmental and societal interest in this issue. This is a very rapidly changing issue so we need to get it right. The recommendations to follow will focus on safe transportation of crude oil, risk reduction, and protection of public health and the environment.

Question from Commissioner Lupo (PA): Have you worked with Sea Grant and other partners? Answer: Yes, but this project is moving along quickly. GLC and GLFC have been asked to be involved since they have huge partner bases that can help to share the information.

Question from Commissioner Nelson (IN): When will the initial comments from Commissioners provided in September be added? Answer: We need to determine this.

Comment from Commissioner Taylor (MI): Suggestion to move purpose of the paper and findings to the beginning of the report. An executive summary would be helpful.
Comment by Commissioner Weakley (OH): An addendum that would include the recently raised Commissioner comments would be helpful to add to the website.

13) Panel, part two: Advancing Remediation, Restoration and Economic Revitalization: Associate Commissioner Carr (ON) introduced the second half of the panel discussion.

John Austin, director of the Michigan Economic Center at Prima Civitas Foundation, discussed the major economic benefits that will come from restoring the Great Lakes. Water has always mattered to the region. Big water-using businesses include agriculture, energy, manufacturing, beverages. Emerging water products and services contribute to a trillion dollar global water technology market. The region is also a center of education, research and innovation. Blue really is the new green. Green places are attractive places. Grand Rapids, Mich., is one of the “greenest” U.S. midsize cities. Lessons in blue economy-building: restore, clean, reconnect with, and celebrate water. Also, leverage and grow water education, support business growing sustainable “smart water” solutions, and embrace values of sustainable water use, stewardship and innovation.

Robert Shibley, dean of the School of Architecture and Planning at the Univ. of Buffalo, focused his presentation on Buffalo, one of the best planned cities in America. Buffalo grew out of the water. Restoring Buffalo is never done. Manufacturing no longer dominates in Buffalo. 3,000 jobs have come to Buffalo through a new solar panel production facility. Planning is important. If you don’t plan, action won’t happen.

Mark Schollen, principal of Schollen and Company, landscape architects and ecological restoration consultants, discussed the North Bay, Ontario, case study. North Bay is about 200 miles north of Toronto. North Bay has a strong railway heritage. Over time the railway became less important to North Bay. The city developed a master plan to create a new relationship between the water and the city. More than $11 million was spent rehabilitating the site. The city embarked on creating a destination, including renovating and repurposing the railway station, strengthening the public plaza space, creating a civic center and surrounding open spaces. A “spill over” effect continued and an influx of new development. Community vision and volunteerism continues to propel the project forward. Total investment so far is $9.3 million.

Question from Associate Commissioner Carr: Has there been an increase in public participation? Answer (Shibley): Yes, public education has attributed to an increase. People see victories and they get more interested and want to see and hear more. It took 30 years of hard-charging conversation to really get people engaged and wanting to “play.” (Schollen): public meetings in the beginning were “because we have to” but the public’s good ideas really contributed to the design process.

Question from Commissioner Allan (MI): Knitting all these stories together in a narrative becomes difficult. When do we get to that point? How do we make sure that this message gets translated so more people will get it? Answer (Austin): We have to be leaders and not laggards and actually be doing the work. Maybe the question is how do we accelerate it? Some communities aren’t participating yet but some have been at it for 50 years. (Shibley): I wonder about where our governors are and how cohesive they are at telling the story. There’s a poverty of imagination; we can do so much more together than by ourselves.

Question from Commissioner Main (IL): Who is the audience for this story? Answer (Austin): The leaders vary by community. Sometimes it’s philanthropic, sometimes it’s business, or nonprofits, or local government. People who have a vision will propagate an audience.
For the Great Lakes, our vision should be being a clean-green-blue playground for the nation and its people, and being the center of innovation.

Question from Commissioner Tierney (NY): What advice would you give to business leaders and community leaders working to clean up a large historical, industrial mess.
Answer (Schollen): The most difficult projects are those where you’re trying to undo bad, past decisions. Starting from scratch, fresh ideas and getting the vision right is critical.
(Shibley): Sometimes an educated public will wake up and see that the vision doesn’t align with their personal/community values. I suggest not starting with a blank sheet of paper but building on some of the strengths of the existing community and lessons learned, past and present. A choice that’s not informed is not a good choice.
(Austin): Most communities want to connect with the water. Don’t let grants drive the work. Let the vision guide the work.

Question from Commissioner Allan (MI): How much does government then need to reimagine itself as facilitator rather than decisionmaker?
Answer (Austin): Sometimes city or local government is not good at facilitating but in some cases they are.
(Shibley): If the facilitation process is not working, don’t be a victim of it.

Question from Associate Commissioner Carr (ON): For Schollen, are your experiences in China and elsewhere helpful?
Answer (Schollen): There is less public input in China. In Canada, all work is driven by community consensus, history of a place, etc. North America strives for purposeful and beautiful.

Observer comments:

**David Ullrich, Great Lakes and St. Lawrence Cities Initiative:** Ullrich said that more should be done in wake of the Toledo water quality crisis. We have a desired water quality that we want and there have to be reductions to the nutrient load, especially in Lake Erie. We all have to live with constraints. This is ultimately the conclusion that mayors reached at their last meeting and GLC Commissioners are in a good place to make changes to reduce nutrient loadings.

**Jan Miller, U.S. Army Corps of Engineers:** USACE has been gratified by their involvement in GLRI, including construction contracts at AOCs in 7/8 Great Lakes states. The Niagara AOC is the latest contract awarded, which will remove 100 million yards of contaminated sediment. Brig. Gen. Richard Kaiser is new commander of the USACE Great Lakes and Ohio River Division. Debbie Lee, who has been with USACE for many years, has been named new director of NOAA-GLERL.

**Joel Brammeier, Alliance for the Great Lakes:** Brammeier thanked the GLC for its work on the oil transportation report. The national perception is that our lakes our still sick, which is a challenging image given that we’re trying to build a blue-green economy. We need to have a resounding yes to the statement that “toxic algae blooms are unacceptable.” We need to think about the capital investments we’re making in wastewater infrastructure in our cities. Cover crops in the Maumee also will require significant investments. We need to change the scale of how we’re thinking about our solutions.

**RADM Fred Midgette, U.S. Coast Guard:** If we get to the point where heavy oil can be transported on the Great Lakes, prevention and response will be of utmost concern. Oil spill response plans and exercises are conducted regularly on the Great Lakes. The USCG Research and Development Center is looking at response planning for heavy oil spills. The National Ocean Policy
regional planning body (chaired by USCG) continues and is not trying to replace any state decisionmaking.

**John Bratton, NOAA-GLERL:** NOAA Administrator Cathy Sullivan is supportive of monitoring and modeling. In the Great Lakes, this includes monitoring of water levels and ice cover. A Harmful Algal Blooms (HABs) bulletin continues, distributed on a twice/week basis to subscribers. A HABs tracker is also now available and includes HAB forecasts. A new HABs ecologist and a zebra/quagga mussel specialist has been hired.

**Paul Seelbach, U.S. Geological Survey:** USGS is actively developing a partnership with the GLC focused on linking science and policy initiatives. The GLC staff provides critical communication skills that are often critically lacking in the more rigorous science labs. GLC staff is facilitating several regional-scale collaboratives, including the mussel control collaborative discussed earlier by Dr. Leon Carl. A five-month staff exchange between GLC and the USGS Great Lakes Science Center occurred in 2014.

**Dereth Glance, International Joint Commission:** Glance noted the IJC’s Lake Erie Ecosystem Priority (LEEP) report and their concern about safe drinking water. Additional follow-up is happening to implement LEEP recommendations. IJC is now working on the 10-year renewal of the “Waters of the Great Lakes” report, originally published in 2004. All the Great Lakes water levels are currently above average due to a cold, snowy winter and a mild summer. The needs of the coastal environment and recreational boating are being reviewed.

**Katherine Friedman, Univ. of Buffalo:** Requested responses to two surveys that focus on the Great Lakes policy community, nutrient loading and economic valuation of water.

Associate Commissioner Marquis (QC) introduced his colleague Marc Gagnon. Gagnon spoke of transportation and infrastructure issues of concern to the maritime transportation community. Ports on the St. Lawrence and the Great Lakes need to be prepared. A maritime strategy is being launched, a 15-year effort, which will leverage the maritime capacity of our region.

15) **Business of the Great Lakes Commission:**

**Resolution – Lake Erie water pollution and drinking water crisis:** This resolution recognizes the recent contamination of drinking water supplies in the western Lake Erie region and the challenges associated with protecting drinking water and preventing algal blooms.

A motion to approve the amendments was made by Commissioner Zehringer (OH), seconded by Commissioner Allan (MI). There was no additional discussion on the amendment. The amendments carried. A motion to approve the resolution, as amended, was made by Commissioner Tierney (NY), seconded by PA. The resolution passed unanimously.

**Resolution – Flexibility in the federal standard for navigation dredging projects in the Great Lakes basin:** The resolution recognizes the current practice of the U.S. Army Corps of Engineers to apply a federal standard that often identifies open water placement as the preferred alternative for disposing of dredged material and encourages the Corps to use greater flexibility in making those determinations.

A motion to approve the resolution was made by Commissioner Allan (MI), seconded by Commissioner Tierney (NY). No discussion. The resolution passed unanimously.
Resolution – Establishing Blue Accounting: A collaborative re-engineering of Great Lakes information strategy and delivery: This resolution directs the Commission to begin implementing recommendations from its recent report, *Great Lakes Blue Accounting: Empowering Decisions to Realize Regional Water Values*.

A motion to approve the amendments was made by Commissioner Allan (MI), seconded by Wisconsin. There was no additional discussion on the amendment. The amendments carried. A motion to approve the resolution, as amended, was made by Illinois, seconded by Commissioner Tierney (NY). The resolution passed unanimously.

Action Item – Presentation, review and process for finalizing the draft report on oil transportation: This action item accepts the discussion draft summary report, requested at the Commission’s 2013 Annual Meeting, which evaluates the potential benefits, risks and mitigation options surrounding the transportation of crude oil in the Great Lakes-St. Lawrence River region. It directs Commission staff to publicize and solicit input on the information presented. Staff will consolidate input for future consideration by the Commission’s Board of Directors and Commissioners in formulating policy recommendations and next steps.

A motion to approve the Action Item was made by Commissioner Galarneau (WI), seconded by Commissioner May (IL). A question arose about whether the Commissioners’ previous comments/suggestions will be represented to the public on the webpage soliciting comments. Eder explained that these suggestions will be listed there. These suggestions from Commissioners included: 1) carefully reviewing the summary and four issue briefs; 2) identifying any issues/major themes not currently covered for inclusion in final report; 3) identifying individuals/agencies within the states and provinces to review the discussion draft; and 4) identifying other stakeholders that should review the discussion draft. The Commission decided that it was not necessary to amend the Action Item to reflect this. Associate Commissioner Marquis asked if a 60-day comment period is long enough. Other commissioners thought that 60 days would allow ample time for external parties to provide comments. The Action Item passed unanimously.

Resolution – GLRI Action Plan FY 2015-19: This resolution commends U.S. EPA and its federal partners for updating the GLRI Action Plan for fiscal years 2015-19 and urges its effective implementation; calls on federal agencies to carry out the updated Action Plan in close consultation with the Great Lakes states; and calls on Congress to continue funding for the GLRI through Fiscal Year 2019.

A motion to approve was made by Commissioner Tierney (NY), seconded by Commissioner Zehringer (OH). There was no further discussion. The resolution passed unanimously.


A motion to adjourn the meeting was made by Commissioner Zehringer (OH), seconded by Commissioner Galarneau (WI). The meeting adjourned at 3:35 p.m.

Respectfully submitted,

Tim A. Eder
Executive Director
/cm
The meeting was called to order at 3:00 p.m. EST by Kelly Burch, chair. The following members were present:

- Todd Main - Illinois
- Kay Nelson (for Jody Peacock) - Indiana
- Jon Allan - Michigan
- Lt. Gov. Yvonne Prettner Solon - Minnesota
- Jim Zehringer, Mike Bailey, Karl Gebhardt - Ohio
- Bill Carr - Ontario
- Kelly Burch - Pennsylvania
- Kerith Iverson-Vosters (for Eric Marquis) - Québec
- Steve Galarneau - Wisconsin

Staff present: Tim Eder, Tom Crane, Christine Manninen, Matt Doss.

1) **Introductions and call objectives:** Chairman Burch welcomed everyone to the call and reviewed the agenda. He congratulated Michigan on the recent delisting of the Deer Lake AOC.

2) **Minutes:** A motion to approve the minutes from the Sept. 17, 2014, call was made by Commissioner Zehringer (OH), seconded by Commissioner Galarneau (WI). The minutes were unanimously approved.

3) **2015 GLC Budget, Audit and Personnel:** Eder reported that the 2014 audit is in process and a positive result is expected. An Audit Committee will need to be appointed. Chairman Burch and representatives from Ohio and Wisconsin were asked and agreed to participate. Eder explained that the budget is in fine shape. Large new grants from NOAA for habitat restoration are expected (upwards of $15M) and another new grant from the Great Lakes Fishery Trust was recently awarded. Other proposals to the Regional Conservation Partnership Program are pending. Eder suggested holding off on a budget amendment at this time. The GLC plans to hire two new positions in the next few months, including the Chief Information Officer position and a new habitat specialist. Commissioner Zehringer asked if any of the new GLFT grant will go toward control mechanisms for AIS. Eder explained that the new grant is for setting up the Invasive Mussel Collaborative, which will discuss application trials of Zequanox to control invasive mussel populations. Commissioner Allan discussed some efficacy trials of Zequanox that were conducted by Michigan DEQ. Commissioner Zehringer requested that Ohio be part of these discussions moving forward, which is the intent of the new Collaborative.

4) **Update on Lake Erie Work Group:** Eder distributed a prospectus for the new work group, which was proposed at the GLC’s Annual Meeting in September. The Joyce Foundation is expected to provide some modest funding to establish the work group. Eder explained that he’d like to use the work group’s input to feed to the Council of Great Lakes Governors in preparation for the next governors’ summit in 2015.
Commissioner Zehringer discussed Ohio’s new nutrient reduction plan, contained in HB 490, under discussion in their legislature. It includes a ban on applying commercial fertilizers and manure to frozen or snow-covered ground or within 24 hours of a rainfall event (i.e., when ½” or more of anticipated rainfall is expected). There are no dates attached to this so, for example, if conditions are allowable in January, then fertilizers can be applied then. A sunset clause (at end of 4 years) is included so Ohio legislators would have to pass another bill to continue the practices. This legislation, already passed by the Ohio State House, will apply to the entire western Lake Erie basin. It is hoped that these new regulations will have a significant impact on reducing the spring loadings of phosphorus to the waters of western Lake Erie.

Commissioner Gebhardt discussed open lake disposal of dredged material and contentious issues, primarily in the Cleveland area. U.S. Army Corps of Engineers (USACE) permits were denied in 2014. Ohio has explored beneficial use programs that are underway in other states. New legislation, currently being negotiated in the Ohio State House, would prohibit by year 2020 the open-lake disposal of dredged material in Lake Erie. Other beneficial uses (beach nourishment, dewatering, habitat restoration) will still be allowed. Earlier in 2014 an appropriation of $10M was made to support some beneficial reuse demonstration projects in Ohio. Commissioner Galanneau, current co-chair of the Great Lakes Dredging Team, congratulated Gebhardt on his work. Gebhardt noted that the federal standard for the disposal of dredged materials by USACE needs to be reexamined. The Great Lakes “technical manual” should also be reviewed and how it is being used.

5) **2015 Semiannual Meeting**: Eder noted that the dates of the GLC’s Semiannual Meeting and Great Lakes Day events are set for Feb. 24-26, 2015. The meetings will again be held at the Hamilton Crowne Plaza. Agenda topics are under development. Possible topics: deep geologic repository for nuclear waste on Lake Huron, oil transportation, dredging and nutrient issues in Lake Erie, and innovative programs for nutrient trading on the Fox River, Chesapeake Bay and other areas. Eder suggested that some discussion might also be useful on whether GLRI could expand its focus to include adaptive management practices, education, communications/data management, etc.

Eder reported that an Observer request has been received from the Sierra Club Great Lakes Program. The Observer guidelines have been shared with the Sierra Club. Commissioner Allan asked if an Observer request has ever been denied. Eder explained that some local organizations have been discouraged from applying for Observer status since the GLC has a focus on Great Lakes organizations with a regional focus but, to his knowledge, a request has never been denied. Commissioner Galanneau supported the request. The Board agreed to move the request on to the full Commission for approval at its 2015 Semiannual Meeting.

6) **2015 Legislative Priorities**: Eder introduced the draft content and schedule for the GLC’s 2015 Federal Priorities Statement. Commissioner Galanneau suggested that a re-evaluation of the Federal Standard (for open water disposal of dredged material) be included. Eder supported this recommendation. Eder explained that the National Invasive Species Act (NISA) has expired, which provides authorization for all the regional AIS panels, including the Great Lakes Panel. Reauthorizing NISA will likely be pursued although specific vectors need to be considered, including ballast water, organisms in trade (Lacey Act), etc. Making NISA more comprehensive might be helpful although there are also reasons to keep it more strip downed and simple.

