– DRAFT AGENDA –

Tuesday, Sept. 29

All times are EDT

11:00 a.m. – Noon  Registration and lunch buffet  Bayfront Convention Center, East Ballroom

12:00 p.m.  Call to Order  Todd Ambs, Vice Chair

12:05 p.m.  Keynote Remarks  Congresswoman Kathy Dahlkemper

12:20 p.m.  Welcome to Erie  Mayor Joseph Sinnott

12:25 p.m.  Roll Call  Tim Eder, Executive Director

12:30 p.m.  Report of the Chair  Todd Ambs, Vice Chair

12:30 p.m.  Report of the Executive Director  Tim Eder

1:00 p.m.  Presentation and Discussion: Federal Efforts to Protect and Restore the Great Lakes  Cameron Davis, Senior Advisor to U.S. EPA Administrator  Charles Wooley, U.S. Fish and Wildlife Service  Jan Miller, U.S. Army Corps of Engineers

2:30 p.m.  Break

3:00 p.m.  Observer comments, featuring:  Ducks Unlimited views on GLRI  Update from IJC on Upper Great Lakes Study

4:00 p.m.  GLC Members’ Views on Great Lakes Restoration Initiative  Tim Eder: Presentation of draft recommendations on GLRI

4:45 p.m.  Business of the Great Lakes Commission  Todd Ambs, Vice Chair

5:00 p.m.  Adjourn
6 – 9 p.m.  
**Reception and light dinner at the Tom Ridge Environmental Center**  
Remarks by local historian David Frew.  
IMAX movie: “Mysteries of the Great Lakes”  
Sponsored by: **Ecology and Environment, Inc.**  
Hosted by: **Commonwealth of Pennsylvania**

**Wednesday, Sept. 30**

7:00 a.m.  
**Continental Breakfast**  
Bayfront Convention Center, East Ballroom

8:30 a.m.  
**Call to Order**  
Todd Ambs, Vice Chair

8:45 a.m.  
**Keynote: Challenges for the Great Lakes Cruise Industry**  
Ray Schreckengost, Executive Director, Erie-Western Pennsylvania Port Authority

9:00 a.m.  
**Panel: Water Conservation and the Energy-Water Nexus**  
Moderator: Marc Miller, Director, Illinois Dept. of Natural Resources; Commissioner  
Mary Ann Dickenson, Executive Director, Alliance for Water Efficiency  
John Gasper, Strategic Area Manager  
Environmental Assessment Division, Argonne National Laboratory  
Michael Webber, Associate Director, Center for International Energy and Environmental Policy, University of Texas-Austin

10:30 a.m.  
**Break**

10:45 a.m.  
**Briefing and Discussion: Review/Negotiation of the Great Lakes Water Quality Agreement**  
Speakers TBD

11:00 a.m.  
**Briefing and Update: Regulating Ballast Water Discharges**  
Capt. Lorne Thomas, U.S. Coast Guard, Ninth District

11:30 a.m.  
**Business: Resolutions and Action Items**  
Todd Ambs, Vice Chair  
Commissioners  
Report of Nominating Committee

11:55 a.m.  
**Invitation to 2010 Semiannual Meeting and Great Lakes Day events in Washington, D.C.**  
Tim Eder, Executive Director

12:00 p.m.  
**Adjourn**  
Todd Ambs, Vice Chair
Minutes

Attached, for review and approval, are minutes from the Commission’s 2009 Semiannual Meeting, held Feb. 23-24 in Washington, D.C.

Also included for your information are minutes of the Board of Directors’ conference calls on March 20, April 17, May 15, June 19, July 24 and Aug. 21, 2009.
Great Lakes Commission
2009 Semiannual Meeting minutes
Madison Hotel; Washington, D.C.
Feb. 23-24, 2009

Summary of Actions

1. Approved the minutes of the 2008 Annual Meeting, held Oct. 6-7, 2008, in Québec City.
2. Approved four resolutions:
   - Reform of the Harbor Maintenance Tax and Harbor Maintenance Trust Fund
   - Coastal Zone Management Act Reauthorization: An Opportunity to Fund and Implement the Great Lakes Regional Collaboration Strategy and Address Climate Change
   - Support for the 2009 Annual AWEA Windpower Conference in Chicago


Minutes

1) Vice Chair Todd Ambs, on behalf of Chairman Illinois Gov. Pat Quinn, called the meeting to order at 1:05 p.m. on Monday, Feb. 23, and reviewed highlights of the agenda. A motion was made by Fred Schnook (WI) to approve the agenda; seconded by Minnesota. The motion passed unanimously.

2) Executive Director Tim Eder called the roll and confirmed a quorum.

Illinois
- Gov. Pat Quinn, Commissioner (Chair)
- Marc Miller, Commissioner and Delegation Chair
- Pat Carey, Alternate Commissioner

Indiana
- No one present

Michigan
- Lt. Gov. John Cherry, Commissioner
- Ken DeBeaussaert, Commissioner and Delegation Chair
- Mike Cox, Commissioner
- Peter Manning, Alternate Commissioner

Minnesota
- Rep. Tom Huntley, Commissioner and Delegation Chair
- Ed Oliver, Commissioner
- Sen. Yvonne Prettner Solon, Commissioner

New York
- Don Zelazny, Alternate Commissioner (via phone)

Ohio
- Sean Logan, Delegation Chair

Ontario
- Bill Carr, Associate Commissioner and Delegation Chair
- Sharon Bailey, Alternate Associate Commissioner

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3) Vice Chair Ambs called for a motion to approve the minutes, as presented, from the 2008 Annual Meeting held on Oct. 6-7, 2008. A motion was made by Ed Oliver (MN) and supported by Marc Miller (IL). The motion was unanimously approved.

4) Tom Melius, director of the Midwest Regional Office for the U.S. Fish and Wildlife Service (USFWS), delivered a keynote address focusing on USFWS priorities for the Great Lakes. Melius commended the Great Lakes Wind Collaborative and its establishment. He said climate change will contribute to an evolving mission of the USFWS. Climate predictions will translate into responses based on species redistribution. The USFWS will build more partnerships with cities and municipalities. Challenges are significant but USFWS has countless partners and is increasing the efficiency of its operations. Q: What opportunities are there to increase youth awareness about the Great Lakes? A: USFWS is exploring this, meetings being held this week. Commissioner Logan (OH) noted that Ohio DNR has a great education program; 800,000 activity guides were distributed in Ohio in 2008 (with no cost to taxpayers).

5) Vice Chair Ambs delivered the Report of the Chair, on behalf of Gov. Quinn. Ambs explained that he personally is very vested in the Great Lakes, being born/raised in Michigan and now working in Wisconsin. The Great Lakes community wasn’t always good at “speaking with one voice” but since 2003, we’ve gotten better, largely due to the work of the Great Lakes Commission. The Great Lakes Basin Compact, passed in 2008, was a truly landmark agreement. This document treats the Great Lakes as a truly connected, binational resource. It essentially says that what you do with your water in Duluth, really does impact the water in Cleveland or elsewhere. The GLC provided stimulus priorities to Congress, including materials on the Great Lakes Fish and Wildlife Restoration Act. A table was shown: “Summary of Key Elements of GL State Ballast Water Treatment Requirements & U.S. Clean Water Act Sec. 401 Certification Conditions.” Congress came close to enacting ballast water legislation in 2008 but it stalled in the Senate. Hopefully it will be passed in the 111th Congress this year.

6) Tim Eder delivered the executive director’s report. GLIN usage is growing. Eder profiled the GLIN legislative priorities database and new maps/models that the GLC has developed for the Great Lakes Observing System. He described work that the GLC is pursuing in the area of AIS organisms in trade (aquaculture, aquarium, bait, horticulture/water garden, food fish). A planning grant on this topic from the Great Lakes Protection Fund was completed in December 2008. Eder reviewed the funding of various agencies in the stimulus package. There were missed opportunities, including (shovel-ready) sediment cleanups under the Legacy Act. The overarching message is that an investment in the Great Lakes is an investment in our regional economy. The Legacy Act was reauthorized in 2008, and was level funded at $54M. We’re asking for an increase in the funding authorization to $150M. Eder noted that a special publication on the Great Lakes Fish & Wildlife Restoration Act is available in the meeting packets.

7) Vice Chair Ambs introduced the following individuals to present Observer comments:

Jennifer Nalbone, Great Lakes United: Urged the GLC to work toward revision of the Great Lakes Water Quality Agreement. Fully engage states, NGOs in these discussions. Specific asks: Clear
goals and timetable; mechanisms to ensure domestic compliance; ample research, monitoring, forecasting; all levels of government should be included in these discussions. A letter signed by 54 NGOs was presented to President Barack Obama and Ontario Premier Dalton McGuinty Feb 19, 2009, encouraging the same.

**Jan Miller, U.S. Army Corps of Engineers:** Described USACE monies in stimulus package.

**Dave Cowgill, U.S. Environmental Protection Agency, Great Lakes National Program Office:** Five completed sediment cleanups so far. Federal investment ($53M) leveraged $44M in nonfederal funds. New provisions in reauthorized Legacy Act: one time site characterization, ID’ing responsible parties at all sites.

**Marc Gaden, Great Lakes Fishery Commission:** Stimulus bill, administration has a lot of discretion. Given this, organizations like the GLC should weigh in to the Administration to ensure the funds are spent as expected.

**Craig Czarnecki, U.S. Fish and Wildlife Service:** Thanks for GLC for support in pushing the Great Lakes Fish & Wildlife Restoration Act. The multiple logos on the back of the GLFWRA brochure send a powerful message.

**RADM. Pete Neffinger, U.S. Coast Guard:** USCG agrees with GLC that a systemwide approach to ballast water management is needed. Expects legislation will be passed in the new Congress. Fairly heavy ice season, USCG has been doing a lot of icebreaking. When shipping is down, more icebreaking is necessary.

**Leon Carl, U.S. Geological Survey:** Carl is the new regional executive for the USGS, no longer director of the Great Lakes Science Center. Priorities: beach health. Butulism neurotoxin research (tracing where the birds are picking up the toxin), storm event tracking and projected inundation. Highlights of stimulus funding for USGS: High speed data transfer for stream gauges is coming soon, $15M for removing abandoned wells, some funding for science centers.

**Sam Speck, International Joint Commission:** Introduced new IJC executive secretary, Chuck Lawson. The IJC Biennial meeting will be held Oct. 6-7, 2009, in Windsor, Ontario, focused on nearshore issues. Papers will be circulated prior to this meeting to get more public input/involvement. The meeting itself will also feature more public engagement. Lake Ontario-St. Lawrence River Study: public meetings have been held to review the regulation plan options. Hearings had a great public response. Lake Superior outflows, two years of the five-year study have been completed. 15 public hearings so far. Trying to determine causes of drop in levels on lakes Michigan-Huron (how St. Clair River may be contributing, etc). Climate change is also being examined. Draft report on St. Clair River is expected to be released on May 1, 2009. Public meetings will follow, final report expected in fall 2009. IJC provided advice to the two federal governments in 2006 regarding review/rewrite of the GLWQA.

**Marie Colton, acting director, NOAA Great Lakes Environmental Research Laboratory:** On duty at GLERL since Jan. 18, 2009, replacing Dr. Steve Brandt. GLERL has moved to a new facility, still in Ann Arbor, Mich. Conference rooms are available for use by other Great Lakes organizations in the area. Great Lakes work is interdisciplinary; partnerships are a must. Eight regional collaborations have been formed within NOAA; Jennifer Day is the new Great Lakes Regional Coordinator. Stimulus priorities for NOAA: habitat restoration (hire pending), updating/renovating NOAA facilities in the region, climate modeling.
George Kuper, Council of Great Lakes Industries: Close working relationship with GLC staff. CGLI is trying to raise capital like everyone else. New AIS risk assessment model is very well received by CGLI.

8) Following a break, a panel discussion focused on the “Blue Water Economy: Leveraging the Great Lakes to Advance Economic Recovery,” moderated by Michigan Lt. Gov. John Cherry. Cherry introduced the discussion by saying that the health of the Great Lakes are important to the health of our economy. The Great Lakes ensure that our region becomes the economic center of the future. We usually try not to view water as a commodity. We are not mandated to share our water, however, we do have a responsibility to share our responsiveness, water technologies and conservation ethics with other regions.

The first speaker was Joe Roman, president and CEO of the Greater Cleveland Partnership, who discussed a business agenda for economic transformation in the Great Lakes region. The return on investment that we make in the Great Lakes is pretty darn big. Metro chambers represent the regions (referred to in powerpoint presentation). State capitals are critical to add to the regions. Chambers were touting their agenda recently to Member offices in D.C. We’re beginning to realize that the Great Lakes region will only make a critical role in the new economy if we work together. Refer to 5 points on “Great Lakes Metro Chambers Agenda.” The Great Lakes region could be the leading producer of renewable energy in the future but only if we invest in it. The 12-state region includes 36 percent of the population of both countries. Size can connote influence. If we can engrave the right names in the shovels then they will be “shovel-ready.” We look forward to working with you.

Betsy Otto, from American Rivers, was the second panelist and discussed a new vision for water infrastructure. Our water infrastructure is crumbling and we need to invest in “green” improvements. There billions of dollars in gap. What we need to do: 1) Use natural water process wherever possible; 2) Stop wasting money; 3) Efficiency must become a priority; 4) Enhance community safety, security and quality of life. The average household in the U.S. could increase its water efficiency by more than 35 percent just by using energy-saving appliances, etc. Heating/cooling and moving water around takes an incredible amount of energy, which is reason enough to invest in water conservation infrastructure. In the American Recovery and Reinvestment Act of 2009, $6 billion is set aside for water infrastructure (SRF); 20 percent set aside for green infrastructure, water and energy efficiency; $2.4B in new bonding authority for water efficiency capital investments; $240M for river restoration (NOAA).

The final panelist was Gil Pezza, director of the Water Technologies Initiative for the Michigan Economic Development Corporation. Pezza discussed building regional capacity in freshwater technology and development. It takes 47 gallons of water to actually make one cup of coffee, if you include all the water purification, energy, etc that is required for the various stages of manufacturing. Gil described Michigan’s Water Quality Cluster. Priorities: Food processing, etc. Pezza noted that key indicators in the Great Lakes economy have been relatively flat.

9) Illinois Gov. Quinn, upon his arrival, offered these comments: The governors met with Obama at the White House recently. We already have a solid Great Lakes partnership (collaboration at its best). Investment in cleaning up pollution and investing in our Great Lakes is well worth the investment. Tourism and recreation are important to support and enhance. Investing in clean water and green infrastructure have a huge multiplier effect. Building (smart) roads is important but we need to get more emphasis placed on water and water investment. We want to make the will of our people, the will of the land.

10) In the Delegation Roundtable, the following State/Province reports were delivered:
**Minnesota (Huntley)** – referred to Advisor article on new ballast water regulations in Minnesota. Ships built after 2012 will have to have the new technology; older ships by 2016. VHS was detected in some farm-raised trout near Duluth. Duluth’s Combined Sewer Overflows are of concern and will be cleaned up in the near-term. There’s approximately $3B for Minnesota in the stimulus package, which should reduce the state’s deficit somewhat (currently about $7B).

**Illinois (Miller)** – Illinois is returning to full compliance with the water diversion decree, has repaid its water debt 14 years ahead of schedule; current diversion is below the court-limit of 32cfs. A water use plan is being developed for the Chicago metro area, which should ensure planning for water for outlying communities and considerable conservation measures. A draft plan for the Illinois Coastal Zone Management program is currently under review by NOAA, expected approval in 2010. The demonstration carp barrier is now back in operation, continuous operation is expected by March 2010. The latest carp sighting is about 15 miles from the barrier. Illinois EPA is in the process of redesigning its Lake Michigan monitoring program.

11) Todd Ambs presented the proposed action items that will be undertaken by the Commission on the following day (four resolutions).

Tim thanked the provinces of Québec and Ontario for their monetary support of the reception to follow at The Brookings Institution.

**Day Two – Feb. 24**

12) Vice Chair Ambs introduced EPA Administrator Lisa Jackson. Jackson addressed toxic cleanups and Great Lakes Legacy Act funding. She said EPA will work hard, with OMB, to ensure toxins are removed from the Great Lakes Basin. It is extraordinarily expensive but we must continue on this journey and EPA looks forward to being a part of this process. We have a lot of work to do on air toxics. The Clean Air Act compels us to do this work. In leading the EPA she indicated she’s committed to a sense of transparency in working with stakeholders. EPA is back on the job and our employees are committed to the important role we play in protecting the environment and human health.

13) State/province updates continued:

**Michigan (Cherry)** – Cherry introduced Ken DeBeaussaert He explained the newly released Michigan Great Lakes Restoration Plan. Referred to Gov. Granholm’s new energy initiatives, including a Great Lakes Wind Council. Criteria are being developed for off-shore wind development. This is strictly an advisory group. Q: how did you get all the stakeholders around the table to develop the Michigan GL Restoration Plan? A: The biggest investment is in time and investment. We started with a partnership of a number of organizations in designing the effort. Healing Our Waters, for example, was very helpful in setting up a local workshop for review of the plan. A second workshop was more open to the public and involved a lot of student input. The power of the world wide web should also not be underestimated and drew a lot of broad attention to the effort. Q: What kind of incentives are being applied to land use? A: Granholm has established a Land Use Leadership Council (previously). Q: What was the role of the other Great Lakes states in the Michigan process? A: The Chambers of Commerce are already leading a regional effort; all states should ensure their involvement. The Great Lakes Commission has a key role to play in communicating the work of the states to one another. The Great Lakes Compact also provides a forum for working together, especially to pursue regional water conservation measures.
**Ontario (Bailey)** – A draft conservation strategy should be available in spring or early summer 2009, including a plan for interbasin transfers. Working on the Canada-Ontario Agreement (COA) and Ontario’s response to the GLWQA. Infrastructure Investments are a priority. Developing a strategy to address aquaculture. A report on climate change adaptation is expected by spring 2009. Growing Green Energy is a priority, including streamlining renewable energy process and establishing province-wide standards. Ontario currently co-chairs the Great lakes Wind Collaborative. A Toxic Reduction Strategy proposes new legislation, ways to support industry in reducing toxics use, ways to inform Ontarians about toxic substances. Lake Simcoe Plan has been released. Simcoe is the largest lake in southern Ontario outside of the Great Lakes. It is located within the Lake Huron watershed. There’s big interest in the climate change study, especially for those jurisdictions who are still considering the realities of climate change. Ontario is convinced that climate change is happening. Q: Did you have difficulty connecting the Lake Simcoe work with the Great Lakes community? A: There is a difference in the level of understanding but the same issues and structure is used, just on a much larger scale for one or more of the Great Lakes.

**Pennsylvania (Light)** – Showed cover of the new state water plan. The state was divided into six major watersheds to incorporate specific regional needs. Inventories of water available, assessments of future water use demands and trends, and corresponding recommendations. For the Great Lakes, needs identified working with the larger Great Lakes community in protecting the basin, and water use and conservation measures (as prescribed in the Compact). Pennsylvania continues to hope for federal action and a national standard for ballast water. PA Sea Grant should be promoted to full SG College status in the coming years, which will further elevate the program and its resources to be applied to the Great Lakes.

**Québec (Boucher)** – Premiere Charest is committed to Kyoto. Québec recently joined the Western Climate Initiative. Bill 92 (the Compact/Agreement) will officially implement the Agreement and make official the right to clean water in Québec. It also establishes a Water Withdrawal Authority, which would have to review and ok any withdrawals. The Blue Green Algae Action Plan is on the way to being implemented. There’s also an effort in Québec to buy up lands that are sensitive, greening transportation corridors, establishing multi-modal policies. Q: where does funding come from? A (Lapierre): some general fund, some from Hydro Québec (water fund).

**Wisconsin (Ambs)** – The Wisconsin Great Lakes Strategy is currently being updated (originally released in 2006). Compact implementation is in full swing. Waukesha and New Berlin proposals: New Berlin has a final application in to Wisconsin DNR, 30-day public comment period required. New Berlin is a “straddling” community, straddling the basin boundary. This is the first community that has requested Lake Michigan water since the ban on out-of-basin diversions. New Berlin would return all water back to the basin. For the additional water they’ll ask for (approx. 1M gallons/day), they will actually return more and they’ll return surface water (not ground water) which is generally cleaner. Waukesha still has a fairly elaborate proposal that they are considering submitting. Waukesha is located 10 miles outside of the Great Lakes basin but they are in a straddling county. This diversion, therefore, would be more controversial and would require vote by the Regional Body. Wisconsin released its state permit requirements for ballast water early in February. This permit regulates biological pollutants to the lakes and includes added requirements for salties, IMO standardsx100. It’s a five-year permit. There are no other provisions required for lakers. Tight budgets in Wisconsin, approximately $5.7B state budget deficit. But the governor has included several new staff positions, especially related to Compact implementation. The Coastal Management Program will be brought back under Wisconsin DNR, rather than the Dept. of Administration where it has sat most recently.

**Ohio (Logan)** – Ohio has created a 28-member advisory board to assist with Compact implementation. There’s a serious lack of land use planning on the local level, which ends up costing
the state a lot of money. The Lake Erie Commission is pursuing a Smart Growth Initiative, which is growing and successful. Ambs-WI comment: in Wisconsin, individual counties were mandated to develop smart-growth plans. Miller-IL comment: Forming the soil conservation districts around watersheds was a novel idea years ago. There are 88 such districts in Ohio.

14) Erica Jensen of the GLC staff provided a brief update on the congressional office visit schedules and packets for the Great Lakes Day events, which immediately follow the GLC Semiannual Meeting.

15) Mary Glackin, NOAA deputy under secretary for Oceans and Atmosphere, provided a keynote address. NOAA is actively organizing regional teams to better address region-specific issues through NOAA programs and services. This is a very collaborative partnership. The Coastal Zone Management Act is up for reauthorization. Near-term priorities: 1) Coastal hazards and climate change, 2) competing coastal uses and habitat loss, and 3) coastal pollution and human health effects. Wisconsin has added a new coastal estuarine reserve. Leave No Child Indoors is a new program. National Climate Assessment (draft at www.globalchange.gov). There's been a decrease in Great Lakes ice coverage, increasing incidence of heavy downpours, etc. IOOS and GLOS are continuing to expand; Dr. Jennifer Read (MI Sea Grant) is new director of GLOS. Work in the Huron-to-Erie Corridor is impressive. Not just focused on producing a model but looking at the end result of how the model will effect water quality protection, search and rescue operations and more. NOAA has been working on habitat restoration in the Great Lakes for more than two decades. Q (Logan): what do you think of projects that aren’t necessarily “shovel ready”? A: these projects will be considered but you have to manage your risk in this regard. NOAA must show results. Q (Booser): Are there multiplier effects of green infrastructure projects? A: Yes, we have compelling evidence from Katrina and other scenarios to justify this argument.

16) Marc Miller (IL) moderated a panel discussion titled “Sustainable Funding for Great Lakes Restoration.”

Chris Adamo, legislative counsel to Sen. Debbie Stabenow (MI), discussed funding opportunities for Great Lakes restoration in the new Congress. The Congressional Research Service has been researching “what is a czar?” and “what is a trust fund?” and more to inform the process of developing a Great Lakes restoration plan. Where does the money come from? How is it dispersed? How is it managed? Currently, advocacy involves appealing to the individual subcommittees. It’s cumbersome and laborious for staff and those who are advocating. A trust fund would allow appropriators to put money in one chunk rather than dozens. Alternatively, smaller “asks” are actually easier than asking for a large lump sum through a trust fund.

Chelsea Henderson Maxwell of The Clark Group discussed the need to start building the case now about why a restoration fund is important. This might also include building a coalition of different regions of the country and then the fund could be sliced/diced later among the regions. There’s more power in the numbers and national partnerships for restoration. Maxwell also addressed funding options under cap and trade legislation.

John Watkins, chief of the Ohio Coastal Program for the Ohio Dept. of Natural Resources, described the Coastal States Organization Call for Action, which suggests creating a trust fund for oceans and Great Lakes restoration. Source of the funds? Unallocated revenues from traditional (oil and gas) and renewable (wind and wave) energy development; future carbon cap and trade system. There is not yet a formal position on how the funds would be allocated. Likely, the governor of each state would prescript how the funds are allocated within his/her state. The funds may be distributed through the CZM programs but not necessarily.
Q: The GLC can make a strong case for the Trust Fund. What should be included in this appeal to make it effective? A (Adamo): the Great Lakes delegation should come to agreement up front about how the funds should be distributed. Also the role of the states and local entities should be determined up front. Climate is an excellent strategy to be a part of but the Great Lakes should also be care to not pigeon-hole itself into only getting on the climate bandwagon. A (Maxwell): The Great Lakes shouldn’t just be holding out its hand for a piece of the pie. The Great Lakes shouldn’t come across as opportunistic but should have a well thought out plan up front. A (Watkins): A Great Lakes Trust Fund, in order to be successful, will need support from outside of the region.

Q (Cherry): Is there any precedent for specific states appealing to the federal government for an allocation of the funds? A (Adamo): Many of the current nationwide restoration efforts (e.g., Chesapeake) have developed from the states up. The Great Lakes Regional Collaboration, on the contrary, developed more from the feds/top down. A (Maxwell): The Everglades restoration work involved some agreements between the feds and Florida's governor.

Q (Schnook): How soon will we see a cap and trade bill? A (Maxwell): Obama prefers that Congress establish the parameters for a cap and trade program. Any bill introduced will be at least as stringent (end goal reduction) as the Lieberman/Warner bill. The longer the delay in introduction of the bill, the more stringent it will need to be.

Q (Eder): Did delegations from different regions work together to draft and support the Lieberman/Warner bill? A (Adamo): I’ve never seen national coalitions NOT work. The Great Lakes lost out recently trying to push a Great Lakes-specific restoration bill. A (Maxwell): Most of the regional collaboration on the Lieberman/Warner bill only came in the form of letters of support, not so much in formulation of the bill.

Q (Logan): Cap and trade vs. carbon use fee…which is preferable? A: Carbon tax will put a bigger burden on high coal burning states (OH, IN, MI, etc).

17) The Business session was moderated by Vice Chair Ambs. Four resolutions were being considered by the Commission.

A motion was made to approve the Great Lakes Commission legislative priorities for FY2010. The motion was made by Schnook (WI), seconded by Michigan and passed unanimously.

A motion was made to approve a resolution encouraging Congress to reform the Harbor Maintenance Trust Fund. The motion was made by Logan (OH), seconded by Minnesota. Discussion: it was clarified that the motion does include recreational boating, not just commercial, needs. Eder noted that Ohio Commissioner Jim Weakley, could not attend the meeting but he provided a letter of harbors on the priority list for dredging. The motion passed unanimously.

A resolution was presented to support reauthorization of the Coastal Zone Management Act and a National Ocean Trust Fund to increase funding for ocean and coastal issues. The motion was made by Logan (OH), seconded by Minnesota. The motion passed unanimously.

The final resolution supports the 2009 windpower conference to be held in Chicago May 4-7. This event will be a forum to promote wind energy as a clean, viable and important economic component of the nation’s energy portfolio. The motion was made by Illinois, seconded by Québec. The motion passed unanimously.

19) Tim Eder reminded people about logistics for lunch and the afternoon session with the Healing Our Waters Coalition. The keynote speaker is Nancy Sutley, director of the White House Council on Environmental Quality.

20) The meeting was adjourned by Vice Chair Ambs at 11 a.m.

Respectfully submitted,

Tim Eder
1. M. Miller, acting for Chair P. Quinn, called the meeting to order at 10 a.m., Friday August 21, 2009 with the following members present:

- M. Miller - Illinois
- T. Mains - Indiana
- — - Michigan
- — - Minnesota
- — - New York
- S. Logan - Ohio
- — - Ontario
- K. Burch - Pennsylvania
- L. Boughton - “
- M. Boucher - Québec
- T. Ambs - Wisconsin

Staff present: T. Eder, V. Pebbles, and R. Straith

2. Minutes
   M. Miller asked for approval of the minutes. T. Ambs moved, the motion was seconded and the minutes were approved as presented.

3. Carp Barrier Update
   M. Miller gave the following update on the Asian carp. Recent news reports have noted that the carp are moving closer to the barrier. All partners have stepped up monitoring and U.S. EPA has provided $100,000 to assist Illinois update a rapid response plan. There is a strong likelihood that fish will eventually get past the barrier so there is a need to define options for control. One option is chemical treatment. Mark suggested that it might be advisable to develop an MOU or similar agreement with states to address the supply and use of Rotenone. Prior to a formal MOU T. Eder suggests that GLC should consider public endorsement of Illinois’ rapid response plan including use of toxicants, if necessary, to prevent Asian carp from invading Lake Michigan. GLC might assist by calling on key players, starting with the GL Fishery Commission and the ANS Panel, to convene an ad hoc working group to discuss the issue and possible development of subsequent agreement among states. T. Ambs suggested that communication challenges should be considered as well. Board agreed with plan to work with the GLFC and the ANS Panel to form an informal working group of state representatives on issues surrounding Asian carp and rapid response.

4. Annual Meeting
   T. Eder asked K. Burke of PA for update on the Annual Meeting planning. Kelly reported that Congresswoman Dahlkemper is confirmed as the keynote speaker. L. Boughton reported that they are continuing to contact sponsors for the evening reception. T. Eder discussed the panel on the GLRI. GLC is preparing its report on comments received from states and stakeholders on the GLRI. States’ comments and follow up discussions with Board will be used as basis for a set recommendations from GLC to EPA and federal agencies.
Action items for Annual Meeting:

a) Election of officers: P. Quinn has appointed a Nominating Committee and they will present a slate of officers.

b) One action item on the Great Lakes Water Quality Agreement. It was agreed on the last Board conference call to have GLC staff convene a working group of state and provincial representatives to keep all jurisdictions informed of the process, timeline and key issues being discussed.

c) Resolutions:

   Water Nexus. T. Eder gave overview of the resolution and asked M. Boucher for guidance and other Canadian ministry’s that should be consulted. Marc will check and get back to staff next week. This resolution calls for recognition of links between energy and water and urges Federal/provincial agencies to work together and consult with each other and consider implications. All agreed to present this resolution to the full Commission.

   A National Renewable Energy Standard. T. Eder reported that D. Pippen of IN raised questions and made some proposed changes to the draft resolution that dropped the call for a federal standard, which was the thrust of the draft resolution. Following discussion on the proposed changes it was agreed that the resolution be tabled indefinitely.

S. Logan asked about the issue of ballast water. Tim replied that the Annual Meeting includes an item seeking an update from the federal governments. The Coast Guard is expected to present their draft proposed rule soon.

5) Great Lakes Restoration Initiative

T. Eder gave an overview of the GLRI meetings held in each of the Great Lakes states in July and August. He noted that the meetings were very successful with good attendance and comments. A draft report summarizing comments was shared with Gary Gulezian and Cam Davis. He urged all states to continue discussions with EPA about states’ needs, plans and questions. EPA is working on the RfP and welcomes questions at this stage. T. Ambs noted that WI intends to submit proposals for each of the 5 categories including some for specific watersheds and noted that he hoped that GLC would not be competing with states for specific habitat or nonpoint projects. T. Eder noted that staff is acutely aware of these concerns and will coordinate closely with Board prior to seeking funding.

6) Project and Program Development

T. Eder provided several updates:

1) Staff is in the process of interviewing of hire a habitat specialist for the stimulus grant we received from NOAA.

2) We have been invited by the GL Protection Fund to submit two full proposals from pre-proposals we submitted earlier. One is on energy development and impacts of water resources on future energy development and the second is on water conservation and water pricing tools.

3) We had a student research associate on staff this summer who surveyed activities and policies in the region (and outside the region) associated with climate change and adaptation. GLC will use this paper to inform future planning about a useful GLC niche. This paper will go out to those interviewed and will then be shared with the Board.

7) M. Miller asked for additional items. Hearing none the meeting was adjourned at 11 am.

Respectfully submitted,

Tim A. Eder,
Executive Director
/rjs
Vice Chair T. Ambs, acting for Chair P. Quinn, called the meeting to order at 10 a.m., Friday July 24, 2009 with the following members present:

- T. Mains    Illinois
- D. Pippen   - Indiana
- -     - Michigan
- -      - Minnesota
- D. Zelazny   - New York
- J. Watkins for S. Logan  - Ohio
- R. Samah for B. Carr  - Ontario
- K. Burch    - Pennsylvania
- L. Boughton   - “
- J. Booser     - “
- —      - Québec
- T. Ambs   - Wisconsin

Staff present: T. Eder, T. Crane, M. Doss, C. Manninen, V. Pebbles, D. Knight, and R. Straith

1) **GLRI Meetings**
T. Eder gave an update on the Great Lakes Restoration Initiative meetings that GLC is organizing on contract to US EPA. Thus far, meetings have been held with state agency personnel and stakeholders in Wisconsin, Illinois and Indiana. Eder noted it was helpful to have a designated point person from each state to lead the discussion and interaction with EPA. Eder asked T. Ambs (WI) and T. Mains (IL) for suggestions/comments they could offer other states. Ambs expressed encouragement that EPA/GLNPO was thinking ahead about how to transfer large grants to states that could be re-granted. T. Mains recommended that states think ahead about priorities and have questions to present. Eder recommended that states be prepared to be asked by EPA if states are willing and able to manage a re-granting process. Eder also said that GLC is thinking about how we can provide leadership to the states without competing with the states and will continue to consult with the states. L. Boughton asked about the type of detail EPA is looking for, specific projects or general process. Eder responded by saying both; EPA is welcoming comments and ideas on the regional level as well as specific state initiatives.

2) **Minutes**
T. Ambs asked for approval of the minutes of 6/19/09. D. Pippen moved to accept the minutes as presented, the motion was seconded and the minutes were approved with no amendments or corrections.

3) **Annual Meeting in Erie**
T. Eder gave an update on plans saying that we are getting a good response from speakers and several have been confirmed.

The business portion of the agenda includes ample time for discussion of the GLRI and working with the federal agencies to make the restoration plan successful. The intent is to prepare a position paper containing recommendations from states directed at EPA and other federal agencies regarding
GLRI implementation for review by the Board and Commissioners. The paper would cover a number of topics including management of the GLRI program, the states’ role in decision-making, science/peer review and accountability. The draft paper would be reviewed with EPA and other federal agency Observers at the meeting, and then finalized. Other items for our agenda for the meeting are election of officers; review/renegotiation of the GL Water Quality agreement; the draft resolutions presented; the possibility the new Administration may present an executive order on the Great Lakes; ballast water regulation, and a possible amendment to the Clean Water Act to reauthorize the Great Lakes National Program Office. Eder asked the Board for guidance on what the Board would like GLC to focus on between now and end of September to develop action items for the Annual meeting.

T. Eder recommended he would work with T. Mains to recommend to Chair Gov. Quinn appointments to a Nominating Committee to develop a slate of officers to present at the Annual meeting.

Draft Resolutions and Other Potential Action Items

A) National Renewable Energy Standard which supports creation of a national standard, but stops short of recommending specific numbers for the standard. D. Pippen had a question regarding implications or requirements for states. Eder suggested that staff (V. Pebbles) work with David to discuss and make any changes to present to Board at the next meeting, to be presented to the Commission at the Annual meeting. D. Zelazny commented that he can’t make a commitment for NY at this time but would be comfortable to move forward with the draft. T. Ambs made the same comment. Staff will bring a revised resolution back to the Board at the August meeting.

B) Water Energy Nexus – Eder informed the Board that a panel on this topic would present information and discussion in Erie. The resolution is fairly general and calls upon EPA, Dept. of Interior, Dept of Energy to collaborate and consult with each other and the GL states on this subject, and the Commission stands ready to assist the region. D. Zelazny commented that he would like to see somewhere in the resolution a statement that the states be consulted in the early stages of the processes. Eder agreed that should be an easy change to make. T. Ambs reminded that there is language in the Compact referencing new water resources. J. Watkins has some comments from Ohio. Eder will follow up.

C) Water Quality Agreement – Eder noted that a meeting between EPA and Environment Canada will soon be scheduled to develop a timetable and the plan for consultation with public, states and provinces. Their goal is to have the agreement renegotiated and signed in twelve months. He asked if the states would like us to assist them in any way including the development of a resolution or a working group that would monitor progress. L. Boughton recommended establishing a working group. Others agreed. Eder suggested that an Action Item for the Erie meeting be developed to direct the staff to form a working group to conduct a series of conference calls to keep states informed and collect input to present to the two federal governments. Details will be worked out with the Board. T. Ambs noted that this process will provide needed help but that at some point, issues may become controversial so it will be necessary to have process for individual state input.

D) Ballast Water Regulation – The Coast Guard has proposed a rule that is currently being reviewed by OMB and the Council of Environmental Quality. The federal rule may be coming out as early as August 15. Time has been blocked on the agenda for the Annual Meeting to address this issue. D. Zelazny asked if the Coast Guard was just offering a briefing on what they would have in August. Eder suggested that the Coast Guard and Transport Canada or maybe even CEQ be asked for an update from the two federal governments. The Board agreed that this would be very helpful and suggested that it include an update to report on development of permits under the Clean Water Act.
T. Ambs offered that the more challenging question is, “what are the most important items that the Commission should be focusing on, recognizing that it just can’t do it all?” How do we determine priorities? Tim suggested that some things are not going to be as time sensitive as others and with cooperation and Board input we will keep focused on highest priorities.

4. **Budget**

T. Eder reported that the Commission has received a $10M from NOAA for habitat restoration at Muskegon Lake and $1.2 M from U.S. EPA on the clean diesel initiative. Both of these awards are with stimulus (ARRA) funds. We were just notified that we received $60,000 from the Joyce Foundation for the joint proposal with the Great Lakes-St. Lawrence Cities Initiative to continue the work with them on municipal governments’ expenditures toward GL restoration. The GLC budget for FY 10 needs to be amended. It is also likely that additional funding may come to the GLC from the GLRI. There are two options for amending the budget: 1) move quickly and amend it between now and Oct 1, or; 2) assuming there is a Board of Directors meeting in December, develop revisions so that an amended budget could be adopted in December.

Eder suggested that staff work with Board and the Finance Committee between now and December and a revised 2010 budget could be finalized at the December Board meeting. T. Crane agreed with this. Eder asked for recommendations or comments. The Board agreed with this recommendation.

T. Eder also noted that dues payments had recently been received from Ohio and Illinois and were greatly appreciated, especially in these times of difficulty for states. He emphasized that dues are critically important to enable the Commission to maintain its focus of working on behalf of the states and not the federal government. Dues are also important because they are the primary source of support for advocacy efforts.

5. **Other**

D. Zelazny asked if it was still timely to submit input on project proposals presented by Tom Crane in response to work on energy and water conservation. T. Crane responded that pre-proposals have been submitted on the GLPF call for pre-proposals, but that if full proposals are requested there will still be plenty of opportunity to address any issues.

Eder stressed the importance of discussion and coordination between the GLC and the states on program development especially as it relates to projects under the GLRI, and noted that these discussions will need to take place between now and October if the EPA adheres to its plans for a deadline of October for proposals.

Meeting adjourned at 11:05 a.m. EDT
Next Board call is August 21 at 10:00 a.m. EDT

Respectfully submitted,

Tim A. Eder,
Executive Director
1. M. Miller, acting for Chair P. Quinn, called the meeting to order at 10 a.m., Friday June 19, 2009 with the following members present:

   T. Main   - Illinois
   M Miller  - "
   - Indiana
   - Michigan
   T. Huntley - Minnesota
   D. Zelazny - New York
   S. Logan  - Ohio
   C. Loucas - "
   K. Burch  - Pennsylvania
   J. Booser - "
   L. Boughton - "
   M Boucher - Québec
   Todd Ames - Wisconsin

   Staff present: T. Eder, R. Hasselbring, M. Doss, C. Manninen, V. Pebbles, D. Knight, and P. Gable

2. **Minutes**
   Marc Miller called for a motion to approve the May minutes, which were passed unanimously as presented.

3. **Resolution to amend the GLC Cafeteria Plan**
   Tim presented information on the GLC Cafeteria Health Benefits Plan for employees, which enables employees to set aside funds to cover medical expenses tax free. The Commission’s health care provider requires a resolution from the Board of Directors to reinstate the plan. A motion was made (Huntley) and supported to approve the resolution. Motion was approved unanimously.

4. **Update on Québec's passage of the Compact**
   M. Boucher updated the Board on recent action in Québec on the Water Resources Compact. He reported it passed the Québec parliament without opposition, with drinkable water being made an individual right. The legislation is being implemented today. He will provide the Board with copies of everything as soon as they are available.

5. **Update of FY 10 federal budget and other legislation**
   T. Eder updated the Board on the Great Lakes Restoration Initiative, the proposed FY10 $475M Great Lakes restoration plan. Tim and T. Ames were in Washington, DC on June 2 and briefed approximately 40 members of staff from the House and Senate. They also met with the House Interior Appropriations subcommittee on specific language that could be incorporated into the bill. The subcommittee modified our suggestions and approved the bill last week with the full $475M intact. The full Appropriations Committee approved the bill yesterday, June 18, and it is scheduled for consideration by the full House next week.
The Senate Appropriations Sub-committee on Interior, Environment, and Related Agencies is scheduled to mark up the bill next Tuesday, June 23. Approximately a week later the full Committee should get the bill and the full Senate after that. There are rumors that the Senate might not appropriate the full $475M. If this happens the House and Senate will have to work out the details.

The Congressional report language ties the funding plan to the Great Lakes Regional Collaboration; it tasks EPA to consult with states, governors, mayors, tribal officials and other stakeholders to develop a comprehensive plan for the restoration initiative, to use that plan to develop input for future years and to assure that the restoration plan is founded in sound science.

T. Ambs asked if there was anything states could or should be doing, either on the House or Senate side, in terms of lobbying efforts. On the Senate side, continue to stay in touch with Senator Kohl to remind him of Wisconsin’s interest. All other states should also continue to work with governor’s offices to communicate support for the initiative to Senators. If the Senate approves a lower figure, it will be important to communicate support to Congressman Obey to assist him in negotiations in conference committee.

M Boucher asked if funds are cut, will specific areas be cut or will the pot just get smaller and decisions later by EPA? Eder responded that the latter was the case, Congress will not decide on specific projects or programs.

The Senate Environment and Public Works Committee passed the Great Lakes Legacy Act this week increasing the funding to $150M. It has passed the full House and now goes to the full Senate.

The Clean Water Authority Restoration Act which clarifies the jurisdiction of the Clean Water Act over navigable water vs. waters of the United States passed the Environment and Public Works Committee with a compromise. The compromise language defines the limits of the legislation and reaffirms that it applies only to surface water and not ground water.

M. Boucher asked if there is a process that has been decided upon for updating the Great Lakes Water Quality Agreement. He noted that there are differences between Canada and the US on some of the complex issues. T. Eder answered that the short answer is no, there is no process yet.

6. **EPA outreach meetings on restoration initiative**

T. Eder reported that EPA has tasked the Great Lakes Commission with preparing a budget and a work plan to assist them in organizing meetings around the basin. There are to be meetings in each state with the EPA, state officials and their staff, who are most directly responsible for implementing and executing Great Lakes Programs. Also on the same day, or close to it, there would be a multi-stakeholder meeting that would open to officials from cities, NGOs, RAP groups, etc. in the same state.

One purpose of the meetings is to get input that EPA can use when they put together their proposed spending plan for FY11 for the GLRI. Their deadline is September 1, so the meeting will need to be scheduled during the last two weeks in July.

Other purposes of these meetings are 1) to help states be prepared for the FY10 plan and how to apply for the funds, and 2) for EPA to listen to the states’ priorities with regard to the Great Lakes so when they think about providing funding, they know how it should tie into state plans, priorities, and programs.

A point person is needed from each state to help coordinate dates, locations and appropriate state officials to attend the meetings. Another question is whether state would like to co-sponsor the
stakeholder meeting. In Michigan, K. DeBeaussaert has asked that the MI Office of the Great Lakes co-sponsor the public meeting. Commission staff will provide assistance preparing the agenda, participation and location, etc.

D. Zelazny asked if the state agency co-sponsored the meeting, would it be a combined with the meeting for state officials. T. Eder replied that they would be separate meetings.

Eder explained that information gathered at these meetings will be summarized in a report to EPA. The report cannot be an advocacy piece to EPA since we are working under a contract with EPA. Following submission of that report, Commission staff will work in coordination with the Council of Great Lakes Governors to build a more specific set of recommendations containing the states’ recommendations on implementation of the restoration initiative to reflect states’ priorities. These recommendations will be presented at the GLC Annual Meeting in September for review and the final recommendations will be submitted to EPA. This will be bigger than a resolution and have significant detail in terms of what the state’s recommendations for specific priorities, states’ views on states’ role in implementation of the initiative, the institutional relationship between states, the federal agencies and other stakeholders, and the states’ view on a long range plan. T. Ambs asked how this might mesh with a Great Lakes summit of Governors that is being considered for the fall. T. Eder answered that he has been in contact with the Council of Great Lakes Governors and discussed how these meeting would work well with the summit.

7. **Annual meeting and potential resolutions**

A revised agenda for the Annual Meeting was reviewed. The restoration initiative will be a major topic of discussion. K. Burch commented that the main issue right now is confirming Rep. Kathy Dahlkemper as keynote speaker. The first afternoon focuses on the federal restoration effort. There are a couple of minor changes for the evening reception. Other than these things, the agenda is pretty well firmed up.

T. Eder mentioned that on the second half of the second day there are two major issues to consider 1) Recommendations on the Great Lakes Water Quality Agreement? 2) The expected proposal from the Coast Guard on their ballast water rules? Time has been penciled in for discussion or presentation on both of these issues and both could be the subject of resolution if we want to tackle them.

Regarding the ballast water rules – the Coast Guard has a deadline of August 15 to release their proposed rules. Though the staff has not reviewed them officially, we understand they may track the IMO rules, which are weaker than legislation approved in the House last year, and weaker than some states’ rules. The states may have some significant concerns. It may be difficult to reach a consensus on a resolution, unless it is relatively general, due to differences in state rules.

8. **Program updates – new funding**

T. Eder reported that the Commission submitted a number of proposals to NOAA for habitat restoration with recovery act money and we have been told that we are likely to receive one of those grants. We will know by June 30. As soon as the grant is official, the plans for staffing will be made known. Another proposal submitted through the stimulus funding was award from the EPA’s Clean Diesel Program. D. Knight worked with American Steamship Company, the state of Wisconsin and the shipyards in Wisconsin. He reported that it involves replacing generator sets on two self unloaders and four engines that provide electrical power to the vessels. The project is $1.6M, 75/25 cost share. ASC and Caterpillar put up the 25 and leveraged $1.2 in federal dollars. We will receive about $25K to administrate the project. It generates about 12,000 man hours of work at the Bay Ship Building Yard and/or the Fraser Yard in Superior. Work will be completed when navigation season starts next April.
Finally, the Commission was approved for a grant for a habitat restoration partnership with NOAA last year for restoration work in Muskegon Lake and Hog Island (WI). We were approved for the project last year but only received $50,000 to start the work. There may be significant new money in FY09, but we will know more in the future.

All of these new sources of funding will require an amendment to the GLC FY 10 budget.

9. M. Miller reminded that the next board call is scheduled for Friday, July 17. The meeting was adjourned.

Respectfully submitted,

Tim A. Eder,
Executive Director

/peg
1) Todd Main, acting for Chair P. Quinn, called the meeting to order at 10 am. Friday May 15, 2009 with the following members present:

T. Main - Illinois
--- - Indiana
K. DeBeaussaert - Michigan
--- - Minnesota
D. Zelazny - New York
S. Logan - Ohio
--- - Ontario
K. Burch - Pennsylvania
J. Booser - “
--- - Québec
T. Ambs - Wisconsin
I. Gutierrez-Pils - “

Staff present: T. Eder; T. Crane; R. Hasselbring; R. Straith; R. Gauthier and M. Doss

2) Minutes
T. Main asked for approval of the minutes. Eder noted there were several typo’s which will be corrected. Minutes were approved with corrections.

3) GLC FY 10 Budget
Eder noted that U.S. EPA has agreed to fund the Great Lakes Air Deposition (GLAD) Program with funding from the federal FY 09 budget, which will be reflected in the GLC budget for FY 2010. This increase requires an amendment to the GLC budget previously reviewed by the Board and Commission. The GLAD funding is a $1.2 million commitment over three years. About $800,000 - $900,000 of these funds will eventually be awarded in contracts to project partners. These awards will be made in fiscal years 2011 and 2012 so it will have a positive impact on the GLC budget for the next two years, through August 30, 2012. T. Crane reviewed the highlights of a memo describing changes in the draft budget previously reviewed by the Board and Commissioners. The suggested changes are positive and allow us to build in needed support to address Commission priorities. T. Ambs asked how the GLAD money is allocated to the states. Tom explained that some funding is provided directly to states to support state air programs and some funding is released through an RfP developed with state input to support research on sources and control measures.

Main asked if there were any more questions regarding the budget and hearing none asked for a motion to approve the budget as presented. K. DeBeaussaert moved, T. Ambs seconded and the motion was approved.
Eder noted that with the impending influx of funding support for Great Lakes programs, he wanted the GLC to be a model for others on spending federal funding. He has asked staff to do a strategic review of the GLAD program to ensure that it is properly aligned with the goals and objectives of the restoration initiative.

4) FY 10 Federal Budget – Great Lakes Restoration Initiative:
Eder provided an update on developments relating to the proposed $475 M Great Lakes restoration initiative in the FY 10 federal budget. T. Ambs noted that there are a number of questions regarding how the money is to be spent. Eder noted that EPA has plans for an omnibus RfP or multiple RfPs by issue areas. Our understanding is that there will be no match requirement for the EPA RfP. Other funds will be transferred to other federal agencies through interagency agreements and will be made available through some existing programs and authorities, many of which already identify match requirements. Tim noted he would like to receive direction from the Board on recommended points and principles regarding the spending plan, which he plans to discuss among our partner agencies and organizations prior to communicating those principles/views to Congress. The House is expected to be marking up their bill soon, so timing is critical. Tim will be preparing a draft to discuss with the CGLG and other partners. Tim noted that we have urged EPA to reach out to the states to discuss the proposal and EPA has asked GLC to provide an outline for a proposal to convene meetings with the states.

Planned next steps
1) Communicate our general support for the funding; discussion on the details to continue.
2) M. Doss held a conference call for leaders of AOCs, RAP groups and state agencies to brief them
3) Briefing call for Commissioners next week.
4) Tim will be going to DC next week.
5) Letter from Chairman Quinn generally supporting the funding
6) Encourage states to communicate with your Congressional reps

T. Ambs noted that Governor Doyle and the CGLG are very interested in a GL Summit in mid-July for key leaders, agencies and provinces to talk about how funding can be effectively spent.

K. DeBeaussaert asked if the new GLAD money was a part of the $475 million restoration initiative. Tim responded that it was not; it is part of the FY 09 budget. Ken also asked Tom to expand on the memo to clarify the source of the GLAD money how it will be used, so he can share it with his agency. Tom agreed to do that on Monday.

5) Resolutions for Annual Meeting
Tim presented several resolutions for discussion and asked for other ideas, noting that we will be sending out our regular “call for action” form inviting Commissioners to identify proposals for resolutions.
1) Water-energy discussion paper. A resolution would be intended to generally raise awareness. Tim asked if Illinois would be willing to sponsor this. T. Main replied that they probably would and suggested looking at this issue from a broader perspective and will take it up with Gov. Quinn.
2) Oil sands paper. We are in the process of circulating this to our Canadian allies and are not ready to put it on the agenda until we get feedback from Canada.

3) Great Lakes Water Quality Agreement. Renegotiation of the agreement may take place and it may be appropriate for the GLC to discuss it at our Annual meeting. D. Zelazny asked if there is a possibility of movement on this before our Annual meeting.

6) St. Clair River and Upper Great Lakes Study – discussion paper
Roger Gauthier shared a draft background paper with the Board. The draft has been provided to J. Nicholas (MI office of USGS) and J. Bredin from the MI Office of the Great Lakes, who was on the study board, who each provided good comments. There is a 60-day comment period that has now been extended 30 days. Tim noted that the GLC may provide input during the comment period and will discuss with the Board in advance. Tim noted that J. Bredin suggested that the GLC might assist states engage in the discussion. D. Zelazny noted that the summary paper was helpful.

7) The meeting was adjourned at 11 am. Tim reminded the Board that the next call is June 19.

Respectfully submitted,

Tim A. Eder,
Executive Director

/rjs
1) M. Miller, acting for Chair P. Quinn, called the meeting to order at 10 am. Friday, March 20, 2009 with the following members present:

- M. Miller  - Illinois
- T. Main  - Indiana
- K. DeBeaussaert  - Michigan
- T. Huntley  - Minnesota
- S. Logan  - Ohio
- C. Loucas  - "
- R. Samah  - Ontario
- K. Burch  - Pennsylvania
- Lori Boughton  - "
- M. Boucher  - Québec
- I. Gutierrez-Pils  - Wisconsin

Staff present: T. Eder; T. Crane; R. Hasselbring; R. Straith and M. Doss

2) Minutes
M. Miller asked for approval of the minutes. One correction was noted that the IJC meeting is June 13 instead of June 16. Minutes were approved with the correction.

3) FY 2010 Budget
T. Eder provided an overview of the process of approving the GLC budget and noted the bylaws change of last year in which the Board approves the budget with review/input from Commissioners. He noted suggestions from the Finance Committee were reflected in the current draft. Pending changes today, the draft will be sent out to all Commissioners and a conference call scheduled. The Board will be asked to approve the budget on its May 15 call. T. Crane reviewed some of the highlights and changes made from suggestions of the Finance Committee. Currently we are expecting some grants to come in by the end of the year. Meeting and travel costs may go up slightly in 2010 due to obligations GLC has contracted, mainly workshops. Tom noted that we have taken reduced costs in several areas, including a lower lease rate and reduced costs for IT equipment maintenance and server storage. The Commission’s budget goal is to reduce benefits as a percentage of salaries to 40%. M. Miller asked how frequently the budget reviewed and reported to the Board. Crane responded “quarterly.” Tim asked for Board approval to present the budget to the full Commission and to schedule a conference call in early May. T. Huntley moved. The motion was seconded and approved.
4) **Clean Water Act**
Tim presented a draft resolution on the jurisdiction and authority of the Clean Water Act, to be presented by the Board at the Annual Meeting in Erie. States already on record in support to Congress of this policy, through communications to Congress include MI, NY, WI and OH. Miller spoke in support of the resolution. Ken D. suggested a revision to incorporate reference to the Rapanos case. Tim noted that he may ask for authorization to send a letter to Congress in the spirit of the resolution, should Congress schedule consideration of legislation to address the matter prior to the GLC Annual meeting. M. Miller asked for a motion to support the proposed letter. Boucher moved. The motion was seconded and approved. Tim will draft a letter and present to the Board before sending to Congress.

5) **Annual Meeting resolutions**
T. Eder asked for ideas for resolutions for the Annual Meeting in Erie, suggesting review of the Great Lakes Water Quality Agreement and the President’s proposed G.L. restoration budget initiative. M. Miller suggested soliciting suggestion by email.

6) **Energy papers**
Two discussion papers on energy issues were discussed. Both had been previously shared with Board members. The papers, on the nexus between energy/water conservation, and on oil sands development, were prepared by V. Pebbles and our Québec Research Associate Sarah Gagnon-Turcotte. V. Pebbles suggested scheduling a conference/symposium on the energy/water nexus paper. M. Miller remarked that Gov. Quinn is very interested this issue. Tim noted that the second paper, on the potential implications of oil sands development on the Great Lakes, draws information in part from a review by J. Barnes who was hired on contract after the BP proposal on Lake Michigan. C. Lucas asked that we approach the oil sands issue with the same degree of sensitivity to our Canadian colleagues as we have done with the ballast water issue. Tim noted that it was staff’s intent to circulate the paper with Canadian consulate colleagues prior broader distribution. M. Miller asked if the Commission had pursued further the creation of a multi-state data base of waste water discharge information. Tim responded that we have investigated it and are interested in pursuing it but it poses challenges. K. Burch noted that PA would support additional discussion in the area of energy and water related issues and that PA had done some project work in these areas and will have some additional information at the Annual Meeting in Erie. The Board concurred with plans for distribution of the two papers.

7) **Annual Meeting Update**
A planning conference call took place with K. Burch, J. Booser, L. Boughton and staff last week. K. Burch provided an update. The meeting will be held Sept. 29-30 at the new Bayfront Conference Center in Erie. Day one would start at 1 pm (although this may now change). Day two may go until 2 PM, depending on flight schedules. They are working on getting their new freshman Congresswomen Kathy Dahlkemper to speak on Tuesday. Panel and speaker possibilities are: 1) Great Lakes Restoration Initiative; 2) Water conservation and energy-water nexus, including successful lessons from outside of the GL basin; 3) Review/renegotiation of Great Lakes Water Quality Agreement; 4) “Short Sea Shipping,” and a discussion of the 50th Anniversary of the Seaway and where it goes in the future. A reception will be held at the Tom Ridge Environmental Center which overlooks Presque
Isle and Lake Erie. A local author and historian may be a speaker, possibly the new Great Lakes IMAX movie. T. Eder commented that we have a very full agenda. He will provide a draft agenda with timeframes for discussion at our next call.

8) **Program Updates**
   a) T. Eder advised that by the end of the month we should hear full details on spending of the $475 million appropriation.
   b) Staff has been working hard on preparing seven Habitat Restoration proposals to NOAA for their $170 million RFP.
   K. DeBeaussaert asked is Tim has heard anything about the recovery act funding and when the Corps is announcing their activities. Tim responded that the Corps briefing was postponed and hasn’t heard anything more.

9) The meeting was adjourned at 11:15. The next calls will be Friday, May 15 and Friday, June 19, both at 10 AM Eastern.

Respectfully submitted,

Tim A. Eder  
Executive Director

/rjs
1) T. Eder, acting for Vice chair Todd Ambs, called the meeting to order at 10 am. Friday, March 20, 2009 with the following members present:

M. Miller - Illinois
K. DeBeaussaert - Michigan
T. Huntley - Minnesota
D. Zelazny - New York
S. Logan - Ohio
C. Loucas - "
B. Carr - Ontario
John Booser - Pennsylvania
Lori Boughton - "
M. Boucher - Québec
T. Ambs - Wisconsin

Staff present: T. Eder; T. Crane; C. Manninen; R. Straith and M. Doss

2) Minutes
Tim reviewed the agenda, and asked for approval on the minutes of the last three meetings. T. Huntley made a motion that the minutes be approved and M. Boucher offered a 2nd. T. Eder asked for any additions or corrections and D. Zelazny commented that there were a few minor typos but nothing critical. Tim advised that staff would correct the typos and the minutes were approved.

3) Review of GL Day and Semiannual Meeting
Tim advised that staff had a debriefing on GL Day and Semiannual Meeting to review meeting highlights. The agenda worked well and the timing was good. We had good attendance from Administration staff which was a coup for us and made our meeting more important. Tim also thanked Ontario and Québec for their support for the excellent reception at Brookings Institution. Staff and Commissioners made 45 Congressional visits for Great Lakes Day, however, thought message wasn’t as sharp as could be and we were missing some states attendance due to budget restraints. We will work on making meeting smoother for some states next year.

Tim asked for comments. S. Logan expressed appreciation for the Harbor Maintenance resolution being on the agenda. D. Zelazny asked about future resolutions. Tim responded that he took some good notes and one area he thought we could work on is the “Cap and Trade.” All states have a broad agenda on this issue and it will be a challenge, however, Tim felt it would be worth our time to look at as an organization.

K. DeBeaussaert asked if the Commission would be putting some bullets together from the presentations. Tim responded that the presentations are on the web site now and the presentations will also be summarized in the minutes of the meeting. K. DeBeaussaert went on to asked about how we could improve the attendance at the breakfast, if it was worth doing at all and T. responded that he thought is worth doing and that for next year we could try to have it at the new Capitol Visitors Center between the House and Senate and perhaps have better food.
M. Boucher stated that this was their first Congressional visit and very much enjoyed the experience of being included with M. Miller and group on the visit to Congressman Oberstar. As the meeting progressed it became more and more focused on “foreign government” and next year Mark will have a clearer understanding of the process and how to work as a team rather than a “foreign government.”

T. Ambs commented that he thought the atmosphere in DC was different this year and made the suggestion that next year instead of doing all Hill visits, that we have meetings with administrative staff on important specific issues. M. Miller agreed that meetings with specific key committee staff could be good.

Tim asked that Board members please let us know if there is any follow up that they would like staff to do.

4) $475 million proposal for GL
The next item on the agenda is the budget proposal the President announced shortly after GL Day. The President recommended $475 million of new money for the Great Lakes for fiscal year 2010. Now we have to work hard to Congress to actually appropriate the money and Tim advised that we have been talking to our partner organizations, including the CGLG, on how to do this. There will be a meeting in Chicago that Dave Naftzger has put together to discuss how distribution could be done, how it relates to the GL Regional Collaboration and how states will express their input. This is a huge issue and we want to try to make sure the money is disbursed in a cooperative manner. Federal agencies have been approached for input however it isn’t clear how input from the states will be solicited. Tim asked for any suggestions. He and Matt Doss have drafted principles to get us started and have shared this with the CGLG, however no comments are reflected in these principles. GLC is turning the principles into a letter which will be presented to the Board for review noting we will be complementary to what CGLG is expressing. After the Board signs off on the letter we will send it to Obama and Lisa Jackson.

D. Zelazny responded that NY thinks it is important to point out that the original strategy was $21 billion and that although we are very grateful for the $475 million we should remind Congress that this is just a starting point. Tim responded that we want to make sure we make it clear that this is part of a 5 year initiative. K. DeBeaussaert stated that he is glad that the principles are being incorporated into a letter connecting back to the regional collaboration, rather than just a list.

5) Clean Water Act Jurisdiction
T. Ambs advised that this issue has been in process for several years. First following a 2001 Supreme Court ruling that severely restricted what types of wetlands the Clean Water Act applied to. States have been dealing with jurisdictional questions since then. Congressman Oberstar and Senator Feingold have been focusing, for several years, on the definitional question to get back to where we were before the Supreme Court decision. There has been some interest in seeing if the GLC would make an appropriate statement addressing this issue. Todd stated that he thinks it is time for the GLC to have a support resolution to address these issues.

Tim noted there is support from a number of states on this issue although some of our states will have some concerns with this. House and Senate have asked the GLC to weight in on it and Tim agrees with Todd that GLC should have a position on it, however, it is not going to be easy. Tim recommends that we draft a resolution for the next Board call and have it on the agenda for the September Annual Meeting. D. Zelazny asked if we need to act before our Annual meeting. Tim replied that you never know what Congress will do and our friends in Congress want this to move as quickly as possible and are looking for any opportunity that can used. Tim advised that the Board can act without the full Commission in a case of emergency however, since it is not on the Congressional calendar right now it doesn’t seem merit this kind of action. We need to be very careful on how we set a precedent for acting without the full Commission.
T. Ambs suggested we draft the resolution get comments and discuss it on our next Board call and be ready to go, if we need to, before the Annual Meeting. Tim agreed and proposed that he and Todd work on a draft and have it on the agenda for the April board meeting.

D. Zelazny asked how the Canadian provinces/government has dealt with this issue. B. Carr and M. Boucher agreed to check with their delegations.

6) Budget Timetable
According to our Bylaws, our 2010 Budget has to be approved 45 days before the beginning of the fiscal year, which is July 1st. Tim reminded the Board that last year the bylaws were amended to allow the Board to approve the budget in consultation, review and input from the Commissioners and to do that we have put together the following timeline. T. Crane advised that early in April a draft will be sent to the Finance Committee and a conference call will be convened on April 10. Then draft will be sent to Board prior to their April 17th Board call, get their input during the call, take those comments, send out that draft to all Commissioners and convene a conference call with all Commissioners in early May. The Board will then finalize the budget on their May 15th conference call, which will then meet our requirements of 45 days prior to the beginning of the fiscal year July 1.

7) Update on Proposals
a) We received grant from the Great Lakes Protection Fund for work on Great Lakes Information Network
b) We have submitted a number of proposals to the Dept. of Energy on wind and energy work for about $750,000 of requested funding
c) We are in the middle of putting together 7-9 proposals for a NOAA RFP at a minimum of $500,000 each. All are in Mich except Hog Island in WI. We have extended an offer to work with AOCs in other states.

8) M. Boucher asked about the Grand Canal issue status and Tim responded that Board doesn’t want any involvement in it and he stated that the matter is closed doesn’t feel any obligation to continue it.

D. Zelazny noted that the IJC will celebrate its 100th Anniversary on June 16 at Niagara Falls. He also noted that many senior dignitaries from both sides of the border will be there and thought that probably Tim and Gov. Quinn had been invited. He also suggested we at least draft a congratulatory letter. Tim responded that he planned to be there and also will draft a letter and share with Gov. Quinn.

9) Tim asked for any other matters and hearing none adjourned the meeting at 11am.

Respectfully submitted,

Tim A. Eder
Executive Director

/rjs
The Great Lakes Commission bylaws provide that:

The Commission shall be permitted to designate observers representing the United States and Canadian federal governments, provincial governments, regional organizations, or 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.

This request is forwarded for consideration by the Commission.
September 17, 2009

Via Email to teder@glc.org

Mr. Tim Eder
Executive Director
Great Lakes Commission
2805 S. Industrial Hwy, Suite 100
Ann Arbor, MI 48104-6791

Re: Great Lakes Environmental Law Center Request for Observer Status

Dear Mr. Eder,

The Great Lakes Environmental Law Center (GLELC) is an independent, not-for-profit, public interest environmental law organization established in 2008 “to protect the world’s greatest freshwater resource and the communities that depend upon it.” We are located in midtown Detroit at the exciting TechTown facility and have a board and staff of dedicated and innovative environmental attorneys to address our most pressing environmental challenges.

The GLELC is currently staffed by Executive Director, Noah Hall and Attorney, Nick Schroeck as volunteers. Hall and Schroeck also co-teach Wayne State University Law School’s Environmental Law Clinic, which launched in the summer of 2009, with student enrollment beginning this fall. The Environmental Law Clinic has a close partnership with the GLELC, providing an opportunity for students to learn critical skills of policy advocacy and legal strategy while serving an unmet need for legal services for environmental and community organizations in Michigan. Our range of work includes informal guidance and public education, policy development, and formal representation in specific matters. The GLELC assists citizens, governments, and non-governmental organizations. It works in all three branches of government – judicial, executive (administrative), and legislative – in roughly equal amounts. Being involved in all aspects of the policy making and implementation process, we are highly effective advocates.

As our name implies, Great Lakes protection and restoration has been a key component of our work and will continue to be in the future. We share with the Great Lakes Commission the desire to promote the sound management and conservation of the Great Lakes and related natural resources. We also believe that our region’s economy and quality of life are inseparable from the health of the
Great Lakes and St. Lawrence River basin ecosystem. The GLELC appreciates the leadership demonstrated by the Great Lakes Commission and we look forward to working together to protect and enhance our international treasure.

We respectfully request that the GLELC be granted Observer status to the Great Lakes Commission.

Sincerely,

Noah Hall
Executive Director

Nick Schroeck
Attorney
The Great Lakes Environmental Law Center

The Great Lakes Environmental Law Center was founded to protect the world’s greatest freshwater resource and the communities that depend upon it. Based in Detroit, the Great Lakes Environmental Law Center has a board and staff of dedicated and innovative environmental attorneys to address our most pressing environmental challenges. The Great Lakes Environmental Law Center was also founded on the idea that law students can and must play a significant role in shaping the future of environmental law. In all of our work, law students are one of the Great Lakes Environmental Law Center’s most valuable resources.

Our current projects:

Meeting the challenge of climate change

Stopping the spread of aquatic invasive species

Finding alternatives to transbasin water diversions

Implementing the Great Lakes Compact

Transitioning to clean energy

Reforming water law

For more information on the Great Lakes Environmental Law Center or to learn more about how you can help with our work, please email Noah Hall, Executive Director.
GREAT LAKES ENVIRONMENTAL LAW CENTER

Board and Staff

Noah Hall, GLELC Executive Director – Noah is a professor at Wayne State University Law School and a visiting professor at the University of Michigan Law School. Before joining the Wayne State faculty, Noah was an attorney with the National Wildlife Federation, where he managed the Great Lakes Water Resources Program for the nation’s largest conservation organization. Noah also worked in private practice in Minnesota for several years, representing a variety of business and public interest clients in litigated and regulatory matters. He graduated from the University of Michigan Law School and the University of Michigan School of Natural Resources and Environment, concentrating in environmental policy. Click here for more information on Noah’s work and publications.

Leor Barak, GLELC board of directors – Leor is the Pro Bono Program Manager for Community Legal Resources in Detroit. He has over four years of legal, public interest, and community experience, most of which has involved communities in the City of Detroit. After some experience working in the corporate legal environment and in private practice, Leor litigated as a practicing student attorney and served as a Board Member at the Free Legal Aid Clinic, Inc., which provides legal services to low income individuals. In addition, Leor has experience with the Civil Rights Division of the Attorney General’s Office as well as the Wayne County Corporation Counsel. He is a graduate of Wayne State University Law School and the University of Michigan and is currently working towards a Masters in Business Administration from Kettering University.

Kathryn Loomis, GLELC board chair – Kathryn is currently taking time off from work for the birth of her first child. She recently completed a clerkship with the Honorable Marilyn Kelly, Justice of the Michigan Supreme Court. Her previous legal experience includes positions with the Michigan Court of Appeals, the Office of the Washtenaw County Public Defender, and in private practice. Kathryn is active in local politics and government. At present, she is acting chair of the Ann Arbor Zoning Board of Appeals. She is a graduate of Wayne State University Law School and the University of Michigan.

Ralph H. Schofield, Jr, Postgraduate Fellow - Ralph recently graduated from the University of Michigan Law School. While in school, he competed with two national moot court teams and was a member of the Moot Court Executive Board. He served as a law clerk for the United States Environmental Protection Agency, the National Wildlife Federation's Great Lakes Natural Resource Center, and a large Atlanta law firm. Ralph is most interested in environmental litigation and public accountability. He plans to develop a related practice or nonprofit advocacy organization in Florida. Prior to law school, Ralph taught high school biology, chemistry, and mathematics. He holds undergraduate degrees in physics and philosophy and a graduate degree in toxicology and risk assessment from the University of South Florida.

Nicholas Schroeck, GLELC board of directors treasurer – Nick is a Regional Representative for the National Wildlife Federation. He works out of the Great Lakes Natural Resources Center in Ann Arbor. Prior to joining NWF, Nick was a Sea Grant Fellow with the Great Lakes Commission. Before his tenure with the Commission, he worked with the Michigan Attorney General's Office Criminal Division, assisting in criminal and civil environmental prosecutions. During law school Nick also served as Executive Board Secretary and as a Student Attorney at the Free Legal Aid Clinic in Detroit. Nick is a licensed Michigan attorney and a graduate of Wayne State University Law School. He also holds a B.A. in Urban Studies and Political Science from Elmhurst College in Illinois.

Bret Stuntz, GLELC board of directors – Bret is an attorney and geologist, and his work combines his knowledge in both fields. He recently co-authored a report for the National Wildlife Federation on Climate Change and Great Lakes Water Resources and has published other work on climate change and water resource policy. Before becoming an attorney, Bret was a project manager and environmental consultant for AKT Peerless Environmental Services. He is a graduate of Wayne State University Law School and the University of Pennsylvania.
Role and Responsibility of Observers

The Great Lakes Commission is a binational agency founded in state and federal law, with a goal to "promote the orderly, integrated, and comprehensive development, use and conservation of the water resources of the Great Lakes Basin-St. Lawrence system." Primary decisionmaking authority, as stipulated in the Great Lakes Basin Compact, rests with individual’s comprising the state/provincial delegations to the Commission. These Commissioners recognize that informed and effective decisionmaking is best accomplished in a setting that encourages the open exchange and discussion of relevant information and viewpoints on a Basinwide, binational basis. For this reason, Commission Bylaws were amended in 1993 to provide for an Observer program. Under Article II, Section 4 of the Bylaws, the Commission is permitted "to designate observers representing the United States and Canadian federal governments, provincial governments, regional organizations, or any others it may so designate to advance the goals and objectives of the Great Lakes Basin Compact." Such Observers "may be permitted to participate in discussions, deliberations and other activities as approved by the Commission, but shall have no vote."

Presented below is a series of expectations that should be met by each Observer in the performance of his/her duties under the terms of Great Lakes Commission Bylaws. It is recommended that these expectations be periodically reviewed by each Observer in the interest of maintaining an efficient and effective organization that meets the goals of the Compact.

Each Observer is expected to:

1) Be fully versed in the goals and objectives of the Great Lakes Basin Compact, and in the structure and operation of its implementing agency, the Great Lakes Commission;

2) Serve as an initial point of contact for Great Lakes-related inquiries to your agency/organization;

3) Participate regularly in all relevant Commission activities, including regular attendance at semiannual and annual meetings of the Commission;

4) When requested, consider membership and active participation on one or more Commission task forces or groups addressing issues consistent with his/her areas of interest/expertise;

5) Ensure that draft policy positions and related Commission materials are circulated for review and comment, as appropriate, within his/her agency/organization;

6) Serve as a conduit to ensure that Commission members and staff are well informed of policy issues and developments within his/her agency/organization;

7) When requested by the Commission, and where possible, be available to represent the Commission and its applicable task forces at meetings, hearings and other events.

(over)
8) Organize roundtables, workshops and other meetings, as needed, for the mutual benefit of the Commission and his/her agency/organization;

9) Designate an alternate who is authorized to represent the Observer agency/organization in the event that he/she is unable to attend a given event or participate in policy discussions.

10) Be accessible to Commission staff for periodic inquiries concerning Commission business.

11) Where necessary and appropriate, work within his/her agency/organization to secure financial support, in-kind services or related resources that may be required to support activities of mutual interest.

12) Maintain an active role in Commission operations, including provision of advice, support and feedback on all aspects of Commission activities and, in particular, setting regional priorities and identifying opportunities for joint initiatives.
ACTION ITEMS

Included in this section are three action items for consideration by the Commission:


- a recommendation to establish a Great Lakes Water Quality Agreement (GLWQA) working group to monitor progress on the renegotiation of the Agreement and to develop a formal position statement outlining the Commission’s views regarding state and provincial involvement in the renegotiation process; and

- a white paper, in which the Great Lakes Commission offers recommendations on behalf of its member states for implementing the Great Lakes Restoration Initiative and maximizing its effectiveness. These recommendations represent a consensus-based synthesis of feedback provided to U.S. EPA by the eight Great Lakes states this summer.
RESOLUTION – DRAFT

The Water Energy-Nexus:
Linking Water and Energy Planning in the Great Lakes

Whereas, water and energy are inextricably linked; and

Whereas, ensuring clean safe water requires large amounts of energy to supply, purify, distribute, and treat water and wastewater; and

Whereas, approximately 80 percent of municipal costs associated with water processing and distribution are for the energy (electricity) alone; and

Whereas, supplying energy requires large amounts of water and impacts Great Lakes water quality, water quantity and water-dependent natural resources;

Whereas, thermoelectric power plants that burn fossil fuels (e.g., coal, natural gas or petroleum) are the largest source of energy in the Great Lakes, which represented 70 percent of the region’s electric supply in 2006; and accounted for nearly 75 percent of all water use in the Great Lakes basin in 2004, excluding hydropower; and

Whereas, electricity is expected to meet a large portion of the region’s anticipated additional power generation in light of projected long-term demographic shifts and economic growth coupled with the threat of global climate change and mounting pressure for greater U.S. energy security; and

Whereas, the Great Lakes and St. Lawrence River region’s vast supply of freshwater makes it particularly attractive for water-intensive energy production and potentially competing demands on Great Lakes and St. Lawrence River water resources; and

Whereas, the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement and the Great Lakes-St. Lawrence River Basin Water Resources Compact require new and existing water withdrawals to demonstrate efficient use of water resources; and

Whereas, energy planning and water planning are currently done separately, compromising the region’s ability to effectively evaluate and plan for future water and energy needs.

Therefore, be it resolved, that the Great Lakes Commission supports the establishment of new protocols and management models that engage water resources management and energy generation in consultative planning processes; and

Be it further resolved, that Great Lakes and St. Lawrence River state and provincial water resource planning agencies should be consulted early in the planning process to evaluate and make recommendations concerning water use by the energy sector (including, fossil-fuel fired power, nuclear, refining and biofuels plants) to achieve water efficiencies and conservation objectives as envisioned by the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement and the Great Lakes-St. Lawrence River Basin Water Resources Compact; and
Be it further resolved, that the Great Lakes Commission calls on federal agencies in the United States and Canada, including the U.S. EPA, Department of Interior (USGS) the U.S. Department of Energy, and Environment Canada, Natural Resources Canada, and Fisheries and Oceans Canada to collaborate with each other and consult with the Great Lakes states and provinces concerning energy and water policies; and

Be it finally resolved, that the Great Lakes Commission stands ready to help position the region as a global center for clean water, renewable energy and energy efficient technologies.

**Action Item for Consideration by the Great Lakes Commission**

Recommendation to establish a Great Lakes Water Quality Agreement (GLWQA) working group to monitor progress on the renegotiation of the Agreement and to develop a formal position statement outlining the Commission’s views regarding state and provincial involvement in the renegotiation process

*Presented to the Great Lakes Commission for consideration  
September 30, 2009*

**Background**

The announcement this past June in Niagara Falls from both the United States and Canada regarding a renewed commitment to amend the Great Lakes Water Quality Agreement (GLWQA) presents an opportunity to discuss the role of the Great Lakes Commission in the renegotiation process. The last time the Agreement was amended was 1987. The Agreement has played an historic and important role in shaping the strategies of both nations to protect and restore the Great Lakes and St. Lawrence River.

The Commission has voiced its historic support for the GLWQA in previous resolutions. Key points from these previous approved policies include:

- Successful implementation of a renewed Agreement will only be achieved with close coordination and the full partnership from the eight Great Lakes states and the provinces of Ontario and Quebec.

- State and provincial governments as well as stakeholders from local government, business and industry and environmental non-government organizations should be closely consulted and included in discussions of any new or renewed Agreement.

- A renewed Agreement will require the full commitment on the part of the federal governments to advance Great Lakes—St. Lawrence River protection and restoration efforts.

In July, the Commission’s Board of Directors had a brief discussion regarding how best to involve the Commission in the renegotiation process and whether to establish/reiterate a formal position (e.g., a prepared statement, a resolution to be presented at a Commission Meeting or a letter to the two governments) that declares the desired role of the Great Lakes States and Provinces in the renegotiation process. The Board decided to present a recommendation at the 2009 Annual Meeting to form a GLWQA working group to investigate the timing and desirability to these different options.

**Recommendation**

The Board recommends the establishment of a working group in October 2009 comprised of Commission staff and Board appointees from the states/provinces to monitor progress on the renegotiation process and help inform the Commission regarding timing and process for preparing a more formal position statement on the desired role of the states and provinces in the renegotiation process. This working group will likely meet several times via conference call over a three to six month period. Each member of the Board will be invited to appoint a representative from their state/province to serve on the working group and help develop a position statement for communication to the federal governments in early 2010.
Remarks at the 100th Anniversary of the Boundary Waters Treaty

Hillary Rodham Clinton
Secretary of State

Rainbow Bridge, Niagara Falls
June 13, 2009

Good morning. What a glorious day, and it's an absolute delight for me to be here on this occasion. I take any excuse I can to get back to come back to New York, and to celebrate this commemoration with all of you and to have an opportunity to spend time with my Canadian counterpart, Minister Cannon, is indeed a privilege.

I just want to recognize the significance of this extraordinary moment in time. The friendship between the people of the United States and Canada is the strongest in the world. There is no border that is longer and more peaceful; there is no greater trade between two nations. There are so many values that we share in common, and today we celebrate a treaty that helped to make this friendship possible 100 years ago.

The people who understood the significance of our relationship and the beauty of our natural surroundings were far-sighted and Treaty of 1909 made official something that people on both sides of the border have known for generations: that the rivers, the our boundary do not belong to one nation or the other, but to both of us. And we are therefore called to be good stewards in the. These waterways sustain some of Canada's and America's greatest cities. They foster travel and trade, they provide drinking wa and, of course, they offer some of the most beautiful vistas in all of creation.