7) **2015 Annual Meeting**: Dates and venues are being considered for the GLC’s 2015 Annual Meeting. The next three locations on the rotation are Minnesota, Indiana and Illinois. Eder recommended Sept. 28-29 in Chicago. This would give an opportunity to forge relationships with new Illinois Commissioners (due to gubernatorial change) and will again coincide with meetings of the Healing Our Waters-Great Lakes Coalition, IJC, EPA and others. The Board concurred on the recommendation.
8) **Update on Oil Transportation:** Tom Crane explained that a 60-day comment period was initiated at conclusion of the GLC’s Annual Meeting on Sept. 30. The comment deadline is Dec. 1, 2014; see [http://glc.org/announce/2014-comment-now-draft-oilreport](http://glc.org/announce/2014-comment-now-draft-oilreport) to submit comments online. Crane said several organizations have expressed interest in providing comments but only a few comments have been received to date. The GLC’s Emergency Preparedness Task Force will be meeting soon to help finalize the report. Based on comments received, the report will be revised, as necessary, and finalized for final approval. A series of recommendations will be developed as a companion document. A resolution will be drafted as well for presentation at the GLC’s Semiannual Meeting in February. Commissioner Nelson asked if the American Petroleum Institute (API) will be commenting. Tom explained that API and the major oil companies in the region will be providing comments. All comments should be submitted by Dec. 1, if possible, to allow the staff time to revise the report and for ample review time by the GLC Board. Associate Commissioner Carr asked how the comments will be rolled up into the final document. Tom explained that comments will not be attributed to any specific jurisdiction. The most important thing to consider for the jurisdictions when reviewing the report is to ensure that the information in the report is accurate.

9) **Upcoming Meetings:**
   - Dec. 18, 3:00 PM EDT – Board call
   - Jan. 15, 3:00 PM EDT – Board call
   - Feb. 24-26 – Semiannual Meeting and Great Lakes Day in Washington; Washington, D.C.

The meeting adjourned at 4:03 p.m.

Respectfully submitted,

[Signature]

Tim A. Eder
Executive Director

/cm
The meeting was called to order at 3:00 p.m. EST by Kelly Burch, chair. The following members were present:

Todd Main - Illinois
Jody Peacock - Indiana
Lt. Gov. Yvonne Prettner Solon - Minnesota
Jon Allan - Michigan
Don Zelazny, Jim Tierney - New York
Jim Zehringer, Andy Ware - Ohio
Bill Carr - Ontario
Kelly Burch - Pennsylvania
Eric Marquis - Québec
Steve Galarneau, Russ Rasmussen - Wisconsin

Staff present: Tim Eder, Joe Bertram, Matt Doss.

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

2) **Minutes**: A motion to approve the minutes from the Nov. 20, 2014, call was made by Commissioner Zehringer (OH), seconded by Commissioner Galarneau (WI). The minutes were unanimously approved.

3) **2014 GLC Audit**: Chairman Burch noted a recent meeting of the audit committee. Eder noted that the Board had been provided access to the FY 2014 audit, which included information on the fiscal year ended June 30, 2014. It was conducted by the same firm used in recent years. They are providing an unqualified report, which is the highest standard in the auditing field. He also noted the A-133 report, compliance the single audit act, which includes a summary of the auditor's findings. This showed no issues uncovered by the auditors. The audit committee (with OH, WI and PA Commissioners) had a call with the auditors and Eder invited questions and comments from the committee members. Zehringer said it was a clean and strong audit and complimented the Commission staff on their work. Galarneau echoed this and said it was nice to be part of such a strong organization. He noted they made some minor recommendations for strengthening some internal controls. Burch noted that the audit speaks to the fiscal responsibility of the Commission. Allan noted caveats related to internal controls and asked what this meant. Joe Bertram said this was standard since the auditors are not reviewing 100% of internal accounts, so their findings reflect a representative sample reviewed. Eder asked for a motion to approve the audit. This was moved by New York and seconded by Ohio. The motion was approved unanimously. Eder invited Board members to contact him for additional details on the audit, including recommendations for improvements. Bertram noted that the audit will be available publicly on websites related to federal grants, as well as the draft available on the Board's website.

4) **2015 Federal Priorities**: Eder reviewed that staff are beginning to prepare federal priorities for 2015. This is typically presented in a four-page statement at Great Lakes Day. Full text will be presented at the January Board call. In addition, the GLC works with a coalition of regional groups to generate a one-page statement of common regional priorities, which is consistent with the GLC’s priorities. Eder reviewed an outline of the GLC statement as provided to the Board. He noted that the GLRI
The authorization bill did not pass the Senate after being approved by the House recently. He noted the question of whether to include re-evaluation of the federal standard for disposal of dredged material, or handle this in another way, such as a meeting with Assistant Secretary of the Army for Civil Works Jo-Ellen Darcy. Zehringer said he would talk with Ohio EPA about this issue and get back to Eder. Allan asked about addressing ballast water. Eder noted that the Commission is on record supporting a regional standard that includes ballast water exchange and opposition to pre-empting state authority to regulate ballast water. Allan noted that the earliest that the Coast Guard will codify a standard is two years, more likely three years. This creates a challenge for ship owners when ordering ships in knowing what standard they need to meet. Should we consider supporting a provision that encourages ship owners to install ballast technologies now while the final standard is still being determined? Eder suggested this be addressed in a resolution so it stands out as a single issue, communicating that companies that adopt technologies early should be grandfathered and “held harmless” if standards change and the Coast Guard hasn’t type approved the installed technology. Tierney commented that the Coast Guard rarely moves quickly in this field; perhaps our resolution could express dissatisfaction with their progress on this issue. Eder cautioned that opening up a legislative battle on ballast water carries risk. A resolution may be the appropriate approach; he proposed that staff work on this and propose a draft resolution at the January board call, which could then be boiled down to a succinct statement in the federal priorities statement. The emphasis is to install IMO-compliant technologies now rather than waiting until Coast Guard guidance on this, while providing some assurance to ship owners that this technology will be accepted until the next permit update. Allan asked if $300 million is enough for the GLRI; Eder suggested saying “at least” $300 million.

5) **2015 Semiannual Meeting:** Eder noted that the agenda is a draft that has not been posted online. He reviewed the schedule and location for the semiannual meeting. There are 3-4 slots we have to work with; and two keynote speakers, possibly Dr. Suzette Kimball, the USGS director, and a republican representative, possibly Rep. Latta or Rep. Joyce, both of Ohio. Two suggestions for issue panels are strategies for reducing nutrient pollution; and maritime transportation. Jody suggested an overview of the past shipping season. There was support for covering the governors’ maritime initiative to raise awareness of this among those who aren’t involved. Zelazny urged getting into specific recommendations for reducing nutrient pollution (regulatory, non-regulatory, etc.). Eder invited suggestions for issues to be addressed in resolutions to be considered at the semi-annual meeting. Some options include ballast water (already discussed); federal priorities; DGR; and the oil transportation paper.

6) **Deep Geologic Repository:** Eder said there isn’t much to report on this, aside from a report and resolution that we will present in January. Eder reviewed that the Michigan legislature has asked the GLC to review and take a position on the DGR. We have been researching the issue; there is relatively little science to show it’s problematical, but there is risk to the Great Lakes. Thus, it will be a bit tricky on how we communicate on this. Previously we have discussed focusing on the process and decision making process. We will present a background paper and draft resolution to the Board in January for consideration in advance of the February meeting. Carr asked if the GLC had been in touch with the Government of Ontario and Joint Review Panel. Not directly, but we have access to the relevant documentation.

7) **Update on Oil Transportation:** Eder reviewed the Board memo summarizing comments on the draft oil transportation paper. We will consider these and revise the report as appropriate or note why we didn’t. It may be difficult to have the revised report by the January 15 Board call, but will do so shortly thereafter. The Board will have a chance to review the revised draft report before it’s finalized for presentation to the full Commission. Peacock asked if there had been a review of economic development potential associated with oil transportation. Eder responded that we considered the economic benefits of shipping oil in general, but not in connection to specific modes or regional benefits. Eder emphasized the importance of relative risk of different transportation modes and the
difficulty of quantifying this risk. Allan noted that it focuses on trends in the industry and implications for the region, including the degree to which risks for each mode are covered.

**Update on Legislation and Canadian Ballast Water Regulations:** Eder noted that the ballast water topic will be covered following completion of the Board call.

Regarding recent legislation, Eder noted that the GLRI authorization bill passed the House last week but stalled in the Senate.

The *Guarding the Great Lakes Act* related to preventing Asian carp movement through the Chicago Area Waterway System was introduced in the House and Senate. The Chicago Waterways Advisory Committee can be a good forum to develop recommendations to improve the bill. Peacock asked for feedback on how the GLC will deal with states with dissenting opinions on policies, noting that Indiana opposes the legislation. He wants to make sure Indiana’s voice is heard. The GLC’s news release supporting the bill caught IN off guard. Eder reviewed that the GLC strives to adopt resolutions that are unanimous; this isn’t always possible, but it’s rare that we vote on resolutions. This resolution passed unanimously in Washington earlier this year following lengthy discussion. Communications to Congress generally are supported by an existing resolution. Our communications generally use the chair’s signature, with their approval. Thus, the Board gives the chair the discretion to make decisions on its behalf when they are consistent with Commission policy. News releases usually include quotes from a Commission officer, which are cleared with them. We don’t usually review congressional communications with the full Board unless it’s very controversial. Often we have to take quick action on legislation and have to move quickly to be relevant, but we always do this in consultation with the chair or vice chair. Peacock noted that Indiana had voiced opposition to the legislation; we did not receive notice of the news release and there wasn’t an opportunity to discuss and seek alternative language. Eder reviewed that there was a clear resolution passed that was consistent with the legislation, which enabled the release to move forward. He acknowledged that it may be complicated when there are concerns about specific legislation. Marquis emphasized that we are stronger when we work together, and noted that things may change now that Indiana has a full delegation to the GLC. Peacock asked that Indiana be provided with the opportunity to have input on future statements on this issue, in particular.

Burch noted that this may be Todd Main’s last Board call; he thanked him for his participation, friendship and contributions to the GLC’s work.

8) **Upcoming Meetings:**

- Jan. 15, 3:00 PM EDT – Board call
- Meeting to discuss oil transportation report and resolutions (TBD)
- Feb. 24-26 – Semiannual Meeting and Great Lakes Day in Washington; Washington, D.C.

The meeting adjourned at 4:20 p.m.

Respectfully submitted,

Tim A. Eder
Executive Director

/md
The meeting was called to order at 3:00 p.m. EST by Kelly Burch, chair. The following members were present:

- Todd Main - Illinois
- Jody Peacock, Kay Nelson - Indiana
- Jon Allan - Michigan
- Don Zelazny - New York
- Karl Gebhardt, Jim Zehringer, Mike Bailey - Ohio
- Bill Carr - Ontario
- Kelly Burch - Pennsylvania
- Eric Marquis - Québec
- Steve Galarneau, Russ Rasmussen - Wisconsin

Staff present: Tim Eder, Tom Crane, Victoria Pebbles, Matt Doss and Bryan Comer.

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

2) **Minutes:** A motion to approve the minutes from the Dec. 18, 2014, call was made by Commissioner Allan and seconded by Commissioner Zelazny. The minutes were unanimously approved.

3) **Deep Geologic Repository for Nuclear Waste:** Chairman Burch asked Tim Eder to discuss the DGR issue and comments received from the Province of Ontario. Eder noted that one of the threshold discussions is the fact that the request came from the Michigan State Senate. Per its compact, the Commission has the ability to provide advice to the states, so it would be appropriate to respond and take a position on the DGR. However, it does set a precedent, and in addition the Commission has limited resources to adequately review and developed an informed position on the issue, which is clearly of significant interest to Ontario. Commissioner Allan asked if a different consultation process had been conducted, would Ontario have a different position. Commissioner Carr responded that a different consultation process might have gotten us to the same result earlier. If this process had been done previously, Ontario’s response and, likely, the briefing paper, would have been very different. Commissioner Allan asked whether to try to address the process or just decide not to respond to the Michigan Senate. Commissioner Main suggested we consider the theoretical question of whether it’s appropriate to take a position on an issue at the request of an outside jurisdiction. It was also noted that it may be inappropriate for the Commission to take a position on a regulatory action by one of its member states. Eder noted that it may be different if the Michigan legislature asked the Commission to take a position on a proposed action within the State of Michigan. Commissioner Zelazny noted that in some states GLC commissioners are appointed by state legislatures; Commissioner Allan confirmed that this is the case in Michigan, with both the state House and Senate appointing commissioners. Eder noted that the request did not come from the commissioner appointed by the State Senate. Commissioner Allan noted that provisions of the Great Lakes Water Quality Agreement allow for one party to notify the other party of a potentially significant action. Commissioner Zehringer motioned that this issue be set aside. Eder suggested that the Commission needs to respond to the State Senate indicating that it will not be taking a position at this time. Commissioner Zehringer revised his motion to respond to the Michigan Senate along these lines. The motion was seconded by Commissioner Peacock and approved by a voice vote. Chairman Burch thanked Commissioner Carr for his input. Commissioner Carr clarified that this will not be an item on the semiannual meeting agenda. Eder responded affirmatively.
4) **2015 Federal Priorities:** Eder reviewed that staff have prepared draft text for the Commission’s 2015 federal priorities statement that will be formatted as a four-page document and released on Great Lakes Day. An additional one-page statement is also prepared in collaboration with a coalition of other regional organizations that is consistent with the Commission’s statement. Eder briefly reviewed the Commission’s top federal priorities, which are very consistent with those presented in past years. Commissioner Bailey noted the upcoming announcement of a major project for Western Lake Erie under the USDA Regional Conservation Partnership Program and asked that this be noted in the text. Commissioner Peacock asked that language in the request for actions on Asian carp and invasive species be revised to say “study and develop” vs. “implement.” Commissioner Allan requested that the word “implemented” be retained. Commissioner Zelazny noted the need to continue support for existing control measures. Following discussion, Eder suggested that the opening paragraph be revised to note the need to maintain existing uses of the CAWS, consistent with Commission policy. Staff will revise this section and send it back out for review. There were no further comments on the draft text.

5) **2015 Semiannual Meeting Resolutions:** It was noted that there will not be a resolution on the Ontario DGR. Eder noted that there will be a complex resolution on the oil transportation report that accepts the report and incorporates and accepts by reference a separate suite of recommendations. These materials will follow shortly and will be the focus of the Feb. 2 Board call. Eder plans to send out the final report, draft recommendations and resolution by Jan. 27, and possibly sooner. There will also be a resolution endorsing the Commission’s federal priorities, incorporating them by reference. Finally, there will be a resolution on updating the International Great Lakes Datum on water levels, emphasizing the importance of this information for a variety of purposes. Plans for the semiannual meeting, including speakers, are moving forward. It will be a very substantive agenda. In addition to the Commission meeting, there will be the annual Great Lakes Day Capitol Hill breakfast followed by congressional office visits on Thursday, Feb. 26. The Commission will assist in scheduling office visits, if requested. Erika Jensen will be contacting Board members on this matter. There will also be a reception at the Canadian Embassy on Wednesday evening.

6) **Update on Oil Transportation Plans:** Eder reiterated that the full report and draft recommendations and a draft resolution will be sent out by Jan. 27 at the latest, for discussion on the Feb. 2 Board call. Commissioner Nelson requested copies of comments received on the draft oil transportation paper. Tom Crane noted that comments received were summarized and provided to the Board for its December call. These are also being summarized in an appendix to the report. Eder committed to providing these comments to Commissioner Nelson.

7) **Upcoming Meetings:**
   - **Feb. 2, 11:00 AM EDT –** Board call
   - **Feb. 24-26 –** Semiannual Meeting and Great Lakes Day in Washington; Washington, D.C.

The meeting adjourned at 3:50 p.m.

Respectfully submitted,

Tim A. Eder
Executive Director

/md
Action Items

- **Observer request** – A letter is attached requesting Observer status for the Sierra Club Great Lakes Program.

- **Resolution – Issues surrounding crude oil transportation in the Great Lakes-St. Lawrence River basin:** The resolution acknowledges completion of the final report, *Summary of Issues and Trends Surrounding the Movement of Crude Oil in the Great Lakes-St. Lawrence River Region*, along with four issue briefs that provide important information regarding oil extraction, movement, risks and benefits of the different modes of transport, and recent legal, policy and regulatory developments. The Commission formally receives the report as written and, to ensure that the report and briefs remain current and accurate, will continue to receive comments from its members and other stakeholders for the record and for consideration to assist the Commission in its future deliberations on next steps in this area.

- **Resolution – Sustaining Great Lakes Restoration and Economic Revitalization: Great Lakes Commission federal priorities for 2015:** The resolution endorses a suite of federal priorities for 2015; 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 GLRI.

- **Resolution – Updating the accuracy of the International Great Lakes Datum (IGLD):** The resolution urges the National Oceanic and Atmospheric Administration (NOAA) to prioritize the IGLD update, with anticipated release in 2025, and to partner with states, Canadian provinces and federal entities to extend the accuracy of the new IGLD; urges Congress to provide necessary financial resources to complete the IGLD update and requests that the Canadian federal government provide a commensurate share to ensure timely completion of this important endeavor.
Thursday, October 9, 2014

Mr. Tim Eder  
Executive Director  
Great Lakes Commission  
2805 South Industrial Hwy, Suite 100  
Ann Arbor, Michigan 48104

RE: Observer Designation to the Great Lakes Commission

Dear Mr. Eder,

The Sierra Club requests the “Observer” status while attending meetings of the Great Lakes Commission. The Sierra Club is the nation’s oldest and largest grassroots environmental organization, with over 2.4 million members and supporters in 65 chapters and over 400 local groups nationwide. Within the Great Lakes basin, the Sierra Club has over 422,000 members and supporters. In addition, the Sierra Club collaborates with the Sierra Club of Canada to restore and protect the waters of the Great Lakes.

The mission of the Sierra Club is to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth’s ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives. After more than a century, the spirit of the Club still resonates with founder John Muir’s desire to “do something for wilderness and make the mountains glad.”