Even as countries elsewhere in the past and today clash over natural resources, Canada and the United States have worked to these waters and caring for their long-term health. Now, when we've had differences, which all friends do, and even families, fo through. The International Joint Commission created by the Treaty has helped us to resolve our differences quickly and fairly.

The treaty has also established a sense of cooperation along the border. Other than comments about which side of the border h something that we hear but don't accept. It is so wonderfully easy to travel between our two countries, except for today, when I'm glad I'm no longer an elected official. (Laughter.) And I think when we look to the extraordinary relationship that we have b much traffic goes across this bridge - not just carrying goods as part of our trade relation, and not just visits by tourists, but re children who play hockey on one side, who work on the other side, who have a summer home on one side. There is so much tre literally minute-by-minute basis. In fact, 300,000 people cross the border every single day to spend some time in the country n through a military checkpoint to do so. Our border reflects our trust in one another.

Now, to properly celebrate the 100 successful years of this treaty, we have to do more than honor the past. We have to recomm partnership and find new ways to work together to solve common problems. As we look at this alliance that exists between the stunning, $1.6 billion in goods flows across this border every single day. Many of our industries actually work hand-in-hand, sup countries. We have the world's largest energy trade relationship. Our power grids work together seamlessly, most of the time. V and defense. Our soldiers are serving shoulder-to-shoulder in Afghanistan. And we share a commitment to promoting democrac worldwide. So our comprehensive alliance in the 21st century will move us even closer together as we collaborate to improve co but across the world.

One area where we must join forces is in protecting our environment, especially our shared waters. Article IV of the Boundary V either country, which made this treaty one of the world's first environmental agreements. By 1972, our nations took another step the Great Lakes Water Quality Agreement, which lays out the goals and guidelines for restoring and protecting the chemical, ph Great Lakes Basin.

The Great Lakes-St. River system is a treasure. It contains one-fifth of the world’s fresh surface water. It provides millions of pe day. So it’s crucial that we honor the terms of the Great Lakes Agreement as it stands today, but we also have to update it to re and, unfortunately, new threats.

The Agreement was last amended in 1987 and since then, new invasive species have appeared in our lakes, new worrisome che industrial processes, our knowledge of the ecology of the region and how to protect it has grown considerably. In its current for: not sufficiently address the needs of our shared ecosystem.

So I’m pleased to announce that Canada and the United States have agreed to update the Great Lakes Water Quality Agreement working closely with state, provincial, and local governments throughout Canada, as well as other stakeholders, in the coming n reflects our best knowledge and our unshakable commitment to preserving this vital natural resource.

Now, as we work together on this, we must also strengthen our response to other environmental threats, especially climate cha facing our world which endangers our world’s water sources, the safety of coastal regions, the future of agriculture and health, i everywhere. It is a paramount threat, and it demands effective and bold action, which can only be achieved through partnership

The Canadian-American border is such a precious reflection of our great relationship, and it reminds us that although we may si sung different anthems, our nations grew from the same land and the same ideals. It falls to us as it falls to every generation to friendship. We look forward to many more years of working with you to achieve our common goal, and many more days of cele today in a beautiful, wondrous creation that God has given us to preserve and maintain.

Thank you all very much.
News Release

June 13, 2009 (12:30 p.m. EDT)
No. 161

Canada and United States Committed to Amend
Great Lakes Water Quality Agreement

The Honourable Lawrence Cannon, Minister of Foreign Affairs, and U.S. Secretary of State Hillary Rodham Clinton today announced, during the official celebrations for the 100th anniversary of the Canada-U.S. Boundary Waters Treaty, that Canada and the United States are committed to amending the Great Lakes Water Quality Agreement.

“These inland waters are the largest system of fresh surface water in the world, part of our natural heritage and the foundation for billions of dollars in trade, shipping, agriculture, recreation and other sectors,” said Minister Cannon. “In seeking to amend the Great Lakes Water Quality Agreement, we will modernize it to address new challenges and reduce pollution. Joint stewardship of the environment is a cornerstone of the Canada-U.S. relationship. This aspect of our long history of collaboration will remain strong as we begin a second century of jointly managing our shared waters, which have served as both a treasured resource and a critical transportation link.”

The Great Lakes Water Quality Agreement addresses threats to water quality in the Great Lakes and in the portion of the St. Lawrence River that straddles the Canada-U.S. border.
First signed in 1972, and last amended in 1987, the Agreement affirms the rights and obligations of Canada and the U.S. under the Boundary Waters Treaty of 1909, in particular their obligation not to pollute boundary waters. The Agreement is a model of international cooperation and has achieved numerous successes, including a significant reduction in the levels of pollutants, such as polychlorinated biphenyls, mercury, dioxin and furans. The Great Lakes have also seen the return of key species such as the bald eagle, signalling a return of the ecosystem’s health.

However, the Great Lakes are still at risk from current and emerging challenges such as increased population and urbanization, land use practices, invasive species, new chemicals and the impacts of climate change. Negotiations over the coming months will aim to strengthen and modernize the Agreement to better address these perils.

"The Great Lakes are a crucial environmental, social and economic resource," said the Honourable Jim Prentice, Minister of the Environment. "The Great Lakes ecosystem is best protected through a coordinated effort, under an amended agreement that supports objectives on both sides of the border."

The announcement of the Government of Canada’s intention to amend the Great Lakes Water Quality Agreement was made after considering input from the Government of Ontario, First Nations, municipalities, non-governmental organizations and other Great Lakes stakeholders. Continued engagement of these partners will be important to ensure that an amended agreement establishes a cooperative agenda for action by all parties in order to continue to improve Great Lakes water quality and aquatic ecosystem health.

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A backgrounder on the Great Lakes Water Quality Agreement and Canada’s initiatives regarding the Great Lakes follows.

For further information, media representatives may contact:

Natalie Sarafian
Press Secretary
Office of the Minister of Foreign Affairs
613-995-1851

Backgrounder

The Great Lakes Water Quality Agreement and Canada’s Initiatives Regarding the Great Lakes

The Great Lakes Water Quality Agreement (GLWQA) is a model of international cooperation that has led to new thinking on environmental policy. First signed in 1972, and last amended in 1987, this agreement demonstrates Canada and the United States’ commitment to restoring and maintaining the integrity of the waters of the Great Lakes Basin ecosystem.

The GLWQA addresses water quality issues in the Great Lakes Basin and the portion of the St. Lawrence River that straddles the Canada-U.S. border. It sets out common objectives and commitments, and outlines provisions for the development of cooperative programs and research. It also assigns special responsibilities to the International Joint Commission, an independent advisory body that works to prevent and resolve disputes between Canada and the United States under the 1909 Boundary Waters Treaty.

Working under the GLWQA, Canada and the United States have instituted major changes to waste-water treatment and land-management practices to significantly reduce the levels in the Great Lakes of pollutants, such as polychlorinated biphenyls, mercury, dioxins and furans.

Current Government of Canada efforts in the Great Lakes include restoring ecosystem health in areas of concern, developing and implementing Canada-U.S. management plans, reducing pollution, and carrying out monitoring and research. For example, the government has allocated $48.9 million to accelerate the cleanup of contaminated sediment in eight areas of concern. These initiatives are funded, in part, through the government’s Great Lakes Action Plan and its Action Plan for Clean Water.
In recent years, the Canadian government has taken numerous strides in protecting the Great Lakes for communities and ecosystems that depend upon a safe and secure supply of water, including the following initiatives:

- In October 2007, the government announced a five-year, $60-million commitment to the Health of the Oceans Initiative. This initiative protects Canada’s waterways from ship-source pollution by enforcing regulations, improving monitoring capabilities and supporting pollution-prevention research.

- In May 2007, the government announced Canada’s new consolidated, zero-tolerance national regulations for the prevention of pollution from ships and for dangerous chemicals. The regulations apply to all ships in Canadian waters and make it illegal for them to deliberately, negligently or accidentally discharge pollutants into the marine environment.

- In 2006, Minister Cannon, then Canada’s Minister of Transport, Infrastructure and Communities, announced that, under the Ballast Water Control and Management Regulations, there would be zero tolerance for the dumping of ballast waters in the Great Lakes. This prohibition further reduces the risk of harmful aquatic species and pathogens being introduced into Canadian waters.
Using the multi-year Great Lakes Restoration Initiative designed to address the most pressing environmental issues facing the Great Lakes. The Initiative will be led by the U.S. Environmental Protection Agency (U.S. EPA) and coordinated with other federal agencies through the Interagency Task Force.

Successful implementation of the Initiative will depend on close coordination with many stakeholders, especially state agencies. The Initiative builds on the framework and recommendations established in 2005 in the Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes (GLRC). Through the leadership of the Great Lakes governors, states were key to the development of the GLRC and since then have consistently called for increased federal support for its implementation.

In July 2009 U.S. EPA released a draft Great Lakes Multi-Year Restoration Action Plan Outline to guide implementation of the Great Lakes Restoration Initiative (GLRI) over a five-year timeframe (FY 2010-2014). The document identified five focus areas for the Initiative, including toxic substances and Areas of Concern; invasive species; near-shore health and nonpoint source pollution; habitat and wildlife protection and restoration; and accountability, monitoring, evaluation, communication and partnerships. The President’s FY 2010 budget requests $475 million for the GLRI, which will be distributed by U.S. EPA through both its own programs and those of other federal agencies. A substantial portion of the funding will be administered to nonfederal partners via grants, cooperative agreements and contracts.

In July and August U.S. EPA convened a series of meetings across the Great Lakes basin to review the GLRI and secure feedback on the draft Action Plan Outline. Separate meetings were held in each state for the public and state agencies, and regional conference calls were held for Great Lakes tribes and cities. The Great Lakes Commission assisted U.S. EPA in convening the meetings and summarizing comments submitted.

The meetings demonstrated the high level of enthusiasm and support among states for the proposed Initiative. At the meetings, states were able to engage in detailed discussions with EPA as planning for GLRI implementation unfolds. States presented many of their restoration priorities and identified many of the challenges and opportunities they anticipate. The meetings were well attended by senior managers from multiple agencies in each state. States submitted detailed written comments outlining their priorities and recommendations. The vast majority of comments from the states and other stakeholders were supportive and constructive, reflecting the unprecedented degree of enthusiasm over the prospect of substantially advancing the restoration and protection of the Great Lakes.

Great Lakes Restoration and the Role of the States

The eight Great Lakes states have a unique and leading role to play in implementation of the GLRI. The Great Lakes governors began the process of developing the regional restoration plan by articulating nine priorities around which to focus such a program. The governors, together with the Great Lakes Commission and many other partners, have advocated persistently with Congress and the Executive Branch for leadership in developing and funding a Great Lakes restoration program. The framework for
this program was developed under the Great Lakes Regional Collaboration, a year-long planning process under which the states, federal agencies, cities, tribes and nongovernmental organizations united to craft a consensus-based strategy for restoring the Great Lakes. The Great Lakes Regional Collaboration was guided by the governors’ priorities and the states were key leaders – and prime contributors – to the final 2005 Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes. As such, the states are key “owners” of the restoration strategy.

Since release of the strategy the states have worked to implement recommendations and address the serious environmental problems facing the Great Lakes. Many of the states have developed state-specific restoration plans designed to “step down” the regional restoration plan to address specific problems within their jurisdiction. Despite severe fiscal constraints facing the region, substantial investments are being made to restore and protect the Great Lakes. Finally, and perhaps most significant, the states united in establishing an historic regional Compact to ensure that the quantity and quality of Great Lakes water are managed for the well-being of future generations.

The Great Lakes states will be on the “front line” in implementing the GLRI. Cooperation and close coordination between EPA and other federal agencies and states is paramount. The states understand the priorities of local governments and stakeholders and are best positioned to coordinated local activities. More than any other level of government, the states have the technical understanding of the problems facing the lakes; the regulatory and programmatic tools to address them; and the skilled and committed staff needed to carry out the restoration effort. Finally, the states – through their citizens and their political leaders – understand the profound role the lakes play in driving their economies and their way of life and, thus, the imperative to restore and protect them for future generations.

**Recommendations for Implementing the Great Lakes Restoration Initiative**

The Great Lakes Commission offers the following recommendations on behalf of its member states for implementing the GLRI and maximizing its effectiveness. These recommendations represent a consensus-based synthesis of feedback provided to EPA by the eight Great Lakes states this summer and reflect additional views arising during ongoing preparation.

As stewards of the lakes and long-time advocates for their restoration and protection, the states bear substantial responsibility for ensuring that restoration funding is spent wisely and achieves the desired outcomes. The states, together with their federal, local, tribal, and nongovernmental partners, share the accountability for the success of this substantial investment in the region.

1. **Recognize the unique role of the states as key partners in implementing the GLRI**

   It is essential that EPA and its partner federal agencies recognize that states have specific priorities for Great Lakes restoration and protection, including priorities articulated in state-specific restoration plans. The states are already heavily engaged in implementing existing plans developed through state wildlife action plans, the North American Wetlands Conservation Act, the Great Lakes Fishery Commission, Remedial Action Plans for Areas of Concern, and others. The states are in the best position to identify specific places that should be afforded the highest priority for implementation. States are in the best position to coordinate activities of local governments and stakeholders within their borders.

2. **Provide a mechanism for states to participate in establishing priorities and managing the GLRI**

   The states should be involved in defining annual priorities, establishing goals and objectives in the multi-year action plan, reviewing results of reporting and monitoring, recommending changes and adapting to evolving needs as the GLRI moves forward. Focused consultation, building on this summer’s series of meetings, is imperative and should be instituted on an ongoing basis to assess progress being made under the GLRI, address obstacles and adopt new approaches. This should occur both at a high level with senior
agency managers to guide the overall collaborative effort and at a topic-specific level to manage restoration efforts in key areas (e.g., habitat restoration). EPA and its partner federal agencies should work with the states to determine if exiting institutional structures can be adapted for this purpose, or if new or revised approaches are needed. At a minimum, the existing structure under EPA’s leadership with the Interagency Task Forces should be adapted to better engage the states and provide mechanisms for interaction with other stakeholders.

3. **Establish large, “bundled” approaches to administering grants under the GLRI**

Consolidating multiple projects into large, “bundled” grants will enable the states to more efficiently administer the GLRI program within their jurisdiction. States urge EPA and its federal partners to develop mechanisms to bundle large grants that cut across the five focus areas of the GLRI. This approach will minimize administrative work, allow states to focus on their highest priorities, and ensure visible results. This will also improve transparency and accountability while coordinating GLRI efforts with state restoration plans and topic-specific plans. This will also enable the states to package projects for critical watersheds and geographic areas to maximize environmental outcomes.

4. **Increase coordination among federal agencies to consolidate funding and reduce the administrative burden on grantees**

Differing application, reporting and administrative requirements among federal agency grant programs will pose a heavy administrative burden on states and other entities implementing restoration efforts under the GLRI. To the maximum extent possible, the federal “family” should coordinate, pool resources and consolidate duplicative funding opportunities. Federal agencies are urged to coordinate the timing of calls for proposals, and develop consistent approaches for applying for and administering grants across various federal agencies and programs.

5. **Provide funds for administrative support**

States across the nation are experiencing unprecedented fiscal constraints that have resulted in reduced staffing and other challenges. Thus, to ensure adequate state engagement in and administration of restoration efforts under the GLRI, federal agencies should allow reasonable administrative costs to be included in funding proposals.

6. **Establish and support a coordinated, efficient, streamlined reporting and accounting system**

States recognize and embrace the importance of accountability and transparency, but recognize that there could be excessive administrative costs to execute these responsibilities. EPA and its partner federal agencies should work with the states to develop and implement an accountability system that is based on transparency, common sense and minimization of transaction costs.

Reporting and accountability should be recognized as an essential element of all of the focus areas, and not separate requirement. A common, region-wide reporting system will reduce transaction costs for grant recipients and improve transparency, accountability and adaptive management. Providing funding to states and other grantees to assist with project tracking, coordination, public outreach, and progress reporting is essential for ensuring transparency, collecting feedback to effectively manage the GLRI over time, and building support for additional funding. Reporting requirements should be simplified to collect necessary information and to track progress without detracting from efficient project implementation. Results should be reported in a manner that is transparent and that allows for sharing of data with the public.
7. **Utilize existing plans and strategies to guide restoration efforts under the GLRI**

Substantial effort has been invested in developing plans, including both statewide restoration plans as well as plans focused on specific geographic areas or topics. As much as possible, these plans should be utilized to guide restoration efforts. EPA and other federal agencies should avoid spending GLRI funds on new plans or studies, except where these are needed to accurately target restoration activities, provide technical guidance, engineering specifications or similar information critical to the effective allocation of funding.

8. **Use the states to coordinate projects and avoid duplication of efforts**

EPA and other federal agencies should develop a management mechanism to avoid duplication of efforts and support for projects that may conflict or compete with state priorities. With an unprecedented level of funding being administered by up to 16 federal agencies – and often through multiple programs in each agency – there is significant risk of duplication and competition among different levels of government and with nongovernmental entities. It is imperative that all parties collaborate on restoration efforts within watersheds and the states are best positioned to facilitate this coordination.

9. **Reduce or eliminate match requirements**

A key challenge for the Great Lakes states, as well as other partners, is providing matching funds for federal restoration programs. This is an especially severe challenge during these times of fiscal crisis, budget deficits, staff reductions and hiring freezes. Awarding grants to projects that can produce the highest level of nonfederal funding could have the effect of favoring areas of greater wealth rather than areas with the most significant environmental needs, benefits or potential returns. Federal agencies should exercise maximum flexibility in reducing or eliminating requirements for nonfederal matching funds, counting in-kind or other contributions, and helping organizations identify resources and approaches to meet match requirements.

10. **Support additional research to inform and guide restoration efforts**

The GLRI should support research that can ensure more effective restoration actions over time. While restoration efforts should be initiated immediately with a bias toward on-the-ground actions, additional research is important to prepare for implementation in future years, and will lead to more cost-effective restoration and sustained productivity.
ILLINOIS

Illinois Department of Natural Resources submitted a list of priority projects for funding under the GLRI. This list includes projects related to the Illinois State Beach, Waukegan Area Watershed best management practices, the Lake Calumet Region, invasive species, as well as Great Lakes research and ecological evaluation. Illinois is currently working to outline how IDNR could best coordinate the administrative aspects of the GLRI in Illinois.

MICHIGAN

Michigan noted the development of the *MI-Great Lakes Plan, Our Path to Protect, Restore, and Sustain Michigan’s Natural Treasures.*

Funding should include support for local Technical Assistance, which is critical to implementing landowner practice changes that are required to accomplish the nonpoint source pollution, protection, and restoration goals of the GLRI. The GLRI needs to recognize the importance of protecting and improving source water for surface water intakes.

While accountability and transparency are extremely important for overall tracking of the Initiative, accountability should also be imbedded into each of the four resource focus areas rather than viewed as an external parallel category. The integration of this category within the other four areas will provide a unifying presence that should be used to connect the funding efforts together to maximize on the benefits from the investment.

Michigan concurs with the approach of using the best available science to support rehabilitation activities, particularly for guiding future policies and program changes that may need to occur as a result of implementing this initiative.

Panels such as those brought together by the National Academy of Science have resulted in positive changes for ecosystems such as the Klamath River basin and the Everglades. Clarification is needed regarding how the panels will be initiated, the timeline under which they will work and their length of service. Redundancy with standing panels that currently exist throughout the Great Lakes basin should be avoided.

MINNESOTA

Minnesota Pollution Control Agency noted that restoration on Lake Superior will look very different from the rest of the lakes, and urged that restoration be viewed in the broadest context possible. MPCA also noted the importance of retrofitting older urbanized areas, and suggested that funding be provided for retrofitting best practices and management measures.

NEW YORK

New York is very appreciative of President Obama's proposed GLRI and recommends that the GLRI Multi-Year Restoration Action Plan waive non-federal matches and incorporate a block grant approach to help support the limited state resources available for implementation and accountability, while optimizing efficiencies in distributing funding via existing State authorities and grant mechanisms. New York also urges including the eighth Great Lakes Restoration Strategy Priority of "Sustainable Development" as a new Focus Area to more effectively coordinate a variety of other environmental programs such as the preservation of agricultural and forested lands, green infrastructure, climate change adaptation, and community education and recreation programs that will substantially benefit the people and enhance long-term stewardship, particularly in environmental justice communities clustered in urban locations. New York also noted that GLRI funding should support the establishment and implementation of watershed management/restoration programs for the major urban rivers and watersheds within the Great Lakes.
basin. New York encouraged funding for an Urban Rivers Initiative that encompasses multiple programs within the most environmentally degraded and economically challenged sections of the Great Lakes system.

**OHIO**

Ohio noted that the issue of dredging and the reuse of dredged material has not been adequately addressed. While this may be more of an issue in Lake Erie and specifically significant for Toledo Harbor (need to eliminate open lake disposal), it is a very large issue and needs to be addressed. At the same time, there is significant interest in additional dredging at both large commercial ports and smaller harbors. The economic impact of the ports, the economic and environmental importance of beneficial reuse of dredge material and the implications of reduced dredging capabilities due to a lack of financially feasible alternatives must be addressed.

In addition, the issue of “priority” watersheds, etc. needs to be addressed. What these are and how they will be determined should be made a bit clearer to assist the states and locals in their efforts to target their efforts on projects most likely to attract funding. Ideally, state and local entities would have a role in identifying the priority watersheds, etc.

The issue of climate change and assistance with adaptation of both human and natural environments to expected changes is not well addressed within the plan. Inclusion of funding tied to the outcomes of climate change would be encouraged.

Little attention is paid to recreation and additional recreational opportunities beyond beaches. Marinas and private boaters have an impact on lake quality, and a motivation is needed for minimizing their impact. Programs such as capital improvement grants and loans would be beneficial for these entities.

**PENNSYLVANIA**

Pennsylvania Department of Environmental Protection (DEP) is working to integrate the numerous existing federal, state and local restoration plans into a specific set of priorities and actions that will be the blueprint for future action by both government and non-government organizations in Pennsylvania.

Pennsylvania DEP encouraged the federal agencies to reinvest in existing programs that provide funding to the states for implementation of activities like water quality assessments, addressing non-point sources of pollution, and Total Daily Maximum Load development under the Clean Water Act, brownfields assessment and cleanup, and stormwater management. Allocating funds specifically for work in the Great Lakes watersheds allows the states to focus attention on problems in the basin and has the additional benefit of freeing up existing funds for work in other parts of the state.

**WISCONSIN**

The focus is on restoration but GLRI should also place a high priority on protection as well. Protection of high quality and high functioning ecosystems has consistently proven to be a more cost effective measure than restoring degraded systems.

The State of Wisconsin strongly emphasized that Interim Objectives need to be reasonable and realistic. Wisconsin supports accountability, monitoring and evaluation. Establishing solid baselines by which States can report progress is critical whether activities are geared towards restoration or protection. However, it must be acknowledged that ecosystems respond slowly. Most results will not be measurable in the 5-year period. There needs to be realistic measures for accountability and the success of GLRI should be based on projects funded.
Obtaining baseline data will require a long-term commitment and a sustained effort to acquire statistically robust results. This will require sustained GLRI monitoring and staffing funds. Quality assurance plans will need to be a part of these efforts and results will need to be reported on and shared. Our collective sharing of data results will continue our approach in the Great Lakes of seeking the best solutions to complex environmental problems and enable us to adapt readily to new information.

Information and education are critical components to science-based decision making and GLRI funding for tracking, reporting and disseminating information should be supported. GLRI should support existing monitoring, reporting, and educational networks that have experienced severe budget cuts over the last few years.
To: Commissioners, Associate and Alternate Commissioners, and Observers

From: Tim Eder and staff

Date: Sept. 14, 2009

Re: Strategic & Workplan Updates

It is my pleasure to present to you, on behalf of the staff of the Great Lakes Commission, this report on recent progress and activities. In May 2007 the Commission approved a five-year Strategic Plan (www.glc.org/about/strategy/). In May 2008 the Commission Board of Directors approved a two-year Workplan to guide implementation of the Strategic Plan. This update includes progress toward the four core areas of the Strategic Plan (pages 3-6) followed by progress toward the five program areas in the Workplan (pages 7-18). Among the key accomplishments:

- Shortly after Great Lakes Day, President Obama announced a $475 million Great Lakes Restoration Initiative (GLRI) as part of the FY2010 budget. Since then, Commission staff has been working with regional partners, agency officials and Congress to ensure that the Initiative is funded and that the funding plan reflects regional priorities. This work has included:
  - letters to and meetings with key officials and members of Congress;
  - coordination of efforts among regional stakeholders, including a joint letter with 14 regional organizations urging the Senate Great Lakes delegation to provide full funding for the GLRI;
  - organizing a press call with leaders of key regional organizations;
  - development of fact sheets and other outreach materials; and
  - convening conference calls with key stakeholder groups.

- Working under contract with U.S. EPA, the Commission convened 18 meetings across the region on the GLRI with the public, state agencies, tribal authorities and cities. The meetings facilitated broad input into U.S. EPA’s multi-year action plan for implementing the GLRI. The Commission summarized input from the meetings in a report to U.S. EPA and will work with the agency to revise the action plan accordingly.

The four core areas of the Strategic Plan are Communication and Education, Information Integration and Reporting, Facilitation and Consensus Building, and Policy Coordination and Advocacy. The five program areas in the Workplan are Aquatic Ecosystems and Biodiversity; Economy and Society; Water Supply; Coastal and Terrestrial Habitat, and Water Quality. There are 12 highest priority “Initiatives” under the five program areas. A diagram on the next page illustrates this organizational structure and the relationship between and among the Strategic Plan, Workplan and the Initiatives.
The Core Areas of the Strategic Plan describe the services or functions of the Commission. The Initiatives represent the subject matter – the economic and ecological challenges faced by the region – which drive the day-to-day work of the staff. Team Leaders have been assigned to each initiative. You’ll notice that there is some disparity in the length of these updates, as several of the initiatives (e.g., climate change) are new for the Commission, whereas other areas (e.g., Areas of Concern, Invasive Species, Non-point source pollution) have many established projects.

Workplan progress is reported to Commissioners twice per year, replacing the previous Program Update memos in the briefing books. The Commission’s workplan is evaluated and refined by the Board and staff on an annual schedule.

Staff welcome questions about the content and progress described in this report.
In center circle – **Core Functions** (goals of strategic plan)
In surrounding circles – **Program Areas**
Outermost text – **Initiatives**
CORE PROGRAMS

Communication and Education

Background
Great Lakes decisionmakers have a crucial need for relevant and timely information focusing on the challenges of resource management in the Great Lakes-St. Lawrence region. With its state and provincial membership, the Commission is uniquely suited to assemble information about the binational Great Lakes—St. Lawrence River basin, provide a forum for resource managers and stakeholders to access and analyze data, convey it to policymakers, host discussions among them, and focus attention on Great Lakes issues. Projects such as the Great Lakes Information Network (GLIN) are a popular, broadly supported conduit of information for people engaged in Great Lakes management, enabling state/provincial partners to publicize their own work, as well as benefit from broadcasts of regional news, real-time lake conditions and forecasts, email lists and discussion forums.

Goal
Increased stewardship and knowledge of the Great Lakes, enabling governments, citizens and other stakeholders to make the most informed decisions affecting the future of the region.

Summary of Ongoing Activities and Recent Accomplishments

- Published the 2008 Annual Report of the Great Lakes Commission; available online at http://www.glc.org/advisor/report/
- Commenced work on building GLIN Labs – the next generation of GLIN, to be the hub where people, data, technologies and Great Lakes issues come together to yield information transactions and software applications that support wise decisions and change behaviors. Key accomplishments on this project included assembling a regional advisory team, establishing the labs.glin.net website, developing and promoting an online GLIN user needs survey, researching innovative e-tools and applications, and piloting an initial set of applications on the GLIN Labs website. A public GLIN Labs webinar was held Sept. 15, 2009, which provided a forum for GLIN users and the broader Great Lakes community to be briefed on the vision for GLIN Labs and the initial pilot applications that are under development.
- Refined the GLC logo, and designed a new floor display and brochure to update the Commission’s “brand” and better promote its strategic initiatives.
- Designed and promoted Short Messages Service (SMS) and Real Simple Syndication (RSS) for GLIN Daily News and GLIN Labs to enhance access to the information from handheld devices (i.e., Palm pilot and cell phones) and other readers.
- Provided outreach and data management applications for the Great Lakes Observing System, including prototype viewers that provide access to real-time hydro-meteorological observations and nearshore and interconnecting waterway flow models.
- Upgraded the GLIN email list software to provide additional features and streamline maintenance.
- Produced and distributed a quarterly newsletter (The Advisor), a monthly GLC News Briefs e-newsletter, GLIN Daily News, and more than 100 email lists, discussion forums and wikis.

Progress Toward Achieving Commission Objectives

- Through the GLIN Labs project, content and user engagement are being enhanced, and new web technologies and interactive communication tools are being offered to the GLIN user community.
- The communications team is enhancing “branding” of Commission products and services through a refined logo, floor display, streamlined annual report and a new “About the Commission” brochure.
- A series of new Commission-authored discussion papers are being promoted to better educate Great Lakes stakeholders and policymakers on critical issues facing the lakes.

Staff Contact: Christine Manninen, Communications Director, manninen@glc.org.
Information Integration and Reporting

Background
Implementation of a comprehensive restoration strategy for the Great Lakes and St. Lawrence River ecosystem, as promoted by the Commission’s member states and provinces, needs to be based upon sound science and decisionmaking that has access to consistent, comprehensive, timely and accurate information. State/provincial economic development programs have these same information needs. Over the last few decades there has been a major increase in information resources and communication tools, coinciding with increased recognition of the complexity of issues that need to be addressed. Information integration and management is a continuing challenge especially between varied jurisdictions and across the broad geographic extent of the Great Lakes basin, which the Commission has played a pivotal role in meeting.

Goal
Ready access to timely, comprehensive, consistent and integrated information for use by member states/provinces in planning, resource management and other activities

Summary of Ongoing Activities and Recent Accomplishments

- Commission staff continues to provide various users with access to the most current geospatial referenced data for use in Geographic Information Systems (GIS) focused on critical issue areas.
- Staff has coordinated conferences and workshops under the Regional Data Exchange (RDX) initiative.
- The Commission continues to maintain a growing network of servers, workstations and networked nodes to facilitate information storing, integration and retrieval and a regional data clearinghouse capability.

Progress Toward Achieving Commission Objectives

- Commission staff has worked with the Great Lakes Regional Collaboration’s Habitat and Species Work Group, under funding provided by the U.S. Army Corps of Engineers, to improve the Great Lakes Habitat Initiative (GLHI) web-based project database to inventory prospective protection/restoration projects and prospective sources for funding and technical assistance. The project promotes implementation of the GLRC habitat/species recommendations, particularly related to restoring wetlands acreage and function.
- Under a grant from the U.S. Federal Geographic Data Committee, GLC has developed a powerful web-based map viewer to access wetlands classified by various federal and state agencies.
- Commission staff, with funding provided by the National Oceanic and Atmospheric Administration, recently completed a report on the design of the Great Lakes Coastal Data Model and Digital Coast Viewer to facilitate user access to physical, biological and social data that support lakewide modeling of erosion/flooding processes and ecological predictions affected by climate change.
- Commission staff over the last nine months has been migrating seven database and application servers to a new Internet Service Provider to improve operational reliability and address increasing needs for continuity of operations in case of equipment failure, power outage, or other unforeseen downtime.
- Commission staff have been engaged over the last six months in developing a comprehensive Business Plan for this core area, outlining strategic needs for growing staff expertise and managing increasingly more complex computer systems and networks. The II&R Business Plan is expected to be finalized in October 2009.

Staff Contact: Roger Gauthier, Program Director, gauthier@glc.org

Facilitation and Consensus Building

Background
The political and scientific and institutional complexities of the Great Lakes-St. Lawrence River basin often lead to competing views regarding how best to manage and use the natural resources. Convening partners from federal, state, provincial, tribal governments and other stakeholders is an essential means by which policy advances and problems are
addressed. Facilitation and consensus building are important services provided by the Commission to help Member states/provinces and the region’s stakeholders make wise decisions.

**Goal**
A forum for Great Lakes management decisionmaking in which conflicting ideas and views are openly shared and debated, and consensus is built around potential solutions.

**Summary of Ongoing Activities and Recent Accomplishments**
- The Commission convenes and leads several regional multistakeholder committees and task forces, a list of which is on the Commission’s web site at [http://www.glc.org/about/taskforce.html](http://www.glc.org/about/taskforce.html). Staff also represents Members’ interests in dozens of external workgroups and at conferences.
- The Commission completed a second round of state habitat workshops to support the habitat goals articulated in the Great Lakes Regional Collaboration Strategy. Under contract to U.S. EPA, nine workshops were held (one in each state and one for tribal stakeholders) between December 2008 and March 2009.
- The Commission received a contract from the U.S. Army Corps of Engineers for work to convene key stakeholders and seek consensus around alternative approaches for managing dredged material from Toledo Harbor. Part of that contract includes advancing ways to use clean dredged material for restoration in other parts of the Great Lakes.
- The Commission undertook several activities in support of the Great Lakes Restoration Initiative:
  - The Great Lakes Commission assisted U.S. EPA in convening 18 meetings across the Great Lakes basin in July and August 2009 to review the GLRI and secure feedback on the draft Action Plan Outline. Separate meetings were held in each state for the public and state agencies, and regional conference calls were held for Great Lakes tribes and cities. The Commission prepared a report summarizing the feedback from these workshops, which was submitted to U.S. EPA.
  - Commission staff prepared a White Paper on “Recommendations on Implementing the GLRI” for Commission consideration (see Tab 3 under “Action Items”).

**Progress Toward Achieving Commission Objectives**
- The Commission convenes and facilitates advisory groups and task forces, as well as the one-time events listed above and in the subsequent initiative updates in this briefing book.
- The Commission pursues ongoing consultation with appropriate state agency personnel and other relevant partners to ensure that its work capitalizes on existing workgroups to support Commission activities.

**Staff Contact:** Victoria Pebbles, Program Director, vpebbles@glc.org.

**Policy Coordination and Advocacy**

**Background**
The Great Lakes Commission advocates for the Great Lakes states on issues of common interest related to the development, use and conservation of the Great Lakes—St. Lawrence River basin. Advocacy and policy coordination is a core element of the Commission’s mission, as reflected in the Great Lakes Basin Compact and the Commission’s strategic plan and workplan. The Commission’s policy and advocacy efforts are coordinated with other regional partners, principally the Council of Great Lakes Governors. The Commission speaks on behalf of the Great Lakes states where there is consensus. We seek to strengthen the effectiveness of the Great Lakes region’s advocacy efforts in Washington by communicating to Congress and federal agencies with a common voice.
Goal
Effective coordination, support and advocacy of issues of common interest to the Great Lakes states/provinces, in collaboration with other partners in the Great Lakes region.

Summary of Ongoing Activities and Recent Accomplishments

- Great Lakes Days in Washington 2009 were held Feb. 23-25. For the third year in a row, the region spoke in a unified voice and presented a set of near-term priority actions to Congress. The core of this year’s message was strengthening our regional and national economy through investment in Great Lakes restoration and protection. Further emphasis was placed on fulfilling the campaign promise of President Barack Obama to provide $5 billion for Great Lakes restoration. Teams of Commissioners and GLC staff participated in 45 meetings with members of Congress and staff.

- The Commission Semiannual Meeting was held in conjunction with Great Lakes Day events. This year’s Semiannual Meeting featured remarks from several high-ranking agency officials, including new Environmental Protection Agency Administrator Lisa Jackson; Mary Glackin, deputy under secretary for Oceans and Atmosphere at the National Oceanic and Atmospheric Administration; and Tom Melius, director, Midwest Regional Office, U.S. Fish and Wildlife Service.

- Shortly after Great Lakes Day, President Obama announced a $475 million Great Lakes Restoration Initiative (GLRI) as part of the FY2010 budget. Since then, Commission staff has been working with regional partners, agency officials and Congress to ensure that the Initiative is funded and that the funding plan reflects regional priorities. This work has included:
  - letters to and meetings with key officials and members of Congress;
  - coordination of efforts among regional stakeholders, including a joint letter with 14 regional organizations urging the Senate Great Lakes delegation to provide full funding for the GLRI;
  - organizing a press call with leaders of key regional organizations;
  - development of fact sheets and other outreach materials; and
  - convening conference calls with key stakeholder groups.

- Working under contract with U.S. EPA, the Commission convened 18 meetings across the region on the GLRI with the public, state agencies, tribal authorities and cities. The meetings facilitated broad input into U.S. EPA’s multi-year action plan for implementing the GLRI. The Commission summarized input from the meetings in a report to U.S. EPA and will work with the agency to revise the action plan accordingly.


- Commission staff has also been working to update, maintain and market the Great Lakes Legislative Tracking webpage on GLIN (http://glin.net/legislativepriorities). The webpage tracks the movement of key regional restoration priorities through Congress (including the GLRI).

Progress Toward Achieving Commission Objectives

- Communicated Great Lakes restoration priorities to Congress and agency officials.
- Coordinated with key regional partners on efforts to support the GLRI.
- Prepared fact sheets and conducted other outreach activities on the GLRI.
- Communicated with stakeholders to generate support for GLRI funding.

Staff Contact: Matt Doss, Policy Director, mdoss@glc.org.
INITIATIVES

Aquatic Invasive Species

Background
The introduction and spread of more than 180 non-native aquatic species into the Great Lakes --St. Lawrence River basin has compromised the region’s economic and environmental health. Aquatic invasive species (AIS) are the source of significant negative impacts to many of the region’s valuable industries and assets including recreation and tourism; commercial navigation/maritime commerce; water supply infrastructure for cities and power generators; the delicately balanced large lakes ecosystem; and the commercial and sport fishery, among others. The Commission recognizes AIS as a top regional priority. Staff is focused on ballast water and live organisms in trade as priority vectors.

Goal
An aquatic ecosystem in the Great Lakes where there is progressive improvement in the health and diversity of native aquatic species populations through prevention of the introduction and spread of harmful non-native species.

Summary of Ongoing Activities and Recent Accomplishments

- **Great Lakes Panel on ANS:** Staff continues to support the Great Lakes Panel on Aquatic Nuisance Species (GLP) and its standing committees. The spring GLP meeting was held in Grand Island, N.Y., in June. Action items and a meeting summary are available at www.glc.org/ans/panel.html#glpmeet.

- **Ballast Water Policy:** The GLP meeting featured a session to address the lack of jurisdictional coordination on ballast water regulatory programs in the region. The goal was to better understand the challenges in developing a regional standard for ballast water and to look for opportunities to advance consensus on such a standard. Updates and related perspectives were provided by representatives from state, provincial and federal governments and industry. Presentations and a summary of the session are available as part of the meeting summary posted at the above website.

- **Great Lakes Restoration Initiative (GLRI):** At the request of the GLP, staff worked with the GLP Executive Committee in submitting comments to the GLRI based on GLP Committee priorities documents (available at: www.glc.org/ans/panel.html#committees). It was also specifically recommended that the GLRI fully utilize the institutional capacity offered by the GLP. Topics being considered for proposal development for potential funding under the GLRI include:
  - administering a small grants program through the GLP to fund regionally based projects to be conducted by GLP membership;
  - building capacity for AIS rapid response in the Great Lakes region;
  - building regional consensus on an AIS risk assessment and listing process; and
  - developing consensus-based metrics to determine success and measure long-term progress on AIS management activities.

- **Funding:** Staff continues to work with the ANS Task Force and the other five regional ANS panels to increase funding for both the panels and state management plans. At the spring ANS Task Force meeting, Jim Grazio (GLP Chair, Penn. DEP), Doug Keller (Indiana DNR) and GLC staff presented the rationale for the urgent need for increased funding for ANS programs. See www.glc.org/ans/panel.html#recommendations for more information.

- **Advocacy:** In May, staff participated in a national AIS advocacy fly-in to promote passage of H.R. 669, *Nonnative Wildlife Invasion Prevention Act*. Congressional members were informed of the risks posed by the trade of live organisms and the urgent need for pre-import screening tools, such as those provided by H.R. 669, to mitigate these risks. Staff provided briefing materials on the bill and participated in congressional visits.

- **Information and Outreach:** Staff continues to work on an online information tool to support species-specific management planning on a regional scale for 15 priority AIS that will be available on GLIN. Staff continues working with the GLP to distribute the *Great Lakes Aquatic Invasions* booklet (www.glc.org/ans/aquatic-invasions/); these efforts will be guided by a marketing dissemination plan based on results from a survey of GLP members. Staff also presented outcomes from the recently completed organisms in trade project at the Wisconsin’s 2009 Aquaculture Conference (March 2009) and at the International Association for Great Lakes Research Conference (May 2009). These presentations are available at: www.glc.org/ans/initiatives.html#oit.
Progress Toward Achieving Initiative Objectives

- Work continued through the GLP to advance regional policy on ballast water consistent across jurisdictional lines through dialogue and consensus building with representatives from the Great Lakes states, federal government and industry.
- Advocated for federal legislation providing for pre-import screening to reduce risk of AIS introduction and spread through the trade of live organisms.
- Coordinated efforts of the GLP with the five other regional ANS panels in building the case on the need increased federal funding for ANS programs. Also advocated on the need for adequate funding for ANS prevention and control programs through congressional visits.
- Initiated work to forge an alliance with industry representatives of Wisconsin’s aquaculture industry to promote best management practices in reducing AIS risks of aquaculture.

Staff Contact: Tim Eder or Kathe Glassner-Shwayder, shwayder@glc.org.

Ports and Navigation

Background
The Great Lakes-St. Lawrence Seaway system is a major commercial transportation artery for the North American mid-continent and a recreational resource enjoyed by millions of residents and visitors. Sustaining the economic benefits generated by these activities for the states and provinces, while protecting the integrity of the Great Lakes—St. Lawrence ecosystem, is a significant challenge, but one to which the Commission is uniquely suited.

Goal
A sustainable system of ports, harbors and waterways that can accommodate recreational boating and a commercial navigation industry that efficiently moves goods, enhances the competitiveness of our regional economy, and sets a global example in minimizing environmental impacts.

Summary of Ongoing Activities and Recent Accomplishments

- A suite of regional sediment management programs is being facilitated by GLC staff including projects to: 1) promote the use of a GLC-developed website tool matching sources of clean dredged material to potential markets for beneficial use; 2) promote the use of dredged material for Great Lakes restoration; 3) facilitate alternative approaches to sediment management in the Toledo-Maumee River harbor; and 4) facilitate an expanded work plan for the Great Lakes Dredging Team, including new committees focusing on beneficial use of dredged material, environmental dredging windows, confined disposal facility management and open water placement of dredged material.
- Commission staff applied for, and received $1.2 million in American Reinvestment and Recovery Act (stimulus) funds, administered through the EPA Clean Diesel program, to replace four diesel-powered generator sets on two Great Lakes bulk carrier vessels. By replacing the 30-year-old generator with new models, nitrous oxide (NOx) emissions will be reduced by 46 percent and carbon monoxide by 74 percent. The project will also generate over 12,000 labor hours of work for a Wisconsin shipyard this winter.
- GLC staff continues to participate on a “technical team” with Michigan Sea Grant and the Michigan Boating Industry Association to create the Great Lakes Small Harbors Coalition (www.miseagrant.umich.edu/harbors), to advocate for a more equitable and sustainable program to fund maintenance and access to shallow-draft, recreational harbors.
- Staff serves on the Advisory Board of the Great Lakes Maritime Research Institute (www(glmri.org), a consortium of the UW-Superior and UM-Duluth.
- Commission staff participated in groundbreaking ceremonies June 30 for the Soo Lock Expansion Project to create a second large lock at Sault Ste. Marie, Mich. The Commission has been an active proponent of the project since 1983, served as the nonfederal cost share sponsor, and continues to advocate for sufficient funding to complete the project.
Progress Toward Achieving Initiative Objectives

- Following creation of the Great Lakes Small Harbors Coalition (previously the Michigan Small Harbors Coalition), interest in participation has been received from harbor communities in Wisconsin, Ohio and New York.
- A “Dredging Summit” was held in Toledo Sept. 23, with GLC participation, to address longstanding issues surrounding the U.S. Army Corps of Engineers dredging program in the Toledo Harbor, including management of some 750,000 to 1 million cubic yards of dredged material annually.
- Commission staff helped facilitate a Great Lakes Regulatory Forum on Ballast Water Action held Sept. 24 in Detroit involving state regulatory personnel, federal agencies and shipping industry representatives to explore issues and timelines for installation of ballast treatment systems.

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Clean Energy

Background

Energy production and use have a direct impact on the Great Lakes—St. Lawrence River environment and economy. Fossil fuels, a major energy source in the U.S and Canada, are environmentally and economically problematic. Several forums exist where states, provinces and stakeholders address clean energy and related climate change and energy security issues. No apparent forum exists where all 10 Great Lakes states and provinces can collectively collaborate to address clean energy opportunities and challenges and water resource implications. The Great Lakes Commission is uniquely positioned to provide that forum or otherwise facilitate dialogue among other forums to ensure that clean energy initiatives are in harmony with the Commission’s mandate.

Goal

A regional energy mix which employs the region’s natural and human capital in ways that can be sustained over generations without compromising the health of the Great Lakes ecosystem.

Summary of Ongoing Activities and Recent Accomplishments

- A voluntary membership contributions memo was redistributed by the Steering Committee and presented to all sectors that participate on the Great Lakes Wind Collaborative (GLWC) Advisory Committee as a source of base funding for GLWC activities.
- The 2nd annual GLWC meeting took place June 10-11, 2009, in Milwaukee. Its focus was largely on offshore wind in the Great Lakes. There were more than 120 attendees.
- Staff conducted an Economic Aspects of Great Lakes Wind Power Workshop and Webinar on June 4, 2009. It featured state/provincial economic development initiatives and a Q&A session. There were 28 people in attendance, plus GLC wind staff.
- Staff completed a document titled Preparation for Offshore Wind in Lake Michigan: Information Solicitation Options for Michigan and Wisconsin. Its purpose was to explore the tools available for soliciting information on offshore wind development and provide an analysis of the next steps that Michigan and Wisconsin may take toward offshore wind development in Lake Michigan.
- A mock-up of an online Great Lakes Wind Atlas was completed.
- A survey was conducted on regional transmission. Responses will be used by the GLWC to compile and develop a public report synthesizing the main challenges to the development of Great Lakes regional (interstate, binational) transmission dedicated to wind energy.
- Staff (John Hummer) was nominated for and accepted a board position with the U.S. Offshore Wind Collaborative to serve as a liaison between that group and the GLWC.
- Staff continues to participate in external meetings/conferences related to clean energy as resources permit.
Progress Toward Achieving Initiative Objectives

- Staff continues to expand and facilitate the GLWC, with Steering and Advisory committees, and five workgroups addressing: environmental planning, siting and permitting; GIS data layers (atlas); transmission; offshore wind; and economic development. GLC wind staff will host a Great Lakes Offshore Meeting of key stakeholders Oct. 8, 2009, in Ann Arbor.
- A new two-year project was awarded funding by the U.S.DOE: Best Practices to Accelerate Wind Power in the Great Lakes Region and Beyond. Work begins Oct. 1, 2009.
- Staff continues to monitor the Midwestern Governors Association’s renewable energy work with an eye on implications for the Great Lakes region. Staff participated in Windpower 09 in May in Chicago and will be attending the Midwest Governors Association Jobs and Energy Summit in Detroit on Oct. 6-7, 2009.
- With information gathered from participating in external conferences, staff drafted two discussion papers. The Potential Impacts of Canadian Tar Sands on the Great Lakes was circulated to the Board and Canadian Partners in spring 2009 and has been indefinitely tabled due to a lack of resources to address the conflicting comments received. The Energy-Water Nexus: Implications for the Great Lakes was also circulated to the Board in the spring of 2009 and is being prepared for final publication on the GLC website.
- Two projects were designed and complementary preproposals were prepared and submitted to the Great Lakes Protection Fund addressing the energy-water nexus. Full proposals have been invited on both and are being developed at the time of this writing.

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Coastal Community Development

Background
Ensuring appropriate development; resiliency (i.e., adaptation) to climate change, changing lake levels, flooding and other coastal hazards; and protecting coastal dune complexes, estuaries, wetlands and other unique coastal ecosystems, are the nexus of distinct challenges facing coastal communities. Coastal community development is that part of coastal management that promotes development while protecting unique coastal resources.

Goal
Coastal areas that have a mix of attractive communities that develop and redevelop consistent with smart growth principles (e.g., mixed use, pedestrian-friendly and low impact development, open space preservation, etc.) to maximize access to and conservation of coastal amenities including safe, unpolluted beaches and other coastal areas for swimming, boating and other recreation.

Summary of Ongoing Activities and Recent Accomplishments
- Staff completed three case studies of selected areas within the Great Lakes basin that have applied smart growth coastal development principles, and presented on this work at Coastal Zone ’09 in July. These case studies will be featured on both the Commission website at http://glc.org/noaaglcproject and on NOAA’s new Coastal and Waterfront Smart Growth website at http://coastalsmartgrowth.noaa.gov.
- Staff developed a conference website and additional information for the 28th Annual International Submerged Lands Management Conference, which has now transitioned to a six-session webinar series (www.submergedlandsconference.com). The webinar sessions will be offered from September through November this fall and will feature topics relevant to coastal communities and resiliency. Commission staff will be moderating the session on Emerging Policies and Plans for Offshore Energy Development in September.
- The Commission received funding from the Joyce Foundation to continue partnership with the Great Lakes and St. Lawrence Cities Initiative to prepare issue briefs for local and regional decisionmakers as a follow up to the 2007 study assessing local investment in Great Lakes restoration and protection. This yearlong effort will further highlight local investment and support the Commission’s advocacy efforts for increased federal investment in water and wastewater infrastructure, watershed and greenspace protection, water conservation, and beach and shoreline management.
Staff submitted a final report to NOAA on the accomplishments under the five-year Joint Project Agreement between the GLC and the NOAA Coastal Services Center. Staff also developed and submitted a “next steps” memo to senior officials at NOAA with suggestions on areas for continued partnership beyond the JPA. Staff met with two senior NOAA officials (David Kennedy, OCRM; Rich Edwing, CO-OPs) in August to explore some opportunities for continued partnership.

Progress Toward Achieving Initiative Objectives

- The Submerged Lands Management Webinar Series addresses key coastal community development issues, such as waterfront revitalization, coastal resiliency, energy facility siting, and public trust and was developed with input and assistance from the Commission.
- The final three selected Great Lakes coastal smart growth case studies were presented at Coastal Zone ’09 in Boston, during a session on smart growth research and outreach.
- Staff continues to monitor CZMA reauthorization activities behind the scenes and on the Hill, through regular communications with CSO and state coastal managers. A Commission resolution in support of the Coastal State’s Organization’s Call for Action to reauthorize the CZMA was adopted at the Commission’s semiannual meeting in February 2009.

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Tourism and Recreation

Background
Coastal tourism and recreation is an important element of the economy of the Great Lakes states, Ontario and Québec. This sector is growing in importance as the region rebuilds and diversifies from a dependence on manufacturing. Access to water resources for tourists and outdoor enthusiasts (both for visitors and those who live here) contribute to a high quality of life. The Commission has a historic and ongoing role in promoting tourism and recreation while protecting and enhancing the assets upon which those industries are based.

Goal
A thriving Great Lakes—St. Lawrence coastal tourism and recreation industry that protects and enhances the region’s natural and cultural resources as part of a sustainable regional economy.

Summary of Ongoing Activities and Recent Accomplishments

- Facilitation of the Great Lakes Small Harbors Coalition, the mission of which is to assure boating access to small, primarily recreational Great Lakes harbors through adequate dredging (see Ports and Navigation update).
- Continued four-season promotion of the Great Lakes Circle Tour and maps through GLIN.
- Responding to hundreds of inquiries per year (received primarily via email via GLIN) from tourists with an interest in the Circle Tour or specific aspects of it. Maps, guidebooks, photos and traveler reviews are the most requested items.

Progress Toward Achieving Initiative Objectives

- Commission staff is identifying existing programs, organizations and resources promoting Great Lakes—St. Lawrence coastal tourism/recreation to explore potential synergies and cooperative projects, such as an interactive, multimedia Circle Tour experience online via GLIN.
- Work on U.S. Canada border policy (Objective 2), Circle Tour routing (Objective 5) and Geotourism promotion (Objective 6) is currently unfunded and still needs to be undertaken.

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Climate Change

Background
Climate change is recognized as a significant factor affecting the future of the Great Lakes—St. Lawrence River region economy and environment. Changes in length and temperature ranges of seasons, precipitation patterns, ice cover and lake levels have been documented, all of which impact the environment, the economy and society. The Commission staff, with its scientific and information management expertise, is ideally suited to work with the Great Lakes—St. Lawrence River Water Resources Regional Body, the International Joint Commission and our federal and Native American partners to help Member states and provinces address the challenges of adapting to climate change.

Goal
A resilient environment and economy supported by sound water, trade, environmental and coastal policies that address the issues and impacts of climate change.

Summary of Ongoing Activities and Recent Accomplishments

• A number of projects under way at the GLC deal with issues related to climate change. Staff is working to catalog these in a way that will allow the climate change components to be better visualized and applied to proposals, reports and presentations.
• Staff, with extensive support from a summer intern from the University of Michigan Ford School of Public Policy, has compiled a report entitled “Great Lakes State and Provincial Climate Change Mitigation and Adaptation: Progress, Challenges, and Opportunities.” Staff will hold a conference call with leading state/provincial contacts to get feedback on the final draft in September. Staff plan to finalize and publish the report as a GLC discussion paper shortly thereafter. The report assesses areas of activity among the states and provinces and identifies opportunities for regional action to advance climate change policy. A complementary appendix was developed based on the report findings that identifies specific areas of activity for the Great Lakes Commission.

Progress Toward Achieving Initiative Objectives

• The report described above is one resource that will help guide climate change adaptation efforts at various levels across the region, ideally helping lead to the adoption of complementary approaches and programs.
• A letter of support was provided to the University of Michigan in support of a proposal to NOAA for a Regional Integrated Science Assessment. A letter of support was provided to Purdue University in support of a Climate Change Action Network under the same NOAA RISA program, with a particular emphasis on GLIN involvement. A general letter was provided to NOAA’s Climate Change Office offering assistance for Regional Integrated Science Assessments and Sectoral Applications Research Program projects taking place in the Great Lakes region. Contact with these programs will continue, including possible roles in support of policy assessment/development, interagency coordination and distribution of materials and results.
• Commission staff met with the Kresge Foundation to discuss their new climate change program area.

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Water Use and Planning

Background
The Great Lakes Commission supports regional water management initiatives emanating from the adoption of the Great Lakes—St. Lawrence River Basin Water Resources Compact and its companion Agreement. The Commission is cultivating partnerships and indentifying work products and activities, where appropriate, to support the work of the Great Lakes—St. Lawrence River Water Resources Regional Body, as well as the water management priorities of the Commission’s members. One area of need includes development of tools and information (e.g., water use inventories) necessary for implementing effective water management planning.
Goal
A sound regional decisionmaking framework that supports the proper management and conservation of Great Lakes—St. Lawrence River basin water resources to protect public and environmental health, assure economic well-being and sustain a high quality of life for the region’s residents.

Summary of Ongoing Activities and Recent Accomplishments
- As a project partner under a Council of Great Lakes Governors (CGLG)-led effort, with funding from the Great Lakes Protection Fund, the Commission contributed to the development of state/provincial water use data collection and reporting protocols and recommendations for improvements to the regional water use database. These draft protocols will be reviewed by the Regional Body later this year.
- The Commission continues to operate and manage the Great Lakes Regional Water Use Database. This activity addresses one of the important mandates established under the Great Lakes Charter of 1985.

Progress Toward Achieving Initiative Objectives
- The Commission has actively participated as a member of the CGLG’s Great Lakes Water Use Information Initiative project team through a series of project conference calls.
- Water use information for 2005 and 2006 have been compiled from input from the Great Lakes-St. Lawrence states and provinces. A draft report has been developed for these years to support the terms of the Great Lakes Charter.
- The Commission is working with the CGLG and other partners to explore funding options for updating the regional database to meet the terms of the Great Lakes Compact.
- Commission staff attended a workshop on the Michigan Water Withdrawal Assessment Tool and are considering approaches for how this web-based tool can be used in the future for site-specific water use reporting for potential participating jurisdictions.
- The Commission is exploring opportunities under the Great Lakes Restoration Initiative (GLRI) to work with the U.S. Geological Survey to expand the coverage of the Michigan Water Withdrawal Assessment Tool to other jurisdictions to improve the overall knowledge of stream ecology and hydrologic impacts from cumulative water uses.

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Water Conservation and Efficiency

Background
The Great Lakes—St. Lawrence River Basin Sustainable Water Resources Compact calls for the development, transfer and application of science and research on water conservation and water use efficiency programs by the Commission’s Member states and provinces. The Commission is pursuing work consistent with the activities of the Great Lakes—St. Lawrence River Water Management Regional Body to help its Member states and provinces meet their obligations under the Sustainable Water Resources Agreement and Compact. The Commission’s work includes information sharing, research and analysis on water conservation and efficiency technologies, policies and programs.

Goal
A Great Lakes region that is viewed as a model for water conservation and efficiency through effective and innovative public policies that enable users of Great Lakes—St. Lawrence River water to become leaders in efficiency, stewardship and conservation practices.

Summary of Ongoing Activities and Recent Accomplishments
- A panel session featuring water resource and conservation experts is planned for the Commission’s Annual Meeting in Erie, Pa.
- Commission staff developed two pre-proposals for the Great Lakes Protection Fund’s Healthy Waters, Healthy Uses request for proposals. The first proposal focuses on the opportunities and obstacles of implementing
conservation water rate structures in the Great Lakes basin. The second proposal will evaluate ecosystem impacts (including impacts to water resources) of different energy technologies and sources, and how energy development in the basin can be influenced by better understanding of ecosystem impacts in the basin. The Protection Fund invited the Commission to develop both ideas into full proposals which are due Sept. 23.

Progress Toward Achieving Initiative Objectives

- The Initiative team continues to track the latest water conservation and efficiency technologies and best practices through participation on the Alliance for Water Efficiency Board of Directors.
- Commission staff has organized multidisciplinary project teams in anticipation of submitting two funding proposals to the Great Lakes Protection Fund to advance water conservation and efficiency efforts in the basin.

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Habitat Protection and Restoration

Background
Past and ongoing human alterations have compromised Great Lakes—St. Lawrence habitats including wetlands, resulting in their loss or degradation. The region has lost more than half its original wetlands and 60 percent of forested lands. Only small remnants of some other habitat types remain. Natural habitat is critical to the health of the Great Lakes ecosystem which, in turn, is inextricably linked to the vitality of the regional economy and quality of life. This is prominently recognized in the Great Lake Regional Collaboration Strategy to Restore and Protect the Great Lakes, as well as a recent Brookings Institution report on the economic benefits of restoration. The Commission is intrinsically empowered to assist its Member states/provinces and observers to coordinate regional activities to address these problems.

Goal
Provide technical, scientific and policy support to Commission Members and Observers to advance protection and restoration of critical habitat, including wetlands, throughout the Great Lakes basin to achieve goals expressed in the Great Lake Regional Collaboration (GLRC) Strategy.

Summary of Ongoing Activities and Recent Accomplishments

- Staff continues to advocate for congressional support to achieve regional habitat protection and restoration goals, including funding for restoration of wetlands, fish and wildlife habitat through the President’s Great Lakes Restoration Initiative (GLRI).
- Commission staff, in partnership with federal agencies and its Member states, completed a second round of state workshops to explore collaborative opportunities to advance habitat/wetlands protection and restoration goals. A report was produced summarizing the common themes expressed at these nine workshops as well as the agenda and participant listing for each meeting. The project was funded by U.S. EPA under the auspices of the GLRC.
- Two Habitat Priority Planner (HPP) demonstration projects were completed for the Buffalo River and St. Joseph River watersheds. The HPP is a tool for managing natural resources such as sorting out options for developing and changing habitat scenarios.

Progress Toward Achieving Initiative Objectives

- Commission staff and collaborators have redesigned the GLRC’s Great Lakes Habitat Initiative (GLHI) restoration project inventory and funding/assistance database to be web-based (see gis.glin.net/habitat). These tools were showcased at the state/tribal habitat restoration workshops to promote collaboration in advancing viable projects toward regional goals. The updated web tools will enhance users’ ability to access detailed information on prospective projects, with specific linkages to applicable funding and technical assistance programs.
• Commission staff is continuing to coordinate habitat restoration planning with several project partners, based in part on recommendations provided by state participants during the habitat restoration workshops. Staff will work with partners to move priority projects forward (e.g., writing proposals, coordinating partners) for GLRI as appropriate.

• Commission staff are discussing methods with appropriate federal agencies to track and report on wetlands restoration progress to meet federal reporting requirements. These methods may include further enhancing the GLHI projects database tool.

• Staff is investigating how the Habitat Priority Planner can be utilized on additional GLHI projects.

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Watershed Management and Land Use

Background
Land use in the Great Lakes region has a cumulative impact on water quality and quantity and the vitality and resiliency of ecosystems. Yet, the current fragmented governance structure for land-use decisionmaking presents enormous challenges for addressing impacts on a watershed scale. The Commission’s mandate enables it to work with members across watersheds to promote sustainable land use and watershed management.

Goal
Watershed-oriented land-use policies and practices that protect the land, air and water resources of the Great Lakes—St. Lawrence ecosystem and sustain a high quality of life.

Summary of Ongoing Activities and Recent Accomplishments

• The Commission continued to administer the Michigan Clean Water Corps program, which funds two volunteer monitoring programs, the collection and dissemination of volunteer monitoring data, small-scale stream cleanup events, and educational initiatives related to water quality in Michigan. Specifically, in 2009 the Commission awarded six volunteer stream monitoring grants totaling over $42,000; supported the Cooperative Lakes Monitoring Program; and awarded 18 small grants totaling over $29,000 to local units of government for river and stream cleanup events.

• Commission staff continued to act in an advisory role for the Western Lake Erie Basin Partnership, a subregional forum for tracking watershed-based trends, sharing information, and building consensus for land-use activities.

• With funding from the Corps of Engineers, Commission staff developed a website on Recycling Dredged Material in the Great Lakes Region (www.glc.org/rsm) that helps to identify potential sources of sediment for reuse. Using a map interface or advanced query search function, users can identify nearby harbors or Confined Disposal Facilities (CDFs) where usable sediment may be available. Annual dredging and storage capacity by state and lake basin is also provided. Corps representatives have consulted with Commission staff to explore opportunities to provide additional outreach related to this work to expand potential regional sediment management and reuse within the Great Lakes basin.

• Commission staff have begun to develop an inventory of projects occurring in the Maumee River watershed to promote the coordination of activities and efforts across programmatic boundaries and issue areas to achieve measurable results. This is being developed as a pilot effort and may be expanded throughout the basin to help the Commission and other stakeholders to coordinate ongoing efforts.

• Additional funds were secured from the Corps of Engineers to continue the Commission’s work on the beneficial use of dredged material within the Great Lakes basin, support for the Great Lakes Dredging Team, facilitating alternative approaches to sediment management in the Toledo Harbor, and support for the implementation of Great Lakes Remedial Action Plans and Sediment Remediation Program.
Progress Toward Achieving Initiative Objectives

- Awarded funding to support the collection and dissemination of data and information on watershed management trends and their impacts on water quality through the Michigan Clean Water Corps program.
- Tracked land-use and sediment management trends to inform Member states and provinces and other interested users through the Regional Sediment Management project. Future program development will also address improved regional responses to address these issues.
- Fostered partnerships and enhanced regional dialogue and consensus building within Member states and provinces through participation in the Western Lake Erie Basin Partnership.
- Staff are engaged in efforts to provide feedback to U.S. EPA on the Great Lakes Restoration Initiative and funding plan for FY2010 and FY2011, which may provide numerous opportunities for staff to continue to address Commission objectives under this initiative area.

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Non-point Source Pollution

Background
The Commission provides leadership in the area of non-point source pollution (NPS) including those contributions from land runoff, spills and air deposition. Work is ongoing in areas related to erosion control and sediment reduction (through a region-wide demonstration grants program), spill prevention and response and reduction of toxic pollutants from air deposition. Commission administered programs help raise awareness of NPS and improve Great Lakes water quality.

Goal
Improved water quality in the Great Lakes-St. Lawrence River basin through the reduction of pollution from land runoff, spills and atmospheric deposition.

Summary of Ongoing Activities and Recent Accomplishments

- In 2009, the Great Lakes Basin Program for Soil Erosion and Sediment Control (GLBP) awarded 11 erosion control demonstration grants totaling nearly $290,000.
- The Great Lakes Air Deposition Program (GLAD) awarded five new multi-year research grants to states and academics for a total of $495,153 in 2009. The GLAD program anticipates receiving additional federal funds from the U.S. EPA to continue this program through 2012 and will be issuing a new RFP for the 2010 grant cycle in the coming months.
- The Commission annually convenes workshops and publicizes accomplishments as a partner with the U.S. Army Corps of Engineers (Corps) under the Great Lakes Tributary Modeling Program. Tools and information are provided to local governments and watershed groups to help control erosion and sedimentation through better land use decisionmaking. Since 1998, the Corps has completed watershed models for 16 tributaries, with 13 additional projects under way, or near completion.
- A new non-point source outreach initiative, to advance erosion and sediment control in the Great Lakes basin using web-based modeling tools, was begun with the hosting of a webcast with Lake Superior soil and water conservation partners on Jan. 28, 2009. A similar meeting is scheduled for Oct. 13 in Geneva, N.Y.
- Commission staff supports spill prevention and response activities through the enhancement of internet-based communications and planning resources for the Region 5 Regional Response Team (RRT). The redesigned RRT website has improved the accessibility of online spill response resources such as regional and local contingency planning documents and has helped improve overall communications between state and federal response entities.

Progress Toward Achieving Initiative Objectives

- Worked with the Soil Erosion and Sedimentation Task Force, consisting of Commissioner-appointed members of the Great Lake states, to select 2009 demonstration grant proposals to be funded.
• Awarded funding to support direct research and information collection on air deposition to Great Lakes researchers via the GLAD grant program.
• Fostered partnerships with state and local agencies by attending conservation district association meetings throughout the basin.
• Improved coordination between state and federal spill prevention and response activities via enhanced internet-based planning tools and communications.
• Advocated for funding for NPS reduction programs through congressional office visits and letters of support for Farm Bill implementation and other non-point source programs including long-term funding to sustain both the GLBP and the GLAD programs.
• The Commission staff is working to develop a watershed scale RFP in conjunction with the Soil Erosion and Sediment Task Force to advance non-point source pollution control objectives under the U.S. EPA-led Great Lakes Restoration Initiative (GLRI).
• The Commission staff is working on developing additional proposals for consideration under the GLRI including:
  o Establishing non-point source research watersheds for the long-term study of the physical, social and economic effects of human activities on watersheds in the Great Lakes basin, and to establish a collaborative means to mitigate harmful impacts.
  o Expanding the use of managed drainage, a new best management practice to reduce the export of phosphorus, nitrogen and sediment from agricultural watersheds.
  o Establish an advisory committee to develop a standardized protocol to set sediment reduction goals in watersheds throughout the basin to improve NPS program accountability.

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Areas of Concern

Background
The Areas of Concern (AOC) are the most environmentally degraded portions of the Great Lakes, suffering from beneficial use impairments (BUI) that restrict our ability to eat fish, drink water and swim at local beaches, among other impacts. The states administer the AOC program in collaboration with federal agencies and local public advisory councils. The Commission serves as a regional coordinator, advocate and “intermediary.”

Goal
Increased funding for AOC cleanup and restoration and enhanced capacity at the federal, state and local levels to restore beneficial uses and, ultimately, delist the Great Lakes Areas of Concern.

Summary of Ongoing Activities and Recent Accomplishments
• The Commission coordinated the submittal of seven proposals to NOAA for habitat restoration in AOCs under the NOAA-ARRA Coastal and Marine Habitat Restoration Project Grants opportunity. One of these proposals, the Muskegon Lake Great Lakes Area of Concern Habitat Restoration Project, was awarded $10 million in funding from NOAA. Contracts are in place and work is under way.
• The Commission is entering year two of its partnership with NOAA to restore habitat in the AOCs. The partnership’s initial focus is on habitat restoration on Muskegon Lake, Mich., and Hog Island, Wis. Restoration projects are moving forward in Muskegon Lake in conjunction with the ARRA grant.
• The Commission is convening the U.S. AOC program annual meeting on Oct. 1-2 in Milwaukee, Wis. This annual meeting will convene participants from the 30 U.S. AOCs to review recent developments affecting the AOC program; discuss approaches for implementing delisting targets; build capacity to implement on-the-ground restoration actions; identify opportunities to address AOC restoration priorities under President Obama’s Great Lakes Restoration Initiative; and consider actions that will strengthen the AOC program.
• The Commission is continuing work with U.S. EPA-GLNPO to prepare a database of information on the status of cleanup efforts in the U.S. AOCs. The information will be presented in a report on progress.
• The Commission, working with the Michigan Department of Environmental Quality (MDEQ) and the Michigan Statewide Public Advisory Council (SPAC), held a legislative briefing for Michigan state legislators. The briefing focused on the economic benefits of restoring AOCs.

• The Commission convened the workshop Building Capacity and Partnerships to Restore Michigan’s Great Lakes Areas of Concern Under the Great Lakes Restoration Initiative. The workshop convened over 150 participants working to clean up Michigan’s AOCs, including partners who could help develop and implement proposals for cleanup projects under the GLRI. See www.glc.org/spac/workshop-aug09recap.html.

• The Commission is continuing work with MDEQ to administer grants to local Public Advisory Councils.

• The Commission is assisting the Army Corps of Engineers in administering its Great Lakes Remedial Action Plan Program. Staff are working with the states and local RAP groups to identify and develop projects that could be funded under the Corps program.

• The Commission will be investigating opportunities to provide additional support to the regional AOC program through the GLRI in areas such as local RAP support, capacity building or tracking progress.

Progress Toward Achieving Initiative Objectives

• Worked with Congress, agency officials and regional partners to secure funding for the Great Lakes Restoration Initiative which provides funding for the Great Lakes Legacy Act and the AOC program.

• Worked with local RAP participants to facilitate their communication efforts with members of Congress and to build capacity for developing project proposals for the GLRI.

• Maintained the Mich-Rap email list and the “virtual library” of information and resources on the U.S. AOCs, as well as continuing work on a database of delisting information.

• Provided support to the Michigan SPAC and U.S. EPA-GLNPO, including convening meetings and ongoing work on the AOC database.

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Great Lakes Restoration Initiative

As background for the panel discussion on the Great Lakes Restoration Initiative, the following documents are attached for your reference:

- Great Lakes Restoration Initiative Fact Sheet, published in May 2009 by the Great Lakes Commission

- A draft letter from Great Lakes Commission Chairman Quinn (dated Sept. 22, 2009) to the chairmen and ranking members of the House Appropriations Committee and the Subcommittee on Interior, Environment and Related Agencies. The letter urges full funding of $475 million in the FY 2010 EPA budget for the multi-agency Great Lakes Restoration Initiative (GLRI) proposed by President Obama. A similar letter was sent to the Senate Appropriations Committee.

- Copies of state comments provided to U.S. EPA on the draft GLRI Action Plan Outline.
A Jump-Start for Great Lakes Restoration

President Obama’s proposed FY2010 budget includes a Great Lakes Restoration Initiative that will accelerate Great Lakes restoration by investing $475 million to confront some of the most serious threats to the region, including invasive species, nonpoint source pollution and toxic sediments. It represents a significant down payment on a multi-year effort to restore the Great Lakes and help revive the region’s struggling economy. The Great Lakes Restoration Initiative is specifically targeted at the following priorities:

- Cleaning up toxic substances and Areas of Concern ($147 million)
- Preventing or removing aquatic invasive species ($60 million)
- Improving nearshore health and preventing nonpoint source pollution ($98 million)
- Restoring and protecting habitat and wildlife ($105 million)
- Evaluating and monitoring progress ($65 million).

The Great Lakes Restoration Initiative will be a multiagency effort led by the Environmental Protection Agency (EPA). Funds are expected to be allocated strategically to implement both federal programs and projects implemented by states, tribes, municipalities, universities, and other organizations. EPA will transfer portions of the appropriated funding to other federal agencies for distribution. It is estimated that 60 percent or more of the funding will be distributed to nonfederal entities through existing contracts and grants as well as new programs. Funding under the Initiative is intended to build on, but not take the place of, existing federal activities. Federal agencies will be expected to maintain their current base level of funding for Great Lakes activities. The Initiative does not address wastewater and drinking water infrastructure activities, which will continue to be supported under the existing Clean Water and Drinking Water State Revolving Funds. The President’s budget includes an additional $3.9 billion nationwide for these two programs.

A Region Ready for Implementation

The Great Lakes region is ready to implement on-the-ground restoration activities and has a strong plan in place to guide the implementation of the Great Lakes Restoration Initiative. Building on years of research, monitoring and planning, the region came together and developed the Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes. The Strategy was developed with input from more than 1,500 stakeholders and identifies priorities, defines problems, outlines solutions, and provides clear goals and objectives for measuring progress in cleaning up the Great Lakes. The Strategy is accepted by state and federal agencies, business and industry, and environmental organizations as the primary blueprint for restoring the Great Lakes. The Strategy is organized around eight priorities identified by the Great Lakes Governors: stopping aquatic invasive species; enhancing fish and wildlife resources; restoring and protecting coastal health; remediating Areas of Concern; controlling nonpoint source pollution; reducing toxic pollution; enhancing indicators and information; and promoting sustainable development. The Great Lakes Restoration Initiative represents a condensed version of these priorities.

Several of the Great Lakes states have developed plans to address Great Lakes problems within their jurisdiction. These plans take a state-level approach to implementing the recommendations of the Great Lakes Regional Collaboration Strategy. In addition, each of the remaining 30 U.S. Areas of Concern – or “toxic hot spots” – has cleanup plans and measurable, science-based restoration targets. Other plans have been developed by entities such as the Great Lakes Fishery Commission, Ducks Unlimited and The Nature Conservancy for specific priorities, such as restoring and conserving fisheries and waterfowl habitat, and controlling aquatic invasive species. The region is prepared to use this funding to address real problems and produce measurable improvements for the environment and the economy.
Ensuring Effective Coordination and Clear Accountability

Using the Great Lakes Regional Collaboration as a foundation, federal and state agencies, tribes and nongovernmental partners are working together to address the most serious problems affecting the Great Lakes. Interagency teams are addressing degraded habitat, toxic “hot spots,” invasive species, contaminated beaches, and other issues. The institutional, technical and policy infrastructure is largely in place to effectively administer large-scale funding for Great Lakes restoration. The Great Lakes states are committed to working with EPA to ensure that effective mechanisms are in place to coordinate activities with state priorities, monitor progress, ensure accountability, and achieve measurable results. To help track progress under the Great Lakes Restoration Initiative, the EPA has identified specific milestones and accomplishments that it plans to achieve with full funding.

Cleaning up toxic substances and Areas of Concern:

- Clean up more than one million cubic yards of contaminated sediments
- Restore and “delist” five Areas of Concern in the U.S.
- Issue grants to states and other stakeholders to restore beneficial uses, such as fishing and swimming
- Identify, prioritize and clean up sources of pollution (e.g., mercury and PCBs) in 400 impaired watersheds.

Preventing or removing aquatic invasive species:

- Develop and test up to six ballast water sampling and treatment technologies
- Target up to 50 non-native species that are not yet established but are being traded in commerce and quantify their potential for release and spread to prioritize controls or restrictions
- Accelerate implementation of aquatic nuisance species management plans developed by the Great Lakes states.

Improving near-shore health and preventing nonpoint source pollution:

- Identify and clean up sources of contaminants at over 100 beaches that were closed five or more days in 2007
- Collaborate with states and other partners to fund on-the-ground projects to control runoff and erosion via increased funding for Farm Bill programs, including the Great Lakes Basin Program for Soil Erosion and Sediment Control.

Restoring and protecting habitat and wildlife:

- Remove 40 barriers to fish passage
- Protect and restore 9,000 acres of wetland and other habitats near lakes, streams and coasts
- Restore 1,000 miles of streams to improve fish habitat by improving passage and stabilizing erosion
- Issue grants to tribal authorities to restore more than 1,500 acres of wetlands.

Great Lakes Restoration and the Economy

An investment in Great Lakes restoration will help with other efforts to reinvigorate the economy of a region especially hard hit by recent downturns in the global economy. In the Great Lakes region, freshwater and access to the lakes are intertwined with economic activity and are fundamental to our future. The Brookings Institution has estimated that implementing the Great Lakes Regional Collaboration Strategy will generate $50 billion in long-term benefits. A coalition of more than 30 metropolitan Chambers of Commerce in the Great Lakes region has highlighted Great Lakes restoration as a critical component of a larger agenda for creating jobs and revitalizing our regional economy. Areas where cleanups have been completed are planning important waterfront redevelopment projects. For example, cleaning up contaminated sediments, alone, is projected to increase coastal property values by $12 billion to $19 billion. Boating, fishing, hunting and wildlife-watching in the Great Lakes region generate over $50 billion in economic activity annually and support hundreds of thousands of jobs. Abundant fresh water, recreational amenities, and other benefits from the Great Lakes will be vital for attracting new industries and young workers in the future. The Great Lakes give our region a unique, competitive advantage in attracting jobs and investment in a global economy. The Great Lakes Restoration Initiative provides an unprecedented opportunity to create jobs, stimulate economic development and invest in our nation’s freshwater resources that will be central to the future of the eight-state Great Lakes region.
[ DRAFT – Similar letter to go to Senate Appropriations Committee ]

September 22, 2009

Hon. David R. Obey, Chair
House Appropriations Committee
H-218 The Capitol
Washington, D.C. 20510

Hon. Jerry Lewis, Ranking Member
House Appropriations Committee
1016 Longworth House Office Building
Washington, D.C. 20510

Hon. Norman D. Dicks, Chair
Subcommittee on Interior,
Environment and Related Agencies
House Appropriations Committee
B-308 Rayburn House Office Bldg.
Washington, D.C. 20510

Hon. Mike Simpson, Ranking Member
Subcommittee on Interior, Environment
and Related Agencies
House Appropriations Committee
B-308 Rayburn House Office Building
Washington, D.C. 20510

Dear Chairmen Obey and Dicks, and Ranking Members Lewis and Simpson:

On behalf of the Great Lakes Commission and its eight member states, I am writing to urge you to maintain full funding of $475 million in the FY 2010 EPA budget for the multi-agency Great Lakes Restoration Initiative (GLRI) proposed by President Obama as you prepare to resolve differences with your colleagues in the Senate. We applaud you for including the full amount of the Administration’s request in the Appropriations bill for the Department of Interior, Environment and Related Agencies for this important initiative.

The Obama Administration has proposed a strong program that is based on sound science and years of research, planning and environmental studies. The Initiative builds on the priorities of the region’s governors and the recommendations established in 2005 in the Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes. This comprehensive strategy defines the problems facing the lakes, outlines solutions and provides clear goals for measuring progress. The Commission’s eight member states, together with local governments and nongovernmental stakeholders, have consistently called for increased federal support for implementation of the restoration strategy, to complement and accelerate the substantial efforts of states, local and non-government efforts in the region.

This summer, EPA convened a series of meetings across the Great Lakes basin to review the proposed GLRI and secure feedback on a multi-year action plan to guide its implementation. The meetings demonstrated a high level of enthusiasm and support among the states for the Initiative and a clear commitment to lead its implementation. All of the states have identified high-priority, on-the-ground restoration actions that are ready to be implemented immediately.

In brief, the Great Lakes region is well organized and prepared to target the full $475 million to the most urgent problems facing the Great Lakes. The GLRI will not only help restore this priceless national treasure but will help revitalize the struggling economy in a region hard hit by the recession. We understand the

Ensuring environmental and economic prosperity for the Great Lakes-St. Lawrence region through communications, policy research and development, and advocacy.
profound role the lakes play in driving our economies and our way of life and, thus, the imperative to restore and protect them for future generations.

Please support full funding of $475 million for the Great Lakes Restoration Initiative to strengthen the federal government’s partnership with the Great Lakes states in restoring the Great Lakes and advancing our region’s economic revitalization. Should you have any questions, please contact our executive director, Tim Eder, at 734-971-9135, teder@glc.org.