The Sierra Club focuses its works around issues that matter to our members in the Great Lakes region including but not limited to fossil fuels, stormwater management, invasive species, renewable energy, biodiversity – many of the same issues that the Great Lakes Commission meets around to adopt resolutions. The Sierra Club hopes the Great Lakes Commission will see value in designating the Sierra Club as an “Observer.”

Thank you for your consideration of this request. Please contact Melissa Damaschke at (313) 965-0055 with any questions.

Sincerely,

Melissa Damaschke  
Great Lakes Program Director  
Sierra Club
RESOLUTION – DRAFT
February 13, 2015

Issues surrounding crude oil transportation in the Great Lakes-St. Lawrence River basin

Whereas, the Great Lakes and St. Lawrence River are international treasures, and environmental and economic assets of vital importance to the Great Lakes-St. Lawrence River states and provinces, as well as the countries of the United States and Canada as a whole; and

Whereas, 55 million Americans and Canadians depend on and use the Great Lakes-St. Lawrence River for drinking water, recreation, manufacturing of products, power generation, and commercial fishing and navigation, among other benefits; and

Whereas, the petroleum industry is vital to the Great Lakes-St. Lawrence River region economy; and

Whereas, there has been a tremendous increase in crude oil production in recent years, particularly from the Bakken formation in North Dakota and from oil sands in Alberta, Canada; and

Whereas, there has been a significant increase in the volume of crude oil transported through the Great Lakes-St. Lawrence River region, with a potentially larger increase forthcoming; and

Whereas, the Great Lakes-St. Lawrence River basin is a fragile, highly sensitive ecosystem, especially along the shorelines and in nearshore areas, that includes some of the most productive freshwater wetlands in the world; and

Whereas, because of the value and fragility of these freshwater ecosystems, an oil spill of any magnitude has the potential to create significant harm to the environment, human health and the economy, including to sustainable industries that create jobs and contribute billions of dollars to the regional economy and depend upon the Great Lakes ecosystem for their livelihood; and

Whereas, several crude oil spills occurred in North America in recent years, some of them having major impacts on the Great Lakes-St. Lawrence River region (Talmadge Creek pipeline spill, Marshall, Mich. – 2010, Lac-Mégantic train derailment, Québec - 2013), which together created a need to better understand the extent and nature of safety issues surrounding the transportation of crude oil by all modes, including those that have not been the cause of recent incidents; and

Whereas, the Great Lakes Commission, reacting to these accidents, took action at its 2013 Annual Meeting and directed its staff to prepare an issue brief evaluating the potential benefits, risks and mitigation options surrounding the transportation of crude oil in the Great Lakes-St. Lawrence River region, including an assessment of the regulatory structure in the two countries, and states and provinces; and

Whereas, the staff has completed a final report, titled Summary of Issues and Trends Surrounding the Movement of Crude Oil in the Great Lakes-St. Lawrence River Region, along with four issue briefs that provide important information regarding oil extraction, movement, risks and benefits of the different modes of transport, and recent legal, policy and regulatory developments; and
Whereas, this report was completed following a 60-day comment period during which comments were received from Commissioners, Observers and other regional partners; and

Whereas, staff has reviewed the comments received and has edited and completed the report accordingly based on those comments.

Therefore, Be It Resolved, that the Great Lakes Commission formally receives the report and the four issue briefs as written and, to ensure that the report and briefs remain current and accurate, will continue to receive comments from its members and other stakeholders for the record and for consideration to assist the Commission in its future deliberations on next steps in this area.
RESOLUTION – DRAFT

Sustaining Great Lakes Restoration and Economic Revitalization:
Great Lakes Commission federal priorities for 2015

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, 36 million Americans and Canadians depend on the Great Lakes-St. Lawrence River basin for drinking water, recreation, fish and wildlife resources, power generation and commercial navigation, among other benefits; and

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

Whereas, the emergency closure of the Toledo, Ohio, drinking water system in August 2014 due to contamination by toxic algae in Lake Erie illustrates the continued threats to the environmental and economic health of the lakes; 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 2,000 restoration projects implemented, six Areas of Concern cleaned up, and farmland acreage enrolled in conservation programs doubled to prevent polluted runoff in critical watersheds; 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 2015, with a focus on:

- providing at least $300 million for the Great Lakes Restoration Initiative (GLRI) in FY 2016 to sustain progress in restoring and revitalizing the Great Lakes;
- passing comprehensive legislation that formally authorizes the GLRI and other critical, existing Great Lakes programs;
- preventing the introduction of Asian carp and other aquatic invasive species (AIS) through development of alternatives from the Great Lakes and Mississippi River Interbasin Study, with an immediate focus on near-term control measures at the Brandon Road Lock and Dam; reauthorizing the National Invasive Species Act; supporting the Great Lakes Fishery Commission’s sea lamprey control program; and strengthening federal programs to prevent the importation of 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 from toxic algae; federal agencies should collaborate with state and local officials to strengthen standards and practices to detect and treat toxic algae;

• ensuring Farm Bill conservation programs target watersheds that contribute polluted runoff to the Great Lakes, with a focus on effective implementation of the new Regional Conservation Partnership Program; and

• strengthening the Great Lakes navigation system by increasing appropriations from the Harbor Maintenance Trust Fund, including dedicated funding for Great Lakes ports and recreational harbors, and managing the Great Lakes as a single, integrated navigation system as directed by the 2014 Water Resources Reform and Development Act; and promoting beneficial alternatives to the disposal of dredged material in the Great Lakes.

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 together with core programs that provide for ongoing conservation and management of the Great Lakes.
RESOLUTION – DRAFT

Updating the accuracy of the International Great Lakes Datum (IGLD)

Whereas, movement of the Earth’s crust across the Great Lakes - St. Lawrence River system occurs on a very gradual, continuous and non-uniform basis (in some areas in the magnitude of centimeters per decade), referred to as “glacial isostatic adjustment” or rebounding of the land surface from the weight of glaciers that retreated over 10,000 years ago; and

Whereas, water levels in the Great Lakes-St. Lawrence system fluctuate on a short-term, seasonal and long-term basis, requiring careful and accurate measurements within an accurately established vertical datum; and

Whereas, the safety and economic viability of the Great Lakes commercial navigation industry, the extensive recreational boating community and ports/harbors across the region all rely heavily on accurate water level forecasts and maintenance of congressionally authorized dredging programs to provide depths in the navigation channels including waterways connecting the Great Lakes; and

Whereas, all coastal zone management, including erosion prediction, flood prediction and response, and coastal structure design, construction and maintenance, rely upon an accurate vertical elevation datum; and

Whereas, all coastal habitat restoration, rehabilitation, creation, enhancement, improvement and protection activities currently underway and expected to be implemented under the Great Lakes Restoration Initiative (GLRI) require an accurate vertical datum; and

Whereas, prediction of the magnitude, timing and duration of climate variability as it affects the Great Lakes-St. Lawrence River system, and the development of adaptive management approaches thereto, require accurate water level measurements and forecasts; and

Whereas, the vertical elevation datum for the Great Lakes, known as the International Great Lakes Datum (IGLD), first established in 1955 and last updated in 1985, needs to be updated every 25 to 35 years to reflect continuous and differential changes in land surface elevations across the region and IGLD (1985) is now due for an update.

Therefore, be it resolved, that the Great Lakes Commission urges the National Oceanic and Atmospheric Administration (NOAA) to prioritize the IGLD update, with anticipated release in 2025, and to coordinate their activities with Canadian federal and provincial partners, to ensure that this foundational vertical datum is maintained to the highest accuracy possible using the best available technologies; and

Be it resolved, that the Great Lakes Commission urges NOAA to partner with states, Canadian provinces and federal entities to extend the accuracy of the new IGLD in all ports and harbors of refuge that were not updated in 1985;

Be it finally resolved, that the Great Lakes Commission urges the U.S. Congress to provide necessary financial resources to complete the IGLD update, and further requests that the Canadian federal government provide a commensurate share to ensure timely completion of this important endeavor.

Presented for consideration at the 2015 Semiannual Meeting of the Great Lakes Commission, February 24-25 in Washington, D.C.
An Environmental and Economic Asset

The Great Lakes are a vital environmental and economic asset for the eight states and two provinces of the Great Lakes region. With 90 percent of our nation’s supply of fresh surface water, the Great Lakes provide unparalleled recreational opportunities for residents and tourists; abundant fresh water for communities and industries; an efficient transportation system for raw materials and finished goods; and extensive habitat for valuable fish and wildlife resources.

The Great Lakes provide our region with a unique competitive advantage; restoring, protecting and wisely using them must continue to be a key component of our broader strategy to create jobs, stimulate economic development, and strengthen waterfront communities. With proper care and sound investments, the Great Lakes will be a foundation for economic prosperity and a high quality of life for our region’s future.

Sustaining Progress, Addressing Challenges

We are making progress in cleaning up the Great Lakes but continue to face serious challenges to their health. The Great Lakes Restoration Initiative (GLRI) is accelerating progress in restoring the lakes. This regional initiative is translating our comprehensive restoration plan into site-specific actions that are cleaning up contaminated Areas of Concern, reducing phosphorus runoff that causes harmful algal blooms, and preventing the introduction and spread of invasive species such as Asian carp.

Challenges remain, however. In August 2014 toxic algae threatened drinking water for nearly half a million residents near Toledo, Ohio; contaminated sediments still impact urban rivers; Asian carp and other invasive species threaten to invade the Great Lakes; failing sewers continue to release sewage and polluted stormwater into local waterways; and new investments are needed to maximize the economic potential of our commercial navigation system.

It’s critical for the future of our region that we complete our Great Lakes restoration efforts and address new threats to the lakes. This is a wise investment that is projected to generate more than $50 billion in long-term economic benefits for the Great Lakes region.

Regional Priorities for the Great Lakes

The Great Lakes Commission urges Congress and the Administration to support the following regional priorities to sustain our restoration efforts and address specific challenges to the long-term environmental and economic health of the Great Lakes.

- Sustain progress under the Great Lakes Restoration Initiative
- Pass comprehensive legislation to strengthen and accelerate Great Lakes conservation efforts
- Protect the Great Lakes from Asian carp and other invasive species
- Help communities upgrade aging water infrastructure and safeguard drinking water
- Ensure Farm Bill conservation programs target watersheds contributing polluted runoff to the Great Lakes
- Provide resources for dredging and infrastructure improvements to maintain the Great Lakes Navigation System
Sustain progress under the Great Lakes Restoration Initiative

Continued funding for the 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 Action Plan has been updated with strengthened performance measures and a science-based adaptive management framework. A regional advisory board is guiding the restoration program and the Great Lakes states, local communities, conservation groups and other partners remain actively engaged. The GLRI is generating real results, with more than 2,000 restoration projects implemented, six Areas of Concern cleaned up, and farmland acreage enrolled in conservation programs doubled to prevent polluted runoff in critical watersheds. During its next phase – FY 2015-2019 – the GLRI will focus on cleaning up 10 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 2016 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 the Administration must support programs and activities that prevent the introduction and spread of Asian carp and other aquatic invasive species (AIS). This includes funding and direction to the Army Corps of Engineers and other agencies to develop alternatives from the Great Lakes and Mississippi River Interbasin Study, with an immediate focus on near-term measures to reduce the risk of Asian carp invading the Great Lakes from the Mississippi River at the Brandon Road Lock and Dam. The alternatives considered should be consistent with recommendations from the Advisory Committee for the Chicago Area Waterway System and should not result in net adverse impacts on flooding, water quality, recreation and barge transportation in northeast Illinois and northwest Indiana. All parties must reach consensus on a comprehensive, long-term solution to prevent AIS transfer while maintaining beneficial uses of Chicago-area waterways. Congress should strengthen federal programs to prevent harmful species – such as Asian carp – from being introduced via the trade of live plants and animals. Programs under the National Invasive Species Act and the Great Lakes Fishery Commission’s sea lamprey control program continue to be vital to safeguarding the Great Lakes from invasive species.

Request: Provide funding and authority to the Army Corps of Engineers, U.S. Fish and Wildlife Service and other agencies to maintain current control efforts, such as the electric dispersal barrier, and develop and implement additional control measures that do not result in net adverse impacts on flooding, water quality, recreation and barge transportation in northeast Illinois and northwest Indiana. Congress should strengthen federal programs to prevent the importation of invasive species.

Pass comprehensive legislation to strengthen 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 similar to the Great Lakes Ecological and Economic Protection Act from the 113th Congress 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 upgrade aging wastewater infrastructure and safeguard drinking water

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 the emergency closure of the Toledo, Ohio, drinking water system in August 2014 due to toxic algae in Lake Erie. This crisis underscores the need to support public agencies in detecting, managing and treating 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, the U.S. and Canadian federal governments should jointly establish national health advisory levels for toxic algae and assist local governments in detecting, monitoring and responding to toxins in drinking water supplies.

Request: Provide funding for the Clean Water and Drinking Water SRFs in FY 2016 to repair failing water infrastructure, including separating combined sewers, upgrading sewage treatment plants, and improving drinking water systems to treat or avoid toxic algae. Federal agencies should collaborate with state and local officials on standards and practices to detect toxic algae and safeguard drinking water supplies.

Ensure 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; it also 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 have developed and recently received funding for projects to address nutrient pollution in our region’s most heavily impacted areas, such as western Lake Erie, Saginaw Bay and Green Bay. This innovative approach holds great promise to address a growing threat to the Great Lakes. However, we must ensure the program is fully funded, effectively implemented, targets watersheds with the greatest conservation needs, and generates real improvements in water quality.

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 USDA Natural Resources Conservation Service should collaborate with the Great Lakes states and coordinate the program with state priorities.

Provide resources for dredging and infrastructure improvements 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 of dredged material and aging navigation infrastructure. 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.

Request: As directed in WRRDA, increase appropriations from the HMTF, including dedicated funding for Great Lakes ports and recreational harbors. The Army 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.

Photos: Left, top: Mackinac Bridge over the Straits of Mackinac, Mackinaw City, Michigan. Left bottom: bighead carp, a species of Asian carp. Right top: Lake Erie, Port of Erie; Erie, Pennsylvania. Right bottom: Lake Ontario, Sandy Island Beach State Park; Richland, New York.
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

*Lake Michigan, Gillson Park Beach, Wilmette, Illinois.*

**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.


The Great Lakes Commission is committed to minimizing the environmental impact of printed materials by using recycled paper with high post-consumer content and vegetable-based inks.
**Speaker Topics**

Under this tab are background materials provided to inform the panel discussions:

**Nutrients**
- *Precision Conservation: Achieving Watershed Outcomes*, The Nature Conservancy
- Lake Erie Nutrient Targets Working Group fact sheet, Great Lakes Commission
- Fox P Trade project overview, Great Lakes Commission

**Oil Transportation**
- Executive Summary of GLC’s oil transportation report

**Legislation**
- Overview of Great Lakes Ecological and Economic Protection Act of 2015 (GLEEPA)

**Maritime Transportation**
- Maritime Initiative background, Council of Great Lakes Governors
- Great Lakes Dredging Team commentaries, published in GLC’s January 2015 Advisor newsletter
- Examples of beneficial use applications of dredged material, Great Lakes Dredging Team
**Overview**

The Great Lakes region is home to a diverse and unique assortment of inland and coastal waters and it also supports a large and diverse agricultural economy (representing about 10% of the corn/soy/wheat belt in North America). Instead of considering whether to have healthy water OR productive agriculture, it’s time to change the conversation; we can have healthy water AND productive agriculture.

The Nature Conservancy’s Great Lakes Project is advancing an agriculture strategy built on a Precision Conservation system. This system, built on the simple concept of dose/response relationships used in the field of medicine, deploys modeling, GIS technology and large biological data sets to help the agricultural industry “grow clean water” and healthy flows in agricultural watersheds. We can now use it to establish the relationship between farm management practices and ecosystem health and we can do this at any scale, from the farm field up to a major watershed.

The precision conservation product has two important features for application in the real world:

1. It enables watershed users (producers, agricultural agencies, agri-businesses and governing bodies) to set realistic watershed management goals to meet human and environmental needs.
2. To enable watershed users (mostly farmers and drainage managers) to manage for performance toward these goals, it quantifies the impact of various conservation management practices on a year over year basis (a built in accounting system), just as they manage agronomic conditions and inputs.

Because the precision conservation system is quantification-based it enables many potential kinds of new transactions, such as pay for performance, drain tile and ditch management, and supply chain verification/certification.

**Solution**

By collaborating with partners to identify the scale of the problem as well as the required investment to achieve a solution, it is now possible to inform the development of shared goals, target conservation investments, and track progress towards their achievement. We can identify where agricultural conservation practices can make the biggest impact, and where other factors are impairing water quality. Given the scale of the problem, no single conservation practice, funding mechanism or delivery agent will be sufficient to address the challenge. Instead, a suite of solutions engaging all aspects of the agricultural supply chain will be needed, leveraging new types of transactions and funding sources. This includes facilitating the adoption of tools and modeling approaches among individual projects, and testing a variety of new “transactions” that use the models/tools to achieve ecological outcomes at watershed scales. Four projects, currently underway, demonstrating these transactions, are described below.

*Supply Chain and Policy in Saginaw Bay*

The Saginaw Bay Watershed Conservation Partnership was selected to receive $10 million in funding under the new Regional Conservation Partnership Program (RCPP), which was created under the 2014 Farm Bill. This work, co-led by the Michigan Agri-Business Association and The Nature Conservancy, consists of over 30 partner organizations and is designed to direct Farm Bill dollars to optimal locations.
within the watershed and to track progress and measure against goals. The Saginaw Bay RCPP includes many innovations such as using Certified Crop Advisors, trusted input and information providers to farmers, to enroll agricultural operators in conservation programs, a service they have not historically performed. Comprised of partners from the conservation, business, corporate, and academic sectors, the Saginaw Bay RCPP is considered by the USDA and others as a national model for how to effectively address water quality resource concerns for the benefit of both people and nature. For more information, visit nature.ly/SaginawBay.