Sincerely,

Governor Pat Quinn
Chairman
August 12, 2009

Director Gary Gulezian:

It was a pleasure meeting with you July 22nd to discuss the incredible opportunity presented by the Great Lakes Restoration Initiative (GLRI). We are excited to work with the Obama administration, and new Great Lakes czar Cam Davis to restore habitat, control invasive species and remediate the legacy sites of our industrial past.

As we discussed in our presentation, Illinois has a 63 mile strip of Lake Michigan shoreline, but has an affected population of over six million people. Our section of northeast Illinois contains the most biologically diverse ecosystems in the state including some areas that have been classified as globally significant.

We understand that in these economically difficult times, these investments in restoring the Great Lakes will pay real economic benefits. In Illinois, recent studies have shown that cleaning up Waukegan area will generate as much as $400 million in improved property values in the city and $7 to 12 billion in Lake County.

The attached Illinois priority project list for GLRI is the product of a working group representing Illinois Environmental Protection Agency, Illinois Department of Natural Resources, Illinois Natural History Surveys, and the City of Chicago. We believe that the Illinois priority list has a proper balance between qualifying shovel ready projects and strategic research projects. While this list is not a comprehensive one that includes all of the projects that we plan on submitting for consideration, it does reflect a consensus of competitive projects. I am pleased to report that we are now speaking with one voice.
As a follow up to our discussions on administration of the program, we are planning to submit a separate document that outlines our thoughts on how IDNR could best coordinate the administrative aspects of the GLRI in Illinois. This is an unprecedented opportunity and we look forward to beginning preliminary work this month with you and your staff on the projects we have outlined.

Sincerely

[Signature]

Marc Miller
Director
Illinois Department of Natural Resources
Illinois Priority Projects for Great Lakes Restoration Initiative

Executive Summary

1. Illinois State Beach

➢ KEY FACTS:
   o Priority projects will create an estimated 138 jobs.
   o Attracts more than 1 million visitors annually and is recognized a National Natural Landmark by US Park Service.
   o More than 650 species of plants have been recorded in the dunes area alone, including dozens of types of colorful wildflowers. Prickly pear cactus thrives in large colonies in the dry areas, and the wet prairies are carpeted with a wide variety of grasses and sedges.
   o The projects we have identified ensure continued existence of the unique topography, restore a more natural hydrology and eliminate invasive species to improve ecosystem health.

➢ PROJECT LIST:
   o Down-drift Sand Entrapment Groin. $700,000
   o Restoration of Eroded and Adversely Impacted State Park Beaches. $4.5m
   o Shore protection for Erosion Defense, Containment of Asbestos-Containing Materials. $300,000
   o Hydrological and Habitat Restoration, Nature Preserves/Creeks $683,000
   o IL Beach State Park/Spring Bluff Forest Preserve Terrestrial Habitat Restoration $560,000
   o Lake Bottom Restoration North Point Marina/Up-Drift Sand Trap $2.36m
   o Coastal Monitoring of Project Effectiveness $135,000

2. Waukegan Area Watershed Best Management Practices

➢ KEY FACTS:
   o Priority Projects will create an estimated 16 jobs.
   o Progress on the cleanup of Waukegan watershed has been underway for 20 years. To leverage this progress we have chosen projects that are necessary for delisting the six beneficial use impairments.

➢ PROJECT LIST:
   o Waukegan River retrofit existing 47 detention basins $470,000–520,000
   o Waukegan River water quality monitoring Phase II $550,000
   o Waukegan Harbor Habitat Survey $350,000/year for 4 years
   o Benthic Organism Population, Density Studies $500,000/year for 3 years
   o Phytoplankton and Zooplankton Population, Density Studies $250,000/year for 4 years
   o Waukegan River Hydraulics and Hydrology Monitoring Studies $1.5m
3. Lake Calumet Region

- **KEY FACTS:**
  - Priority projects will create an estimated 12-102 jobs.
  - The Lake Calumet region hosts one of the state’s largest number of Breeding Black-crowned Night-Herons.
  - More than 200 species of birds live or migrate through the Lake Calumet region, including 30 species of shorebirds.
  - We have chosen only qualifying shovel ready projects in this category.

- **PROJECT LIST:**
  - Hegewisch Marsh Remediation $200,000-$2.25m
  - Big Marsh Remediation and Restoration $300,000 - $60.635m
  - Van Vlissingen Prairie Remediation and Restoration $300,000 - $8.85
  - Chicago Lake Plain Natural Area/Nature Preserve Restoration $50,000 +

4. Invasive Species

- **KEY FACTS:**
  - Priority projects will create an estimated 6 -14 jobs.
  - The Chicago Sanitary & Ship Canal has been identified as one of the priority areas for invasive species control.
  - We have chosen projects that support both regional and basin wide projects.

- **PROJECT LIST:**
  - State/Interstate Aquatic Nuisance Species Management Plans $500,000 – $1m
  - Research Alternatives for Interbasin Transfer of Aquatic Nuisance Species (USACOE) $500,000
  - Whole-Lake Sea Lamprey Chemical Treatment $ TBD
  - Identify Range and Limit Spread of Aquatic Animal Pathogens $600,000/year
  - Additional ANS Research for Management, Control of Priority Species $various, range from $100,000 to $4.3m

5. Research and Ecological Evaluation

- **KEY FACTS:**
  - Priority projects will create an estimated 30 jobs.
  - The projects we have selected balance locally oriented research with basin wide programs.

- **PROJECT LIST:**
  - Great Lakes Mass Marking of Hatchery-Produced Salmonines $7m
  - Evaluation of Effects of Wind Energy Development on Lake Bottom Substrates $400,000 - $2m
  - Assessment of Essential Near-Shore Habitat in Lake Michigan $500,000-$2m
  - Hydrologic and Water Quality Monitoring, Ravines $500,000 – $2m
  - Evaluation of Coastal Changes and Erosion $500,000 - $1.5m
I. Illinois Beach Ecosystem Restoration

The Adeline Jay Geo-Karis Illinois Beach State Park (IBSP) and adjacent Spring Bluff Forest Preserve on the Lake Michigan shore in northeast Illinois includes three dedicated Illinois Nature Preserves (Illinois Beach, North Dunes and Spring Bluff). The complex supports a diverse variety of plants and animals because of the site’s unique coastal beach ridge and swale topography. The park is recognized as a National Natural Landmark by the U.S. Park Service. The diverse topography and coastal climate also has allowed for the establishment of a wide range of rare natural communities, including some that have been classified as globally significant.

Past human activities combined with suppression of fire have resulted in the encroachment of invasive vegetation into historically open landscapes. In addition, variation in water levels on Lake Michigan and changes in the pattern of sand movement and deposition along the lake shore have affected the area. An increase in beach erosion has created a threat that lake waters will breach the dunes near the lake shore and permanently alter or destroy the ridge and swale topography and eliminate populations of rare plants and animals. The urban nature of the surrounding lands, previous development, and land use has altered the hydrology of streams that bring water from the uplands into the park and eventually to Lake Michigan causing further adverse alterations of natural communities and increasing nutrients and sedimentation in surface waters.

These projects will incorporate habitat restoration, engineering/construction and hydrological restoration to restore sand deposition patterns to their historical norm, ensuring the continued existence of the topography of the park, restore a more natural hydrology to the complex and eliminate many of the invasive species restoring the health of this ecosystem. Progress will be monitored through a monitoring program.

1. Down Drift Sand Entrapment Groin:
This structure will be built along the southern portion of IBSP. The preferred location is near the southern edge of the Johns-Manville property at the eastern projection of Greenwood Avenue. Numerical modeling and wave-tank testing for this structure has been completed by the Iowa Institute of Hydraulic Research at the University of Iowa. An L-shaped groin of 800 to 1,000 feet in length will provide maximum efficiency. For this project, an 800-foot groin is planned. Construction will be carried out both from the shore and from a barge on Lake Michigan.

Project Focus Areas:
Near shore Health and Nonpoint Source Pollution
Provides a mechanism for the long term maintenance of natural beaches and other related natural communities, thereby supporting beach related public use on Illinois largest natural beachescape and controlling sedimentation in areas south of the park (Goal 2)
Habitat and Wildlife Protection and Restoration
This project provides a mechanism for the long term maintenance of the beach, dune and swale topography and the associated rare biological communities and endangered species habitat (Goal 1).

Project Selection Criteria:
Ability to strategically achieve measurable environmental outcomes linked to the highest priority issues
Observable local impacts
Inter-agency/inter-organizational coordination and collaboration
Promotion of long-term societal, economic, and environmental sustainability
Funding: $700,000

2. Restoration of Eroded and Adversely Impacted State Park Beaches:
Sand will be imported to IBSP and placed at the designated feeder beach at the north (up drift) end of the North Unit. The natural wave-induced transport of sand along the shore will distribute this sand to the down drift beaches. Sand will be delivered to the feeder beach by truck from a local sand pit and distributed onto the feeder beach with front loaders. A total of 333,333 cubic yards of sand will be supplied. The IDNR has all necessary permits in hand for placing this feeder beach sand.

Project Focus Areas:
Near shore Health and Nonpoint Source Pollution
This project restores natural beaches and repairs erosion thereby preventing loss or degradation of the beach and other related natural communities supporting beach related public use on Illinois’ largest natural beachescape. (Goal 2)

Habitat and Wildlife Protection and Restoration
This project restores natural beaches and repairs erosion thereby preventing loss or degradation the beach, dune and swale topography and the associated rare biological communities and endangered species habitat (Goal 1)

Project Selection Criteria:
Ability to strategically achieve measurable environmental outcomes linked to the highest priority issues
Feasibility of prompt implementation
Observable local impacts
Inter-agency/inter-organizational coordination and collaboration
Promotion of long-term societal, economic, and environmental sustainability
Best available science
Funding: $4,500,000

3. Shore Protection for Erosion Defense and Containment of Asbestos-Containing Material:
Work to stop ongoing shoreline erosion and prevent future erosion will be done in the vicinity of North Point Marina (NPM). This area has suffered serious erosion in recent years which has reduced the stability of the shore in the area of the marina parking lot and other facilities. Without more robust shore protection, the south end of the marina parking lot is a potential source of ACM that could wash downshore into various areas within IBSP.
The onshore work will involve construction of a rubble mound revetment that runs along the southeast perimeter of the NPM South Parking Area. Offshore operations are needed to extend the underwater breakwater (reef) farther south to give needed wave protection for the shore.

**Project Focus Areas:**

**Toxic Substances and Areas of Concern**
This project will help contain asbestos containing materials found in sand deposits south of North Point Marina thereby keeping them from the beaches and environment. (Goal 1)

**Habitat and Wildlife Protection and Restoration**
This project helps restore natural beaches and prevents erosion, thereby preventing loss or degradation the beach, dune and swale topography and the associated rare biological communities and endangered species habitat (Goal 1).

**Project Selection Criteria:**

- Ability to strategically achieve measurable environmental outcomes linked to the highest priority issues
- Feasibility of prompt implementation
- Observable local impacts
- Inter-agency/inter-organizational coordination and collaboration
- Promotion of long-term societal, economic, and environmental sustainability
- Best available science

**Funding:** $300,000

4. Hydrological and Habitat Restoration for North Dunes Nature Preserve (Illinois Beach State Park) and Spring Bluff Nature Preserve (Lake County Forest Preserve District):

**Dead Dog Creek, Kellogg and Middle Creeks**

Streams in the interior of IBSP and Spring Bluff Forest Preserve have become degraded due to changes in flow from surrounding uplands and previous land-uses of the park. Deep, standing water and an elevated temperature of the water impounded by road crossings and other obstructions has adverse effects on the vegetation in sedge meadows and wet sand prairies. This project would replace four existing culverts and modify the mouth of Dead Dog Creek to reduce blockages of that stream which flows through Spring Bluff NP and North Dunes Nature Preserve. This will facilitate water flow and reduce flooding during storm events that have been degrading natural communities in both nature preserves. Kellogg Creek is deeply incised and has become degraded due to numerous channel obstructions. This project would restore this creek by re-meandering and stabilizing this creek improving the in stream habitat. Middle Creek has impeded the movement of water through the high-quality wetlands at IBSP. Obstructions would be removed from Middle Creek.

**Project Focus Areas:**

**Near shore Health and Nonpoint Source Pollution**
This project will achieve a significant reduction in erosion and sedimentation in tributaries to Lake Michigan (Goal 5).

**Habitat and Wildlife Protection and Restoration**
This project restores of natural stream hydrology and habitat and repairs erosion thereby preventing loss or degradation the high quality natural communities and endangered species in this dune and swale landscape (Goal 1).

**Project Selection Criteria:**
Ability to strategically achieve measurable environmental outcomes linked to the highest priority issues
Feasibility of prompt implementation
Observable local impacts
Inter-agency/inter-organizational coordination and collaboration
Promotion of long-term societal, economic, and environmental sustainability

**Funding:** Dead Dog Creek ($433,000), Kellogg and Middle Creeks ($250,000)

5. **Illinois Beach State Park/Spring Bluff Forest Preserve Terrestrial Habitat Restoration:**

Invasion of IBSP by a variety of exotic plant species has had negative effects on native plants and has altered habitats of native animal species. Control or eradication of the invasive plants is needed to restore populations of native species and to allow continued management for those species. Exotic and invasive brush will be removed by using a variety of low impact methods. Pockets of invasive herbaceous species exist throughout the project areas. Species include lyme grass, cattails, phragmites, reed canary grass sweet clover, cypress spurge, and crown vetch. Old infrastructure including old interior fencing would be removed from the area.

*Project Focus Areas:*
*Invasive Species*
This project will use integrated pest management principles to control invasive species in high quality communities to restore natural communities of the park (Goal 5).

*Habitat and Wildlife Protection and Restoration*
This project restores natural communities and provides improved habitat for endangered and threatened species found at the site (Goal 1).

*Project Selection Criteria:*
Ability to strategically achieve measurable environmental outcomes linked to the highest priority issues
Feasibility of prompt implementation
Observable local impacts
Inter-agency/inter-organizational coordination and collaboration
Promotion of long-term societal, economic, and environmental sustainability

**Funding:** $560,000

6. **Lake Bottom Restoration At/Near North Point Marina and Up Drift Sand Trap:**

Construction of North Point Marina in 1986-1987 resulted in the introduction of a partial barrier to littoral transport. Pre-construction assessment identified the need to periodically remove sand trapped on the up drift side of the marina. Such work has never been done. Twenty years of sand entrapment has created a broad, low-slope beach and near shore with reduced wave action and serious water-quality issues. Persistent below-average lake levels in recent years have compounded the shoaling problems. Restoring the lake-bottom profile to 1988 conditions is essential. All accumulated sand will be removed and returned to the littoral transport down drift of the marina. Lake-bottom restoration is also needed at the marina entrance and entire marina lakeward perimeter. All sand will be transferred to the down drift shore. A total of 225,000 cubic yards needs to be removed from all accumulation areas on the margin of North Point Marina. This project would also dredge a sand trap with a 40,000 cubic yard capacity to capture sand. This sand would then be periodically dredged for placement on beaches within IBSP, thereby bypassing the marina.
Project Focus Areas:
Near shore Health and Nonpoint Source Pollution
This project restores the North Beach Area repairs and provides for long term maintenance for a water quality and sedimentation problem that impairs the use of North Beach, North Point Marina and interrupts sand transport around the marina, thereby supporting beach and boating related public use at IBSP. (Goal 2)
Habitat and Wildlife Protection and Restoration
This project provides a mechanism for the long term maintenance of the beach, dune and swale topography and the associated rare biological communities and endangered species habitat, by assisting in by passing sand around an obstruction and providing a source of sand for the beach ecosystem (Goal 1).

Project Selection Criteria:
Ability to strategically achieve measurable environmental outcomes linked to the highest priority issues
Observable local impacts
Promotion of long-term societal, economic, and environmental sustainability
Funding: $2,360,000

7. Coastal Monitoring of Project Effectiveness:
Several transects have been established and are in use for monitoring of plant diversity and abundance at IBSP. The occurrence and abundance of both native and exotic species are monitored as an indication of the success of restoration efforts and to guide future management. Annual monitoring of piping plover critical habitat along Lake Michigan will continue. Coastal morphology will be monitored to assess the effectiveness of the various project components in managing the coastal sand. This monitoring will include collection of beach measurements, profile data, bathymetry, and ground and aerial photography to confirm restoration and plan continued maintenance and movement of sand.

Project Focus Areas:
Accountability, Monitoring, Evaluation, Communication, and Partnerships
Provide information on the success of other components of the project and allow for adjustments of future land management strategies in the Illinois Beach Ecosystem.

Project Selection Criteria:
Feasibility of prompt implementation
Inter-agency/inter-organizational coordination and collaboration
Funding: $135,000
II. **Watershed Best Management Practices (BMP) Implementation Projects For Waukegan Area**

Over the course of Waukegan's settlement and growth, many natural features of the original lakefront landscape have been destroyed or severely compromised by industrial development. Despite the negative effects of industrial activity on Waukegan's lakefront, many valuable ecological systems remain. These include an excellent "foredune" system immediately adjacent to the beach, small remnant plant communities in abandoned sites and wetlands adjacent to roads and railroads.

*Project 1: Waukegan River retrofitting existing 47 detention basins* - Water quality improvement, erosion protection and sedimentation reduction project.

Summary:
The Waukegan River watershed is located in the northeastern portion of Lake County. It drains almost 12 square miles of land including much of the City of Waukegan. The Illinois EPA has listed the river as impaired for aquatic life due to contaminated sediments and total dissolved solids. Forty-one percent of the ravine walls are experiencing high to moderate erosion. The Waukegan River Watershed Plan, finalized in 2008, identified forty-seven existing detention basins that retrofitting to increase their ability to retain stormwater and reduce pollutant load.

- **GLRC Priority Categories:** Nearshore Health and Nonpoint Source Pollution, Accountability, Monitoring, Evaluation, Communication and Partnerships
- **GLRC Selection Criteria:** Prompt implementation, Observable Local Impacts, Achieve measurable environmental outcomes, Promotes long-term societal and environmental sustainability
- **GLRC Long Term Goals:** Land use, recreation and economic activities are managed to ensure that nearshore aquatic, wetland and upland habitats will sustain the health and function of natural communities. Achieve significant reduction in soil erosion and the loading of sediments into tributaries through greater implementation of soil practices in urban areas. Accessible mechanisms provide a range of opportunities for Great lakes stakeholders to and citizens to provide input to the governments on Great Lakes issues and concerns.

**Funding Range:** $470,000 - $520,000
**Project 2: Waukegan River water quality monitoring proposal –Phase II**

Summary:
Waukegan River Water Quality Monitoring proposal –Phase II - Five year monitoring protocol

The project will continue the efforts accomplished in the Waukegan River Water Quality Monitoring Proposal - Phase I and the National Monitoring Program Project. Monitoring data is used to assist in the implementation and update of the watershed plan for the Waukegan River. Monitoring activities conducted as part of this proposal include a record of river flow conditions and the collection of water and sediment samples for analyses. These activities would provide necessary background information for current and future planning efforts and initiatives.

GLRC Priority Categories: Nearshore Health and Nonpoint Source Pollution
Accountability, Monitoring, Evaluation, Communication and Partnerships

GLRC Selection Criteria: Prompt implementation
Strong bias for inter-agency/interorganizational coordinataion and collaboration
Promotes long-term societal and environmental sustainability

GLRC Long Term Goals: Land use, recreation and economic activities are managed to ensure that nearshore aquatic, wetland and upland habitats will sustain the health and function of natural communities.

High quality, timely, and relevant information about the nearshore areas is readily available to assess progress and to inform enlightened decision-making.

Accessible mechanisms provide a range of opportunities for Great lakes stakeholders to and citizens to provide input to the governments on Great Lakes issues and concerns.

**Funding Range:** $550,000

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**WAUKEGAN HARBOR AREA OF CONCERN DELISTING STUDIES**

**Project 3: Habitat survey, including physical, ecological, and hydrological monitoring, and development of habitat management plan for the Waukegan lakefront dune and swale habitat**

Summary:
As part of the requirements necessary for delisting the Waukegan Harbor Area of Concern, determine current baseline habitat conditions for the Waukegan lakefront dune and swale habitat.

Develop a local fish and wildlife habitat management and restoration/rehabilitation plan for the Waukegan lakefront dune and swale habitat. The management plan should: define the causes of all habitat impairments; establish site-specific habitat and population targets for fish and wildlife species; identify all fish and wildlife habitat restoration activities with lead agencies; and establish a timetable and
list of possible funding mechanisms for all fish and wildlife habitat restoration activities.

GLRC Priority Categories: Toxic Substance and Areas of Concern
Nearshore Health and Non-Point Source Pollution
Accountability, Monitoring, Evaluation, Communication and Partnerships

GLRC Selection Criteria: Ability to advance Remedial Action Plans for Areas of Concern
Prompt implementation
Strong bias for inter-agency/interorganizational coordination and collaboration
Public Support

GLRC Long Term Goals: High quality, timely, and relevant information about the nearshore areas is readily available to assess progress and to inform enlightened decision-making.

Accessible mechanisms provide a range of opportunities for Great lakes stakeholders to and citizens to provide input to the governments on Great Lakes issues and concerns.

Funding Range: $

**Project 4: Benthic organism population and density studies**

Summary:
As part of the requirements necessary for delisting the Waukegan Harbor Area of Concern, determine current baseline of the Waukegan Harbor benthic community’s population and species. In addition establish a control site for comparison. If the community structure is statistically different than the reference conditions, the benthic community is considered impaired.

If the benthic community is considered impaired then identify the factors leading to this impairment. Ambient water chemistry sampling should be conducted to determine if nutrient enrichment is the main contributor. If nutrient enrichment is not considered the cause of the impairment, conduct bioassays to determine if ambient water toxicity is causing impairment.

Community surveys of benthic organisms from Waukegan Harbor should be compared to harbor control sites which are of similar location, use and/or structure.

If coordinated properly, USEPA's research vessel could collect samples.

GLRC Priority Categories: Toxic Substance and Areas of Concern
Nearshore Health and Non-Point Source Pollution
Accountability, Monitoring, Evaluation, Communication and Partnerships

GLRC Selection Criteria: Ability to advance Remedial Action Plans for Areas of Concern
Prompt implementation
Strong bias for inter-agency/interorganizational coordination and collaboration
Public Support

GLRC Long Term Goals: High quality, timely, and relevant information about the nearshore areas is readily available to assess progress and to inform enlightened decision-making.

Accessible mechanisms provide a range of opportunities for Great lakes stakeholders to and citizens to provide input to the governments on Great Lakes issues and concerns.

**Funding Range:** $

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**Project 5: Phytoplankton and zooplankton population and density studies**

Summary:
Phytoplankton and zooplankton community surveys should be conducted and compared to a non-impacted or minimally impacted harbor type reference site to set the baseline condition. If the community structure is statistically different than the reference conditions, the phytoplankton and zooplankton community should be considered impaired.

Community surveys of phytoplankton/zooplankton from Waukegan Harbor should be compared to harbor control sites which are of similar location, use and/or structure.

If coordinated properly, USEPA's research vessel could collect samples.

GLRC Priority Categories: Toxic Substance and Areas of Concern
Nearshore Health and Non-Point Source Pollution
Accountability, Monitoring, Evaluation, Communication and Partnerships

GLRC Selection Criteria: Ability to advance Remedial Action Plans for Areas of Concern
Prompt implementation
Strong bias for inter-agency/interorganizational coordination and collaboration
Public Support

GLRC Long Term Goals: High quality, timely, and relevant information about the nearshore areas is readily available to assess progress and to inform enlightened decision-making.

Accessible mechanisms provide a range of opportunities for Great lakes stakeholders to and citizens to provide input to the governments on Great Lakes issues and concerns.

**Funding Range:** $

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**Project 6: Waukegan River hydraulics and hydrology and monitoring strategy 32 month**

Summary:
This project proposal was developed by the Illinois State Water Survey will assist in the development of comprehensive watershed plan for the Waukegan River. This plan will bring together the stakeholders in the Waukegan River watershed to address water quality concerns, impacts and to protect and improve aquatic biodiversity and to enhance habitat. This monitoring strategy is proposed to be a 32-month study that will address selected chemical parameters, generate stream maps, and the use of water quality models to identify current and potential water quality conditions. The monitoring strategy will continue monitoring protocols established under the USEPA Section 319 Waukegan River National Monitoring Program for seasonal habitat surveys and may provide additional monitoring of flow conditions on the Waukegan River. The uses of additional monitoring equipment and the collection of samples and surveys will assist in providing further background information for the current and future watershed planning and implementation efforts. This project is necessary to develop flow models of the river to develop BMPs to reduce flooding potential and flashiness of the waterway.

GLRC Priority Categories: Nearshore Health and Nonpoint Source Pollution
Accountability, Monitoring, Evaluation, Communication and Partnerships

GLRC Selection Criteria: Prompt implementation
Strong bias for inter-agency/interorganizational coordinataion and collaboration
Promotes long-term societal and environmental sustainability

GLRC Long Term Goals: Land use, recreation and economic activities are managed to ensure that nearshore aquatic, wetland and upland habitats will sustain the health and function of natural communities.

High quality, timely, and relevant information about the nearshore areas is readily available to assess progress and to inform enlightened decision-making.

Accessible mechanisms provide a range of opportunities for Great lakes stakeholders to and citizens to provide input to the governments on Great Lakes issues and concerns.

Funding Range: $1,500,000
III. Lake Calumet Region

The Lake Calumet region is a 20-square mile (~12,000 acres) area located on Chicago’s far southeast side that has undergone radical change wrought by 120 years of intensive industrialization, pollution and waste disposal. The coexistence of industrialized lands and valuable wetland habitats is the defining feature of the Calumet area. This varied landscape evolved through a vibrant history of important industrial development and the sometimes random and accidental protection of marshlands that were once extensive, teeming with threatened and endangered species as well as other native flora and fauna.

Project 1: Hegewisch Marsh Remediation – Restoration and remediation of Hegewisch Marsh, an important wetland in the Calumet region of Chicago, located at the future site of the Ford Calumet Environmental Center (FCEC).

GLRC Priority Categories: Toxic Substances and Areas of Concern
Habitat and Wildlife Protection and Restoration
Accountability, Monitoring, Evaluation, Communication and Partnerships

GLRC Selection Criteria: Public Support
Strong Inter-Agency Cooperation
Prompt implementation
Observable Local Impacts
Achieve measurable environmental outcomes
Promotes long-term societal and environmental sustainability
Minimal transaction costs
Ability to leverage non-Federal resources

GLRC Long Term Goals: Protect, restore and improve Great Lakes wetland, aquatic and terrestrial habitat
Reduce exposure to historical contamination for humans, threatened and endangered species, and other flora and fauna
Improve health and integrity of wildlife populations and habitat protection
Increase opportunities for recreational and ecological land use
Cooperative monitoring and observing system

Summary:
Hegewisch Marsh is a 130-acre wetland in the Calumet region of Chicago. The uplands at Hegewisch Marsh are slated for the Ford Calumet Environmental Center, a 38,000 square foot environmental education and research LEED-certified building. FCEC will be a focal point for ecological restoration in the 3,900 acre urban Calumet Open Space Reserve. Over 100,000 visitors are expected annually, with groundbreaking slated for late 2010. Restoration of the site is nearly complete, thanks to National Coastal Wetlands Conservation Grant Funds totaling more than $1,100,000.

The objectives for this project are to complete delineation of soils with elevated concentrations of lead and conduct the necessary remediation to meet the ecological restoration goals and to protect human health of visitors to the future Ford Calumet Environmental Center. It will also be protective of ecological receptors, particularly a suite of state-endangered birds using the site. The last remaining tasks within the marsh include remediation of three areas containing elevated levels of lead. Funds will be used to fully delineate these areas, identify costs and begin the necessary remediation to protect ecological and human health as part of site restoration.
Funding Range: $200,000 - $2,250,000

Project 2: Big Marsh Remediation and Restoration – Remediation and restoration of Big Marsh, the largest wetland in the Calumet region of Chicago.

GLRC Priority Categories: Toxic Substances and Areas of Concern
Habitat and Wildlife Protection and Restoration
Accountability, Monitoring, Evaluation, Communication and Partnerships

GLRC Selection Criteria: Public Support
Strong Inter-Agency Cooperation
Prompt implementation
Observable Local Impacts
Achieve measurable environmental outcomes
Promotes long-term societal and environmental sustainability
Minimal transaction costs

GLRC Long Term Goals: Protect, restore and improve Great Lakes wetland, aquatic and terrestrial habitat
Reduce exposure to historical contamination for humans, threatened and endangered species, and other flora and fauna
Improve health and integrity of wildlife populations and habitat
Increase opportunities for recreational and ecological land use
Cooperative monitoring and observing system

Summary:
Big Marsh is a 290-acre wetland that lies within the Calumet region of Chicago’s southeast side. The site is part of the Illinois Natural Areas Inventory, a state list of the highest-quality open spaces. Many state-endangered birds utilize the site, and it is actively used by the community for hiking, birding and fishing. The City of Chicago acquired the site in 2008. Restoration will include wetland, prairie and forest improvements, modification of an existing water control system for habitat purposes, invasive species control, prescribed burns, planting of native species throughout the site, and establishment of a path system. Additional objectives for this site include fully delineating the extent of contamination and conducting remediation to protect both human and ecological receptors. The site will ultimately be used by Chicagoans for passive recreation, and will be an invaluable resource to the many state-endangered birds in the area.

Funding Range: $300,000 - $60,635,000

Project 3: Van Vlissingen Prairie Remediation and Restoration - Remediation and ecological restoration of Van Vlissingen Prairie, an important wetland in the Calumet region of Chicago.

GLRC Priority Categories: Toxic Substances and Areas of Concern
Habitat and Wildlife Protection and Restoration
Accountability, Monitoring, Evaluation, Communication and Partnerships

GLRC Selection Criteria: Public Support
Strong Inter-Agency Cooperation
Prompt implementation
Observable Local Impacts
Achieve measurable environmental outcomes
Promotes long-term societal and environmental sustainability
Minimal transaction costs

GLRC Long Term Goals:
- Protect, restore and improve Great Lakes wetland, aquatic and terrestrial habitat
- Reduce exposure to historical contamination for humans, threatened and endangered species, and other flora and fauna
- Improve health and integrity of wildlife populations and habitat
- Increase opportunities for recreational and ecological land use
- Cooperative monitoring and observing system

Summary:
Van Vlissingen Prairie is a 130-acre wetland that lies within the Jeffrey Manor community, a low-income, blue-collar community on Chicago’s southeast side. Neighbors to the property already use the site extensively for hiking, birding and enjoyment of nature. These neighbors, along with many stakeholders, have worked for several years to develop a mutually agreeable site restoration plan that includes wetland, prairie and forest improvements, invasive species control, prescribed burns, and planting of native species throughout the site, as well as establishment of a path system. This project has moved partially through the State of Illinois’ Tiered Approach for Corrective Action protocol. Objectives include final site sampling and undergoing remediation (to protect both human and ecological receptors). The site will ultimately be used by Chicagoans for passive recreation, and will be an invaluable resource to the many state-endangered birds in the area.

Funding Range: $300,000 - $8,850,000

Project 4: Chicago Lake Plain Natural Area/Nature Preserves Restoration:
Several nature preserves, land and water reserves and natural areas are located in the Chicago Lake Plain area and are in need of restoration. These sites are owned by several partners including the Chicago Park District, Forest Preserve District of Cook County, Universities and other local units of Government. Examples of sites where work could take place include Powderhorn, Calumet City Prairie, Thornton Fractional High-School Prairie, Sand Ridge, and Burnham Prairie. Activities would support the Chicago Wilderness Biodiversity Plan, and Illinois Wildlife Action Plan. The partners, in turn, would identify management priorities that would include brush removal, invasive species removal, controlled burning, other management needs.

Focus Areas:
Invasive Species
Habitat and Wildlife Protection and Restoration

Selection Criteria:
Ability to strategically achieve measurable environmental outcomes linked to the highest priority issues
Feasibility of prompt implementation
Observable local impacts
Inter-agency/inter-organizational coordination and collaboration
Promotion of long-term societal, economic, and environmental sustainability

**Funding Range: $50,000 to ?**
IV. Invasive Species

Invasive species propagate and spread throughout the Great Lakes region, ultimately degrading habitat, out-competing native species, and interrupting complex food webs. Prevention is the most cost-effective approach to dealing with organisms that have not arrived and could potentially threaten the lakes. New invasive species can be introduced into the Great Lakes region through various pathways, including: commercial shipping, canals and waterways, trade of live organisms, and activities of recreational and resource users.

Prevention and control efforts must be accelerated in order to prevent new introductions and to minimize spread of organisms to inland lakes, the Mississippi River watershed and beyond. Three priority activities are (1) Stop the introduction of new invasive species through enhanced prevention programs, (2) Control the spread of invasive species already here, and (3) establish early detection and rapid response (EDRR) capabilities to deal with accidental introductions. Highest priority projects for Illinois include:

**Project #1: State and Interstate Aquatic Nuisance Species Management Plans** - This U.S. Fish and Wildlife Service program will support approved (by Aquatic Nuisance Species Task Force) State and Interstate Aquatic Nuisance Species Management Plans, and implementation of rapid response actions by States.

Summary:
Illinois has an approved ANS management plan in operation, which has been underfunded for several years. The stated goals of this plan align with goals outlined above (prevent new introductions, minimize spread, etc.). This management plan is used to issue sub-contracts in support of invasive species research, various control projects, outreach and education to diverse user-groups, and interagency coalitions. A planned revision / update / review of this plan is also included as a specific work item.

Long-Term Goals:
Goals 2, 3, and 4 are supported (minimize risk of introduced species, minimize spread of species beyond current range, and develop comprehensive program for detection and rapid response).

Project Selection Criteria:
• Ability to strategically achieve measurable environmental outcomes
• Feasibility of prompt implementation,
• Observable local impacts, especially for projects at the field level;
• Strong bias for inter-agency/inter-organizational coordination and collaboration;
• Promotion of long-term societal, economic, and environmental sustainability; and
• Minimization of transaction costs.
All of the additional project standards are met.

**Funding Range:** $500,000 - $1,000,000 per year for FULL implementation.
**Project #2 Interbasin Transfer of Aquatic Nuisance Species** - U.S. Army Corps of Engineers will conduct comprehensive study on the feasibility of a wide array of alternatives for preventing the migration of aquatic nuisance species between the Great Lakes and Mississippi River Basins.

Summary:
An electric barrier is in place to prevent the transfer of ANS between the Great Lakes and Mississippi River basins via the Chicago Sanitary and Ship Canal. However, several connections have been identified which may allow certain life-stages of some species to bypass this protective structure. Further, the effectiveness of the barrier to prevent all life stages of all species is not completely understood, nor is the barrier’s ability to prevent migration of ANS from the Great Lakes into the Mississippi River basin. A feasibility study to prevent transfer of all life stages of all species is necessary for long-term ecosystem health.

Long-Term Goals:
Goals 2, 3, and 4 are supported (minimize risk of introduced species, minimize spread of species beyond current range, and develop comprehensive program for detection and rapid response).

Project Selection Criteria:
- Ability to strategically achieve measurable environmental outcomes linked to the highest priority issues;
- Ability to advance applicable ecological priorities of Lakewide Management Plans, Remedial Action Plans for Areas of Concern, as well as other relevant national and regional coordinated strategic planning efforts;
- Observable local impacts, especially for projects at the field level;
- Strong bias for inter-agency/inter-organizational coordination and collaboration;
- Support new work, or enhance (but do not replace) existing Great Lakes base activities;
- Public support;
- Ability to leverage non-Federal resources;
- Promotion of long-term societal, economic, and environmental sustainability.

Additional project standards are met.

**Funding Range:** $500,000

**Project #3: Whole-lake Sea Lamprey Chemical Treatment** - A whole-lake chemical treatment program, similar to Lake Erie, should be undertaken in Lake Michigan to reduce the impacts of invasive, predatory sea lamprey on fish stocks. This is possible under the headings “Sea Lamprey Traps and Barriers” and “Integrated Pest management for Priority Species.”

Summary:
Sea lamprey predation is an impediment to lake trout restoration and their control is critical to effective management of fisheries resources. Federal agencies expend significant funds each year in an attempt to reestablish self-sustaining lake trout populations. A large portion of the stocked lake trout, in addition to salmon, are lost to sea lamprey predation. Lamprey numbers and wounding rates have continued to increase in Lake Michigan due to intermittent chemical treatments. Barriers, traps and limited chemical treatments have not been effective in reducing sea lamprey numbers. Dam removal is a priority for reestablishing natural flow regimes to
tributaries; thus, increasing water quality. However, removal has the potential to open new waterways in which sea lamprey reproduce. Efforts should be made to chemically treat all Lake Michigan tributaries simultaneously and over three consecutive years to remove residuals and transformers.

Long-Term Goals:
Goals 2, 3, 4, and 5 are supported (minimize risk of introduced species, minimize spread of species beyond current range, develop comprehensive program for detection and rapid response, and Integrated Pest Management for priority species).

Project Selection Criteria:
• Ability to strategically achieve measurable environmental outcomes linked to the highest priority issues;
• Ability to advance applicable ecological priorities of Lakewide Management Plans, Remedial Action Plans for Areas of Concern, as well as other relevant national and regional coordinated strategic planning efforts4;
• Observable local impacts, especially for projects at the field level;
• Strong bias for inter-agency/inter-organizational coordination and collaboration;
• Support new work, or enhance (but do not replace) existing Great Lakes base activities;
• Public support;
• Ability to leverage non-Federal resources;
• Promotion of long-term societal, economic, and environmental sustainability.
All of the additional project standards are met.

Funding Range: unknown - $2,750,000 available in GLRI.

Project #4: Identify Range and Limit Spread of Aquatic Animal Pathogens – In response to recent findings of Viral Hemorrhagic Septicemia (VHS) in Illinois, an intensive program of surveillance monitoring in Illinois watersheds and fish production facilities is necessary to limit spread of this devastating aquatic animal pathogen.

Summary:
USDA –APHIS currently partners with Illinois DNR and Southern Illinois University for VHS surveillance monitoring in Illinois watersheds and both public and private fish hatchery facilities. Aquatic animal pathogens can impact both natural fish populations as well as cultured animals. VHS disease testing is required to maintain Illinois’ current sportfish production capacity, as well as the ability to export various products under revised Federal Orders. IDNR is the Competent Authority for fish health in Illinois and is currently working on a program with APHIS and SIU to identify current range and limit spread of VHS in Illinois waters through regulations and outreach and education efforts. This funding will expand current efforts and build laboratory capabilities.

Long-Term Goals:
Goals 2, 3, 4, and 5 are supported (minimize risk of introduced species, minimize spread of species beyond current range, develop comprehensive program for detection and rapid response, and Integrated Pest Management for priority species).
Project Selection Criteria:
- Ability to strategically achieve measurable environmental outcomes linked to the highest priority issues;
- Feasibility of prompt implementation, including a bias for projects that are both ready-to-go and will have results soon;
- Strong bias for inter-agency/inter-organizational coordination and collaboration;
- Support new work, or enhance (but do not replace) existing Great Lakes base activities;
- Public support;
- Ability to leverage non-Federal resources;
- Promotion of long-term societal, economic, and environmental sustainability; and
- Minimization of transaction costs.
All of the additional project standards are met.

**Funding:** $600,000 per year

**Project #5: Additional ANS Research for management and control of priority species** – A full understand of ecological effects and invasion mechanisms is necessary to manage and control various species in the Great Lakes and their tributaries.

**Summary:** Additional research can be funded through the Invasive Species Prevention Control Program ($4,280,000), Integrated Pest Management Grant/Subcontract Support ($4,223,000) and Aquatic Invasive Species Prevention Program ($3,136,000). Specific projects submitted for Illinois ANS research include:

- “Understanding molecular mechanisms of successful invasions” Funding: $550,000 – $600,000.
- “Alternative barrier and prevention approaches to bi-directional migration of motile invasive species” Funding: $100,000 to 200,000 per year for 5 years
- “Nutrient and food chain effects associated with recreational boating activities in Chicago ports - a risk assessment of our harbors and ports as focal points for invasive species” Funding: $100,000 to 150,000 per year for 5 years
- “Quantify migration and reproductive ecologies of Asian Carps (Hypophthalmichthys harmandi and H. nobilis) in the Illinois River using molecular markers as a means to assay invasive potential and predict invasion success in the Great Lakes” Funding: $500,000 per year for 5 years.

**Long-Term Goals:**
Goals 2, 3, 4, and 5 are supported (minimize risk of introduced species, minimize spread of species beyond current range, develop comprehensive program for detection and rapid response, and Integrated Pest Management for priority species).

**Project Selection Criteria:**
- Feasibility of prompt implementation
- Strong bias for inter-agency/inter-organizational coordination and collaboration;
- Support new work, or enhance (but do not replace) existing Great Lakes base activities;
- Public support;
- Ability to leverage non-Federal resources;
• Promotion of long-term societal, economic, and environmental sustainability. Additional project standards are met.
V. Research and Ecological Evaluation

Project 1: Great Lakes Mass Marking - Marking (implanting of coded-wire tags) in all hatchery-produced salmonines is necessary to assess natural reproduction and provide information critical to the Lake Michigan lake trout rehabilitation program.

Summary: Over 12 million salmon and trout are stocked in Lake Michigan annually. Fisheries managers must balance this predator demand with available forage or risk collapsing prey populations. A significant number of Chinook salmon are added to the system through natural reproduction creating potential for imbalance. Marking (implanting of coded-wire tags) will allow fisheries managers to determine numbers of naturally produced fish and adjust stocking numbers accordingly. In addition, restoration efforts for lake trout have had little success over the past 40 years due to insufficient information on efficacy of strains and stocking locations. Marking of all stocked lake trout will provide critical information for the restoration effort as well as identify natural recruits. A Great Lakes fish marking plan has already been adopted by the Council of Lakes Committee. This program is estimated to have an annual operating cost, which USFWS intends to cover out of other program budgets, of $10,000,000. However funds to cover initial equipment are still needed. This should be developed as a Regional Project under the Great Lakes Fish and Wildlife Restoration Act.

Funding Range: $7,000,000

Project 2: Evaluation of the effects of wind energy development on lake bottom substrates – The current initiative (36 USF&WS Great Lakes Wind Power) only addresses avian flyways.

Summary: Great Lakes wind energy will provide benefits to the environment but should be developed in a way that minimizes the effects on both fish and wildlife resources. Lake bottom substrates act as feeding and spawning areas for fish, and some of these spawning areas provide unique habitats necessary for egg incubation (e.g., lake trout at Julian's Reef). Evaluation of the effects of construction and operation of wind energy development on nearshore bottom substrates should be added to Initiative 36 which currently only lists avian flyways. Information gathered from this study will assist in locating sites with the least impact to fish populations.

Funding Range: $400,000-2,000,000

Project 3: Assessment of essential nearshore habitat in Lake Michigan – There is little information on invertebrate and fish distribution in nearshore areas and most of the information on bottom substrates is outdated.

Summary: Quantification is required to understand the degree of heterogeneity of productivity in the Lake Michigan nearshore zone, macro- and micro-habitat structure, complexity, and diversity. The Department often lacks the necessary information to assess proposed shoreline developments during the permitting process. Identification and cataloging of aquatic habitats combined with extensive monitoring of fish and invertebrate communities is necessary to identify vital areas of lake productivity and help prioritize and guide future strategies related to shoreline development and protect habitats essential to the ecosystem function.
Project 4: Hydrologic and Water Quality Monitoring – Hydrologic and water quality monitoring and evaluation are needed to assess the hydrologic conditions of flow in ravines associated with waterways connected to Lake Michigan and provide important information for ravine management and restoration along the northern shoreline.

Summary:
Periodic monitoring and evaluation are needed to assess the hydrologic conditions of flow in the ravines. Currently, Lake County SMC operates 8 stream gages in the Kellogg Creek, Dead River, Waukegan River, and Pettibone Creek watersheds. Hydrologic studies for the bluff/ravine systems south of the Pettibone Creek watershed are sparse and rely heavily upon modeling. Monitoring would provide important scientific data for ravine management and restoration as well as reference for the implementation of stormwater and other development BMPs in ravine watersheds. The Lake County Health Department – Lakes Management Unit is performing a water quality assessment on Dead Dog, Kellogg, and Bull Creeks. Continued water quality monitoring that includes not only chemical, but also biological and physical monitoring would bolster understanding of how water quality in ravine streams is related to water quality in Lake Michigan, especially at beaches. It would also improve understanding of how urban stormwater runoff and implementation of BMPs affect water quality. In addition to addressing non point source pollution, for purposes of improving water quality and aquatic habitat, it will be important to assess and repair potential problems with cross connections between sanitary and stormwater pipes and infiltration/exfiltration that results when pipes are degraded due to age or erosion.

Funding Range: $500,000-2,000,000

Project 5: Evaluation of Coastal Change and Erosion – Lakebed erosion has the potential of being the future, long-term erosion issue along the Illinois coast. Sustained annual coastal monitoring and lakebed erosion programs will be a valuable as planning tools for coastal management, assessing sediment transport pathways, and will assist in computing sand budgets.

Summary:
A database of physical characteristics along the entire Illinois coast needs to be developed. Such database would contain profile data, sand-thickness measurements and distribution maps, nearshore bathymetry, and coastal photography, and would be a valuable planning tool for coastal management. The Illinois Beach State Park/North Point Marina and the neighboring coast southward to Waukegan Harbor includes the most severe beach erosion along the Illinois coast and has the greatest need for the management of coastal sand. In addition, a better understanding of the role of nearshore ice in Illinois coastal erosion is necessary. Previous studies of the dynamics of coastal ice along the Illinois coast have demonstrated that nearshore ice can contribute to erosion (Barnes et. al 1994). Ice can also contribute to the damage and deterioration of shore structures.

Funding Range: $500,000 - 1,500,000
August 19, 2009

Mr. Cameron Davis
Special Assistant to the Administrator for the Great Lakes
U.S. Environmental Protection Agency
Great Lakes National Program Office
77 West Jackson Boulevard (G-17J)
Chicago, Illinois  60604-3511

Dear Mr. Davis:

On behalf of the state of Michigan, thank you for the opportunity to provide comments on the proposed Great Lakes Restoration Initiative’s (GLRI) Multi-Year Restoration Action Plan Outline.

Governor Jennifer M. Granholm and Lt. Governor John Cherry have asked the Office of the Great Lakes to coordinate with state agencies to develop these comments. First, we would like to extend our appreciation for the efforts made by you, the Great Lakes National Program Office Director Gary Gulezian, and other federal agency representatives to meet on August 3, 2009, with Michigan state agency directors, their senior staff, and later with our Great Lakes partners to discuss the GLRI.

As you know, Governor Jennifer M. Granholm participated in the convening ceremony for the Great Lakes Regional Collaboration (GLRC). At her direction, Michigan offered to co-chair two of the GLRC Strategy Teams and actively participated in the overall development of the GLRC Strategy. The fiscal year 2010 GLRI proposal makes an important down payment on the kind of long-term, significant investment called for in the GLRC Strategy. We look forward to continuing to work collaboratively with the U.S. Environmental Protection Agency (U.S. EPA) and our partners to make the GLRI a true success.

To better prepare for the opportunities to implement the GLRC Strategy in Michigan, last year Lt. Governor John Cherry launched the development of the MI-Great Lakes Plan, Our Path to Protect, Restore, and Sustain Michigan’s Natural Treasures. This Plan, developed with the involvement of more than 2,000 Michigan citizens at over 20 public meetings, builds off of the recommendations from Strategy and defines specific direction for Michigan’s protection and restoration efforts. In February, Lt. Governor Cherry presented the MI-Great Lakes Plan to the U.S. EPA Administrator Lisa Jackson.
The GLRI offers tremendous opportunity to enhance our current efforts to implement the MI-Great Lakes Plan, State Wildlife Action Plans, Lakewide Management Plans, Remedial Action Plans, Aquatic Invasive Species State Management Plans, along with other plans, to accelerate Michigan’s efforts to protect and restore the Great Lakes.

Great Lakes waters have been the catalyst for the economic development that moved the region into international prominence; however, these activities have also left us with a legacy of pollution in some communities. During the process to develop the MI-Great Lakes Plan, we heard from citizens throughout Michigan that protecting and restoring Michigan waterways is essential to our economic transformation. The GLRI presents a unique opportunity at a critical juncture for our region to revitalize our economy, protect, and restore the Great Lakes, and thus sustain and improve our quality of life.

For the GLRI to be successful, the multi-year action plan should consider the following:

- The states are the most critical partners in the successful implementation of the Action Plan and their role as such should be clearly recognized in the Action Plan.
- Where possible, the funding process should allow for large grants to state agencies so that monies can be centrally managed. This approach will improve transparency and accountability, and help ensure that spending is consistent with the Strategy, state plans, Lakewide Management Plans, and other planning efforts.
- The application process should allow applicants to submit a single, consolidated application encompassing several grant opportunities. Michigan strongly supports the goal of streamlining the process for years 2011 and beyond to facilitate effective partnership and project development. Consolidation of duplicative funding programs currently distributed across multiple agencies will improve efficiencies for applicants and recipients of funds as well as improve reporting, transparency, and accountability.
- Dedicated resources should be provided for administrative support to implement GLRI-funded programs and projects.
- Reporting requirements should be simplified to collect necessary information and to track progress without detracting from efficient and effective project implementation. The proposed metrics need to be reviewed to insure that the objectives relate to the activities funded by the GLRI, and not because of other efforts or conditions. The metrics also need to consider the timeframe for the objectives to occur. To the extent possible, results should be reported in a manner that is highly transparent and that allows for sharing of data with the public.
- Funding should include support for local Technical Assistance, which is critical to implementing landowner practice changes that are required to accomplish the nonpoint source pollution, protection, and restoration goals of the GLRI.
Affordable and flexible non-federal match requirements should be considered recognizing significant and ongoing investments by state, other governments, and stakeholders in Great Lakes protection and restoration.

We look forward to continuing our partnerships with the U.S. EPA and other federal agencies to achieve on the ground measurable successes as a result of this significant national investment in Great Lakes restoration. We have attached specific comments on the Draft Multi-Year Action Plan Outline for your consideration. Thank you again for the opportunity to provide comments. If you have any questions, please do not hesitate to contact me.

Sincerely,

Ken DeBeaussaert
Director
517-335-4056

Attachment

cc:  Mr. Gary Gulezian, U.S. EPA
     Mr. Anthony Kizlaukus, U.S. EPA
     Mr. Nathaniel Lake, Jr.  Governor’s Office
     Ms. Donna Stine, Governor’s Office
     Mr. Joseph Dooley, Governor’s Office
     Mr. Gary Owen, Lt. Governor’s Office
     Ms. Rebecca Humphries, MDNR
     Mr. Donald Koivisto, MDA
     Mr. Steven Chester, MDEQ
General Comments

• The states are the most critical partners in the successful implementation of the Action Plan and their role as such should be clearly recognized in the Action Plan.

• Where possible, the funding process should allow for large grants to state agencies so that monies can be centrally managed. This approach will improve transparency and accountability, and help ensure that spending is consistent with the Strategy, state plans, Lakewide Management Plans, Remedial Action Plans, Aquatic Invasive Species Prevention and Control Plans, and other planning efforts.

• The U.S. Environmental Protection Agency (U.S. EPA) grant application process should allow applicants to submit a single, consolidated application encompassing several grant opportunities. Michigan strongly supports the goal of streamlining the grant application process for years 2011 and beyond to facilitate effective partnership and project development. In future years, consideration should be given to allowing applications to be submitted to the U.S. EPA to be reviewed by one federal agency, creating a consistent process and allowing the entire proposal to be considered by one decision-maker. This would consolidate the duplicative funding programs currently distributed across multiple agencies while improving efficiencies for applicants and recipients of funds as well as improving reporting, transparency, and accountability.

• Dedicated resources should be provided for administrative support to implement the Great Lakes Restoration Initiative (GLRI)-funded programs and projects.

• Affordable and flexible non-federal match requirements should be considered recognizing significant and ongoing investments by state, other governments, and stakeholders in Great Lakes protection and restoration.

• Reporting requirements should be simplified to collect necessary information and to track progress without detracting from efficient and effective project implementation. Streamlining reporting requirements of the various federal agencies for GLRI projects in coming years should also be explored. A single annual report to the U.S. EPA providing the appropriate information/progress could be shared among all federal agencies, as appropriate. To the extent possible, results should be reported in a manner that is highly transparent and that allows for sharing of data with the public. We encourage the federal agencies to require annual reporting only, which is consistent with most of the current federal grants, and to design simple, straightforward reporting requirements that will focus on the critical actions taken and the project outcomes.

• The Action Plan is a very comprehensive approach to removing impediments to the Great Lakes basin ecosystem health; however, Michigan recommends that resources be targeted to achieve defined goals and objectives.

• State priorities are not identified in the Action Plan, thus allowing local priorities to compete with important broader scale priorities. Focusing funding in spatially explicit state priority areas could allow for demonstration of significant results.

• State priorities and plans should be considered in determining measures of progress and formulation of those goals and interim targets. The measures of progress should be realistic given the timeframe of the Initiative. Stakeholders should also be consulted in the development of goals, targets, and measures of progress.

• Funding should include support for local Technical Assistance, which is critical to implementing landowner practice changes that are required to accomplish the nonpoint source pollution, protection, and restoration goals of the GLRI.
• The GLRI needs to recognize the importance of protecting and improving source water for surface water intakes. Drinking water protection should be recognized in the Toxic Substances and Areas of Concern (AOC), Nearshore Health and Nonpoint Source (NPS) Pollution, and Accountability, Monitoring, Evaluation, Communication, and Partnerships focus areas as a minimum. Approaches for incorporating drinking water protection would be to specifically include drinking water intake locations and impacts in modeling work, identification of priority total maximum daily loads and NPS focus areas, monitoring, etc. In addition, some consideration should be given to whether specific goals and objectives are needed for drinking water protection, similar to those provided for beach protection.

• While accountability and transparency are extremely important for overall tracking of the Initiative, accountability should also be imbedded into each of the four resource focus areas rather than viewed as an external parallel category. The integration of this category within the other four areas will provide a unifying presence that should be used to connect the funding efforts together to maximize on the benefits from the investment.

• Michigan concurs with the approach of using the best available science to support rehabilitation activities, particularly for guiding future policies and program changes that may need to occur as a result of implementing this initiative. Panels such as those brought together by the National Academy of Science have resulted in positive changes for ecosystems such as the Klamath River basin and the Everglades. Clarification is needed regarding how the panels will be initiated, the timeline under which they will work, and their length of service. Redundancy with standing panels that currently exist throughout the Great Lakes basin should be avoided.

Toxic Pollutants and Areas of Concern
• While the problem statement discusses pollutants including polychlorinated biphenyls (PCBs), mercury, banned pesticides and chemicals of emerging concerns, and recognizes atmospheric deposition as an important loading mechanism only PCBs (with the exception of general waste collection) are discussed in the “Interim Objectives” and the “Measures of Progress” and this should be expanded. The phrase “persistent toxics” in the measures should also be included.

• The Interim Objectives and Measures of Progress should also include mercury and some of the emerging pollutants that have been identified as concerns including brominated and chlorinated flame retardants, fluorinated compounds and possibly dioxin/furans and pesticides such as lindane. PCBs and mercury are the most frequent triggers of fish consumption advisories.

• Interim Objectives and Measure of Progress should also be established for the “emerging” pollutants briefly mentioned in the narrative. These can include, but are not limited to brominated and chlorinated flame retardants. Polybrominated diphenyl ethers (PBDEs) are a concern because for example, the concentrations of PBDEs have been doubling in human blood, tissue, and breast milk approximately every five years in the United States. While there have been some voluntary restrictions on some of these compounds, others continue to be used including decabromo-diphenyl ether (BDE-209) and Dechlorane Plus (DP).

• It is implied that pharmaceuticals and personal care products are the most significant chemicals of emerging concern. PBDEs and perfluorinated compounds (PFCs) are equally important and should be considered.

Long-Term Goals
• Under Goal 1: that stated, “The discharge of toxic substances in toxic amounts is prevented and the discharge of any or all persistent toxic substances to the Great Lakes
basin ecosystem is virtually eliminated.” The word “discharge” should be replaced with “release” to accurately reflect the other NPS such as atmospheric deposition that is appropriately noted in the introductory paragraph.

- Goal 2 – Michigan is highly supportive of efforts to remove toxic sediments within the basin and recognizes that this may be the single most important activity in this category. At the same time, strong efforts need to be implemented in non-AOC areas to avoid future AOCs.

**Interim Objectives**

- The fourth interim objective needs clarification regarding correspondence with current rates and reference to lake-specific populations or overall basinwide populations. The objective should consider the lakewide nature of these populations as well as the atmospheric deposition from other sources and changes in the food web. For example, Lake Huron fish were thinner as a result of low forage, which has resulted in a decline in their contaminant loading. Careful consideration for monitoring should be considered given the interplay of several factors in addition to the removal of the sediments. This goal also must consider that this is a long-term process and the length of time required to show results.

- Specific objectives should be included to address the loadings of other important toxic pollutants such as pharmaceuticals and personal care products to the Great Lakes and connecting channels.

- Another objective could be added is to address the use and release of sulfonated perfluor-chemicals that have been known to be associated with the production of teflon and have also been known to be associated with the use and release from chromium electroplaters and are known persistent bioaccumulative toxics (PBTs).

**Measures of Progress**

- Measures of progress for mercury could include: a measure of mercury-reduced from coal-fired electric generating facilities (passage and progress on implementing state rules); implementation of area source regulations that cover electric arc furnaces and foundries, implementation of the Great Lakes Mercury Products Phase-Down Strategy and the Great Lakes Mercury Emissions Reduction Initiative, development and implementation of mercury TMDLs, data collected in the basin on mercury-containing switches from the National Vehicle Mercury Switch Recovery Program (NVMSRP) (with continued funding), continued efforts to reduce long-range transport and deposition through such efforts as the Quicksilver Caucus and data collected through the clean sweep/household hazardous waste collection efforts. Data collected from sediment cores and/or atmospheric monitoring data can also be another measurement of progress for atmospheric deposition of mercury.

- Measurements can also continue to track other PBTs including dioxin, chlordane, and DDT to continue to show a decline in the environment.

- Not all pollution prevention activities can be measured by pounds of waste reduced. There needs to be a measurement of the pollution prevention (P2) activities implemented or the number of behavioral changes resulting from P2 programs. The dollars saved due to P2 activities would also be an appropriate measurement.

- Many states lack funding for efforts to educate sensitive populations on the issue of healthy fish consumption. Another measure could be to increase the education/outreach activities to inform individuals on healthy fish consumption including a clear message regarding PBT contaminated fish.

**Principal Actions of Progress**

- Support for local (watershed) groups is important to achieving many of these goals, particularly in AOCs and should be included as a Principal Action of Progress. Support
could be provided through direct grants to local watershed groups for capacity building activities as opposed to implementing projects and funding for state staff to provide technical and administrative assistance.

**Invasive Species**

- It is not clear from the text whether this issue area covers terrestrial species as well as aquatic species. This Great Lakes funding should target aquatic species and the Action Plan should clearly state that.
- The ‘Principal Actions to Achieve Progress’ section indicates that we know the general approach for addressing aquatic invasive species (AIS) but that we lack clear, comprehensive, and actionable plans to reach our goals. These need to be developed very quickly if we are to act on them with success under the GLRI. We recommend that specific dates for the plan development be included as Interim Objectives and Measures of Progress.

**Long-Term Goals**

- Goal 1 – Michigan strongly supports and advocates for the elimination of invasive species introductions through ballast water. Michigan views this as the single most important issue facing the Great Lakes for future ecosystem health and likely the most achievable with a limited and known list of sources. It is also the aspect and goal that has the best possibility of success in this focus area.
- Michigan also supports the goal of minimizing the risk for new invasive species introductions, particularly through analysis of susceptible areas.
- Eradication has not been achievable in the past in most cases. It should be based on a strategic investment approach as well as a risk benefit analysis for the rapid response plan. The scope of when eradication might be attempted needs to be better defined.

**Interim Objectives**

- No dates have been specified for the Interim Objectives. Michigan proposes that no dates should be past 2014, the timeframe for the Action Plan; however, the prevention actions should be implemented sooner than 2014.
- The first Interim Objective on detection as currently written may conflict with later objective on increased detection efforts. If detection efforts are increased, the rate of detection of new species may increase, even if the rate of new introductions is falling. Suggested revision – remove this bullet unless a weighted measure can be developed.
- The second Interim Objective on control is unachievable without identifying specific species; it’s not possible to control all existing populations.
- The fifth objective on prevention technology should be revised to target ballast water and read: “By 2011, ballast water treatment technology that prevents the introduction of invasive species will be tested, refined, evaluated, and implemented”.
- Add objective - “Reissue federal Vessel General Permit or pass federal law by 2014 that requires specific technology for preventing the introduction of AIS to the Great Lakes.”

**Measures of Progress**

- The measures for progress need to be linked with restoration of ecosystem function rather than cumulative areas managed. This would give an appropriate strategic emphasis rather than pursuit of large areas on the basis of demonstrating effectiveness. Smaller areas managed to protect or retain high quality habitats should be prioritized over areas that are severely degraded and have other issues to be addressed (e.g. hydrology) prior to initiating invasive species control.
- Add a measure on the number of ships operating in the Great Lakes with ballast water treatment on board. All ships should have treatment onboard by 2014.
• Add a measure that addresses recommended Interim Objective “Reissue federal Vessel General Permit or pass federal law by 2014 that requires specific technology for preventing the introduction of AIS to the Great Lakes.”

Principal Actions of Progress
• While the notion of an early detection and immediate response is possible, it should be based on a strategic investment approach as well as a risk benefit analysis for the rapid response plan. It is likely that a one size fits all approach for different invasive taxa could require resources far beyond the agencies abilities to respond. Currently, many resource agencies are reacting to invasive species that are already long-established with little chance of elimination by the time of detection. In addition, earlier warning would also for provide for improved management options to slow the spread of invasive species.
• The first Principal Action of progress on ballast water treatment should be edited to emphasize installation of systems, not study of systems.
• There is no action to achieve progress that targets organisms in trade. A separate action should be added on developing and implementing a screening tool, “Develop and implement a screening tool for new species – Screening of all species not on a clean list and proposed for introductions should be implemented for the Great Lakes basin as a regulatory tool.”

Nearshore Health and Nonpoint Source Pollution
• There are several instances in this section where causes of nearshore problems appear to be focused mainly on excessive nutrient loading to the lakes. The implication is that these problems can be fixed by addressing sources of nutrients and sediment that may carry nutrients to the lakes. The importance of AIS and other non-nutrient factors in the ‘new’ nearshore problems needs to be introduced here as well as the concept that reducing nutrient loads alone may not be enough to address the complex changes that are occurring/have occurred. This plays well with the continued work planned by the National Oceanic Atmospheric Administration and other partners to evaluate these problems.

Long-Term Goals
• Achievement of Goal 1 will require a significant investment of shoreline landowner understanding and acceptance of ecological principles and processes associated with this dynamic natural area. We would recommend that efforts focused toward an outreach and education campaign be undertaken to help local municipalities (and hence zoning boards) and landowners understand their role in Great Lakes nearshore health.
• Goal 1 indicates that nearshore aquatic communities should be self-sustaining and comprise native species. In some instances, the native species has been extirpated and an ecological equivalent that is naturalized is self-sustaining. This goal should emphasize self-sustainable and desirable communities of native and naturalized species.
• Goal 4 will require a significant amount of funds to achieve and relies on many other efforts to be successful.
• To achieve significant long-term reduction in soil erosion, Michigan strongly supports long-term funding mechanisms for local technical assistance efforts which are critical to the success of implementation of soil conservation practices.

Interim Objectives
• The first, second, third, and fourth Interim Objectives require the identification of priority and/or targeted watersheds for control measures or load reductions. These objectives need to acknowledge that a consensus set of criteria should be developed and
consideration should be given to existing state plans (approved NPS watershed management plans and TMDLs) and priorities as well as targeting degraded and contributing watersheds.

- In the third Interim Objective, Michigan suggests creating a baseline and specific target(s) (including target tributaries if needed) before or in the early stages of implementation of soil erosion controls. There seems to be a disconnect in the timeline of the second and third Interim Objective.

- In the fourth Interim Objective, clarification is needed regarding role of soluble P in nearshore problems to establish an interim objective for percent reduction and how this objective relates to the long-term goals and the type of change expected in the nearshore.

- In the fifth Interim Objective, it seems to suggest that nearshore biological problems are nutrient driven and that the problem can be significantly improved by local actions to reduce nutrient loads. At the very least, it is expected that nutrient reductions will be needed in the upstream watersheds not just locally, but required actions may need to address hydrologic changes, internal nutrient loading, changes in food web, etc.

- While the fifth Interim Objective of understanding causes of nearshore impairment within five years is an important objective and may be achievable in some instances, it may not be a realistic interim objective given the scope and unique nature of many areas of impairment, both temporally as well as geographically.

- In the fifth Interim Objective, in addition to Cladophora, Spirogyra growth has implicated some locations in the Great Lakes.

- In regards to the seventh and eighth Interim Objectives, the standardized beach sanitary surveys do not definitively identify sources of contamination. They may point in the right direction and gather information that is useful in development of predictive models; however, there is a disconnect between the two objectives. Alternative objectives could address number of beaches removed from the nonattainment list; number of beaches where source control measures have been implemented and beaches are now open, etc.

**Measures of Progress**

- While we support the measure related to the rate of sediment deposition in harbors by the U.S. Army Corps of Engineers, many of the areas that experience detrimental effects from sedimentation are in harbors with no commercial dredging as well as in upstream areas where sediment may disproportionately affect instream habitat, particularly upstream of catchment basins (e.g. dams). This measure should be reconsidered, perhaps with a form of remote sensing technology.

- Annually estimating P loads to the Great Lakes is a costly endeavor; it may be better to estimate these loads on a less frequent basis. Also, a standardized and agreed upon method for estimating the loads will be needed.

- Measuring the “extent and severity” and “negative affects” is often very subjective and difficult for what should be an objective assessment of progress. Standardized agreed upon metrics will be needed for these.

- Additional measure that should be considered and could include measures similar to those in the U.S. EPA’s Strategic Plan dealing with watershed restoration. Suggestions include measure designed specifically to address contaminants of nearshore concern. e.g. number of E. coli (P, sediment) impaired waters restored.

- An additional measure that should be considered is to use changes in economic value over time of recreation and other ecosystem services and avoided costs like reductions in dredging. This would integrate a broad range of items into easily understandable currencies.
Michigan strongly supports priority be given to “permanent conservation efforts” through Farm Bill programs like the Wetland Reserve Program (WRP). “Acres subscribed in conservation programs managed by NRCS” should be revised to state “Acres subscribed in conservation programs managed by NRCS that result in permanent protection of natural resources.” In addition, given some of the restrictions placed on releasing certain information from participants in Farm Bill programs, it will be important to develop an appropriate method to garner adequate, meaningful information to validate the effectiveness of practices in targeted areas.

Principal Actions of Progress
- It is unlikely that phosphorus load reductions could be easily scaled from TMDLs to larger watersheds to yield meaningful load reduction targets for the Great Lakes. Michigan recommends that the second Principal Action to Achieve Progress be deleted.
- The restoration of wetlands should be added as an additional Principal Action. Michigan views wetland restoration and wetland protection efforts as high priority Best Management Practices (BMPs) that should be used to improve the water quality of the Great Lakes as well as habitat.

Habitat and Wildlife Protection and Restoration
- This section identifies some key points regarding habitat and healthy ecosystems, but needs revision. The term “restoration” should be defined and in some cases is not a realistic goal for some activities; rehabilitation is suggested alternate term.

Long Term Goals
- Goal 1 - The insertion of the term “native” before “fish and wildlife” is unnecessary and again does not reflect the social values that are important to ecosystem management principles. Furthermore, it may be the health of a key non-native population that keeps another non-native population in check for the health of the native species (e.g. Chinook salmon keep alewife populations in balance which leads to successful reproduction and recruitment of perch, walleye, and lake trout).
- Goal 1 - Michigan supports establishing separate goals for the restoration, protection, and enhancement of each of these habitat types listed. There should be a separate goal identified for acres of wetlands restored, acres of wetlands protected, and acres of wetlands enhanced. Each of the other habitat types (e.g. wetland associated uplands, coastal uplands, and islands) should all be separated by acres restored, acres protected, and acres enhanced. Restoration and protection acreage goals should not be combined and the protection, restoration, or enhancement must be permanent.
- Goal 1 - Michigan strongly supports restoring wetlands and protecting wetlands.
- Goal 1 should be clarified to indicate priority for protection of intact habitats and should also take into consideration the strategies in the National Fish Habitat Action Plan.
- Goal 2 - Stocking is a tool currently used in the Great Lakes to provide for enhancement of a fishery, for the rehabilitation of a population, or for the reintroduction of a regionally extirpated species. In the case noted above (Chinook salmon, alewife, lake trout) it may be the stocking of non-native fish that provides for the rehabilitation of the native species. Critical management activities to allow fish passage or remove barriers will provide for the sustainability and rehabilitation of fish populations. Disease issues are complex and should be removed from this goal and stated within its own goal.
- Goal 3 - Michigan strongly supports sound decision-making facilitated by accessible, site specific and landscape scale baseline status and trend information about fish and wildlife resources and their habitats. This goal strongly supports Michigan’s efforts to update the National Wetland Inventory (NWI) and conduct the Landscape Level Wetland Functional Assessment (LLWFA).
Goal 6 - Michigan supports the goal of collecting information on coastal wetlands and spawning areas as this information is necessary for developing management plans and working with local landowners and zoning boards regarding alterations of nearshore areas.

Interim Objectives
- The costs of fixing 500 or more barriers are likely to absorb all of the funding in the Initiative and are not realistic; however, in spite of the cost, this is one objective that will have immediate returns and is a high priority.
- The second interim objective should emphasize permanent protection and restoration with an emphasis on permanent protection of the best remaining habitat.
- The third interim objective of propagating 8 million lake trout and lake sturgeon and other native species requires further explanation to gain a better understanding of intent. Lake trout have solid rehabilitation plans to back the need for propagation of this species, but discussion needs to occur with state agencies regarding lake sturgeon and the category of “other species” before fully committing to this objective.
- The fourth interim objective should specify which species will be included in these objectives and how they will be determined.
- The final interim objective concerning habitat-related beneficial use impairments will likely require significant funds beyond what may be available in the GLRI and may not be achievable.
- The interim objective to have populations of native aquatic non-threatened and endangered species exist at self sustaining levels by 2014 is dependent upon the species in question as well as the location in question particularly for late maturing species that don’t begin to reproduce until the age of 6 or 25 years. A better measure would be improvement in measures of natural reproduction and recruitment.
- The interim objective of 30 percent of habitat-related beneficial use impairments will be delisted across 27 AOCs is inconsistent with the interim objective stated in the AOC section. These should be reconciled and consistent.

Measures of Progress
- The inclusion of number of fish propagated should be revised. The measure should reflect the success of those fish stocked as well as natural reproduction.
- The measures of miles of rivers open and number of fish passage barriers removed may not be the best measure. Some dams and barriers throughout the Great Lakes region are tied to controlling invasive species.

Principal Actions of Progress
- Under principal actions to achieve progress, “propagating lake trout and lake sturgeon fingerlings, assessing fish populations, and protecting and restoring culturally significant species” should be removed from a heading titled “Maintain or Improve the Population Status of Threatened, Endangered, Rare, and Migratory Species” or the heading changed. Lake trout are neither rare nor migratory.

Accountability, Monitoring, Evaluation, Communication, and Partnerships
- The background section appears to only consider the 83 U.S. counties along the Great Lakes shorelines. It must consider all of the counties in the basin as they all contribute to the habitat impairments in the Great Lakes. Also the Great Lakes Fishery Commission should be specifically mentioned as a key cooperating and organizing entity in the document.
- Monitoring on a smaller scale than proposed needs to be supported by the GLRI. Most of the indicators and monitoring supported by the GLRI are for nearshore or open waters of the Great Lakes. These are not sensitive enough to identify upstream problems that
contribute to problems in the Great Lakes/nearshore or to document progress that may result from water quality improvement projects in one watershed. Funding support for tributary watershed monitoring is essential to document progress until such time we can begin to see changes in the nearshore and/or open water indicators. Support for tributary watershed monitoring is also needed to ensure that problems can be identified and track progress toward their resolution given the expected increased effort in areas such as TMDL and watershed management plan implementation, sediment clean ups, and actions to remove beneficial use impairments in AOCs will required enhanced monitoring under existing the state monitoring program.

- Past efforts to track progress towards meeting the Michigan’s wetland restoration goals has been impeded by the lack of data sharing. All federal agencies (but primarily the National Resource Conservation Service, Farm Services Agency, and the U.S. Fish and Wildlife Service) must be required to share their habitat related restoration data with partners. Farm Bill “privacy provisions” and “lack of staff resources to compile the information” have been the primary reasons given for their inability to provide this important information. Unless this issue is addressed it will be very difficult to accurately track progress on many of the habitat-related goals.

**Long-Term Goals**

- Goal 2 should include the need for common databases and data structures to support all of the other needs in this Initiative.
- Goal 4 needs additional clarification.
- A refined set of science-based assessment indicators will be difficult to get consensus on and again. Michigan recommends supporting the efforts of the National Fish Habitat Board in developing the National Fish Habitat Assessment.
- Michigan suggests that the “Accountability” section might include a “Goal 7”: Available resources are focused on programs and projects most likely to bring about lasting protection and improvement of Great Lakes resources.

**Interim Objectives**

- Under the second Interim Objective, the accountability system must be easily useable and accessible to state and local governments.
- Under the third Interim Objective, if possible Michigan suggests expanding remote sensing program to include assessment of Phragmites locations.

**Measures of Progress**

- State and tribal agencies should be included in a collaborative effort with the federal agencies to establish baselines for the various performance goals and to identify needed additional research and monitoring, outreach, and implementation. In the background discussion on measures of progress, the federal agencies will work together but there is no mention of state or tribal agencies.
- There needs to be careful thought given to appropriate Measures of Success. While some physical metrics can be readily observed soon after completion of the remediation measures, many of the biological parameters may take a decade or more to fully recover or utilize the area. Some biological metrics in the short-term may not yield satisfactory results which could lead to conclusions of failed projects, when in fact the response is to be expected to occur on a lengthier timeline.
- In the first Measure (in the table) use of the Great Lakes 40-point scale may not be a good representation initially. Additional measures should be considered.
- It is very important to ensure continued support for monitoring and evaluation after 2014. Many of the projects that will be funded under this Initiative will not demonstrate full benefits for several years.
• Sharing of data among agencies and organizations will also encourage greater use of information obtained with GLRI funding. Federal agencies should be required to report project information in a Geographic Information System Format to the extent possible.
• The Army Corps of Engineers was funded to develop a database under the Great Lakes Habitat Initiative for tracking project development for improvement of habitat. While initially onerous it has been much improved. It should be easy to “retrofit” the database to track project thresholds and progress with relatively little added cost. Making the use of this database integral to project reporting can both facilitate project tracking and allow partners, the public and the Legislature to follow progress, if done properly.

Principal Actions of Progress
• Michigan supports implementing the accountability system for grantees through the grant reporting requirements to avoid duplication of effort and multiple reporting requirements.
• Under the third Principle Action, the enhancing partnerships action is unclear as written.
August 19, 2009

Mr. Gary V. Gulezian, Director
U.S. EPA - Great Lakes National Program Office
77 W. Jackson Blvd.
Chicago, Illinois 60604
Telephone: 312-886-4040

Subject: Comments on the Great Lakes Multi-Year Restoration Action Plan

Dear Mr. Gulezian,

Thank you for the opportunity to provide feedback on the Great Lakes Multi-Year Restoration Strategy. We commend your agency's efforts to develop a forward looking plan and to solicit comments in a wide variety of formats from citizens throughout the Great Lakes Basin. In the spirit of improving upon a very good start, the following comments are offered for your consideration:

**Restoration Looks Different on Lake Superior:**

Lake Superior's appearance and forested landscape mask its past well. While a protection approach is a high priority for Minnesota and its neighbors, it should be acknowledged that restoration of Lake Superior is a key part of any Great Lakes strategy. Restoration simply looks different on Lake Superior. Much of the restoration work involves removal of the pollutant reservoir, restoring obliterated habitats, stabilizing stream channels and managing the forest canopy and landscape to mimic hydrologic conditions that existed prior to large scale European settlement. Therefore, restoration tends to cover the gamut of solutions from targeted construction projects to research, vegetative management, policy development and bottom-up grass roots engagement of its citizenry. In this light, it is our belief that restoration should be viewed in the broadest context possible, recognizing that it will be most effective if incorporated into a comprehensive approach to the management of the Lake and its watershed.

**Feedback – Recommendations:**

In keeping with this spirit of interpreting restoration in a broad context, Minnesota recommends consideration of these specific actions. These actions will provide flexibility to target funds where needs are greatest and offers the greatest potential for accountability and return on investment.
• **Administrative Efficiency**
  Given the state of the economy, staff resources at the state and local levels are stretched thin. Therefore, EPA should look for opportunities to provide for an efficient, effective, and systematic way to get funds directed toward protection and restoration rather than toward process and paperwork.

• **Minimal Match Requirements**
  State and local governments are under extreme fiscal duress throughout the Great Lakes states. Therefore, it would behoove EPA and all of its federal partners to minimize match requirements. It is our belief that many of these projects will leverage considerable local and state support as projects unfold or move into development phases. A large match requirement may unfairly penalize small organizations and could be enough of a disincentive to discourage applications for otherwise worthy projects.

• **Maximize Project Completion Timeframes**
  While the GLRI is starting out anticipating that it be funded each year for the next five years, opportunities must be found to allow the annual funds received by states and their partners to be spent over the maximum grant period (three years is typical and historically the maximum amount of time made available). Without this flexibility in longer-term project duration, there's enough uncertainty to discourage states and partners from taking the important step of hiring new staff or reassigning current staff.

• **Retrofitting**
  Without a substantial emphasis on retrofitting, older urbanized areas, they will continue to be a major source of nutrients, sediments and pollutants to the Lakes. As such, the GLRI should encourage implementation of retrofitting best practices or management measures into non-point source projects. The states have all completed Coastal Non-point Source Management Plans that describe pro-active approaches to retrofitting urban areas. The GLRI could reduce overall pollutant loads to the Lakes by emphasizing these management measures and by providing resources to the task of retrofitting.

• **Research, Planning and Assessment**
  The Great Lakes Multi-Year Restoration Action Plan acknowledges the need to fill data gaps and to encourage partnerships. This interpretation should be broad enough to recognize that research, planning and assessment are also central to this process and to the success of projects. And, to the extent possible, these needs need to be acknowledged and built into projects at every level of government and partner participation.

• **Goals, Indicators and Tracking Progress**
  In reviewing the plan, we have a number of specific recommendations on goals, indicators and tracking processes. These goals are identified by page number and reference below:
Pages nine and ten:

A. The interim objectives about PCB levels in fish and air measure changes in global inputs of PCBs rather than changes that are made at a regional level. The two PCB bullets could be revised to capture this regional change with language similar to that below:

Through 2014, track the rate of decline of PCBs in whole lake trout and walleye, as well as, in air in the Great Lakes basin, as an indicator of global input trends. Rates of decline in the fish should meet or exceed an annual average of 5%. The annual average rate of decline should be 7% in the air or atmosphere;

B. It would be helpful to have a goal for emissions identified in the plan. A suggestion for adding this language is as follows:

By 2014, at least one ton of mercury emissions from sources in Great Lakes states will be eliminated compared to the 2005 emissions.

Note: one ton of mercury emission reductions could come from the following sources:
- 1080 lb from the chlor alkali plant in Port Edwards, WI
  http://www.glc.org/air/inventory/1999/AppendixI_WI.pdf
- The Port Edwards conversion was announced in 2007:
  http://www.chemweek.com/newsletters/cbd/7285.html
- 1058 lb from 6 Minnesota coal fired power plants per stakeholder agreement

C. To complete the Measures of Progress table on page 10 for the new bullet on mercury, the following bullets can be used in the table columns:

- Measure: Reduce mercury emissions from Great Lakes states by at least 1 ton
- Baseline: See state emission inventories
- 2010 Target: 1,400 pounds
- 2014 Target: 600 pounds

D. Miscellaneous

- Foot notes on page 10: There is no explanation of GPRA.
- If the new bullet on mercury is added, then this new principal action is also needed: Insure Implementation of Reduction Commitments by Great Lakes States Facilities - Track progress of voluntary reduction commitments made by facilities in Great Lakes states. Work with states and stakeholders to monitor and communicate progress.
We appreciate the opportunity to provide feedback on the Great Lakes Multi-Year Restoration Action Plan and look forward to playing an integral role in working aggressively to improve and protect the Great Lakes, especially Lake Superior. Please do not hesitate to call upon us if we can provide further clarification of our comments or to provide additional support as the GLRI is rolled out.