4R Nutrient Stewardship Certification
The Conservancy, in collaboration with The Fertilizer Institute, the agricultural industry, researchers and government agencies, was instrumental in developing a voluntary certification program for nutrient service providers, (e.g., fertilizer retailers) in the Lake Erie Basin to promote and implement nutrient management recommendations and applications that adhere to the “4-R’s”: applying the right kind of fertilizer, in the right amount, at the right time and in the right location. The program launched in March 2014; to date, three branch retail locations are already certified, and over 60 additional locations in Ohio, Michigan and Indiana have begun taking the steps toward certification. The United States Department of Agriculture’s (USDA) Agricultural Research Service is leading a “triple bottom line” evaluation of the program to quantify the environmental, economic and social impacts in the Western Lake Erie Basin. Go to www.4RCertified.org for more information.

Real Time Drain Water Management
There is a growing understanding that many of the culprits of water quality impairment, e.g. sediments, are themselves symptoms of widespread drainage, both through sub-surface tile drains and surface ditches. A promising practice to manage flows and restore watershed hydrology that also provides a direct economic benefit to famers is Drain Water Management: use of a drainage control structure to manage in-field water levels. The environmental potential of Drain Water Management is generally not realized due to inactive or non-optimal management. The Conservancy is partnering with leading technology and drain equipment companies to pilot the intelligent and automated management of Drain Water Management Units at a watershed scale, which will help farmers overcome barriers to adoption of Drain Water Management, create new transactions for famers and industry, while also providing optimal downstream environmental benefits.

Wetlands and Hydrological Practices
An important suite of practices that can provide numerous environmental benefits and assist in water quality improvements is the restoration of wetlands and other forms of in-stream natural infrastructure. These practices are costly to implement, and because they often involve taking land out of production, are not widely implemented. In pilot watersheds across the Western Lake Erie Basin, the Conservancy and partners are implementing demonstration wetland and two-stage ditch projects to better inform regional farmers, land managers and authorities on the benefits of these practices.

For more information, contact:
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Background
At its Annual meeting on September 30, 2014, the Great Lakes Commission (GLC) adopted a Lake Erie Water Pollution resolution acknowledging the challenges associated with algal blooms and toxins like microcystin that fouled drinking water for Toledo residents in August 2014. The resolution recognizes that there are multiple sources of phosphorus and that states and provinces have the primary responsibility for implementing clean water programs and are in the best position to find solutions to reduce nutrient loadings that contribute to harmful algal blooms and other ecological problems in Lake Erie.

The GLC's Lake Erie Water Pollution resolution committed the states and the province of Ontario to the formation of a working group to develop new and refine existing practices, programs and policies necessary to achieve previously agreed-upon pollutant reduction targets and/or identify additional remedies to achieve objectives set forth in the U.S. Clean Water Act and the Great Lakes Water Quality Agreement.

Lake Erie Nutrients Target (LENT) Working Group
The Lake Erie Nutrient Targets Working Group (LENT WG) is comprised of representatives from Indiana, Michigan, New York, Ohio, Pennsylvania, and Ontario. WG members represent state agencies with responsibilities for state water quality and rural nonpoint/agriculture conservation programs. The LENT WG will use existing/previously agreed-upon load reduction targets within individual states and provinces to identify programs, policies, and practices that can be enhanced, modified, or augmented to improve water quality in Lake Erie. (Defining targets is not the purpose of the LENT WG and is being undertaken by the Annex 4 Subcommittee of the Great Lakes Water Quality Agreement.) During the first half of 2015, the LENT WG will:

1) Document, in coordination with the Annex 4 Subcommittee, existing federal, state and provincial water quality management policies and programs that can contribute to achieving reduced load reduction targets for Lake Erie. Identify areas of improvement within existing programs and authorities that are agreeable to all Lake Erie jurisdictions.
2) Examine key policy documents, consult with regional policy leaders, and conduct interviews with state, regional and national through leaders to identify innovative and promising policies, programs and practices for improving water quality in Lake Erie.
3) Prepare a draft joint action plan that recommends specific actions that refine and sharpen the effectiveness and sustainability of existing policies and programs and/or calls for new and promising approaches to achieve the Lake Erie phosphorus reduction targets and otherwise meet water quality objectives.
4) Work with Lake Erie states and Province of Ontario to vet and refine the joint action plan.

The LENT WG will also:
- Consider nutrient concentration guidelines and criteria;
- Examine programs from other multi-jurisdictional regions and identify those with potential applicability to the Great Lakes;
- Evaluate opportunities for market based approaches to complement regulatory approaches; and
- Coordinate its work plans and interim products with the Annex 4 Subcommittee.

Products and Timeline
The main product of the working group is expected to be joint action plan or series of recommendations for improving water quality in Lake Erie that can be endorsed by Lake Erie States and Ontario. The working group is expected to produce an interim report to the Great Lakes Governors and Premiers by June of 2015 and a final report by September 2015.

For information, contact Victoria Pebbles, vpebbles@glc.org/734-971-9135
Fox P Trade Project Overview

*Fox P Trade* is a three-year initiative led by the Great Lakes Commission in partnership with the USDA-Natural Resource Conservation Service (NRCS) and the Wisconsin Department of Natural Resources (Wisconsin DNR) to establish a water quality trading program in the Lower Fox River Watershed of Wisconsin. The Lower Fox River flows into lower Green Bay, both of which suffer from excessive sediment, nutrients, bacteria and heavy metal loads. Since 2012, the Lower Fox has been subject to a U.S. EPA-approved Total Maximum Daily Load (TMDL), which sets limits on the amount of Phosphorus (P) trading and Total Suspended Solids (TSS) that can be discharged into the Lower Fox River Watershed. *Fox P Trade* focuses primarily on P trading, hence the project name “Fox P Trade,” but is also exploring trading for TSS.

Water quality trading is an innovative, market-based approach whereby credits are bought and sold. Credit sellers earn credits for reducing pollution and those can be sold to entities that are faced with high pollution control costs, generally facilities with NPDES (in Wisconsin called WPDES) water discharge permits. Trading enables a cost-effective approach to pollution reduction when polluters are facing very different costs to control the same pollutant. Wisconsin DNR (WI DNR) issued U.S. EPA-approved guidance for water quality trading in August 2013.

*Fox P Trade* was launched in March 2013 with the establishment of a project structure to ensure proper engagement of partners and stakeholders throughout the effort. A consulting team of national experts on water quality trading has completed a P and TSS trading feasibility assessment for the Lower Fox River Watershed. Waste water treatment facilities and farmers in the Lower Fox are participating in a hypothetical trading exercise to test all aspects of a trading program. This includes testing methods to quantify pollution reduction efforts and convert them to sellable credits; creating contracts between buyers and sellers that can be used as templates for future trades and producing associated forms; and identifying the appropriate market structure for trading in the Lower Fox and the organizational roles to support it.

The WI DNR trading guidance provides a lot of information on how to engage in water quality trading in Wisconsin, but the Lower Fox has unique conditions, including the TMDL, that affect when, where and how water quality trading can occur. Lessons learned, documents created, and specific needs and considerations of the Lower Fox identified through *Fox P Trade* will be reflected in an online Lower Fox trading handbook that will be produced as a final product. The handbook will walk buyers and sellers through the steps necessary for trading in the Lower Fox Watershed, with links to appropriate forms and supporting tools.

Funding for *Fox P Trade* is provided by NRCS through the Great Lakes Restoration Initiative, which has identified the Lower Fox River/Green Bay as a priority watershed for targeted restoration efforts.

For more information, see [www.glc.org/projects/water-quality/foxptrade](http://www.glc.org/projects/water-quality/foxptrade) or contact Victoria Pebbles, 734-971-9135; vpebbles@glc.org.
Executive Summary

Full report available at www.glc.org/projects/water-quality/oil-transport

Overview

The Great Lakes Commission has researched the potential benefits and risks surrounding the transportation of crude oil in the Great Lakes-St. Lawrence River region, including an assessment of the regulatory structure in the two countries. This report stems from an Action Item approved by GLC commissioners in September 2013. The report reflects the Commission’s concerns over recent oil spills and the desire for information regarding the dramatic growth in North American oil production and the associated increase in oil transportation to and through the region. The final report includes a suite of findings and an appendix with four issue briefs reviewing key topics in greater detail.

Background

Domestic production of crude oil in North America (primarily from the Bakken formation, the Alberta oil sands and the Permain and Eagle Ford fields in Texas) has increased dramatically in recent years, with U.S. production in 2015 projected to be 75 percent above 2009 levels. This has challenged both industry and government with the need to transport growing volumes of crude oil from its source to refineries and points of export in both nations.

The binational Great Lakes region has become a hub of oil transportation and refining. A large volume of crude oil is also transported through the region to refineries in other parts of the two countries. Safety concerns related to oil transportation have increased due to spills and accidents in recent years, including the 2013 derailment and explosion of a train carrying domestic crude oil in the town of Lac-Mégantic, Québec, that caused 47 deaths, and the 2010 failure of a pipeline near Marshall, Mich., that spilled approximately 1 million gallons of crude oil from the Alberta oil sands. Since the Lac-Mégantic incident at least 19 other transportation-related crude oil spills have been reported, including at least four in a Great Lakes state or province.

The primary options for transporting crude oil are pipelines, vessels and railroads.

Pipelines

Historically, pipelines have been the preferred mode for transporting petroleum products and more oil is transported through the Great Lakes-St. Lawrence River basin by pipeline than by any other mode. Approximately 70 percent of oil sands produced in Alberta is shipped to U.S. refineries via pipeline. Pipelines are, on average, $5 to $10 per barrel cheaper than rail. As a result, the increasing production of oil sands crude in Alberta likely will drive industry toward new pipeline construction to support future transportation to the U.S. Midwest for refining. Recent pipeline failures have raised awareness of pipeline safety and drawn attention to the vulnerability of the Great Lakes to pipeline spills. These spills have also prompted response agencies to evaluate the state of preparedness within their jurisdiction and to identify areas where these programs can be improved.

Vessels

Although there is refined petroleum transported on the Great Lakes — over 19 million metric tonnes in 2011 — no crude oil is transported on the Great Lakes at the current time. In September 2014 the first tankers transporting crude oil for export were seen on the St. Lawrence River. These transport oil sands crude shipped by rail from Alberta to Sorel-Tracy, Quebec and stored near the port. As the production of domestic crude oil grows, there has been an overall increase in crude oil transportation in the larger Great Lakes basin waterway system, which includes inland waterways, rivers and canals connected to the Great Lakes. Most concerns over waterborne transportation of crude oil on the Great Lakes relate to the risk of spills from vessels. In addition, oil from oil sands is denser than traditional oil and tends to sink in water, rather than float on the surface, significantly complicating cleanup actions. The U.S. Coast Guard has noted that currently there is no technology available to contain or clean up a spill of heavy crude oil in fresh water. Existing Vessel Response Plans do not address this type of scenario.
Rail

Rail transport, because of its load carrying and routing flexibility, has increased in recent years due to capacity limitations in the pipeline network. The increase in rail transport is dramatic: 9,500 carloads of crude oil were carried by train in 2008 in the U.S., compared with 650,000 carloads forecasted by the end of 2014. In Canada, 500 carloads were carried in 2009 and an estimated 140,000 carloads will be carried in 2014. The transportation of crude oil via rail has garnered much attention since the Lac-Mégantic incident – safety issues being addressed relate to crew size and training; tank car designs; routes for trains carrying crude oil; and communications with state/provincial and local agencies. A key issue is the ability of the legal and regulatory regime to keep pace with the market-driven increase in oil being transported by rail.

Key Findings

The following are highlights from the report’s findings focused on key issues that may warrant further study and action on the part of government agencies and industry.

Oil Extraction and Movement

- There are conflicting opinions about the characteristics of Bakken crude oil, which is relevant to the perceived safety of the transportation process by rail
- The characteristics of Alberta oil sands present particular challenges in the transportation of the product by all modes
- Bakken crude oil passes directly through the region to refineries located elsewhere

Risks and Impacts of Oil Transportation

- There is a need to better understand the relative risks of oil spills associated with increased transportation of crude oil
- The risks and costs of increased oil transportation to government agencies need to be studied and better understood
- The age and quality of infrastructure is a concern for most modes of oil transportation, which poses an increased risk for a spill or accident
- Communications between oil companies, oil transporters, regulatory and response agencies is important but is often lacking and can be better coordinated to help improve preparedness and reduce the risk from spills

Oil Transportation Programs, Policies and Regulations

- The increase in oil production and transportation, particularly rail transportation of oil, is outpacing the development and implementation of regulatory, enforcement and inspection programs
- A review of the funding and adequacy of inspection and enforcement protocols and the timeliness of spill reporting across all modes will help identify gaps in regulatory, prevention and response programs
- The Great Lakes states and provinces are not taking full advantage of opportunities to assume oversight of pipeline safety, inspection and enforcement
- Plans to retrofit and/or eliminate DOT-111 tank cars and replace them with newer, safer models will significantly improve the safety of oil transportation by rail
- Pursuing additional improvements to rail transportation safety, including adopting new technologies and dual person crew requirements may help lessen the number of rail accidents
- Proper classification of all types of oil transported by train is necessary
- Federal, state and provincial response agencies may not be adequately funded and equipped to efficiently respond to spills from different modes and in all locations
- Some mechanisms for communication, coordination and notification between jurisdictions regarding oil transportation and spills currently exist and may be expanded to further enhance preparedness and response in the region.
- Vessel Response Plans (VRPs) required under the Oil Pollution Act (OPA) represent one important component of the U.S. regulatory regime that ensures safe transportation of crude oil by vessel. It is unlikely that VRP requirements can presently be met for transport of heavy crude oil on the Great Lakes.
Recent Policy and Regulatory Developments

The table below lists major oil transportation policy and regulatory developments, through 2014, in the U.S. and Canada and among the Great Lakes states and provinces. Additional details are provided in issue brief 4.

<table>
<thead>
<tr>
<th>UNITED STATES</th>
<th>CANADA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rail</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Federal**
- Pipeline and Hazardous Materials Safety Administration (PHMSA):
  - proposed regulations for phasing out of DOT-111 tank cars
  - standards for next generation of tank cars
- Department of Transportation (DOT):
  - Notice of Proposed Rulemaking (NPRM) for Hazardous Materials: Enhanced Tank Cars Standards and Operational Controls for High-Hazard Flammable Trains
  - Advance Notice of Proposed Rulemaking (ANPRM) for Hazardous Materials: Oil Spill Response Plans for High-Hazard Flammable Trains
  - Emergency Orders
    - stricter standards to transport crude oil by rail
    - prohibiting shippers to switch to alternate classification involving less stringent packaging
    - carriers must inform first responders about crude oil transported through their communities
  - Letter to American Association of Railroads outlining actions that can be taken voluntarily immediately by industry
- Federal Railroad Administration (FRA) & USDOT
  - Operation Classification, primarily targeting shipments from the Bakken formation

**State**
- New York:
  - new targeted rail inspection and training campaign
  - multi-agency report on crude oil transportation
  - Executive Order directing agencies to petition U.S. DOT to strengthen rail car standards and to assess federal agencies’ needs and risks
  - letter to governor of North Dakota urging quick action on regulations to reduce volatility of Bakken crude oil
- Minnesota:
  - new laws: stricter oversight of railroad companies, more railway inspections, better emergency response training and preparedness
  - In 2014, amendment of Chapter 115E of the Oil and Hazardous Substance Discharge Preparedness Law: railroads must provide training for fire departments along unit train routes and specific timeframes for deploying equipment and trained staff for unit train
  - letter to the Governor of North Dakota advocating for conditioning standards to reduce volatility of Bakken crude oil

**Federal**
- Transport Canada – regulation:
  - new regulations for federally regulated road and rail crossings
  - amends existing regulations to identify and address safety risks
  - companies must hold a valid Railway Operating Certificate to operate on federally regulated railways in Canada
  - amendments requiring 35 provincially regulated railway and light-rail companies operating on federal track to develop and implement Safety Management System
  - formalizing new DOT-111 tank car standards and three-year phase out of old ones
  - improving data reporting requirements for railways to proactively identify and address safety risks before accidents happen
  - monetary penalties for Railway Safety Act (RSA) violations
  - amendment to RSA to speed up approvals in emergencies – RSA allows for emergency directives to compel a railway company to cease unsafe activities or compel mitigation of immediate threats to safe railway operations
- Transportation Safety Board
  - Investigation report for the Lac-Mégantic accident
- Proposed settlement between victims of the Lac-Mégantic and Montreal Maine and Atlantic Canada Co., its insurance carrier, rail-car manufacturers and some oil producers. Three companies have not agreed to participate: World Fuel Services, Canadian Pacific Railway and Irving Oil.
### Pipeline

**Federal**
- DOT Inspector General Audit of PHMSA’s State Pipeline Safety Program guidelines, policies and procedures
  - Concluded that programs lack elements to ensure state inspections cover all federal requirements and pipeline operators maintain safety standards

**State**
- Michigan:
  - Michigan Petroleum Pipeline Task Force
  - Letter sent by attorney general and DEQ to Enbridge asking that additional anchors be installed to support the pipeline under the Straits of Mackinac. Work begun in August 2014.