Sincerely,

[Signature]

Suzanne Hanson
Manager, Northeast Region
Regional Division
STATE OF NEW YORK

August 19, 2009

Mr. Anthony Kizlauskas
USEPA Great Lakes National Program Office (G-17J)
77 West Jackson Blvd.
Chicago, IL 60604

Dear Mr. Kizlauskas:

We want to thank President Obama and the United States Environmental Protection Agency (EPA) for championing the Great Lakes Restoration Initiative (GLRI). This initiative reflects the profound understanding by the Obama Administration of the challenges facing the Great Lakes and a deep commitment to remediating, restoring and revitalizing these valuable resources. In particular, we appreciate the leadership which EPA has shown in shepherding the GLRI through the federal budgetary process in such a swift and effective fashion. Without a doubt, the President’s decision to appoint Mr. Cameron Davis as EPA’s Great Lakes czar, coupled with the administrative expertise of EPA’s Great Lakes National Program Office, headed by Mr. Gary Gulezian, is ensuring the successful implementation of this hallmark initiative. From New York’s perspective, we appreciate the Administration’s renewed focus on our Great Lakes ecosystems, economies and localities.

We write today to offer New York State’s comments to the Federal Great Lakes Interagency Task Force on the “Great Lakes Multi-Year Restoration Action Plan Outline” (Draft July 17, 2009) that provides an essential framework for the Great Lakes Restoration Initiative (GLRI). In addition to review of the Outline, New York State’s comments were informed by the “Great Lakes Restoration Initiative Funding Guide” (from the EPA website, dated July 20, 2009) and the July 30, 2009, EPA presentation in Albany, New York.

New York State has been a long-time leader in developing and applying innovative and successful approaches to environmental protection, conservation and restoration in the Great Lakes basin. Examples include: Niagara Falls State Park – the oldest State Park in the United States; the Adirondack Park Agency – a unique, collaborative governance organization charged with oversight of the largest State Forest Preserve in the United States; the remediation of nearly
all Niagara River point sources of priority toxic chemicals under the bi-national Niagara River Toxics Management Plan; and, the restoration of the Oswego River Area of Concern (AOC) – the first and only Great Lake AOC delisted in the United States to date.

In 1992, New York also became the first Great Lakes state to establish a plan for guiding its environmental goals for the Great Lakes Basin. The “New York State 25-Year Plan for the Great Lakes” articulates collaboratively developed goals, objectives and specific short- and long-term actions needed to promote a “shared vision” of water quality restoration, water resources management, natural resources preservation and improvement, sustainable economic development, and improved intergovernmental relationships.

New York draws upon this record of success and innovation in reviewing the draft “Great Lakes Multi-Year Restoration Action Plan Outline” and offers the following observations and recommendations:

1. **State Block Grants**
   The State of New York appreciates the need to distribute the funds and stimulate action in a timely fashion. To achieve that goal, funds will be distributed through 57 different grant programs administered by numerous programs within multiple federal agencies. States, local governments, Indian Nations, not-for-profit organizations and academic institutions are eligible to apply for these 57 different grant programs. Coordination among the eligible applicants is a major challenge, and this construct creates a system where federal agencies may have to review enormous numbers of grant applications for local projects that in many cases may be redundant or even in conflict. It also hinders innovative, broad-based proposals that cannot fit into any one funding source and risk insufficient funding if multiple applications must be separately submitted to different programs and agencies.

   Therefore, we recommend for future years of this program that you consider a block grant approach. One example of this approach can be found by reviewing the National Oceanic and Atmospheric Administration’s 2001 Great Lakes Restoration program where Congress appropriated $30 million, and the program provided an allocation to each state, which in turn granted the money to local governments, not-for-profits, and Soil and Water Conservation Districts for worthy projects, as well as undertaking a few projects directly. Here in New York, a program to solicit, award, and administer grants resulted in 24 successful projects.

   For President Obama’s GLRI, adoption of a similar block grant approach could significantly expedite project implementation. This process is already familiar to all of the Great Lakes States and avoids the confusion of matching projects to diverse federal grant programs with variable deadlines. This modified approach will avoid both federal and state administrative overload associated with applying for money through so many separate grant processes and avoid dilution of the funding into much less useful pieces.
2. New Focus Areas

The purpose and intent of the GLRI are laudable, but additional focus areas and funding categories merit inclusion. For instance, the Great Lakes Restoration Strategy included as a strategic issue “Sustainable Development” with several key objectives that served to tie together the goals for water quality, habitat restoration, toxics reduction, etc. into a more forward-looking strategic direction. Additions to the GLRI and the proposed Outline should include enhanced public access and projects leading to long-term economic health, an item consistent with the Strategy’s Sustainable Development Objective: “Build outreach that brands the Great Lakes as an exceptional, healthy and competitive place to live, work, invest and play.” At the July 30th meeting in Albany, EPA representatives repeatedly noted the important link between public access and stewardship of the Lakes. All of our efforts to clean the lakes are diminished if the public cannot reach the water to enjoy it. Further, the short term stimulus to local economies provided by the GLRI could provide longer economic benefits if some of the funds could be used for projects that stimulate tourism, provide recreational boating, fishing and swimming access, enhance parks and generally improve conditions in coastal communities to make them attractive places to visit and live in. These projects could create a foundation for long-term sustainability of communities whose principal asset is being adjacent to a Great Lake. As people become able to earn a living and can attribute that to the Lakes and their environmental benefits, their interest in protecting and preserving the Lakes will increase.

Additional focus areas and funding categories for inclusion in the GLRI and the Outline, which would also fit under the Great Lakes Restoration Strategy’s goals, thereby supporting broad-based restoration initiatives in New York State and across the Great Lakes region include:

- Urban River Initiatives. Urban areas encompass some of the most environmentally degraded and economically challenged sections of the Great Lakes system. New York State has had a long history of tackling urban waterfront issues through preparation of Local Waterfront Revitalization Programs, waterfront planning, and other programs. In addition to these State efforts, coordinating a variety of other environmental programs, such as the remediation of toxic hot spots, green infrastructure projects and habitat restoration initiatives, will substantially benefit the people, particularly environmental justice communities, clustered in urban locations.

- Climate Change Adaptation Projects. While this issue is a priority across the nation, the GLRI can make the Great Lakes region an incubator for adaptation programs that will be useful for ecosystems across the country. The International Joint Commission proposed changes in Lake Ontario level regulation serves as an ideal test case for the impacts of climate change induced water level variation. A concerted effort to implement initiatives which focus on helping both people and natural systems to adapt to climate change would also jumpstart the implementation of the agenda to be set by the President’s Task Force on Oceans.

- Watershed Management Programs. Watershed planning on the local, inter-municipal, and regional levels has been successfully implemented in New York by state agencies and
others. Using successful, stakeholder-driven models of watershed management programs such as the federal Lake Champlain Basin Program and New York’s Hudson River Estuary Program, GLRI funding should support the establishment of such programs for the major watersheds within the Great Lakes basin. Such programs have proven extraordinarily effective at integrating national goals, local needs and interdisciplinary initiatives.

- Preservation of Agricultural and Forested areas. With over 20 cities and 14 million acres of working forest and agricultural landscapes, investment in the green infrastructure of New York State’s Great Lakes basin could be a major investment into the Upstate economy. The investment in forests and farms have benefits to the entire region as the return is realized in a variety of ways including: stronger industries that make up a key component of the New York’s economy, cleaner water and air, climate change benefits, increased tourism, and smart growth for both the rural and urban areas of the State. The GLRI should ensure that these industries, and the state and municipal structures which support them, receive the federal attention that they deserve.

3. Limited State Resources
The Great Lakes Multi-Year Restoration Action Plan Outline should fully recognize the burden that will be placed on states to administer the program with limited existing staff and constrained matching funds. Currently, New York State does not have adequate staff to administer these grants, to track and report on the vast number of federal GPRA performance measures, or to implement projects where matching funds are simply impossible to find in this fiscal environment. Even the grant application process will require reassignment of staff to address the multiple applications and deadlines, which may prove a significant barrier to the State seeking GLRI funding. Some flexibility in program funding needs to be provided to allow states to hire additional staff to bring the resources to bear on this initiative that it requires and deserves, and matching fund requirements for grants need to be eliminated.

The State of New York State greatly appreciates the opportunity to comment on the Great Lakes Multi-Year Restoration Action Plan Outline. If you have questions regarding these comments, please contact Judith Enck, New York State Governor David A. Paterson’s Deputy Secretary for the Environment.

Sincerely,

Alexander B. Grannis, Commissioner
New York State Department of Environmental Conservation
Carol Ash, Commissioner
New York State Office of Parks, Recreation and Historic Preservation

Curt Stiles, Chairman
Adirondack Park Agency

Howard Freed, M.D., Director
Center for Environmental Health
New York State Department of Health

John Bartow, Executive Director
Tug Hill Commission

Patrick Hooker, Commissioner
New York State Department of Agriculture and Markets

Lorraine Cortes-Vazquez, Secretary
New York State Department of State

Carmella R. Mantello, Director
New York State Canal Corporation
August 19, 2009

Gary Gulezian, Director
U.S. Environmental Protection Agency
77 W. Jackson Boulevard (G-17J)
Chicago, Illinois  60604-3511

Dear Mr. Gulezian:

Please find attached comments submitted on behalf of the Ohio Lake Erie Commission which includes the following state agencies: Ohio Department of Agriculture, Ohio Department of Development, Ohio Environmental Protection Agency, Ohio Department of Health, Ohio Department of Natural Resources, and the Ohio Department of Transportation. The comments have been prepared with their input and reflect Ohio's collective comments on the Great Lakes Restoration Initiative. These agencies have been working together since our meeting with you on July 27, 2009 to jointly formulate the comments and to prepare Ohio for a collaborative response to the Great Lakes Restoration Initiative. Ohio recognizes the importance of Lake Erie to the lives of Ohio residents and the importance of all the Great Lakes. It is imperative that we all work together to maximize the impact of the funding proposed through the Great Lakes Restoration Initiative.

The opportunity to comment on the Great Lakes Restoration Initiative has been taken very seriously by the affected Ohio agencies and we would be happy to respond to any comments or questions you may have or your staff.

We greatly appreciate the interest and support from the Great Lakes National Program Office in helping us to understand and prepare for the opportunity to take significant steps to protect and restore the Great Lakes. We look forward to the upcoming Request for Proposals.

Sincerely,

Edwin J. Hammett
Executive Director;
Ohio Lake Erie Commission

EJH/jw
Attachment
Ohio’s Comments on the Great Lakes Restoration Initiative

August 19, 2009

Ohio is very pleased with the proposed Great Lakes Restoration Initiative and very appreciative of the efforts of the Obama Administration to push forward with needed funding for the Great Lakes. The efforts by the USEPA Great Lakes National Program Office (GLNPO) to solicit input on the GLRI are greatly appreciated. The importance of this effort to Lake Erie is absolutely critical as we face mounting problems that require immediate attention. We also understand that there may be a distinction between what can be done for FFY 2010 and for the multi-year program as there is little time for developing a new federal response to the issues at hand and that immediate action is important. Our comments are intended as a constructive contribution to help to maximize the benefits of the GLRI. We are certainly willing to engage in any discussion or respond to questions. Thanks for this opportunity.

We support the following basic concepts:

1. Provide the states with the maximum flexibility in pursuing projects that address Great Lakes priorities as defined in the Governor’s Great Lakes Priorities, Great Lakes Regional Collaboration, State plans (in Ohio’s case, our Lake Erie Protection & Restoration Plan, as well as other existing planning efforts such as RAPs, LaMPs, TMDLs and watershed plans.)

2. Streamline the funding delivery system by assuring that there are limited federal process costs which could consume a significant portion of the funding if care is not taken to limit such costs. Ohio favors a “block grant” approach which the states could administer at a reasonable cost. This would allow states to manage the funds in an efficient manner, focus on our highest priorities and assure visible results rather than spread funds across the geographic and programmatic range.

3. Provide states the opportunity to coordinate the efforts of the many government, academic and non-profit organizations that are central players in Great Lakes Restoration. Again, this offers the opportunity to direct funding to the previously identified high priorities. This coordination will help address the concerns of these stakeholders that the federal paperwork and process costs will consume a large portion of the available resources. There are economies of scale to be gained here.

4. We appreciate and support the importance of keeping match requirements to a minimum at this time of fiscal emergency. The ability to utilize federal funding would be greatly limited by match requirements during at least the next couple of years and probably through 2014.
Comments on FFY 2010 Funding Plan

We are looking for USEPA GLNPO to provide additional clarification concerning the concept of state re-granting efforts. We have some concern and confusion between the idea of creatively focusing on our priorities and the need to adhere to existing program guidelines as funds are channeled into existing federal programs. Specifically, what exactly is expected from the states: can multiple funding programs be combined or can funding which is to be funneled to different federal agencies be re-combined? We anticipate that the RFP’s will provide guidance on how to do this, and finally we are concerned whether the various federal agencies are on board with the idea of these creative approaches to priority problems.

- We support the concept of an overall point person or program within USEPA GLNPO. We have already discovered that we are getting different views from many points of contact listed in the funding guide.

Comments on GLRI Multi-Year Restoration Action Plan

For purposes of the multi-year strategy, it would very be helpful if the federal agencies could combine/consolidate some of their authorities to provide fewer funding sources but larger amounts in the remaining programs. That would allow funding larger priority projects. Right now, there are 18 different programs that fund habitat restoration, none of which would fund a project more expensive than ~ $800,000. Many of the significant Ohio habitat projects we reflect in our priorities would cost anywhere from $2.7 to $25 million. This is true for other priority issues such as Toledo Harbor beneficial reuse, a program to address our phosphorus problems in the Western Basin of Lake Erie and others. In short, our largest issues rank among our highest priorities and would each benefit from a significant coordinated and well-funded effort.

General Comments

- The issue of dredging and the reuse of dredged material has not been adequately addressed. While this may be more of an issue in Lake Erie and specifically significant for Toledo Harbor (need to eliminate open lake disposal), it is a very large issue and needs to be addressed. At the same time, there is significant interest in additional dredging at both large commercial ports and smaller harbors. The economic impact of the ports, the economic and environmental importance of beneficial reuse of dredge material and the implications of reduced dredging capabilities due to a lack of financially feasible alternatives must be addressed.

- The issue of “priority” watersheds, etc. needs to be addressed. What these are and how they will be determined should be made a bit clearer to assist the states and locals in their efforts to target their efforts on projects most likely to attract funding. Ideally, state and local entities would have a role in identifying the priority watersheds, etc.

- The issue of climate change and assistance with adaptation of both human and natural environments to expected changes is not well addressed within the plan. Inclusion of funding tied to the outcomes of climate change would be encouraged.
• Little attention is paid to recreation and additional recreational opportunities beyond beaches. Marinas and private boaters have an impact on lake quality, and a motivation is needed for minimizing their impact. Programs such as capital improvement grants and loans would be beneficial for these entities.
• The development of revolving loan funds for use by state agencies for projects over the course of any given timeframe would provide some additional capital and flexibility for some projects.

Toxic Substances & Areas of Concern (AOC)

• The Plan should acknowledge that goals and interim objectives for AOCs should include a period of recovery after a remediation or restoration project. Monitoring should be conducted after that period to determine if delisting targets have been achieved. Even if all remedial actions listed in a RAP have been completed, it may be years before the site or even particular BUIs can be delisted.
• On page 10, is it realistic to expect to see a change in PCB (or other contaminants) in fish tissue on an annual basis? Is there enough data collected every year to make any measurable change statistically significant? The Plan should be clear that the fish tissue being measured is related to protection of wildlife and not for human fish consumption advisories.
• We request USEPA consider improvements to BUIs on a river segment basis for tracking progress in AOCs. Perhaps the measurement could be a percentage, such as 75% of the AOC that meets targets for fish habitat (example.) Also, will there be any use of the “In Recovery” status for AOCs where all remedial actions have occurred?
• On page 11, Strategic Pollution Prevention and Reduction Projects - There should be a mention of the importance of atmospheric deposition as identified in the Regional Collaboration, the contribution of such widespread practices as open burning of plastics and the potential for support for outreach and other programs to reduce these sources.

Invasive Species

• The Multi-year Plan (pages 12 & 13) seems to be heavily oriented towards the aquatic species and does not seem to explicitly acknowledge the importance of the other non-aquatic invasive species. Aquatic species are a major issue for Ohio and we strongly support GLRI funding support toward ballast water management as a preventive tactic and toward the sea lamprey control program with the Great Lakes Fishery Commission. However, we also support funding for management of other established invasive species. Ohio’s Lake Erie Protection & Restoration Plan, Great Lakes Regional Collaboration report and GLRI Funding Guide all identify concerns with these other species. Ohio has specific concerns about purple loosestrife, garlic mustard, phragmites, gypsy moths, emerald ash borers and other plant bird and insect species as well as the aquatic invaders. It is important that we keep a focus on all invasive species.
Nearshore Health & Nonpoint Source Pollution

- An additional goal that provides for an increase in the amount of accessibility citizens have to beaches, lakes, and streams would be worth considering. While it is critical to protect what we have, it is also important to expand our efforts to preserve, protect, and allow public access where appropriate.
- While a focus on urban runoff is provided for in the Interim Objectives, the FFY 2010 funding has very few dollars that can be used for education and implementation of BMPs and model ordinances in urban communities. The demonstration/implementation of green infrastructure and the adoption of codes to encourage green practices such as streamside setbacks, compact and conservation development, and meadow ordinances for managing open space in communities should be included as beneficial outcomes.
- Would suggest that more focus be put on land-use change and efforts to tie community planning, development, and infrastructure to environmental protection goals. As we spend this money on cleaning up historical problems, we continue to create new ones at an incredible rate. Prevention of future problems should be a piece of what this funding aims to do, and land-use decisions are critical to that end. Support for watershed land-use planning efforts can bring together local governments to identify and deal with these issues. Smart growth/balanced growth is critical for highly urbanized areas such as along Lake Erie.
- The protection of working agricultural lands (row crops, flower crops, vegetables, orchards, vineyards, etc.) is not well addressed in the plan.
- Under the first Interim Objective – we would recommend that the states be consulted when compiling and mapping the basin’s priority watersheds.
- On page 16, how will priority watersheds be selected?
- Page 16, last bullet. How will Great Lakes beaches implement measures to control, manage or remediate pollution sources related to sewage outfalls? Wouldn’t these measures fall under other Clean Water Drinking Water State Revolving Fund programs that are ineligible for GLRI funding? Often the owner or organization/agency controlling the beach is not the same as the organization or agency with the authority/jurisdiction for sewage maintenance and control.
- Page 17, Measures of Progress table: Several of these measures appear to be unrealistic because there are no current baselines and the variability of conditions affecting these measures on an annual basis would render them meaningless, especially annually within a three to five year timeframe. For example, how would extent and severity of HABs be measured?
- Some recent monitoring results indicate that managing sediment load can no longer be used as surrogate for measuring phosphorus load. There is also data that we may need to be looking at dissolved phosphorus as well as total phosphorus.
- Under the last measure of progress – USEPA may want to add the number of acres put under conservation practices by other federal agencies and/or state/local programs. It is conceivable that some non-NRCS programs may put rural and urban land into conservation efforts that reduce NPS pollution.
- Under Principle Actions, Place Based Watershed Implementation – we recommend adding the U.S. Forest Service to the list of collaborating agencies.
• Under Principle Actions, Identify Sources and Reduce Loadings of Nutrients and Soil Erosion – we recommend including plans that meet USEPA’s nine elements for planning when referring to implementation.
• We recommend adding a bullet in Section III, Nearshore Health and Nonpoint Source Pollution, encouraging funding for the installation of methane digesters and gasification as a way to transform animal waste into clean energy.
• The 4th bullet point on page 11, Measuring Progress and Addressing New Toxic Threats, does not have a corresponding Measurement of Progress target box. If a target could be developed, Ohio Department of Agriculture would seek funding to test well samples for pesticides throughout the Lake Erie Watershed.
• The ability to address nutrient inputs to abate algal blooms will need to be supported by the conservation programs offered through the NRCS EQIP program. However, there are limitations in the ability of NRCS to geographically target EQIP funds. We respectfully request that GLRI funding for EQIP include the authority for NRCS to target EQIP funds to those watersheds demonstrated to be contributing high nutrient loads into the Great Lakes.

Habitat & Wildlife Protection & Restoration

• Was an interim objective of miles of streams restored or watersheds meeting use attainment considered? This provides a well known connection to Clean Water Act goals and connects state/local goals to those of the overall Great Lakes effort.

Accountability, Monitoring, Evaluation, Communication, & Partnerships

• The goal of providing for citizen involvement and information (Goal 3, pg 22) is a good start, but seems to fall short of providing a true mechanism for reporting the progress of this project to the citizens in a timely fashion. If multi-year funding is necessary for restoration, then immediate and widespread public involvement in the process and regular reports to stakeholders will be key to building a basis for support that will lead to future funding. Providing funding to the states to assist with statewide project tracking, coordination, public outreach/involvement, reporting, and public and media relations is missing from this portion of the plan. Without people telling the story of what the benefits are, it is not likely that support for additional funding will be built over the 6-9 month period between when projects start and when the FFY 2011 funding decisions will be made. State-by-state and lake-by-lake reports on what has been funded and timeframes for completion should be provided to the public within three months of funding decisions.
• Various tracking and reporting measures are in place within the states, such as Ohio’s State of the Lake Report - Lake Erie Quality Index. Providing funding for implementation of these mechanisms in 2014 would provide a much greater measure of the impact of the funding over a five-year window.
• With state and local funding cuts, current monitoring programs are at risk of reducing their number of sampling locations (Objective 5, pg 23.) Developing a comprehensive plan for monitoring across the basin and directing funding at those areas will be important.

• It would be good to have a timely, public user friendly data base for lake and tributary results, but let’s work first on getting timely data available for agencies to use for informed decision making.

• There is a need to recognize and provide continuing funding support for staff and organizations in watersheds, RAP areas and even states. Often, the existence of these organizations provides the necessary spark for local stakeholder to come together to plan and implement many important grass roots programs. There is often a willingness to support specific actions, but it is difficult to maintain financial support for planning, design and fostering collaboration. This is particularly true in challenging economic times.
Dear Mr. Kizlauskas:

Thank you for the opportunity to provide comments on the proposed federal Great Lakes Restoration Initiative (GLRI) Multi-Year Restoration Action Plan. Pennsylvania may be a small portion of the Great Lakes basin but we have big ideas and plans to protect and restore it. The GLRI brings much needed attention to the importance and urgency of Great Lakes protection and restoration. It also offers an unprecedented opportunity for the state and local partners working in Pennsylvania’s Great Lakes watersheds to implement actions that will have maximum impact.

The priorities identified in both the 2010 spending plan and the Multi-Year Action Plan support Pennsylvania’s Great Lakes efforts. State and local organizations have priority projects in each of the five focus areas. One of the first tasks is to integrate the numerous existing federal, state, and local restoration plans into a specific set of priorities and actions that is the blueprint for future action by both government and non-government organizations in Pennsylvania. Work is underway on that effort with priority projects identified and ready for implementation.

One overarching concern I have with the GLRI and the Action Plan is the lack of opportunities for the investigation, research, and monitoring essential to identifying and maintaining sustainable solutions to the environmental problems the Great Lakes are facing. Understandably, the priority is implementation and achievement of measurable outcomes. However, research and science are the foundation of any restoration and protection plan and need to be included as priorities in the Action Plan. For example, to delist the remaining beneficial use impairment in Presque Isle Bay, Pennsylvania needs to conduct specific research into the cause of external tumors on brown bullhead catfish. It is unclear if funds are available for that work or other research to support delisting of non-sediment related impairments.

My other broad concerns relate to the competitive grants. While I am delighted by prospect of $250 million available through competitive grants in FY2010 and beyond, I have concerns with implementing action through the existing federal grant programs. The scope and scale of some of the priority projects in Pennsylvania could necessitate multiple applications to different agencies to piece together the needed resources. In other cases, a single entity may need to apply to several agencies to fund individual projects that differ in scope. In either case, the administrative burden associated with writing multiple grants, overseeing budgets, workplans, and addressing all the requirements of the different grant programs could be
a real impediment to implementing action. Then there are the non-federal match requirements which will be difficult to meet for single grants as well as multiple grants. Additionally, there is a real concern that local government and non-government organizations will become competitors rather than collaborators on projects within the watershed.

To minimize and address these concerns, I encourage the federal agencies to consolidate and coordinate grants into cross-cutting opportunities in FY 2010 and provide large grants to the States beginning in FY2011. States can centrally manage and distribute the funds amongst various government agencies and local partners, ensuring accountability, coordination, and consistency with existing restoration plans and state priorities.

I also encourage the federal agencies to reinvest in existing programs that provide funding to the states for implementation of activities like water quality assessments, addressing non-point sources of pollution, and Total Daily Maximum Load development under the Clean Water Act, brownfields assessment and cleanup, and stormwater management. Allocating funds specifically for work in the Great Lakes watersheds allows the states to focus attention on problems in the basin and has the additional benefit of freeing up existing funds for work in other parts of the state.

Thank you again for this opportunity to provide comments. If you have any questions or wish to discuss these comments, please do not hesitate to contact me.

Sincerely,

\[Signature\]

Lori Boughton, Director
Office of the Great Lakes

Cc: Barb Sexton
    Kelly Burch
    Andy Zemba
    John Booser
    Jim Grazio
August 18, 2009

U.S. EPA - GLNPO

Subject: Comments for Great Lakes Multi-Year Restoration Action Plan Outline

Thank you for the opportunity to comment on the Great Lakes Multi-Year Restoration Action Plan Outline dated July 17, 2009. The State of Wisconsin strongly supports and appreciates the significance of the Great Lakes Restoration Initiative bringing new, meaningful resources towards protecting and restoring our Great Lakes.

Outlined below are recommendations for program modifications to ensure the highest rate of success for the Great Lakes Restoration Initiative. These build on comments submitted by Governor Doyle and the Council of Great Lake Governors and are based on feedback from key state agency staff and the many partners with whom we work to protect these resources for current and future generations.

Project Packaging and Grants

We strongly believe that lumping groups of smaller projects into single larger grants is a key to successfully allocating and managing this funding. For example, wetlands restoration projects could be a single grant. This would allow several projects by various parties to be coordinated and minimize the administrative work for everyone. Projects could also be packaged by critical geographic area for best environmental results and less grant work.

Utilizing Existing Programs and including Protection

Build from the strong foundation of existing programs that are successful and will benefit the most from additional funding and staffing. Work with existing plans that represent years of local resource based knowledge and constituent support such as LaMPs, RAP’s, and numerous other important fisheries and wildlife plans that are under the umbrella of Wisconsin’s Great Lakes Strategy. Don’t create more layers of organization/structure to do what is currently in process. Selectively build on State and local programs and authority to facilitate implementation and maximize impact for restoring, protecting and enhancing the Great Lakes.

Priorities outlined are appropriate as long as there is some flexibility. The focus is on restoration but GLRI should also place a high priority on protection as well. Protection of high quality and high functioning ecosystems has consistently proven to be a more cost effective measure than restoring degraded systems. However, protection is more than land acquisition or easements; it includes inventory and monitoring, planning, watershed restoration and educational outreach. It is critical that the Great Lakes Restoration Initiative address the full spectrum of protection activities to ensure a long term return on our investments. Support for sustaining the progress already accomplished will be critical as well so that we don’t lose the ecological function of existing wetlands for instance. For example, GLRI funding support for maintenance of existing wetlands should be considered as protecting investments already made in the Great Lakes.
Priorities, Targets and Measures

The State of Wisconsin strongly supports accountability, monitoring and evaluation. Establishing solid baselines by which States can report progress is critical whether activities are geared towards restoration or protection. However, it must be acknowledged that ecosystems respond slowly. Most results won’t be measureable in the 5 year time frame. Ecosystem response will take years to quantify measurable changes, e.g. reductions in fish tissue of PBTs, and reductions in nutrient loads where water quality impacts can be measured. There needs to be realistic measures for accountability and the success of GLRI should be based on projects funded, i.e. pounds of PBT’s eliminated from the environment through programs like clean sweeps and waste minimization; mercury reductions from dischargers and other sources; miles of buffers installed to reduces nutrients and sediment loads to streams and lakes. Thus we emphasize again that Interim Objectives need to be reasonable and realistic.

Obtaining baseline data will require a long-term commitment and a sustained effort to acquire statistically robust results. This will require sustained GLRI monitoring and staffing funds. Quality assurance plans will need to be a part of these efforts and results will need to be reported on and shared. Our collective sharing of data results will continue our approach in the Great Lakes of seeking the best solutions to complex environmental problems and enable us to adapt readily to new information.

As a measure of progress, give preference to long-term gains by looking at more than acres subscribed in NRCS conservation programs and consider the local framework that supports compliance with environmental standards over time. Wisconsin’s statewide nutrient management program is an example that addresses agricultural non-point pollution reduction strategies in collaboration with local government. This is evident through the County Land Conservation Departments in the Great Lakes Basin, which have demonstrated the ability to implement nutrient management planning on farms within one year of grant awards. Wisconsin’s Agricultural Performance Standards (NR 151) once installed, must be maintained, in perpetuity, without additional cost-sharing. This provision avoids the common pitfall of most agricultural non-point source management programs which provide cost-sharing for practices which often are not maintained and then must be cost-shared again, and again. The implementation of NR151 conservation practices provides enduring, cost-effective control of agricultural non-point pollution.

Current Great Lakes Plans and Staff Resources

Wisconsin developed the Wisconsin Great Lakes Strategy: Restoring and Protecting our Great Lakes, to further develop the recommendations of the Great Lakes Regional Collaboration. The Wisconsin Great Lakes Strategy mirrors the goals and objectives reflected in other plans such as the Lakewide Management Plans, State Wildlife Action Plans, and the Joint Strategic Plan for Great Lakes Fisheries, thus ensuring broad support throughout the State. EPA should identify consistency with each States’ Great Lakes plans as a basis for selecting projects to ensure efforts on building strong partnerships are rewarded. Using that process will allow States to identify high priority areas that were identified in the process of developing their State Strategies. Building on our partnerships and priorities identified by local governments and stakeholder groups in Wisconsin and providing funding for their key projects will keep this locally-driven momentum going by producing results.

Federal agencies should consider States capacity to implement on-the-ground projects as well as their ability to manage Great Lakes restoration. We would suggest a grant to each state to fund a core staff that can help manage the projects and reporting. It is well known that states across the nation are experiencing unprecedented fiscal problems which have resulted in reduced staffing across all program areas.
The current economic problem also affects in-kind matches as well as the ability to provide monetary match for grant applications. Relaxing grant match requirements is essential for the success of the Great Lakes Restoration Initiative. Providing staff capacity at the local, county and state level to apply, administer, and implement GLRI projects will be critical to meeting and sustaining our commitment to effective resource management in the Great Lakes.

Data Collection and Education

The Wisconsin Great Lakes Strategy mirrors the goals and objectives reflect in other plans such as the Lakewide Management Plans, State Wildlife Action Plans, and the Joint Strategic Plan for Great Lakes Fisheries. These are science based plans that represent years of collective Great Lakes knowledge and ongoing studies. Building from existing plans and ongoing state and local programs will provide the GLRI with solid science based foundation. Support for long-term monitoring to collect the baseline data will further enhance our decisions and enable us to adapt to changing conditions. Wisconsin has developed a Phosphorus Index that provides a science-based indicator. If used, it will help assess and evaluate the delivery and improvements of phosphorus delivery to nearshore areas.

Information and education are critical components to science-based decision making and GLRI funding for tracking, reporting and disseminating information should be supported. GLRI should support existing monitoring, reporting, and educational networks that have experienced severe budget cuts over the last few years. For example, Wisconsin’s Basin Educators have been a strong and experienced partner in the realm of delivering environmental education through the UW-Extension Office. Yet their funding has been repeatedly cut over the past few years. Consideration should also be made for States that are involved in the Environmental Information Exchange Network (EIEN). The EIEN facilitates electronic reporting and the sharing, integration, analysis, and use of environmental and other types of information from many different sources.

In conclusion we wish to stress that we support the Great Lakes Restoration Imitative and the State of Wisconsin looks forward to partnering with U.S. EPA, other Federal Agencies, and local partners to promote Great Lakes restoration and protection. It is our understanding that additional comments will be welcomed as the process for implementing the GLRI is evolving. Thank you for considering our comments.

Sincerely,

Stephen Galarneau
Acting Director
Office of the Great Lakes
Energy and water are inextricably linked. While this linkage is not unique to the Great Lakes region, the region’s vast supply of freshwater make it particularly attractive for water-intensive energy production and potentially competing demands on Great Lakes water resources. Within the Great Lakes basin, the largest source of energy comes from thermoelectric power sources, which have historically required large amounts of water. Projected long-term demographic shifts and economic growth coupled with the threat of global climate change and mounting pressure for greater U.S. energy security will demand additional power generation capacity to meet our energy needs. Implications for the Great Lakes are uncertain. Work at the national level can inform a regional dialogue on this issue.

Attached are several relevant background documents to complement the panel remarks.

- *The Energy-Water Nexus: Implications for the Great Lakes*: This Great Lakes Commission Issue Paper provides a primer on the Great Lakes Water-Energy Nexus and offers a starting point for dialogue on this issue among the Commission membership.

- Energy-Water Nexus Brochure: Prepared by the U.S. DOE multi-laboratory Energy-Water Nexus Committee, this brochure provides an overview of the energy-water nexus issue in a national context and identifies future areas of need.


- Summary of Water Conservation Provisions in the Great Lakes-St. Lawrence River Basin Water Resources, Compact and Agreement. Prepared by Commission staff as background for this panel.
The Energy-Water Nexus: Implications for the Great Lakes

Prepared by Sarah Gagnon-Turcotte, Research Associate

Overview

Energy and water are inextricably linked (See Figure 1). While this linkage is not unique to the Great Lakes region, the region’s vast supply of freshwater make it particularly attractive for water-intensive energy production and potentially competing demands on Great Lakes water resources. Within the Great Lakes basin, the largest source of energy comes from thermoelectric power sources, which have historically required large amounts of water. Projected long term demographic shifts and economic growth coupled with the threat of global climate change and mounting pressure for greater U.S. energy security, will demand additional power generation capacity to meet our energy needs. A large part of that additional power generation is expected to come from electricity. Already, a host of new products, from electric lawnmowers to cars that run on electricity, are gaining a greater foothold in the marketplace. Similarly, biofuels such as ethanol are being refined from corn and cellulosic biomass to fuel flex-fuel vehicles, a process which also requires large amounts of water. Because of the important role of water in energy production, the additional demand for domestic energy has significant potential to put increasing pressure on the Great Lakes and St. Lawrence River, which represent 20 percent of the world’s fresh surface water and 90 percent of the U.S. freshwater supply.

This paper describes the interdependence of energy and water—the amount of energy needed to provide water for various uses and, conversely, the amount of water needed to produce different kinds of energy, with a focus on electric power. It also calls attention to the need for greater coordination of institutions and policies to ensure sustainable development of energy and water resources that does not compromise the Great Lakes and St. Lawrence River.

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This discussion paper was authored by Sarah Gagnon-Turcotte and Victoria Pebbles. Sarah Gagnon-Turcotte was a 2008 Research Associate at the Great Lakes Commission. Victoria Pebbles is a Program Director at the Great Lakes Commission. Please do not copy or cite without acknowledging the authors.
Water Requires Energy

Satisfying our water needs requires energy to supply, purify, distribute, and treat water and wastewater. Each year, about 4 percent of all U.S. power generation is related to providing and treating water. Public water supplies, for instance, consume between 1,400 and 1,800 kilowatt-hour (kWh) for every million gallons of water distributed. Approximately 80 percent of municipal costs associated with water processing and distribution are for the energy—electricity—alone.

The energy required to pump water can be negligible if users are located close to the source. However, the longer the distance between user and source, the more energy is required for pumping. In addition, surface waters for drinking water supply generally require more treatment, thus more energy, than groundwater. Regardless of the volumes of water that run through a water treatment plant, the predominant use of electricity for delivering surface water for public supply is to pump the water to the distribution system, which represents about 80 to 85 percent of the total electricity consumption for surface water treatment.

Energy requirements for distribution, wastewater collection and treatment vary depending on system size, topography, and age. Older systems, which are prevalent across the Great Lakes region, usually require more energy because of decaying and leaky infrastructure and less energy efficient equipment.

Energy Requires Water

Large amounts of water are withdrawn every day within the Great Lakes and St. Lawrence River basin for a multitude of purposes, from agriculture to industrial activities. In 2004, the latest year for which Great Lakes basin water use data are available, total water withdrawals were slightly over 41 billion gallons a day (bgd). This figure includes public water supply, domestic and industrial uses, irrigation and livestock and thermoelectric power generation (fossil-fuel and nuclear), but excludes hydro-electric power generation. Nearly 75 percent of this 41 bgd was used for thermoelectric power generation alone, making this category the largest water user in the Great Lakes region.

Water Used For Thermoelectric Power Generation

“Thermoelectric power generation” is a broad category of power plants consisting of coal, nuclear, oil, natural gas, and gas-fired combined cycle that relies on a fuel source (fossil, nuclear, or biomass) to heat water to steam that is used to drive a turbine-generator to generate electricity. Thermoelectric generation represents the largest segment of U.S. electricity production, at nearly 90 percent total domestic electricity production. A significant quantity of water is required for thermoelectric power generation. Each kilowatt-hour generated from coal, for example, which accounts for over half of U.S. electricity generation, requires an average of 25 gallons of water. The largest demand for water in thermoelectric plants is cooling water for condensing steam. Other uses by thermoelectric plants also include water for operation of pollution control devices such as flue gas desulfurization (FGD) technology as well as for ash handling, wastewater treatment and wash water.

Although thermoelectric generation requires water, its consumptive use—the amount of water lost in the process—varies depending on the type of technology used for thermoelectric power generation. There are three general types of cooling system designs used for thermoelectric power plants: once-through, wet recirculating, and dry.
Prior to 1970, most thermoelectric power plants were built next to surface water and were commonly using open-loop cooling (also called once-through cooling). This system withdraws water for cooling directly from the adjacent water body and discharges the heated water back to the source, as shown in Figure 1. Once-amounts of water, but evaporation percent). About 31 percent of current U.S. generating capacity is composed of thermoelectric loop cooling and some 90 system in the Great Lakes region.

Most thermoelectric plants built loop cooling (also called “wet pump water through a cooling 2). These systems withdraw less water than open-loop systems, lost to evaporation and consumptive loss is small (usually less than 3 percent). About 31 percent of current U.S. generating capacity is composed of thermoelectric loop cooling and some 90 thermoelectric plants use this system in the Great Lakes region. Since the mid-1970s use closed-loop recirculating”) systems, which withdraw less water than open-loop systems, lost to evaporation and consumptive loss is typically greater than 60 percent.

The total weighted average water consumption for the Eastern Electric grid (which includes the Great Lakes area) is estimated at 0.49 gal/kWh. For Great Lakes states, the water consumption ranges from 0.41 gal/kWh for Indiana to 1.05 gal/kWh for Illinois. Although over 30 bgd of Great Lakes water was used for power generation in 2004, only 0.41 bgd—slightly over 1 percent—was lost, while the rest was returned to the basin. Figure 4 shows the amount of water used in for thermoelectric power generation in fossil fuel and nuclear plants as compared to total water use in the Great Lakes basin, with total withdrawals and comparative water losses (consumptive uses).