**Provincial**
- For approval of TransCanada’s Energy East project:
  - Ontario: 6 conditions
  - Quebec: 7 conditions

### Vessel

**Federal**
- Coast Guard:
  - The 2010 Coast Guard Authorization Act directs the Coast Guard to revisit regulations addressing the transfer of oil to and from tank vessels and examine if new measures are needed in sensitive areas or during high-risk conditions. October 2013: Coast Guard issued a request for public comment, but no rulemaking has since been promulgated
  - Development of Bottom Recovery Systems final report stating that “current methods are inadequate to find and recover submerged oil, with responders having to reinvent the techniques on each occasion”

**Federal**
- In December 2013, Transport Canada increased the maximum size of tankers allowed on the St. Lawrence River
  - The Minerva Gloria arrived in the port of Sorel-Tracy on 9/22/14 – federally permitted, it is the first tank vessel to carry diluted bitumen on the St. Lawrence Seaway for exportation.

**Provincial**
- Quebec:
  - 7 conditions for TransCanada’s Energy East terminal in Cacouna
Great Lakes Restoration Initiative Act of 2015
Rep. Dave Joyce

Summary and Purpose

Containing about 85 percent of North America’s fresh surface water and over 20 percent of the fresh water worldwide, the Great Lakes are the largest surface freshwater system in the world, and are home to more than 3,500 species of plants and animals. The Great Lakes are a unique and vital ecosystem as well as an important economic engine throughout the region. The Great Lakes basin supports a diverse range of industries and small businesses, supporting an estimated 1.5 million American jobs. More than 30 million Americans live within the Great Lakes basin and rely on the Great Lakes as the source of safe drinking water, transportation, and recreation.

The Great Lakes, however, face significant ecological threats and are highly sensitive to the effects of a variety of pollutants. Legislation is needed to address the challenges of invasive species, nonpoint source pollution, nutrient pollution, and restore and clean up other toxic hot spots along the shores.

Specifically, the legislation would:

Authorize the Great Lakes Restoration Initiative (GLRI)

- In 2004, President Bush established a Great Lakes Interagency Task Force chaired by the EPA to coordinate Great Lakes protection and restoration efforts. Also under President Bush, the Great Lakes Regional Collaboration was formed to work with other stakeholders to design a strategy for the restoration, protection, and sustainable use of the Great Lakes.
- In the Administration’s FY2010 budget, the President requested $475 million in the EPA’s budget for the Great Lakes Restoration Initiative (GLRI), an interagency effort that builds on the collaboration strategy from the previous Administration.
- The GLRI is an action-oriented, results-driven initiative targeting the most significant problems within the basin, including aquatic invasive species, toxics and contaminated sediment, nonpoint source pollution, and habitat and wildlife protection and restoration.
- This program is the most significant restoration effort for the Great Lakes, and should be authorized into law to clarify its purpose and objectives, and to demonstrate support from Congress.
- The GLRI Act would formally authorize the GLRI at $300 million annually from 2016-2020

Previous Funding Levels for GLRI:

- FY2010: $475 million
- FY2011: $300 million
- FY2012: $299.5 million
- FY2013: Approximately $284 million- sequestration level
- FY2014: $300 million
- FY2015: $300 million
Great Lakes Ecological and Economic Protection Act of 2015 (GLEEPA)

This bill would help protect and restore the Great Lakes, the world’s largest system of fresh surface water and an ecological treasure and economic engine for the region.

This is a reintroduction of S. 1232, the Great Lakes Ecological and Economic Protection Act of 2013, which was led by Senators Levin and Kirk in the 113th Congress.

Why is the legislation needed?

After decades of industrial pollution and with the threats posed by invasive species and water quality issues, the health of our Great Lakes is in danger. Since 2010, we have been coordinating federal efforts to cleanup and restore our lakes to ensure that they continue to provide clean drinking water for our communities and serve as an economic driver for our region. This bill takes that effort to the next level by formally authorizing those efforts.

What would the legislation do?

- **Authorize the Great Lakes Restoration Initiative (GLRI)**, an inter-agency program designed to address the most significant problems in the Great Lakes ecosystem, with a focus on tangible, measurable results

- **Reauthorize two existing programs critical to the Great Lakes**
  - It would reauthorize the Great Lakes Legacy program, which supports the removal of contaminated sediments at more than thirty Areas of Concern (AOCs) across the Great Lakes,
  - And it would reauthorize the Great Lakes National Program Office, which handles Great Lakes matters for the EPA

- **Formally establish an Interagency Task Force**, as well as an advisory board to ensure that federal programs concerning Great Lakes restoration are coordinated efficiently, reflect input from a variety of stakeholders, and ensure that taxpayer funds are effectively directed to worthwhile restoration projects which produce tangible, measurable results

Please join Senators Baldwin, Kirk, and Stabenow to reintroduce GLEEPA to protect one of our nation’s most precious natural resources.

Baldwin Staff contact: Colleene Thomas, colleene_thomas@baldwin.senate.gov
Kirk Staff contact: Jon VanderPlas, jonathan_vanderplas@kirk.senate.gov
Stabenow Staff contact: Aaron Suntag, aaron_suntag@stabenow.senate.gov
SUMMARY

U.S. ARMY CORPS OF ENGINEERS
FISCAL YEAR 2016 BUDGET

AMOUNTS BUDGETED FOR DREDGING
GREAT LAKES
COMMERCIAL HARBORS

BY STATE
ILLINOIS

There are 2 federally maintained commercial harbors on the Great Lakes in the State of Illinois. For the purposes of this summary, the term "commercial harbors" means cargo-handling ports. This list does not include purely recreational harbors.

<table>
<thead>
<tr>
<th>HARBOR</th>
<th>TONS/YEAR*</th>
<th>CARGOES</th>
<th>FY2016 DREDGING $ NEEDED</th>
<th>FY2016 DREDGING $ BUDGETED</th>
<th>$ SHORTFALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waukegan</td>
<td>90,000</td>
<td>cement, gypsum</td>
<td>2,439,000</td>
<td>1,439,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Chicago**</td>
<td>17,898,000</td>
<td>limestone, coke, coal, salt, grain cement, liquid bulk, potash, steel</td>
<td>10,570,000</td>
<td>1,850,000</td>
<td>8,720,000</td>
</tr>
<tr>
<td>Total</td>
<td>17,988,000</td>
<td>* 2012 data (most recent)</td>
<td>13,009,000</td>
<td>3,289,000</td>
<td>9,720,000</td>
</tr>
</tbody>
</table>

Note: the chart above only reflects dredging needs. It does not include other Corps of Engineers activities funded in the agency's operation and maintenance account, such as conditions surveys, repair and maintenance of breakwaters and operation of confined disposal facilities or locks.

* 2012 data (most recent)
** includes facilities along the Chicago River, Calumet River, and Lake Calumet
INDIANA

There are 2 federally maintained commercial harbors on the Great Lakes in the State of Indiana. For the purposes of this summary, the term "commercial harbors" means cargo-handling ports. This list does not include purely recreational harbors.

<table>
<thead>
<tr>
<th>HARBOR</th>
<th>TONS/YEAR*</th>
<th>CARGOES</th>
<th>FY2016 DREDG $ NEEDED</th>
<th>FY2016 DREDG $ BUDGETED</th>
<th>$ SHORTFALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana Harbor</td>
<td>13,164,000</td>
<td>iron ore, limestone, coal, coke, steel, aluminum, slag, petroleum products general cargo</td>
<td>6,883,000</td>
<td>4,083,000</td>
<td>2,800,000</td>
</tr>
<tr>
<td>Burns Harbor</td>
<td>8,382,000</td>
<td>iron ore, steel, limestone, grain chemicals, fertilizer, coal, petroleum products, clay, general cargo</td>
<td>5,139,000</td>
<td>1,659,000</td>
<td>3,480,000</td>
</tr>
<tr>
<td>Total</td>
<td>21,546,000</td>
<td></td>
<td>12,022,000</td>
<td>5,742,000</td>
<td>6,280,000</td>
</tr>
</tbody>
</table>

* 2012 data (most recent)

Note: the chart above only reflects dredging needs. It does not include other Corps of Engineers activities funded in the agency's operation and maintenance account, such as conditions surveys, repair and maintenance of breakwaters and operation of confined disposal facilities or locks.
MINNESOTA

There are 2 federally maintained commercial harbors on the Great Lakes in the State of Minnesota. For the purposes of this summary, the term "commercial harbors" means cargo-handling ports. This list does not include purely recreational harbors.

<table>
<thead>
<tr>
<th>HARBOR</th>
<th>TONS/YEAR*</th>
<th>CARGOES</th>
<th>FY2016 DREDGING $ NEEDED</th>
<th>FY2016 DREDGING $ BUDGETED</th>
<th>$ SHORTFALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duluth / Superior</td>
<td>34,672,000</td>
<td>iron ore, limestone, coke, coal, grain, steel, general cargo, grain, clay, cement sand &amp; gravel</td>
<td>3,500,000</td>
<td>3,000,000</td>
<td>500,000</td>
</tr>
<tr>
<td>Two Harbors</td>
<td>16,210,000</td>
<td>iron ore</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>50,882,000</td>
<td></td>
<td>3,500,000</td>
<td>3,000,000</td>
<td>500,000</td>
</tr>
</tbody>
</table>

* 2012 data (most recent)

Note: the chart above only reflects dredging needs. It does not include other Corps of Engineers activities funded in the agency's operation and maintenance account, such as conditions surveys, repair and maintenance of breakwaters and operation of confined disposal facilities or locks.
NEW YORK

There are 5 federally maintained commercial harbors on the Great Lakes in the State of New York. For the purposes of this summary, the term "commercial harbors" means cargo-handling ports. This list does not include purely recreational harbors.

<table>
<thead>
<tr>
<th>HARBOR</th>
<th>TONS/YEAR*</th>
<th>CARGOES</th>
<th>FY2016 DREDGING $ NEEDED</th>
<th>FY2016 DREDGING $ BUDGETED</th>
<th>$ SHORTFALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dunkirk</td>
<td>0</td>
<td>-</td>
<td>1,190,000</td>
<td>0</td>
<td>1,190,000</td>
</tr>
<tr>
<td>Buffalo</td>
<td>724,000</td>
<td>limestone, grain, sand &amp; gravel, cement, salt</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rochester</td>
<td>82,000</td>
<td>cement</td>
<td>2,320,000</td>
<td>2,320,000</td>
<td>0</td>
</tr>
<tr>
<td>Oswego</td>
<td>417,000</td>
<td>fertilizer, cement, aluminum, general cargo, corn</td>
<td>1,285,000</td>
<td>1,285,000</td>
<td>0</td>
</tr>
<tr>
<td>Ogdensburg</td>
<td>106,000</td>
<td>salt, manufactured goods</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1,329,000</td>
<td></td>
<td></td>
<td>4,795,000</td>
<td>3,605,000</td>
</tr>
</tbody>
</table>

* 2012 data (most recent)

Note: the chart above only reflects dredging needs. It does not include other Corps of Engineers activities funded in the agency’s operation and maintenance account, such as conditions surveys, repair and maintenance of breakwaters and operation of confined disposal facilities or locks.
There are 9 federally maintained commercial harbors on the Great Lakes in the State of Ohio. For the purposes of this summary, the term "commercial harbors" means cargo-handling ports. This list does not include purely recreational harbors.

<table>
<thead>
<tr>
<th>HARBOR</th>
<th>TONS/YEAR*</th>
<th>CARGOES</th>
<th>FY2016 DREDGING $ NEEDED</th>
<th>FY2016 DREDGING $ BUDGETED</th>
<th>$ SHORTFALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashtabula</td>
<td>4,539,000</td>
<td>coal, fertilizer, limestone, iron ore, slag pig iron</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Toledo</td>
<td>9,638,000</td>
<td>coal, petroleum products, aggregates, metal products, limestone, grain, chemicals, iron ore, steel, cement, minerals, general cargo</td>
<td>5,420,000</td>
<td>5,420,000</td>
<td>0</td>
</tr>
<tr>
<td>Put-In-Bay</td>
<td>8,000</td>
<td>gasoline, fuel oil, limestone</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sandusky</td>
<td>2,951,000</td>
<td>coal, limestone</td>
<td>1,700,000</td>
<td>1,700,000</td>
<td>0</td>
</tr>
<tr>
<td>Huron</td>
<td>466,000</td>
<td>limestone</td>
<td>3,200,000</td>
<td>3,200,000</td>
<td>0</td>
</tr>
<tr>
<td>Lorain</td>
<td>655,000</td>
<td>fertilizer, sand &amp; gravel, limestone, iron ore, slag</td>
<td>1,450,000</td>
<td>0</td>
<td>1,450,000</td>
</tr>
<tr>
<td>Cleveland</td>
<td>11,313,000</td>
<td>coal, iron ore, limestone, sand &amp; gravel, salt, cement, petroleum products, clay, machinery, general cargo, steel</td>
<td>6,700,000</td>
<td>6,700,000</td>
<td>0</td>
</tr>
<tr>
<td>Fairport</td>
<td>1,533,000</td>
<td>limestone, sand &amp; gravel</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Conneaut</td>
<td>3,989,000</td>
<td>limestone, iron ore, scrap steel</td>
<td>1,350,000</td>
<td>1,350,000</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>35,092,000</td>
<td></td>
<td>19,820,000</td>
<td>18,370,000</td>
<td>1,450,000</td>
</tr>
</tbody>
</table>

* 2012 data (most recent)

Note: the chart above only reflects dredging needs. It does not include other Corps of Engineers activities funded in the agency's operation and maintenance account, such as conditions surveys, repair and maintenance of breakwaters and operation of confined disposal facilities or locks.
There is 1 federally maintained commercial harbor on the Great Lakes in the State of Pennsylvania. For the purposes of this summary, the term "commercial harbor" means cargo-handling ports. This list does not include purely recreational harbors.

<table>
<thead>
<tr>
<th>HARBOR</th>
<th>TONS/YEAR*</th>
<th>CARGOES</th>
<th>FY2016 DREDGING $ NEEDED</th>
<th>FY2016 DREDGING $ BUDGETED</th>
<th>$ SHORTFALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erie</td>
<td>634,000</td>
<td>sand &amp; gravel, limestone,</td>
<td>1,500,000</td>
<td>1,500,000</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>general cargo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>634,000</td>
<td></td>
<td>1,500,000</td>
<td>1,500,000</td>
<td>0</td>
</tr>
</tbody>
</table>

* 2012 data (most recent)

Note: the chart above only reflects dredging needs. It does not include other Corps of Engineers activities funded in the agency's operation and maintenance account, such as conditions surveys, repair and maintenance of breakwaters and operation of confined disposal facilities or locks.
There are 8 federally maintained commercial harbors on the Great Lakes in the State of Wisconsin. For the purposes of this summary, the term "commercial harbors" means cargo-handling ports. This list does not include purely recreational harbors.

<table>
<thead>
<tr>
<th>HARBOR</th>
<th>TONS/YEAR*</th>
<th>CARGOES</th>
<th>FY2016 DREDGING $ NEEDED</th>
<th>FY2016 DREDGING $ BUDGETED</th>
<th>$ SHORTFALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superior (Duluth)</td>
<td>34,672,000</td>
<td>iron ore, limestone, coke, coal, grain, steel, general cargo, grain, clay, cement sand &amp; gravel</td>
<td>3,500,000</td>
<td>3,000,000</td>
<td>500,000</td>
</tr>
<tr>
<td>Ashland</td>
<td>2,000</td>
<td>coal</td>
<td>1,625,000</td>
<td>0</td>
<td>1,625,000</td>
</tr>
<tr>
<td>Menominee/Marinette</td>
<td>233,000</td>
<td>pig iron, limestone, steel, machinery</td>
<td>590,000</td>
<td>0</td>
<td>590,000</td>
</tr>
<tr>
<td>Green Bay</td>
<td>1,958,000</td>
<td>coal, limestone, cement, machinery, pig iron, petroleum products, steel</td>
<td>4,100,000</td>
<td>2,500,000</td>
<td>1,600,000</td>
</tr>
<tr>
<td>Sturgeon Bay</td>
<td>13,000</td>
<td>cement</td>
<td>800,000</td>
<td>0</td>
<td>800,000</td>
</tr>
<tr>
<td>Manitowoc</td>
<td>236,000</td>
<td>coal, cement, limestone</td>
<td>1,695,000</td>
<td>845,000</td>
<td>850,000</td>
</tr>
<tr>
<td>Port Washington</td>
<td>?</td>
<td>coal</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Milwaukee</td>
<td>2,267,000</td>
<td>coal, petroleum products, limestone, steel, cement, general cargo, salt</td>
<td>2,225,000</td>
<td>0</td>
<td>2,225,000</td>
</tr>
<tr>
<td>Total</td>
<td>39,381,000</td>
<td></td>
<td>14,535,000</td>
<td>6,345,000</td>
<td>8,190,000</td>
</tr>
</tbody>
</table>

*2012 data (most recent)
? indicates unavailable data

Note: the chart above only reflects dredging needs. It does not include other Corps of Engineers activities funded in the agency's operation and maintenance account, such as conditions surveys, repair and maintenance of breakwaters and operation of confined disposal facilities or locks.
There are 21 federally maintained commercial harbors on the Great Lakes in the State of Michigan. For the purposes of this summary, the term "commercial harbors" means cargo-handling ports. This list does not include purely recreational harbors.

<table>
<thead>
<tr>
<th>HARBOR</th>
<th>TONS/YEAR*</th>
<th>CARGOES</th>
<th>FY2016 DREDGING $ NEEDED</th>
<th>FY2016 DREDGING $ BUDGETED</th>
<th>$ SHORTFALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ontonagon</td>
<td>?</td>
<td>coal</td>
<td>800,000</td>
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<td>Keweenaw Waterway</td>
<td>?</td>
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<td>coal, limestone, iron ore</td>
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<td>Menominee/Marinette</td>
<td>233,000</td>
<td>pig iron, limestone, steel, machinery</td>
<td>590,000</td>
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<td>St. Joseph</td>
<td>272,000</td>
<td>limestone, cement, sand &amp; gravel</td>
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<td>1,400,000</td>
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<td>1,206,000</td>
<td>750,000</td>
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<td>sand &amp; gravel, cement, coal, slag,</td>
<td>2,000,000</td>
<td>1,000,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>limestone, salt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muskegon</td>
<td>1,689,000</td>
<td>coal, salt, machinery, sand &amp; gravel,</td>
<td>550,000</td>
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<td></td>
<td>limestone, cement, slag</td>
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<td>-</td>
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<tr>
<td></td>
<td></td>
<td>slag, cement, sand &amp; gravel</td>
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<td>4,200,000</td>
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<tr>
<td></td>
<td></td>
<td>limestone, sand &amp; gravel, cement, salt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HARBOR</td>
<td>TONS/YEAR*</td>
<td>CARGOES</td>
<td>FY2016 DREDGING $ NEEDED</td>
<td>FY2016 DREDGING $ BUDGETED</td>
<td>$ SHORTFALL</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------</td>
<td>----------------------------------------------</td>
<td>--------------------------</td>
<td>-----------------------------</td>
<td>-------------</td>
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<td>Harbor Beach</td>
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<td>St. Clair River**</td>
<td>7,204,000</td>
<td>coal, limestone, sand &amp; gravel</td>
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<td>0</td>
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<td>Rouge River</td>
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<td>coal, petroleum products, limestone, sand &amp; gravel, iron ore, slag, cement</td>
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<tr>
<td>Detroit River***</td>
<td>18,713,000</td>
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<tr>
<td>Monroe</td>
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<td>coal, limestone</td>
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<tr>
<td>Michigan Ports Total</td>
<td>54,258,000</td>
<td></td>
<td>22,602,000</td>
<td>9,310,000</td>
<td>13,292,000</td>
</tr>
</tbody>
</table>

| Connecting Channels |          |                                              |                          |                             |             |
| St. Marys River     | 0         |                                              | 0                        | 0                           | 0           |
| Grays Reef Passage  | 0         |                                              | 0                        | 0                           | 0           |
| St. Clair River (above) | -   |                                              | -                        | -                           | -           |
| Detroit River (above) | -   |                                              | -                        | -                           | -           |
| Channels Total      | 0         |                                              | 0                        | 0                           | 0           |

* 2012 data (most recent)
** includes cargo to/from facilities on the St. Clair River
*** includes cargo to/from facilities on the Detroit River / Port of Detroit
? indicates unavailable data

Note: the chart above only reflects dredging needs. It does not include other Corps of Engineers activities funded in the agency's operation and maintenance account, such as conditions surveys, repair and maintenance of breakwaters and operation of confined disposal facilities or locks.
The Council of Great Lakes Governors launched the Maritime Initiative in 2013 with the goal of improving the region’s maritime system and economic competitiveness. The Governors and Premiers created a Maritime Task Force charged with developing recommendations to help to rejuvenate this critical component of the region’s transportation and infrastructure system.

The Great Lakes-St. Lawrence region is home to a confluence of waterways, rail lines, interstate highways, airports, and telecommunications lines, all of which combine to create a regional infrastructure network that is unmatched in the world. As a result, the States and Provinces are in a unique position to work together to capitalize on this interconnected, inter-jurisdictional transportation system to increase the economic competitiveness of the entire region.

The Great Lakes-St. Lawrence River system is one of our region’s competitive advantages and a key to continued prosperity. Regional collaboration is required to protect it and coordinate needed investment. However, a number of barriers and challenges prevent the regional maritime system from being used to its full potential, including but not limited to regulatory hurdles; old and un-replaced infrastructure; inadequate dredging; seasonal waterway closures; and an aging fleet.

The Great Lakes Governors and Premiers recognize that there is a great need to reinvest in the rehabilitation and possible expansion of this regional infrastructure network that connects the Great Lakes States, Ontario and Québec with one another and with the world. There are a wide variety of opportunities and structural arrangements to fund the improvement of the regional maritime infrastructure network, including but not limited to governmental investment, private capital, public-private partnerships and creative financing mechanisms.

For More Information
The Council of Great Lakes Governors 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.cglg.org.
GLC COMMISSIONER STEVE GALARNEAU (WI)
CO-CHAIR, GREAT LAKES DREDGING TEAM

Dredged material placement: dialogue, flexibility and creative solutions needed

T IS AN HONOR TO SERVE AS THE CO-CHAIR of the Great Lakes Dredging Team (GLDT). The U.S. Army Corps of Engineers (USACE) brings vast experience and technical skills to the challenges we all face when we work to meet our navigational dredging needs in the Great Lakes waters. The partnership between USACE, the U.S. Environmental Protection Agency, states and locals is crucial to meeting this charge. The GLDT offers the opportunity to work together to discuss and resolve tough issues, which is why we took on the discussion of open-water placement of dredged material.

Wisconsin, as with the other Great Lakes states, has seen increased navigation dredging needs as a result of lower lake levels and increased opportunities to remediate contaminated sediment sites through the Great Lakes Restoration Initiative Legacy Act Program. Dredging activities inherently call for a degree of flexibility, creativity and innovation to be successful. Wisconsin has worked closely with partners cleaning up sites. Wisconsin continues to seek good social-environmental options for dredged material management. As we make progress on remediating sites it affords us greater flexibility in the future for... [continued on page 8]

PAULINE THORNDIKE, U.S. ARMY CORPS OF ENGINEERS
CO-CHAIR, GREAT LAKES DREDGING TEAM

Dredged sediment management options are a shared responsibility

T HE U.S. ARMY CORPS OF Engineers (Corps) annually dredges 2 to 5 million cubic yards of sediment from 25-50 federal harbors, projects and connecting channels across the complex U.S. Great Lakes Navigation System spanning from Duluth, Minn., to Ogdensburg, NY.

One of the biggest challenges in this dredging mission is finding mutually acceptable locations to place dredged sediment while adhering to an important requirement known as the Federal Standard. The Federal Standard is defined in federal regulations as the dredged sediment disposal alternative(s) identified by the Corps which represents the least costly alternative consistent with sound engineering practices and meeting the environmental standards established by the Clean Water Act Section 404(b)(1) Evaluation process. It ensures that federal dredging funds are equitably distributed across harbors and states. Some state agencies impose requirements that exceed those of the Federal Standard. In such cases, the state (or another non-federal entity) will be asked to fund the difference in cost.

Open-water placement is a nationally common method of dredged sediment management, and is often the least costly alternative due to efficiencies in handling, low transportation costs and lack of real estate requirements. Although dredged sediments are getting cleaner across the Great Lakes due to decades of environmental efforts, some state agencies refrain from supporting open-water placement even if the sediment meets protective and... [continued on page 8]
Great Lakes Dredging Team Co-Chair Commentaries, continued

Galarneau, continued from page 7

maintaining navigation dredge depths in our ports and harbors. It is great to see all of the progress here in Wisconsin and across the Great Lakes in remediating contaminated sediment and the focus on beneficial use of dredged material.

Some of the issues particularly of interest to Wisconsin are dredged material placement options, beneficial use possibilities, and potential “mining” of existing confined disposal facilities for space allotment. Wisconsin agrees that more dialogue and flexibility in our decision processes will facilitate more dredging projects. It is also about finding creative funding mechanisms and opportunities to leverage resources at the state, local and federal levels to help make projects happen.

An example of a creative project in Wisconsin is the Cat Island Chain project. A rock-spine was built out into Green Bay essentially recreating islands that had eroded away as a result of high water levels in the past and loss of protective vegetation. This project is going to be a long-term site for beneficial use of dredged material from the navigation channel maintenance in Green Bay. This project is truly a win-win project as a long-term solution to dredged material placement and critical habitat restoration (see http://www.seagrant.wisc.edu/Home/Topics/HabitatsandEcosystems/Details.aspx?PostID=413) for details).

Thorndike, continued from page 7

legal federal guidelines. At the same time, a large dredging backlog exists, confined disposal facility (CDF) capacity is dwindling and funds for construction of new CDFs are limited. Therefore, the Corps faces new challenges to corroborate open-water placement and help find alternative dredged sediment management options.

Beneficial use involves using dredged sediment for goals such as habitat restoration, beach nourishment, and industrial and commercial development. If a beneficial use option exceeds the cost of the Federal Standard, costs need to be shared by a non-federal entity. While beneficial use options can be hampered by state requirements, they can also be enabled through public and private grants or subsidies. Early and close interagency and local collaboration is paramount to successful beneficial use projects.

Strategies used to facilitate the management of dredged sediment must be economically and technically feasible, environmentally acceptable, and fiscally attainable if we are to achieve the goal of not impeding navigation on the Great Lakes. State and local governments must become actively engaged to find solutions to dredged sediment management needs. The continued economic viability of their harbors depend on their ability and willingness to share this responsibility. ●
**Beneficial Use of Dredged Material in the Great Lakes**

### Why Dredge?
Maritime transportation on the Great Lakes system generates more than $34.6 billion in revenue each year and moves an average of 300 million tons of cargo, making it an important economic driver and job creator for the region. Recreational boating – a $3.8 billion industry – and commercial navigation require continued maintenance of harbors, ports, marinas, and shipping channels, which can be costly and comes with numerous challenges influenced by water levels and misconceptions about dredging.

### Dredged Material Placement
- Slightly more than half of the dredged sediment includes enough contamination from past industrial discharge, agricultural runoff, and other activity to require certified disposal, typically in specifically designed “confined disposal facilities,” or CDFs.
- Clean sandy material is often used for beach nourishment, making dredged material a desirable commodity in sand-starved areas.
- Open lake placement is a common practice (and often the least expensive) for managing clean dredged sediment. This practice does present some political challenges and is not universally accepted as the most desirable placement option in the Great Lakes region.
- In many cases, dredged material is clean enough to be managed not as a burden but as a sustainable resource, a commodity with value.

### Community Involvement
- Community involvement is important in identifying local projects that are able to use dredged material instead of an original source material. Potential projects may include road construction, park improvements, brownfield reclamation, habitat restoration, and many other uses.
- Pooling resources to promote dredged material recycling can be accomplished by forming a committee, task force, or subgroup within existing local government entities and through public-private partnerships.

### Examples of Beneficial Use Applications
- **Cat Island Restoration Project**
  - Green Bay, WI
- **Lorain Harbor CDF**
  - Lorain, OH
- **21st Avenue West Pilot Project Demonstration**
  - Duluth, MN
- **Golf Course Turf Restoration**
  - Duluth, MN
- **Cleveland Lakefront Nature Preserve (formerly Dike 14)**
  - Cleveland, OH
- **Brownfield Redevelopment**
  - Cleveland, OH
- **21st Ave West, Duluth, MN**: Placement of dredged material into four areas within the 21st Ave West embayment to reduce water depths to help promote vegetation growth in support of aquatic habitat.
- **Golf Course Turf Restoration, Duluth, MN**: Reclaimed soils from the Duluth-Superior CDF were used for turf restoration at a local golf course in Duluth, MN.
- **Cleveland Lakefront Nature Preserve, Cleveland, OH**: After closing a CDF that reached its capacity, the peninsula was converted into a publicly accessible nature preserve and is home to hundreds of species of birds, butterflies, and mammals.
- **Cat Island, Green Bay, WI**: A 2.5 mile wave barrier was built atop the remnant shoals of the original chain of the Cat Islands which were eroded away during periods of high water levels to re-create and protect 1,200 acres of near shore and wetland habitat and 200 acres of island habitat favored by avian species such as double-crested cormorants and American white pelicans.

### Beneficial Use as a Management Strategy
- Beneficial use of dredged material can help create capacity and extend the life of CDFs by removing suitable material from the site.
- State and local beneficial use programs help identify ways to maximize the use of dredged material as a sustainable resource.
- Dredged material may contain soils that can be used for beach nourishment, capping, land creation and improvement, habitat creation or restoration, replacement fill, construction fill, and for topsoil enhancement.
- Beneficial use includes the use of recently dredged sediment as well as productive reuse of CDFs for habitat creation, public access, and economic development.
- Examples of beneficial use projects include:
  - **21st Ave West, Duluth, MN**: Placement of dredged material into four areas within the 21st Ave West embayment to reduce water depths to help promote vegetation growth in support of aquatic habitat.
  - **Golf Course Turf Restoration, Duluth, MN**: Reclaimed soils from the Duluth-Superior CDF were used for turf restoration at a local golf course in Duluth, MN.
  - **Cleveland Lakefront Nature Preserve, Cleveland, OH**: After closing a CDF that reached its capacity, the peninsula was converted into a publicly accessible nature preserve and is home to hundreds of species of birds, butterflies, and mammals.
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### About the Great Lakes Dredging Team
The Great Lakes Dredging Team (GLDT) serves as a forum for both governmental and non-governmental Great Lakes dredging interests to discuss the region's dredging needs. In collaboration with its partners, the team supports timely, effective, and environmentally sound dredging practices at U.S. harbors and channels throughout the Great Lakes, connecting channels and tributaries. It is co-chaired by a federal and state representative. The Great Lakes Commission serves as the secretariat.

[http://greatlakesdredging.net](http://greatlakesdredging.net)
Memorandum

To: Commissioners, Associate and Alternate Commissioners, and Observers

From: Tim Eder, Executive Director

Date: Feb. 12, 2015

Re: Workplan update

On the following pages you'll find updates from the staff on the Great Lakes Commission’s various programs and projects, which are organized according to our current workplan priorities. A workflow diagram, illustrating the six program areas in the workplan, is shown on the following page. The workplan will be updated in 2015 to reflect current regional priorities and emerging issues. We 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.

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 programs: 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. [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.]

On the staffing front, I am pleased to announce that the Commission has hired Mr. Stephen J. Cole as its Chief Information Officer. Mr. Cole has a rich business portfolio, having built several successful information services and technology start-up companies over his decades-long career. Steve also brings expertise in marketing, data and software integration, corporate and product strategy, and information science and analytics. Steve will join the Commission’s senior management team on March 2, 2015, and will lead the Information Integration and Reporting core area, including implementation of the Blue Accounting initiative.

As we update and refine our workplan, we always welcome input from our Commissioners and Observers. The Commission continually seeks to leverage our core programs to address the needs of our Member states and provinces and the broader regional community.
GLC Workflow Diagram

Program Areas
(Workplan)

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.

- 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.
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 in the last update, there is no funding to continue to support the GLWC. The GLWC website and listservs remain operational, but GLC staff no longer actively convenes GLWC committees or undertakes GLWC work. Work on a three-year subcontract for a larger Dept. of Energy-funded consortium on offshore wind was completed in September 2014. A second phase of U.S. Fish and Wildlife Service-funded work to survey pelagic bird activity over the Great Lakes continues through February 2015. Staff has submitted a proposal to USFWS to continue this work in 2015 and 2016.

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:** The GLC has completed a MI DEQ Coastal Zone Management-funded project to identify and promote best practices for climate adaptation in coastal wetlands. The final online toolkit is available at [www.glc.org/projects/energy/coastal-wetland-climate](http://www.glc.org/projects/energy/coastal-wetland-climate). Outreach on the final product included two webinars (one for regional managers; one for MI State resource managers) and two in-person presentations (one to the 2014 Michigan Wetlands Association and one at the 2014 Great Lakes Coastal Managers Meeting in Erie, Pa.). The final toolkit showcases policies, practices and case studies on how wetlands management and restoration activities can maximize climate adaptation potential.

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:** The GLC, in consultation with the Michigan Office of the Great Lakes, has hired a contractor to carry out a perceptions research study for two of Michigan’s Great Lakes Areas of Concern (AOCs): Muskegon Lake and White Lake. The aim is to assess and characterize the perceptions of the AOCs among consumers, both internal and external, to help leaders in the two AOCs prepare for “life after delisting” and leverage the value of water-related assets that are being revitalized by cleanup efforts under the GLRI. The White Lake AOC was formally delisted in November 2014 along with the Deer Lake AOC in Michigan’s Upper Peninsula. The project is part of the GLC’s support for the Statewide Public Advisory Council (SPAC) for Michigan’s Great Lakes AOC program. Results from the study were presented at the SPAC’s fall meeting and are now being finalized.
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.

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 serves as secretariat to the Great Lakes Dredging Team (GLDT) to work with state and federal agencies and industry partners on maintaining navigation access to Great Lakes ports and harbors while pursuing sustainable and environmentally responsible dredging operations and management of dredged material. At its 2014 Annual Meeting, the GLC passed a resolution calling for greater flexibility in the application of the federal standard for dredge material management. The federal standard is an economic feasibility justification that is used to guide U.S. Army Corps of Engineers’ decisionmaking for dredged material management decisionmaking. Following a May 2014 summit meeting on open water placement of dredged material, there has been considerable ongoing discussion on state and federal regulatory policies relating to open water placement. To help frame the discussion and clarify the issues, the GLC staff, in concert with the GLDT, has been working on a briefing paper on open water placement policy, with plans to release the paper at the June 2015 annual meeting of the GLDT. The GLDT recently launched its new website; completed a briefing paper on beneficial use partnerships with DOT agencies; completed a poster on beneficial use of dredged material; held its semiannual meeting as a webinar on Nov. 13, 2014; approved a revised charter and operational guidance; and added a new member, the Northeast-Midwest Institute. The 2015 Annual Meeting will be held June 3-4 in Green Bay, Wis.

The theme of the GLC’s January 2015 Advisor newsletter is “The Dredging Equation,” and focuses on various economic, environmental and public safety factors. The newsletter includes commentaries from GLDT Co-chairs Steve Galarneau (WI) and Pauline Thorndike (USACE).

Work was initiated in October 2014 on a Univ. of Wisconsin-led project that will include the updating and refinement of a previously developed GLC web tool promoting the recycling and beneficial use of clean sediment dredged from Great Lakes navigation channels. As part of the project, the GLC is partnering with UW’s National Center for Freight and Infrastructure Research and Education (CFIRE) to conduct detailed characterizations of dredged material in confined disposal facilities (CDFs) at three Wisconsin commercial harbors (Milwaukee, Green Bay and Superior) to assess its suitability for uses such as habitat restoration and construction fill. The data produced will be used to enhance the existing GLC web tool; see [http://projects.glc.org/rsm](http://projects.glc.org/rsm).

The GLC is working with a Ballast Water Task Force of the states and provinces to assess current ballast water standards and develop a common platform for the region from which to advance a future ballast water management regime. The Task Force will next meet via conference call in February 2015. The task force has identified research topics that will be addressed through one or more white papers that will support their work. The GLC is coordinating with the Great Ships Initiative, the Great Lakes Ballast Water Collaborative and the Council of Great Lakes Governor’s AIS Task Force in this effort.
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, with a particular need to support the efforts of those ports currently receiving little or no financial assistance for dredging as a result of ongoing federal budget constraints. The GLC continues to follow the efforts of the Great Lakes Small Harbors Coalition, whose aim is to restore federal harbor maintenance support for recreational harbors in the Great Lakes. Budget constraints and prioritization of deep draft, commercial ports in the Great Lakes have severely affected some 80 federally authorized small, primarily recreational, harbors that have historically been dredged and maintained by the U.S. Army Corps of Engineers. The GLC has synchronized its legislative agenda with the Small Harbors Coalition’s to reform the Harbor Maintenance Trust Fund (HMTF) and prevent the diversion of fund dollars for non-dredging purposes.

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. A summer intern conducted research to inventory existing programs, policies and initiatives related to coastal revitalization to inform future work in this area. Additional insights were generated by the discussion panel at the GLC’s Annual Meeting in Buffalo in September 2014. Staff are exploring the potential to collaborate with U.S. EPA’s Mid-Continent Ecology Division lab in Duluth, Minn., which is hiring a three-year postdoctoral position to investigate how environmental restoration can contribute to community revitalization. This likely will review the results of cleanup work in the Areas of Concern and restoration efforts under the Great Lakes Restoration Initiative.

### 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 is working in partnership with the Great Lakes and St. Lawrence Cities Initiative to investigate 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 is supporting the convening of an advisory committee as the primary regional stakeholder forum seeking solutions to the problem of AIS transfer through the CAWS. The committee entered a new consensus-seeking phase of its work in 2014. With the guidance of an experienced facilitation team (Gail Bingham, president emeritus of RESOLVE, and Tim Brown, founder and president of Wabashco LLC), the group is building a stronger working relationship and developing consensus on short- and long-term recommendations. The advisory committee has met five times since May 2014 and will meet again in early spring 2015. The committee is aiming to finalize its recommendations by December 2015.
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 grant from the Great Lakes Restoration Initiative to develop software and tools to track, identify and monitor the sale of invasive species via the internet. The web-crawling software system is complete and in the initial stages of operation. The GLC is developing a plan for outreach to online retailers identified through the project. Staff presented at several meetings during fall 2014 to share information on the project. A workshop is planned for March 2015 to share results from the system and gather input from stakeholders on next steps. The GLC continues to support legislation or executive action that would strengthen federal programs to prevent the importation of potentially harmful non-native species.

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 providing backbone support to a new invasive mussel collaborative. The Invasive Mussel Collaborative is intended to provide 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 effort met in early February 2015. A webinar series focused on priority issues of interest to the steering committee is being planned. More information is available at [www.invasivemusselcollaborative.net](http://www.invasivemusselcollaborative.net).

The GLC is working with a Ballast Water Task Force of the states and provinces to assess current ballast water standards and develop a common platform for the region from which to advance a future ballast water management regime. The Task Force met via conference call in March and September 2014. The task force has identified research topics that will be addressed through one or more white papers that will support their work. The GLC is coordinating with the Great Ships Initiative, the Great Lakes Ballast Water Collaborative and the Council of Great Lakes Governor’s AIS Task Force in this effort.

The GLC provides staff support to the Great Lakes Panel on Aquatic Nuisance Species (GLP) and its standing committees. The GLP met in November 2014 in Ann Arbor, Mich. The meeting included sessions on recent response exercises, outreach efforts and other updates on important regional efforts. In addition, the Great Lakes Water Quality Agreement Annex 6 (AIS) Subcommittee held another in-person meeting in conjunction with the GLP meeting; the GLC is a member of the subcommittee.

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 invasive 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 associated with this species. The Collaborative supports an interactive web hub ([www.greatlakesphragmites.net](http://www.greatlakesphragmites.net)), webinar series, social media presence and email list, and is guided by a regional advisory committee. Staff gave a presentation at a regional professional conference and are working with partners to develop tools to support current management guidelines. The GLC also
supports the Collaborative for Microbial Symbiosis and *Phragmites* Management, established in partnership with the USGS, to bring together researchers to explore the potential to use symbiotic relationships, both to control invasive *Phragmites* and encourage native plant establishment. A manuscript showcasing this effort was accepted by the journal *Frontiers in Microbiology*.

The GLC, in collaboration with the Great Lakes Fishery Commission, has developed a new mapping application that allows the user to visualize the geographic impact of potential sea lamprey barrier addition or removal on rivers and streams in the Great Lakes region. Historical sea lamprey control data are provided in addition to basic stream attribute data. The application is built as a tool to inform decisionmaking regarding sea lamprey control investments, native species connectivity, and natural resource management. A prototype of the tool was introduced in October 2014 (see [http://maps.g1in.net/projects/lcm/viewer.php](http://maps.g1in.net/projects/lcm/viewer.php)). Enhancements are planned in 2015, including metrics that are considered in treatment planning, trapping locations and results, and more historical attributes.

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 2014 in Falls Church, Va., and provided a presentation on the new AIS web-crawler tool. In addition, staff participated in the Upper Midwest Invasive Species Conference held in Duluth in October 2014, moderating and presenting for a session focused on addressing organisms in trade. The conference was attended by more than 700 stakeholders with an interest in invasive species issues. A new issue of the *ANS Update*, a two page news publication, featuring an article on the Great Lakes Phragmites Collaborative, was published and is available online ([www.glc.org/files/projects/ais/glp-ANS-Update-Fall2014.pdf](http://www.glc.org/files/projects/ais/glp-ANS-Update-Fall2014.pdf)). The *Update* features articles on emerging AIS issues in areas of science and policy, and programmatic progress reports on a state, provincial, regional and federal level.

The GLC’s GIS and data management teams are collaborating with the Michigan departments of Environmental Quality and Natural Resources to develop a data integration tool for citizen-scientist observations of invasive species. The tool, which will use U.S. EPA Exchange Network protocols, will allow basic data from multiple species identification and tracking programs to be consolidated into a central database. The programs will still maintain detailed information specific to their needs, but species, location, observation date and other general information will be searchable and viewable for use as a regional reference.

**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 2013 annual water use report was completed in December 2014 and is posted on the project website:
http://projects.glc.org/waterusedata/. The GLC and the Council of Great Lakes Governors are beginning to plan for a second water use data workshop for state and provincial data managers in Ann Arbor, Mich., in mid-May following a successful first workshop in May 2014. GLC are developing online metadata forms to be completed by the states and provinces as they prepare to submit their 2014 water use data in August 2015. The online metadata forms will automate the process for documenting data quality and tracking water use trends.

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 to explore a project that would assess trends in water use in the Great Lakes thermoelectric sector. Additionally, the GLC is exploring opportunities for the development of sustainable water use metrics with several academic researchers and the Pacific Institute. The Pacific Institute has developed similar metrics in the state of California.

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 continues to support a team, led by John Jackson (formerly of Great Lakes United) and other partners, on a Great Lakes Protection Fund-project to identify and test the environmental and financial rationales for municipalities to pursue water conservation and green infrastructure practices, and evaluate how this information, when combined with effective knowledge transfer techniques, can drive innovation in water management throughout the Great Lakes region. The “Greater Lakes” project team is planning a second knowledge transfer workshop for water management professionals in city of Guelph on March 6, 2015. Participants will discuss integrated water management strategies for the city and help design a mini-project the project team can implement by the end of the project. The GLC is also leading the co-branding efforts of the project, in cooperation with Issue Media Group (IMG), a regional online media partnership. The first article in the dedicated web and video series, *Fractured Water: Can metro Detroit reconnect its watersheds?*, was published on Dec. 2, 2014. New branding for the project, including a revised name and logo, were added to the project website: [www.glc.org/projects/water-resources/greater-lakes](http://projects.glc.org/waterusedata/).

GLC staff is following the work of the Council of Great Lakes Industries (CGLI) and its partners regarding the completion of a third phase of a Great Lakes Protection Fund-supported project to help industry optimize water use through the development and application of water stewardship tools for Great Lakes basin industries. The objective of the project is to help guide industry through the assessment and quantitative confirmation of their water use to help establish good water stewardship practices. The GLC also continues to work with the Council of Great Lakes Governors to identify other opportunities to advance the science strategy of the Water Resources Compact and Agreement.

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 on issues related to water resources streamflow modeling and assessment tools to help states and provinces identify impacts associated with water withdrawals and consumptive use and to explore new methods to coordinate data and information sharing. These methods are discussed at the annual water use workshops and help enhance the regional data reporting process.
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 initiative (refer to Objective 5 below for more details), as charged by the Great Lakes governors and premiers. The recent drinking water crisis in Toledo, Ohio (Aug. 2-4, 2014) highlighted the need for a better system of monitoring, which, tied together with information about the quality and status of municipal water infrastructure, could provide greater predictability and vital information to anticipate, prevent and assist with response efforts in such emergencies. The development of an information monitoring, strategy and delivery system that supports achievement of the region's priority water outcomes is vital and will be initiated through the Blue Accounting program. The priority outcome, in the case of Toledo, is safe and sustainable municipal water services. Even before the Toledo episode, municipal Water Supply had been chosen as a pilot for the Blue Accounting program.

The GLC continues to track progress and 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. (Refer to Policy and Advocacy section for more details.)

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 is currently supporting 50 active projects for the 2010-2013 program years. The GLSNRP is funded by the U.S. Dept. of Agriculture Natural Resources Conservation Service through the GLRI. GLSNRP grants are awarded to local and state entities to install sediment reduction practices in priority watersheds throughout the Great Lakes basin. The 2013 grants (21 projects totaling more than $1.8 million) were initiated in fall 2013. Annual reports were developed and submitted to NRCS for each of the previous program years. Practices range from cover crops to streambank stabilization to applying gypsum to reduce erosion and phosphorus runoff. The agreement with USDA-NRCS for the 2014 program year GLSNRP grants program has been signed by GLC and will soon be in place. The RFP soliciting project applications was released in January 2015 with an application deadline of mid-April. The emphasis for the 2014 program year has changed from sediment reduction to phosphorus reduction. Over 20 grantees are expected to be selected in late May or early June.

The GLC continues to provide technical and administrative support to the U.S. Army Corps of Engineers’ Great Lakes Tributary Modeling Program. GLC staff facilitates communication among the Corps’ Great Lakes districts through participation in bimonthly program teleconferences, as well as the convening of an annual Great Lakes Sedimentation Workshop, which is being planned for May 2015. 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 staff also assisted the Corps’ Buffalo District in the organization and publicizing of training classes for the program’s online modeling tools. To expand partnerships under the program, an informational meeting on the program was held with Great Lakes Fishery Commission (GLFC) staff and a strategy was developed to adapt several of the current modeling efforts to assist the GLFC in their efforts to control sea lamprey. An initial meeting was also held with Sea Grant to explore areas where partnerships could be expanded. The GLC is partnering with the University of Michigan School of Natural Resources and Environment on a master’s student team project to compare the costs, benefits and policy issues related to various approaches to implementing conservation practices. They will be concentrating on the western Lake Erie basin.

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 Natural Resources Conservation Service in Wisconsin, is completing its second year of the Fox P Trade project to develop a phosphorus credit trading program for the lower Fox River watershed in Wisconsin. Water quality trading provides a cost-effective means for permit-holders to achieve compliance and holds potential to help address high nutrient levels and algal blooms. Stakeholder engagement continues through monthly management team calls, periodic meetings and webinars. A trading feasibility assessment was completed in January 2015. A beta “credit calculator” screening tool and other models have been developed but face some technical hurdles. Work on “hypothetical trades” among actual parties in the watershed continues; legal contracts and supporting documents have been developed and are being refined. Modeling is being completed to calculate how many credits sellers can generate and their costs. Staff is working with buyers to assess willingness to pay. The GLC continues to work with WI DNR and other partners to overcome technical and policy hurdles. The first half of 2015 will complete tasks to determine the appropriate market structure for trading in the area. The project is scheduled to be completed in the third quarter of 2016.

The Lower Fox Demonstration Watershed Project, which began in December 2013, finished its first year of operation. The $1 million, five-year agreement is a partnership between the GLC, USDA-NRCS, and Brown and Outagamie counties. The project was executed as a partnership agreement between the GLC and the NRCS with funding from the GLRI. An in-person project management team meeting was held May 7, 2014, in Appleton, Wis., to provide updates and visit the four selected farm sites. The conservation plans for each site have been completed and conservation practices are scheduled for implementation during the 2015 construction season. A field day event was held at one of the demonstration farms in October and a second field day is scheduled for early April. Signage has been secured for each farm site and will be installed this spring. A workshop on soil health will be held Feb. 26. Several outside organizations have submitted proposals to demonstrate innovative phosphorus reduction practices on the sites and will be evaluated for future participation in the network.

A GLC Lake Erie Nutrient Targets (LENT) Working Group was established in response to a resolution passed at the GLC’s 2014 Annual Meeting in Buffalo, calling for action in the wake of the Toledo water crisis. All Lake Erie states and Ontario have designated representatives to sit on the working group, which is meeting monthly. A prospectus has been developed that includes a plan of work, which has been reviewed and approved by the working group. The LENT Working Group has set up regular calls with the U.S. co-chair of the GLWQA Annex 4 Subcommittee; the Canadian co-chair is expected to be involved periodically. The main outcome of the effort is expected to be a joint action plan that can be endorsed and implemented by all Lake Erie states and provinces. An initial milestone is to have recommendations ready for consideration by the governors and premiers at their meeting in June 2015.
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:** In 2014, the GLC completed a multiyear, collaborative project funded by the U.S. EPA via a 2011 GLRI grant (http://gle.org/projects/water-quality/pbde) and a related project to organize workshops for industry representatives on the concerns associated with the use of flame retardants. With the conclusion of these two projects, the GLC’s direct involvement in work relating to the reduction of Great Lakes loadings from atmospheric contaminants has now ended.

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 achievement of the region’s priority water “outcomes” – is being 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 www.glc.org/docs/2014-blue-accounting-recommendations-glc. The August 2014 drinking water crisis in Toledo, Ohio, highlighted the need for a better system of monitoring, which, tied together with information about the quality and status of municipal water infrastructure, could provide greater predictability and vital information to anticipate, prevent and assist with response efforts in such emergencies. To augment its staff capacity to pursue these efforts, the GLC has hired Mr. Steve Cole as its Chief Information Officer (he will begin work on March 2). In late 2014, the GLC received grants from the Great Lakes Protection Fund and the Joyce Foundation to develop Blue Accounting governance and a municipal water pilot. The GLC is pursuing a partnership with The Nature Conservancy and approaching other prospective donors and investors, in both the public and private sectors, to support this project. In January 2015, the GLC hosted the second in a series of Great Lakes Information Harmonization workshops, which convene representatives of the region’s key Great Lakes data and information management programs and portals to envision and design a collaborative and efficient structure for regional data and information management.

The GLC coordinated the 14th Annual Great Lakes Beach Association (GLBA) Conference, which was held Nov. 12-14 in Toronto. The event attract close to 200 participants and more than 60 professional papers were presented in sessions focused on beach monitoring, sources of contamination, management of beaches, physical and hydrological beach processes, communicating health and safety risks to the public, and more. The event also featured a poster session, vendor displays and hands-on training workshops for beach managers. The GLC provides secretariat and web hosting services for the GLBA.

The GLC administers the Michigan Clean Water Corps (MiCorps) program, which 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. On Oct. 27-28, 2014, staff convened the 10th annual MiCorps conference at the R.A. MacMullan Conference Center on Higgins Lake, 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. In particular, the 2014 conference focused on celebrating the first 10 years of the MiCorps program and using volunteer monitoring as a tool for positive change.

The Lake Michigan Monitoring Coordination Council (LMMCC) held its fall 2014 meeting Dec. 4 near Chicago. The group reviewed the council’s original charter, which will be updated in the coming months. A second co-chair, Steve Greb, Wisconsin DNR, was elected. Reviews and updates on Great Lakes Water Quality Agreement annexes 2 (Lakewide Management), 2B-7 (Nearshore Framework) and 7...
(Habitat & Species) were presented, as they are critical to the work of the LMMCC. There were also presentations on the evolving Lake Michigan LAMP Partnership, the Cooperative Science and Monitoring Initiative (CSMI), and the Great Lakes component of the National Coastal Condition Assessment. There was extended discussion on the role of the LMMCC in the LAMP Partnership within the context of the new GLWQA. The meeting presentations and summary are online at www.glc.org/projects/water-quality/lmmcc/lmmcc-meetings. The LMMCC likely will be an advisory body to the Lake Michigan Technical Coordinating Committee on monitoring and will be working closely with CSMI on the 2015 field year for Lake Michigan. A survey to gather information for the Lake Michigan 2015 monitoring inventory (an update to the 2013 inventory) will be distributed soon. The next LMMCC meeting will be held in spring 2015. Continued funding for the LMMCC through mid-2016 is being coordinated with the Michigan Dept. of Environmental Quality.

The GLC continues to support the data management efforts of the Great Lakes Observing System, 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’s data holdings, and assures 365/24/7 uninterrupted access to GLOS data.

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:** Maintenance of statewide Inland Sensitivity Atlases (ISAs) for use by spill responders remains a priority. Map production for the Ohio ISA is currently underway. GLC staff assist with design and content development for the federal Region 5 Regional Response Team website; updates to the federal Region 5 Regional Contingency Plan; and updates to the Northern Michigan Subarea Spill Contingency Plan, in conjunction with U.S. EPA, U.S. Coast Guard, and local, county and tribal 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:** Staff have put significant effort into a report for the states and provinces detailing issues related to crude oil transportation in the Great Lakes region. Since the GLC’s 2014 Annual Meeting in Buffalo, a comment period was held from Oct. 1-Dec. 1, 2014. The GLC received more than 30 comments from federal, state, and provincial governments, NGOs, and the public. In response to the comments and additional input from Commissioners, the report has been updated and an executive summary was added.

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:** The GLC’s myBeachCast mobile app will add an iOS (iPhone) version and additional coastal hazard warnings prior to the start of the 2015 beach season to increase the safety of beachgoers. In addition, the GLC is partnering with LimnoTech and west Michigan beaches to develop a flag status database, which will allow local beaches to report their flag status and related conditions for inclusion in the mobile app. Originally released in 2012 for Android mobile devices, myBeachCast (http://beachcast.glin.net) provides real-time information on beach water quality advisories, weather and water conditions for more than 1,900 Great Lakes and inland beaches. Funding for the app enhancements comes through a grant from the NOAA Coastal Storms Program. GLC staff presented the app at the Great Lakes Beach Association annual conference in November 2014.
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 John Jackson (formerly of Great Lakes United) and other 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.)*

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**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 received a grant to lead a new NOAA GLRI-funded, three-year regional partnership to support habitat restoration in priority AOCs. Since 2013 more than $16 million has been allocated for restoration at the St. Marys River AOC in Michigan, Buffalo River AOC in New York and Muskegon Lake AOC in Michigan. Additional funding for all three sites is expected during 2015. The GLC is working with state and local agencies to implement these projects over the next several years.

- St. Marys River AOC: $5,929,200 for the Little Rapids Restoration Project restoring 70 acres of river rapids and aquatic habitat
- Buffalo River AOC: $4,681,053 for eight restoration and design projects restoring 2,212.15 linear feet of river habitat, 2,832 linear feet of shoreline habitat, 4.66 acres of riparian habitat and 3.31 acres of invasive species management
- Muskegon Lake AOC: $5,454,500 for two projects restoring 2,257 linear feet of shoreline habitat, 19 acres of wetlands, 6.8 acres of riparian habitat, 1 acre of fish habitat, 9.3 acres of hydrological reconnection and removal of 125,400 metric tons of unnatural fill

The GLC provides staff support to the Statewide Public Advisory Council (SPAC) for Michigan’s Areas of Concern (AOC) Program. Recent actions include the SPAC’s fall meeting, held Oct. 30-31 in Whitehall, Mich., in the White Lake AOC; administering grants to local Public Advisory Councils to support restoration work; and assisting with the 2015 annual conference for the U.S. AOC program, being held March 11-12 in Toledo, Ohio. Two of Michigan’s AOCs were delisted last fall (White Lake and Deer Lake) and the SPAC is advising on that process and helping local AOC advisory councils prepare for “life after delisting.” Among other activities, the GLC is overseeing a perceptions research project for two AOCs; this project is complete and the report is being finalized now *(see the Water Dependent Economy and Infrastructure section for more details on this project).*

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

**ACTION:** The GLC works closely with the states and federal agencies to establish regional positions and priorities related to habitat and coastal management policies, and legislative initiatives. The GLC
supported strong conservation provisions in the reauthorization of the Farm Bill. The GLC also sits on the steering committee of the Upper Midwest and Great Lakes Landscape Conservation Cooperative and participates on the Coastal Conservation Working Group. With support from USACE, the GLC is expanding development of the Great Lakes Restoration Database, http://habitat.glc.org, to showcase projects implemented under Focus Area Four (restoring habitat and native species) of the Great Lakes Restoration Initiative (GLRI). This searchable database was developed to increase awareness and improve communication on the accomplishments of the GLRI.

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:** Staff is closing out a pilot project with Michigan DEQ, Wisconsin DNR and Wayne State University to test sharing of ecosystem monitoring data using infrastructure and data handling practices developed by the Environmental Information Exchange Network. Wayne State University data remains to be tested on the server hosted by GLC, after which development of the pilot system will be considered complete. Future use of the tools developed under this project will be driven by projects developing ecosystem-related data outside of state or federal monitoring and regulatory programs.

The GLC partners with federal agencies to facilitate communication and coordination between states and federal research laboratories. In 2011, the GLC established a five-year Memorandum of Understanding with the U.S. Geological Survey (USGS) to facilitate collaboration with its Great Lakes Science Center in Ann Arbor. A 2014-15 annual workplan under the MOU has been developed that includes continued work on the Great Lakes Phragmites Collaborative and the Coastal Science Strategy. The agreement covers seven joint initiatives between the GLC and GLSC:

1. Phragmites Initiative
2. Great Lakes Coastal Science Strategy
3. Urban Coast Revitalization
4. Beach and Coastal Health
5. Nutrients and Harmful Algal Blooms
6. Coastal Infrastructure and Nearshore Habitats
7. Lake Michigan Monitoring Coordination Council and its Nearshore (NEMO) Workgroup

The first two are explicitly funded. 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 GLC completed a second annual cycle of surveying and mapping avian resources in the open waters of lakes Erie, Huron, Michigan and Ontario. The GLC worked with the USFWS, USGS, Michigan DNR, Biodiversity Research Institute, the Michigan Natural Features Inventory and the Western Great Lakes Bird and Bat Observatory to collect bird data that will support decisions regarding offshore siting of wind turbines or other potential open-lake uses or conservation efforts. In total, phases 1 and 2 covering the years 2012-2014 documented more than 1.8 million bird observations in the non-breeding seasons. Final products will be linked from the Great Lakes Wind Collaborative website at www.glc.org/projects/energy/wind by March 2015. The GLC submitted a proposal to USFWS for a third annual cycle of surveys. A particular focus of the proposed phase 3 project is the development of data and information products most relevant to wildlife and natural resource managers. If funded, the third phase will start in fall 2015.

The GLC is in its second full year of the Coastal Science Strategy, a joint initiative between the GLC and the USGS-Great Lakes Science Center. This effort is one of several under the five-year MOU between
the GLC and the USGS-GLSC. The Coastal Science Strategy aims to build more effective communications between managers and scientists working on coastal issues/science in the Great Lakes region. In fall 2014, GLC and USGS staff coordinated to complete four workshops (Erie, Toledo, Chicago, Ashland). Collectively approximately 100 people participated in these four events. Project staff are compiling the results, which will summarize feedback from the workshops and recommendations to ensure that science is responsive to management needs. The GLC also completed a MI DEQ CZM-funded project to identify and promote best practices for climate adaptation in coastal wetlands. (See “Climate and Energy” update.)

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 2014 statement, Advancing Economic Strength and Environmental Integrity for the Great Lakes and St. Lawrence River Region, was released on March 6 – Great Lakes Day 2014 – and guided the GLC’s advocacy activities in 2014. The top priorities for 2014 were:

- Sustaining progress under the Great Lakes Restoration Initiative
- Taking action to protect the Great Lakes and St. Lawrence River against Asian carp and other invasive species
- Passing comprehensive legislation to strengthen and accelerate Great Lakes conservation efforts
- Helping communities upgrade aging water infrastructure
- Supporting Farm Bill programs that prevent polluted runoff and protect water quality
- Maintaining and improving infrastructure for the Great Lakes navigation system

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

Status of appropriations for major Great Lakes programs

The following table summarizes appropriations (in millions of dollars) for selected Great Lakes programs for Fiscal Years 2014 and 2015 and the President’s budget request for FY 2016.

<table>
<thead>
<tr>
<th>Program</th>
<th>FY 2014</th>
<th>FY 2015</th>
<th>FY 2016 Budget Request</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Lakes Environmental Research Laboratory</td>
<td>$9.6</td>
<td>$9.8</td>
<td>Not specified</td>
</tr>
<tr>
<td>Dispersal Barrier and Interbasin Study</td>
<td>$36</td>
<td>$49.7</td>
<td>$28</td>
</tr>
<tr>
<td>Harbor Maintenance Trust Fund</td>
<td>$1,061</td>
<td>$1,100</td>
<td>$915</td>
</tr>
<tr>
<td>Great Lakes and Mississippi River Interbasin Study (GLMRIS)</td>
<td>$3</td>
<td>$.5</td>
<td>$0.5</td>
</tr>
<tr>
<td>Clean Water State Revolving Fund</td>
<td>$1,449</td>
<td>$1,449</td>
<td>$1,116</td>
</tr>
<tr>
<td>Drinking Water State Revolving Fund</td>
<td>$907</td>
<td>$907</td>
<td>$1,186</td>
</tr>
<tr>
<td>Great Lakes Restoration Initiative</td>
<td>$300</td>
<td>$300</td>
<td>$250</td>
</tr>
<tr>
<td>BEACH Grants</td>
<td>$9.5</td>
<td>$9.5</td>
<td>$0.0</td>
</tr>
<tr>
<td>Great Lakes Science Center</td>
<td>$8.4</td>
<td>$8.5</td>
<td>$8.7</td>
</tr>
<tr>
<td>Section 106 Water Pollution Control</td>
<td>$230.8</td>
<td>$230.8</td>
<td>$249</td>
</tr>
<tr>
<td>Great Lakes Fishery Commission</td>
<td>$23.7</td>
<td>$25</td>
<td>$20</td>
</tr>
</tbody>
</table>

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 2015, a $25 million increase from the president’s budget.
The GLC continues to devote substantial efforts to urging Congress to fully fund the GLRI. This includes 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. Letters from the Great Lakes congressional delegation to their respective appropriations committees urging continued funding for the GLRI in FY 2016 are anticipated; the GLC will urge delegation members to sign on to them. The President’s FY 2016 budget requests $250 million for the GLRI, so continued advocacy with congress will be required to sustain level funding at $300 million.

In September U.S. EPA Administrator Gina McCarthy released the GLRI Action Plan II that will guide the GLRI from FY 2015-2019. It addresses the same five focus areas as the previous Action Plan: cleaning up AOCs; preventing and controlling invasive species; reducing nutrient runoff; restoring habitat to protect native species; and promoting integrated solutions to cross-cutting issues. It incorporates a science-based adaptive management framework to prioritize ecosystem problems and select and assess the effectiveness of GLRI projects; and measures of progress to track all actions implemented under GLRI. The GLC adopted a resolution endorsing the new Action Plan at its 2014 annual meeting in Buffalo, NY.

Establish strong protections against aquatic invasive species (AIS)

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. With 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 take action, particularly on 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. In addition to funding for near-term control measures, the Corps has been clear that it needs direction from Congress to proceed with continued work on GLMRIS.

The Commission is now focused primarily on its work with the CAWS Advisory Committee, discussed above in detail in the Invasive Species workplan update. A key accomplishment of the Advisory Committee to date is the August 2014 letter calling on Congress to direct the Army Corps of Engineers to lead work on short-term solutions, with a focus on measure that can be implemented in or near the Brandon Road lock and dam (see discussion in the Invasive Species section). In November 2014 the Corps announced that it will move forward with a formal evaluation of potential control technologies to assess the viability of establishing a single point to control one-way, upstream AIS transfer from the Mississippi River Basin into the Great Lakes Basin near Brandon Road.

In December legislation was introduced in the House and Senate authorizing the Corps and other federal agencies to construct measures at Brandon Road to prevent the upstream movement of invasive species with a focus on Asian carp. It also called for continued efforts to develop a long-term solution and directed U.S. EPA, acting through the Great Lakes Interagency Task Force, to work with the state of Illinois, the city of Chicago and other interests to address impacts to water quality, flooding and transportation resulting from actions to prevent aquatic invasive species transfer through the CAWS. The GLC released a statement supporting this legislation. A group of 17 representatives from Illinois and Indiana wrote to the House Speaker and Minority Leader opposing the legislation, as introduced, asking that it be considered through “regular order.” No action was taken on the legislation before the end of 113th Congress. This matter was discussed with the CAWS Advisory Committee, which is considering providing input to the House and Senate members who are considering re-introducing this legislation in the current congress.
**Pass comprehensive legislation to enhance and accelerate Great Lakes conservation efforts**

The GLC has endorsed the Great Lakes Ecological and Economic Protection Act (GLEEPA), introduced in the House (HR 2773) and Senate (S. 1232) in 2013, which would authorize the GLRI at $475 million annually; reauthorize EPA’s Great Lakes National Program Office (GLNPO) at $25 million annually; reauthorize the Great Lakes Legacy Act at $150 million (Senate bill) or $100 million (House bill) annually; establish a Great Lakes Advisory Board; authorize a Federal Interagency Task Force; and call for implementation of the Great Lakes Water Quality Agreement.

In November Rep. David Joyce (R-OH) and several other members introduced H.R. 5764, the Great Lakes Restoration Initiative Act of 2014, which authorized the GLRI at $300 million per year. While the bill did not include the other provisions of the larger GLEEPA bill, securing formal authorization for the GLRI is considered a top priority and the GLC, together with other regional organizations, wrote to both the House and Senate delegations supporting it. The bill was passed in the House by a voice vote on Dec. 9. Despite significant efforts by the Senate Great Lakes delegation, the Senate did not take up the bill. In January, Rep. Joyce reintroduced the bill, H.R. 223, which currently has 26 co-sponsors. Sen. Mark Kirk (R-IL) is expected to introduce a companion bill in the Senate. The GLC again will be leading a joint letter, with other regional organizations, to the House and Senate Great Lakes delegations urging their support for this legislation.

**Address the crisis facing commercial navigation and recreational harbors in the Great Lakes**

After several years of negotiations, Congress passed the Water Resources Reform and Development Act (WRRDA) in May 2014 and the bill was signed into law by the president. The GLC has communicated actively in support of provisions that would increase funding for dredging and navigation infrastructure in the Great Lakes, including reform of 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. These priorities have also been endorsed by the Great Lakes governors.

The GLC is serving on the Advisory Committee for the Council of Great Lakes Governor’s Maritime Initiative, which delivered recommendations in April 2014 and is now developing a regional maritime entity model, State/Provincial maritime asset inventory and a strategic plan for establishing a regional entity to advance priorities for the Great Lakes Navigation System. An update on the Governors Maritime Initiative and implementation of Great Lakes provisions in the new WRRDA bill will be provided at the GLC meeting.

**Provide funding to upgrade aging water infrastructure**

As shown in the funding table above, final FY 2015 funding for the Clean Water and Drinking State Revolving Fund (SRF) programs was level with their FY 2014 levels of $1,449 and $907 million, respectively. Both programs were funded above the level requested in the President’s FY 2015 budget. The President’s FY 2016 budget requests $333 million less for the Clean Water SRF, but $279 million more for the Drinking Water SRF. According to U.S. EPA’s FY 2016 budget justification, the increase for the Drinking Water SRF is “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.”

**Reauthorize the Farm Bill to advance soil conservation and water quality protections in the Great Lakes region**

The Great Lakes have been designated a Critical Conservation Area (CCA) under the RCPP with a goal to manage nutrients and sediment to reduce algal blooms and provide habitat for fish and wildlife. In May NRCS released an RFP for nearly $400 million under the RCPP for FY 2014 and 2015, with $138 million for the eight designated CCAs. In January 2015 NRCS announced RCPP funding decisions, with two projects
funded under the Great Lakes CCA (Saginaw Bay Watershed Conservation Partnership, $10 million; and the Tri-State Western Lake Erie Basin Phosphorus Reduction Initiative, $17.5 million). In the state funding category 10 projects were funded in the Great Lakes states with combined funding of approximately $11 million. The national funding category includes seven projects affecting one or more of the Great Lakes states. A complete list of funded RCPP projects is available online at http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/farmbill/rcpp/.

A key outstanding question is how the Great Lakes CCA can best target priority watersheds and generate outcomes for water quality and habitat. The RCPP will be a major source of funding for conservation efforts and ensuring its effectiveness and strong coordination with the Great Lakes states will be an ongoing priority.

**Other policy and advocacy issues**

*Ballast water*

The Vessel Incidental Discharge Act (S. 373) was introduced by Senator Marco Rubio (FL) on Feb. 4, 2015, and referred to the Senate Commerce, Science and Transportation Committee. The bill is largely similar to legislation introduced in 2014 and impacts federal and state ballast water discharge requirements, among other provisions.
**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 Commission's 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.

February 12, 2015

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**Jon W. Allan, Vice Chair, Michigan**  
**Kenneth G. Johnson, Retired, Immediate Past Chair, Wisconsin**  
**James Zehringer, Ohio**  
**Bill Carr, Ontario**  
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