**Water Resource and Other Environmental Implications of Thermoelectric Power**

Although most Great Lakes thermoelectric power plants use once-through cooling systems so most of the water is returned to the basin, the large quantities of water required for power generation must be continuously available for power utilities to provide reliable service to their customers. This quantity of water is therefore “reserved” for power generation and is not available to other users such as irrigation or public water supply. Also, once-through cooling can potentially affect fish, shellfish and other aquatic life in several ways, including impingement on intake screens, entrainment in the cooling water systems or warming of return waters. The 90 power plants using open-loop cooling on the Great Lakes are estimated to kill in excess of 40 million fish per year due to impingement alone. Moreover, the discharge of warm water back to the source (between 10° and 20° F warmer) can also adversely affect aquatic life by potentially disturbing local species’ growth rates, feeding behavior or other factors. On the U.S. side of the Great Lakes, the U.S. Clean Water Act (CWA, 2002) addresses fish and wildlife impacts associated with thermoelectric power plant discharges and water intake structures. Further, the Clean Water Act requires that thermoelectric facilities constructed after January 17, 2002 use closed-loop cycle cooling.
With a greater reliance on closed-loop cooling systems, water withdrawals are expected to remain relatively constant, while water consumption is expected to increase substantially since closed-loop cooling systems consume more water, due to evaporation, than open-loop systems. With electricity consumption projected to increase by almost 30 percent by 2030, the higher consumptive loss resulting from closed-loop cooling could have adverse impacts on the Great Lakes and St. Lawrence River.

Finally, chemicals added to the water at thermoelectric power plants to extend the useful life of equipment and to ensure efficient operation, such as demineralized regenerants and rinses that prevent biological growth in the towers and prevent corrosion in condensers, can result in the release of degraded water into the Great Lakes and its tributaries. In the United States, these discharges are regulated under the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA).

**Water Used For Other Energy Production**

The amount of water used for other types of energy production depends on the source of that energy. Unlike thermoelectric power generation, solar photovoltaic and wind power generation uses only minimal water for panel and blade washing and have, therefore, no discernable impact on water supply or water quality. However, the Great Lakes region’s predominant reliance on fossil fuel based thermoelectric sources is water intensive. In 2006, nearly 70 percent of the region’s electric supply came from coal, petroleum, and gas-fired thermoelectric power plants. More than a quarter of the region’s electricity comes from nuclear sources, while energy production from other sources is still comparatively small; hydroelectric makes up 3 percent, while alternatives, such as wind and solar make up only 1 percent.

Other energy production activities also use large quantities of water. Consumptive use from hydropower is often ignored because all the water is assumed to be returned to the basin. Yet, when hydropower projects involve large storage reservoirs, evaporation can be a significant consumptive use. Nevertheless, since the water storage in hydropower reservoirs usually serves multiple purposes (e.g., irrigation, public water supply and recreation), hydroelectric power is not the sole culprit in these evaporative losses.

Petroleum refining activities use about 1 billion gallons of water per day, nationwide. Crude oil projections for 2008 indicate about 350 billions gallons of water will be consumed to refine 235 billion gallons of oil. The refining capacity in the Great Lakes region is expected to increase by over 2 million barrels a day by 2015, resulting in a concomitant growth in water uses.

The production of biofuels, such as corn-based ethanol, uses vast amounts of water. A 2006 study by the Institute for Agriculture and Trade Policy shows that producing one gallon of ethanol requires an estimated 3.5 to 6 gallons of water. Roughly 90 to 95 percent of that water is lost through cooling towers, wet spent grain shipped locally and exhaust from the spent grain dryers. Based on these estimates, a 2007 Great Lakes Commission study extrapolates that a typical modern ethanol plant with a production capacity of 50 million gallons per year requires on the order of 175 million gallons of water per year: a 3 to 1 ratio. Many of the newer facilities under construction within the Great Lakes-St. Lawrence River region will have larger production capacities of 100 million gallons of ethanol per year or more, requiring 350 to 600 million gallons of water per year (nearly 0.96 to 1.65 million gallons per day). The water-to-ethanol ratio varies seasonally and is largely dependent on the efficiency of a facility’s cooling towers and the quality of the water coming into the facility. The previously-referenced studies do not consider the water necessary to actually grow the corn. Agricultural irrigation accounts for roughly 20 percent of all consumptive water use in the Great Lakes-St. Lawrence River basin. When ethanol is produced from corn that requires irrigation, it can use nearly 1,000 gallons of water per gallon of fuel. Public officials are recognizing the wide array of negative environmental and social impacts and there are signs of a public policy shift away from corn-based ethanol as of early 2009. Still, 29 more biorefineries came online in the United States in 2007, with twice as many expanding or under construction so the role of corn-based ethanol and other biofuels could continue to place pressure on Great Lakes water resources well into the future.
The Energy-Water Nexus: Implications for the Great Lakes

5 Great Lakes Commission Discussion Paper April 2009 INAUGURAL EDITION

The Region’s Future Energy and Water Needs

Future demographic and economic growth will necessitate vast amounts of additional energy and water to respond to population needs. Power generation will grow to meet rising electricity demand, especially from the residential and commercial sectors. Nationwide, U.S. electricity demand is expected to rise by about 29 percent by 2030, most of which will be produced by coal-fired power plants. In the five U.S. electricity market regions that cover the Great Lakes area (ECAR, MAAC, MAIN, MAAP and NY) (Figure 5), the Energy Information Agency’s 2008 reference case projects over 18 GW of additional power generation capacity by 2030. Moreover, Quebec and Ontario are expected to increase their generating capacity by as much as 43 GW by 2020, most of which (35 GW) will come from Ontario and is expected to be from natural gas fired plants. These projections do not consider potential significant increases in electricity demand from a shift in transportation technology to electric vehicles.

Water for public water supply by itself will consume a good portion of that energy. In 2005, nation wide total electricity consumption for public water supply was about 32 billion kWh. This is expected to reach about 36 billion kWh by the year 2020 and 46 billion kWh by the year 2050. Table 1 shows projected consumption for different categories of water uses in the East North Central region and the Middle Atlantic region. Combined, these two regions encompass 7 of the 10 states and provinces of the Great Lakes region and can therefore illustrate the scale of the expected growth. As Table 1 shows, an additional 3 billion kWh will be needed just to supply, treat and deliver water across these two regions in 2050. Thermoelectric power generation has been a significant part of the region’s energy portfolio. The thermoelectric power generation sector will remain a considerable water consumer for the foreseeable future. In the U.S, thermoelectric generating capacity is expected to increase by nearly 18 percent between 2005 and 2030. During that same period, water withdrawals are projected to decline slightly as new power plants comply with the requirements of the less water-intensive closed-loop technology, although the total amount of water withdrawals will still be huge—on the order of 112 to 154 billion gallons per day. In the face of growing competition for water resources, regional and national efforts to reduce water withdrawal and consumption for thermoelectric power plants are expected to intensify. Freshwater consumption is estimated to increase between 31 to 49 percent between 2005 and 2030 to operate the 124 GW of new U.S. thermoelectric generating capacity projected for 2030.
Implications for the Great Lakes and St. Lawrence River are uncertain. On the one hand, the region’s vast amounts of freshwater engender it with an inherent capacity to meet the predicted increase in power generation needs in the Great Lakes region and its associated water use. On the other hand, much will depend on competing uses for these waters and whether climate change predictions for the Great Lakes—lower water levels—become a reality. Efficiency gains or losses—the relative rate of decrease in unit of water used per megawatt—will also be an important factor. This will depend on the types of technologies employed to generate future power needs and, in the case of power plants, the types of cooling systems employed as discussed above—compared with the rate of increase in power produced. Furthermore, an increasing population will not only need more electricity but also more food, potentially creating competing interests between public water supply, energy production and agriculture. In the Great Lakes region, where the water resources also serve important functions for recreation, commercial navigation and aquatic habitat the potential for competing uses is noteworthy.

### Conclusion

The public policy shift in the United States and Canada away from foreign (primarily Middle Eastern) oil to domestic electricity has particular implications for the Great Lakes. Even with accelerated development of non-water intensive power generation such as wind and solar, the Great Lakes region can still expect a considerable amount of energy to come from thermoelectric sources. While advances are being made to reduce some environmental impacts of thermoelectric power generation, such as the development of clean coal technologies or carbon capture and storage, these efforts are focused on reducing harmful air emissions and greenhouse gases in particular. While the connection between biofuels and water has begun to capture the attention of some policymakers, very little attention is being paid to the potential impacts that a rapid escalation of domestic electricity capacity will have on water resources.

Energy and water are virtually and inextricably linked. Yet, in most regions, including the Great Lakes region, energy and water resource planning are considered separately. The Great Lakes region is endowed with the largest supply of fresh surface water on earth. Future energy and water planning in the Great Lakes region should recognize the interdependence of energy and water. Policies and institutional mechanisms are needed to ensure that potential impacts that each sector has on the other are considered when planning for new power plants and water supply and treatment facilities.
References


5. Electricity Consumption, supra note 3 at p.2-2.


9. Energy Demands, supra note 2 at p. 25


11. Energy Demands, supra note 9 at p. 19.


15. PowerScorecard, supra note 16.


17. Ibid.

18. According to the Phase I Rule enacted by the EPA under the Section 316(b) of the Clean Water Act (CWA, 2002). For more information, see EPA, Cooling Water Intake Structure-CWA §316(b) website at: <http://www.epa.gov/waterscience/316b/>. A 2008 EPA estimation indicates that 3.8 billion gallons per day is lost during the process of cooling water intake structures. Available online at: <http://mydocs.epri.com/docs/public/00000000001013162.pdf>.


24. Energy Demands, supra note 11 at p. 20. The average loss for U.S. hydroelectric reservoirs is 4,500 gallons per MWh. With an annual generation of approximately 300 million MWh, total losses are estimated at 3.8 billion gallons per day.

26 Energy Demands, supra note 24 at p. ii.


28 Water use records for ethanol plants are not publicly available; however, these figures were obtained from records held by the Minnesota Department of Natural Resources for ethanol plants in that state.

29 Personal communication: G. Mickelson, Minnesota Department of Natural Resources, November 29, 2007.


31 Ibid., at p. 20.

32 Energy Demands, supra note 26 at p.21.

33 Rob Runyan, supra note 25 at p. 4.

34 Additional factors, such as the fight against climate change could also create new demands for water and energy. For instance, the process for carbon capture and storage technology is both water intensive and energy intensive. The Department of Energy has said that power plants’ consumption of water would nearly double by 2030 if coal-burning power generators had to install this carbon capture technology to combat global warming. Kyle Rabin, The Water Factor, The New York Times, Letter to the Editor, December 10, 2008. Available online at: <http://www.nytimes.com/2008/12/11/opinion/11green.html?partner=rssnyt&emc=r>


36 Ibid.


38 From a compilation of EPRI U.S. Electricity Consumption for Water Supply & Treatment appendixes.


42 Ibid.

43 Ibid.
Leading the Way

Water is an energy issue, and both water and energy are issues of national security. Ensuring our water and energy supply will require multidisciplinary scientific and technical expertise and involve long-term, high-risk investment with very little profit incentive in the short term. These factors lead to one clear conclusion: the federal government, specifically the Department of Energy, must lead the way if the U.S. is to complete its energy sustainability puzzle.

The Department of Energy’s National Laboratories are already collaborating to support an integrated energy-water R&D program. The laboratories possess the requisite expertise in science and technology to lead the initiative, but perhaps even more important are their proven abilities to successfully manage complex, multidisciplinary programs in collaboration with industry, academia, and government agencies.

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Completed the puzzle

Electricity and water are at the heart of the U.S. economy and way of life. National defense, food production, human health, manufacturing, recreation, tourism, and the daily functioning of households all rely on a clean and affordable supply of one or both of them. Understanding the complex relationship between water and electricity and developing technologies to keep that relationship healthy is an important key to a sustainable and secure future for the United States.

Completing the puzzle

A national research, development, and demonstration program focused on the interrelationships between water and energy would bolster U.S. energy sustainability by

• creating a detailed source of water/energy information to aid policymakers;
• providing well-targeted technological solutions;
• ensuring a stable water resource for energy producers;
• reducing the energy cost of providing clean, affordable water;
• improving the quality of the nation’s fresh water supplies; and
• alleviating competition between energy producers and other water users.

National Benefits
U.S. Energy Sustainability

The Missing Piece

U.S. energy sustainability is a complex puzzle of interlocking parts. Federally supported research and development (R&D) is being carried out to address key pieces of this puzzle including advanced fossil and nuclear energy technologies, energy efficiency, infrastructure systems, pollution control and prevention, and renewable and alternative energy. However, one critical component of the R&D mix is missing—water.

The Energy—Water Connection

Energy production requires a reliable, abundant, and predictable source of water, a resource that is already in short supply throughout much of the U.S. and the world. The electricity industry is second only to agriculture as the largest user of water in the United States. Electricity production from fossil fuels and nuclear energy requires 190,000 million gallons of water per day, accounting for 38% of all freshwater withdrawals in the nation, with 71% of that going to fossil fuel electricity generation alone. Coal, the most abundant fossil fuel, currently accounts for 52% of U.S. electricity generation, and each kWh generated from coal requires withdrawal of 25 gallons of water. That means U.S. citizens may indirectly depend upon as much water turning on the lights and running appliances as they use to their use of showers and watering lawns. According to the 2001 National Energy Policy, our growing population and economy will require 300,000 MW of new generating capacity (or 1,300 to 1,900 new power plants—more than one built each week) by the year 2020, further straining on the nation's water resources.

Several related factors bring into question whether a stable, affordable supply of water will exist to support the nation's future electricity demands:

- While U.S. population is expected to rise significantly, accessible freshwater supplies are not. Moreover, population movement and energy development do not always track well with water availability. During the 1990's in the U.S., the largest regional population growth (25%) occurred in one of the most water deficient regions, the mountain west. Water availability is also becoming a serious issue in the southeastern, where population has increased by nearly 54% since 1990. By comparison, the water-rich northeast has experienced only a 2% growth in population.
- An increasing population will not only need more electricity but sales more food, pushing the nation's two largest water users into potential competition for limited water resources.
- Proposed restrictions on the use of water for power generation to protect fish and other aquatic organisms could result in increased costs of electricity or potential energy shortages.
- Because the energy required for treatment and delivery of water accounts for as much as 80% of its cost, an insufficient supply of affordable energy will have a negative impact on the price and availability of water.
- The interdependency between the water and carbon cycles could lead to shifts in water distribution that are difficult to predict. That is, increases in electricity production and use may lead to higher levels of atmospheric carbon, which can impact the availability of water to electricity producers in certain regions.

Future National Needs

To sustain energy production, the United States must gain a detailed understanding of the interdependencies of water–electric systems, balance the needs of all users, and develop technologies to reduce water use and loss. These goals can be achieved through a focused research and development effort that integrates the following three components: (1) prediction and decision support, (2) science and technological innovation, and (3) technology transfer and implementation.

Prediction and Decision Support

A critical piece is missing from the U.S. energy sustainability puzzle.

In summary, the intimate link between clean, affordable energy and clean, affordable water is crystal clear. These cannot be one without the other.

Science and Technological Innovation

This component of the proposed research program would focus on:
1. Minimizing the impact of energy production on water quality and availability and reducing the amount of energy required for treating and distributing water;
2. Science and technological innovations could be directed at (1) treating and reusing non-potable process water ("gray") water in power production;
3. Accessing currently unused water sources, such as saline aquifers; (2) reducing or eliminating water use altogether in generating power; (3) delivering water and energy more efficiently to prevent losses; and (5) minimizing water-related impacts from mining, energy production, and disposal of solid byproducts.

Implementation and Technology Transfer

One key to the program's success will be the early formation of stakeholder teams that can provide real-world feedback, test the decision support systems, prototype technological innovations, and implement solutions quickly. These teams will include national laboratories and universities that conduct research and development; state and federal agencies responsible for water, energy, and environmental management; and industries and consortia involved in the production and/or distribution of energy and water.

Catch-22: WATER vs. ENERGY

Water is needed to generate energy. Energy is needed to deliver water. Both resources are limiting the other—and both may be running short. Is there a way out?

By Michael E. Webber

In June the state of Florida made an unusual announcement: it would sue the U.S. Army Corps of Engineers over the corps’s plan to reduce water flow from reservoirs in Georgia into the Apalachicola River, which runs through Florida from the Georgia-Alabama border. Florida was concerned that the restricted flow would threaten certain endangered species. Alabama also objected, worried about another species: nuclear power plants, which use enormous quantities of water, usually drawn from rivers and lakes, to cool their big reactors. The reduced flow raised the specter that the Farley Nuclear Plant near Dothan, Ala., would need to shut down.

Georgia wanted to keep its water for good reason: a year earlier various rivers dropped so low that the drought-stricken state was within a few weeks of shutting down its own nuclear plants. Conditions had become so dire that by this past January one of the state’s legislators suggested that Georgia move its upper border a mile farther north to annex freshwater resources in Tennessee, pointing to an allegedly faulty border survey from 1818. Throughout 2008 Georgia, Alabama and Florida have continued to battle; the corps, which is tasked by Congress to manage water resources, has been caught in the middle. Drought is only one cause. A rapidly growing population, especially in Atlanta, as well as overdevelopment and a notorious lack of water planning, is running the region’s rivers dry.

Water and energy are the two most fun-
Fundamental ingredients of modern civilization. Without water, people die. Without energy, we cannot grow food, run computers, or power homes, schools or offices. As the world’s population grows in number and affluence, the demands for both resources are increasing faster than ever.

Woefully underappreciated, however, is the reality that each of these precious commodities might soon cripple our use of the other. We consume massive quantities of water to generate energy, and we consume massive quantities of energy to deliver clean water. Many people are concerned about the perils of peak oil—running out of cheap oil. A few are voicing concerns about peak water. But almost no one is addressing the tension between the two: water restrictions are hampering solutions for generating more energy, and energy problems, particularly rising prices, are curtailing efforts to supply more clean water.

The paradox is raising its ugly head in many of our own backyards. In January, Lake Norman near Charlotte, N.C., dropped to 93.7 feet, less than a foot above the minimum allowed level for Duke Energy’s McGuire Nuclear Station. Outside Las Vegas, Lake Mead, fed by the Colorado River, is now routinely 100 feet lower than historic levels. If it dropped another 50 feet, the city would have to ration water use, and the huge hydroelectric turbines inside Hoover Dam on the lake would provide little or no power, potentially putting the booming desert metropolis in the dark.

Research scientist Gregory J. McCabe of the U.S. Geological Survey reiterated the message to Congress in June. He noted that an increase in average temperature of even 1.5 degrees Fahrenheit across the Southwest as the result of climate change could compromise the Colorado River’s ability to meet the water demands of Nevada and six other states, as well as that of the Hoover Dam. Earlier this year, scientists at the Scripps Institution of Oceanography in La Jolla, Calif., declared that Lake Mead could become dry by 2021 if the climate changes as expected and future water use is not curtailed.

Conversely, San Diego, which desperately needs more drinking water, now wants to build a desalination plant up the coast, but local activists are fighting the facility because it would consume so much energy and the power supply is thin. The mayor of London denied a proposed desalination plant in 2006 for the same reason, only to have his successor later rescind that denial. Cities in Uruguay must choose whether they want the water in their reservoirs to be used for drinking or for electricity. Saudi Arabia is wrestling with whether to sell all its oil and gas at record prices or to hold more of those resources to generate what it doesn’t have: freshwater for its people and its cities.

We cannot build more power plants without realizing that they impinge on our freshwater supplies. And we cannot build more water delivery and cleaning facilities without driving up energy demand. Solving the dilemma requires new national policies that integrate energy and water solutions and innovative technologies that help to boost one resource without draining the other.

High stakes: The Bellagio Hotel (above) and the rest of Las Vegas consume massive amounts of energy and water. But levels at nearby Lake Mead (right) are at historic lows, threatening the water supply and the Hoover Dam’s ability to generate the city’s electricity.
Furthermore, the available water is often not clean or not located close to population centers. Phoenix gets a large share of its freshwater via a 336-mile aqueduct, from, of course, the Colorado River. Municipal supplies are also often contaminated by industry, agriculture, and wastewater effluents. According to the World Health Organization, approximately 2.4 billion people live in highly water-stressed areas. Two primary solutions—shipping in water over long distances or cleaning nearby—but dirty supplies—both require large amounts of energy, which is soaring in price.

Nationwide, the two greatest users of freshwater are agriculture and power plants. Thermal power plants—those that consume coal, oil, natural gas or uranium—generate more than 90 percent of U.S. electricity, and they are water hogs. The sheer amount required to cool the plants impacts the available supply to everyone else. And although a considerable portion of the water is eventually returned to the source (some evaporates), when it is emitted it is at a different temperature and has a different biological content than the source, threatening the environment. Whether this effluent should be processed is contentious; the Supreme Court is set to hear a consolidation of cases about the Environmental Protection Agency's requirements that power plants retrofit their systems to minimize impact on local water supplies and aquatic life.

At the same time, we use a lot of energy to move and treat water, sometimes across vast distances. The California Aqueduct, which transports snowmelt across two mountain ranges to the thirsty coastal cities, is the biggest electricity consumer in the state. As convenient resources become tapped out, providers must dig deeper and reach farther. Countries that have large populations but isolated water sources are considering daunting megaprojects. China, for example, wants to transport water from three river basins in the water-rich south over thousands of miles to the water-poor north, consuming vast energy supplies. Olé-guard investors such as T. Boone Pickens, who made his billions from oil and natural gas are now putting their money into water, including one project to pipe it across Texas. Cities such as El Paso are also trying to develop desalination plants positioned above salty aquifers, which require remarkable amounts of energy—and money.

In addition, local municipalities have to clean incoming water and treat outgoing water, which together consume about 3 percent of the nation's electricity. Health standards typically get stricter with time, too, so the degree of energy that needs to be spent per gallon will only increase.

From Imported Oil to Domestic Water

The strains between the resources manifest themselves in tough choices at the local level—especially in land- and water-locked regions such as the desert Southwest. Is it better for a city to import freshwater or to import electricity to desalinate brackish water in deep aquifers below? Or is it better yet to move the people to where the water is? With infinite energy, freshwater can be achieved, but even if the public coffers were unlimited, policymakers are under pressure to limit carbon emissions. And with climate change possibly altering the cycles of droughts, floods, and rainfall, burning more energy to get more water might be doubly dire.

The challenges get even tougher because the U.S. has finally conceded that the best way to fix its energy and security problems is to break its dependence on imported oil. This new view is reflected in the Energy Independence and Security Act of 2007 and other legislation. Because the transportation sector is a major oil consumer—and a major carbon emitter—it is on the short list of targets for radical change by policymakers, innovators and entrepreneurs. The two most popular choices to replace gasoline appear to be electricity for plug-in vehicles and biofuels. Both paths have merits, but both are more water-intensive than our current system.

Plug-in vehicles are particularly appealing because it is easier to manage the emissions from 1,500 power plants than from hundreds of millions of tailpipes. The electrical infrastructure is already in place. But the power sector swallows water. Compared with producing gasoline for a car, generating electricity for a plug-in hybrid-electric or all-electric vehicle withdraws 10 times as much water and consumes up to three times as much water per mile, according to studies done at the University of Texas at Austin.

Biofuels are worse. Recent analyses indicate that the entire production cycle—from growing irrigated crops on a farm to
pumping biofuel into a car—can consume 20 or more times as much water for every mile traveled than the production of gasoline. When scaling up to the 2.7 trillion miles that U.S. passenger vehicles travel a year, water could well become a limiting factor. Municipalities are already fighting over water supplies with the booming biofuels industry: citizens in the Illinois towns of Champaign and Urbana recently opposed a local ethanol plant’s petition to withdraw two million gallons a day from the local aquifer to produce 100 million gallons of ethanol a year. Resistance will grow as ranchers’ wells run dry.

Whether proponents realize it or not, any plan to switch from gasoline to electricity or biofuels is a strategic decision to switch our dependence from foreign oil to domestic water. Although that choice might seem more appealing than reducing energy consumption, we would be wise to first make sure we have the necessary water.

**New Mind-set Needed, Too**

Regardless of which energy source the U.S. or the world, might favor, water is ultimately more important than oil because it is more immediately crucial for life, and there is no substitute. And it seems we are approaching an era of peak water—the lack of cheap water. The situation should already be considered a crisis, but the public has not grasped the urgency.

The public has indeed become more open-minded about the risks of peak oil, which vary from the dire (mass starvation and resource wars) to the blase (market forces bring forth new technologies that save the day). Supply shortages and skyrocketing prices have ratcheted up confidence in the claims of the “peakers.” Policy levers and market forces are being deployed to find a substitute for affordable oil.

What will it take for us to make the leap for water and, better yet, to consider both issues as one? When the projections for declining oil production are overlaid with

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**Water Required to Generate One Megawatt-hour of Electricity Using ...**

- **Gas/steam combined cycle**: 7,400–20,000 gallons
- **Coal and oil**: 21,000–50,000 gallons
- **Nuclear**: 25,000–50,000 gallons

*Data are for plants that draw and dump water; plants with cooling towers use less.*
the increasing demand for water, the risks become severe. Because water is increas-
ingly energy-intensive to produce, we will likely be relying on fossil fuels for pump-
ing water from deeper aquifers or for mov-
ing it through longer pipelines. Any peak in oil production could force a peak in wa-
ter production. Peak oil might cause some human suffering, but peak water would have more extreme consequences: mil-
ions already die every year from limited access to freshwater, and the number could grow by an order of magnitude.

Perhaps signposts will wake our collec-
tive minds. Kansas lost a lawsuit to Mis-
souri recently over interstate water use, causing Kansan farmers to reconfigure how they will grow their crops. Rationing should certainly put society on notice, and it is beginning. My hometown of Austin, Tex., now imposes strict lawn-watering restrictions. California, suffering record low snowfalls, has issued statewide re-
quirements for municipal water conserva-
tion and rationing of water that are remi-
niscent of gasoline controls in the 1970s.

Someday we might look back with a curious nostalgia at the days when proli-
gate homeowners wastefully sprayed their lawns with liquid gold to make the grass grow, just so they could then burn black gold to cut it down on the weekends. Our children and grandchildren will wonder why we were so dumb.

Forcing Solutions
The rising tension between water and en-
ergy is troubling, but it also presents an opportu-
ity. We can tackle the problem. The first step is to integrate U.S. policy-
making processes. Although the two re-
sources are highly interdependent, energy and water regulators operate separately, with different funding streams, accountability mechanisms, government oversight and legislative committees. Instead of wa-
ter planners assuming they will have all the energy they need and energy planners assuming they will have all the water they need, we must get them in the same room to make decisions.

The federal government has long had a Department of Energy but does not have a Department of Water. The EPA oversees water quality, and the U.S. Geological Survey is responsible for collecting data and monitoring supply, but no federal agency ensures the effective use of water. Congress should create a single overseer, possibly in the Department of the Interior.
(because of water’s environmental importance) or the Department of Commerce (because of its role in the economy). Partly because water has historically been produced locally, most regulatory responsibility has been pushed down to the state and municipal levels. Local policies can readily fail, however, when aquifers, rivers and watersheds span multiple cities or states. What happens when another city takes your water?

Federal energy and water agencies should then develop a plan for integrated policy making. For example, when power plant owners seek building permits for a given site they must show that the new installations will meet EPA air-quality standards, similar requirements from a new agency should have to be met for water usage. Energy planners should be in the room when their counterparts debate issuing water permits, to raise concerns about greater electricity demand. When siting and permitting are considered for power plants, water experts should there to comment on any potentially elevated risk of scarcity. These interactions can take the form of simple collaborations.

The same cross talk should inform climate change legislation. In May, Michael Arceaux, deputy executive director of the Association of Metropolitan Water Agencies, began a one-person campaign to educate Congress that high-profile bills under consideration, notably those involving carbon cap-and-trade systems, had serious effects on water supplies that were not being considered.

As the U.S. better coordinates policy making, innovative technologies can reduce the amount of freshwater that society extracts and consumes. Agriculture is the place to start. Drip irrigation (instead of spraying water onto fields, allowing much of it to evaporate) requires much less water and delivers it directly to a crop’s roots. Farmers in the high plains due east of the Colorado River should switch to drip irrigation for their own good. Nearly all of them tap the Ogallala aquifer, the largest in the U.S., and it is being depleted at a rate of 15 billion cubic yards a year—much more than the rainfall and runoff that reaches it to recharge it. Irrigation now accounts for 94 percent of the groundwater used in the entire region.

Consumption by power plants can be significantly reduced by switching from water cooling to air cooling or at least hybrid air-water cooling. Although air systems are more expensive and are less efficient during operation, they virtually eliminate water withdrawal.

Reusing municipal and industrial wastewater will also save supplies and reduce energy consumed to transport them. Although many people cringe at the thought of “toilet to tap” cycles that convert wastewater to drinking water, astronauts on board the space station and residents in Singapore readily drink treated

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### Alternative vehicles: They use less petroleum, but producing their fuel guzzles more water.

<table>
<thead>
<tr>
<th>Gallons of Water Depleted to Travel 100 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol vehicle</td>
</tr>
<tr>
<td>Hydrogen fuel-cell vehicle</td>
</tr>
<tr>
<td>Plug-in hybrid electric vehicle</td>
</tr>
<tr>
<td>Gasoline vehicle</td>
</tr>
</tbody>
</table>

**NOTES:** For ethanol made from irrigated corn, Hydrogen for fuel cells is made by electrolysis of water with electricity from standard grid. Water for hybrids cools local power plants and processes their energy source. Water is used to extract and refine oil for gasoline.
wastewater every day with no ill effects. Even if that option remains unpalatable to many consumers, municipalities can certainly use reclaimed water for agriculture and industry and, indeed, for cooling power plants.

Engineering advances can also make water treatment much less energy-intensive. For example, Stonybrook Purification in Stony Brook, N.Y., is developing advanced membranes that more efficiently clean wastewater and desalinate saltwater. The inventor who discovered a way to purify water using minimal energy could become the world's richest person and be forever enshrined.

Intelligent monitors can reduce residential and commercial waste. It is not uncommon to see sprinkler systems spraying lawns at full force in the heat of the afternoon—when evaporation is maximized and irrigation effects are minimized—and in the middle of a rainstorm. Companies such as Accuwater in Austin combine sensors, smart software and internet connectivity for real-time weather information to better control such systems.

Residents can also spare the energy spent to heat water by widely implementing solar water heating. The simple technology is affordable, reliable, time-tested and pays for itself. But perhaps because the technology doesn't seem cutting-edge and doesn't have much backing from the federal government, its market penetration remains small.

We may have to make social choices, too. Conserving energy and water means we might need to give up our young love affair with corn-based ethanol.

More than anything, however, we need to value water. We must move away from a long-standing expectation that water should be free or cheap. If we think water is important, we should put a realistic price on it. Without that, we send a confusing signal that everyone can be biased about wasting water.

Once true pricing is in place, the U.S. can perhaps go further and show consumers and regulators how much the price of water raises the price of energy and how much the price of energy raises the price of water. These two metrics will bring us face to face with the dilemma of conserving both resources, prompting effective solutions.

Michael E. Webber is associate director of the Center for International Energy and Environmental Policy at the University of Texas at Austin and assistant professor of mechanical engineering at the university.
Summary of Water Conservation Provisions in the Great Lakes-St. Lawrence River Basin Water Resources Compact and Agreement

Section 4.2 of the Compact (Article 304 of the Agreement) identifies specific provisions for developing water conservation and efficiency programs which will be implemented by the Compact Council/Regional Body or the states and provinces. The Compact Council and Regional Body are committed to developing regional water conservation and efficiency objectives. The states and provinces are committed to implementing these objectives their water conservation and efficiency programs. Provided below is a detailed description of these provisions.

The development of regional objectives for water conservation and efficiency

The Agreement calls for the Compact Council and Regional Body to develop regional objectives which will be reviewed every five years. These objectives are based on the regional goals of:

a. Ensuring improvement of the waters and water dependent natural resources;
b. Protecting and restoring the hydrologic and ecosystem integrity of the basin;
c. Retaining the quantity of surface water and groundwater in the basin;
d. Ensuring sustainable use of waters of the basin; and,
e. Promoting the efficiency of use and reducing losses and waste of water.

Presented below are the regional objectives for water conservation and efficiency that were adopted on December 4, 2007 by Resolution 6 of the Great Lakes-St. Lawrence River Water Resources Regional Body.

REGIONAL OBJECTIVES

➢ Guide programs toward long-term sustainable water use.
  • Use adaptive programs that are goal-based, accountable and measurable.
  • Develop and implement programs openly and collaboratively, including with local stakeholders, Tribes and First Nations, governments and the public.
  • Prepare and maintain long-term water demand forecasts.
  • Develop long-term strategies that incorporate water conservation and efficient water use.
  • Review and build upon existing planning efforts by considering practices and experiences from other jurisdictions.

➢ Adopt and implement supply and demand management to promote efficient use and conservation of water resources.
  • Maximize water use efficiency and minimize waste of water.
  • Promote appropriate innovative technology for water reuse.

➢ Conserve and manage existing water supplies to prevent or delay the demand for and development of additional supplies.

➢ Provide incentives to encourage efficient water use and conservation.

➢ Include water conservation and efficiency in the review of proposed new or increased uses.

➢ Promote investment in and maintenance of efficient water infrastructure and green infrastructure.

➢ Improve monitoring and standardize data reporting among State and Provincial water conservation and efficiency programs.
  • Improve the measurement and evaluation of water conservation and water use efficiency.
  • Encourage measures to monitor, account for, and minimize water loss.
  • Track and report program progress and effectiveness.

➢ Develop science, technology and research.
  • Encourage the identification and sharing of innovative management practices and state of the art technologies.
• Encourage research, development and implementation of water use and efficiency and water conservation technologies.
• Seek a greater understanding of traditional knowledge and practices of Basin First Nations and Tribes.
• Strengthen scientific understanding of the linkages between water conservation practices and ecological responses.

➢ Develop education programs and information sharing for all water users.
• Ensure equitable public access to water conservation and efficiency tools and information.
• Inform, educate and increase awareness regarding water use, conservation and efficiency and the importance of water.
Promote the cost-saving aspect of water conservation and efficiency for both short-term and long-term economic sustainability.

• Share conservation and efficiency experiences, including successes and lessons learned across the Basin.
• Enhance and contribute to regional information sharing.
• Encourage and increase training opportunities in collaboration with professional or other organizations in order to increase water conservation and efficiency practices and technological applications.
• Ensure that conservation programs are transparent and that information is readily available.
• Aid in the development and dissemination of sector-based best management practices and results achieved.
• Seek opportunities for the sharing of traditional knowledge and practices of Basin First Nations and Tribes.

The development of water conservation and efficiency programs

Each state and province will develop and implement water conservation and efficiency programs consist with regional goals and objectives within two years of the Compact and Agreement entering into force (December 8, 2009). To ensure consistency with the regional goals and objectives, the states and provinces are to develop their own water conservation and efficiency goals and objectives. These programs may be voluntary or mandatory.

Furthermore, the states and provinces are obligated to promote environmentally sound and economically feasible water conservation measures such as:
   a. Measures that promote efficient use of water;
   b. Identification and sharing of best management practices and state of the art conservation and efficiency technologies;
   c. Application of sound planning principles;
   d. Demand-side and supply-side measures or incentives; and,
   e. Development, transfer and application of science and research

All proposals for new or increased withdrawals of Great Lakes—St. Lawrence River Basin water must incorporate environmentally sound and economically feasible water conservation and efficiency measures.

Following the 5 year review of the regional objectives, state and provinces are committed to make necessary modification to their own programs to reflect any changes to the regional objectives. Programs must be targeted to both new and existing water users and adjusted to meet to new demands and the potential impacts of cumulative effects and climate.
Regulating Ballast Water Discharges

Background

There is significant concern regarding the lack of jurisdictional coordination of ballast water regulatory programs in the Great Lakes region. The Great Lakes Commission has advocated for a U.S. federal solution to the ballast water management issue in the Great Lakes and has been interested in moving forward toward consensus on a regional standard for ballast water.

Over the past several months the Great Lakes Commission, in partnership with the Great Lakes Panel on Aquatic Nuisance Species, has been working with representatives of the state, provincial, and federal governments as well as industry to better understand the challenges in developing a regional standard for a Great Lakes ballast water program. A critical aspect of this work is to find areas of agreement between the variety of stakeholders in order to advance consensus on such a standard. In June at its meeting in Grand Island, N.Y., the Panel convened a session to discuss the array of ballast water standards in place or proposed for Great Lakes states and the respective regulatory vehicles that the states have used for establishing a state ballast water discharge standard. The two primary regulatory vehicles that states have used for this purpose are 1) a state mandated permit program; and/or 2) state certification of the U.S. EPA Vessel General Permit (VGP) under Section 401 of the Clean Water Act. On Aug. 28, the U.S. Coast Guard announced its much anticipated draft rulemaking on the proposed establishment of ballast water discharge standards.

To inform the briefing on ballast water regulation at the 2009 Annual Meeting, the following attachments are provided:

- Copy of Federal Register /Vol. 74, No. 166, August 28, 2009, Standards for Living Organisms in Ships’ Ballast Water Discharged in U.S. Waters
- Proposed Ballast Water Discharge Standard Rulemaking, courtesy of U.S. Coast Guard Office of Operating and Environmental Standards
- Fact Sheet on U.S. EPA’s Vessel General Permit
- Summary of Key Elements of Great Lakes State Ballast Water Treatment Permit Requirements and U.S. Clean Water Act Sec. 401 Certification Conditions
DEPARTMENT OF HOMELAND SECURITY

Coast Guard

[USCG–2001–10486]

Standards for Living Organisms in Ships' Ballast Water Discharged in U.S. Waters; Draft Programmatic Environmental Impact Statement

AGENCY: Coast Guard, DHS.

ACTION: Notice of availability and request for comments.

SUMMARY: The Coast Guard announces the availability of a Draft Programmatic Environmental Impact Statement (DPEIS) for the rulemaking entitled “Standards for Living Organisms in Ships’ Ballast Water” (Docket No. USCG–2001–10486), published elsewhere in today’s issue of the Federal Register. This DPEIS provides an assessment of the potential environmental impacts associated with the proposed establishment of ballast water discharge standards. The standards would be used to approve alternative ballast water management methods that are effective in preventing or reducing the introduction of nonindigenous species via discharged ballast water into United States waters. We request your comments on this DPEIS.

DATES: Comments and related material must either be submitted to our online docket via http://www.regulations.gov on or before November 27, 2009 or reach the Docket Management Facility by that date.

ADDRESSES: You may submit comments identified by docket number USCG–2001–10486 using any one of the following methods:


(2) Fax: 202–493–2251.


(4) Hand delivery: Same as mail address above, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The telephone number is 202–366–9329.

To avoid duplication, please use only one of these four methods. See the “Public Participation and Request for Comments” portion of the SUPPLEMENTARY INFORMATION section below for instructions on submitting comments.

FOR FURTHER INFORMATION CONTACT: If you have questions on this notice, call or e-mail Mr. John Morris, Project Manager, Environmental Standards Division, U.S. Coast Guard Headquarters, telephone 202–372–1433, e-mail: John.C.Morris@uscg.mil. If you have questions on viewing or submitting material to the docket, call Renee V. Wright, Program Manager, Docket Operations, telephone 202–366–9826.

SUPPLEMENTARY INFORMATION:

Public Participation and Request for Comments

We encourage you to submit comments and related material on the Draft Programmatic Environmental Impact Statement (DPEIS). All comments received will be posted, without change, to http://www.regulations.gov and will include any personal information you have provided.

Submitting comments: If you submit a comment, please include the docket number for this notice (USCG–2001–10486) and provide a reason for each suggestion or recommendation. You may submit your comments and material online, or by fax, mail or hand delivery, but please use only one of these means. We recommend that you include your name and a mailing address, an e-mail address, or a telephone number in the body of your document so that we can contact you if we have questions regarding your submission.

To submit your comment online, go to http://www.regulations.gov and click on the “submit a comment” box, which will then become highlighted in blue. Insert “USCG–2001–10486” in the Keyword box, click “Search”, and then click on the balloon shape in the Actions column. If you submit your comments by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. If you submit them by mail and would like to know that they reached the Facility, please enclose a stamped, self-addressed postcard or envelope. We will consider all comments and material received during the comment period.

Viewing the comments and DPEIS: To view the comments and the DPEIS, go to http://www.regulations.gov, enter the docket number for this rulemaking (USCG–2001–10486) in the Keyword box, and click “Search”. If you do not have access to the Internet, you may view the docket by visiting the Docket Management Facility in Room W12–140 on the ground floor of the Department of Transportation West Building, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. We have an agreement with the Department of Transportation to use the Docket Management Facility.

Privacy Act: Anyone can search the electronic form of comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review a Privacy Act system of records notice regarding our public dockets in the January 17, 2008, issue of the Federal Register (73 FR 3316).

Background and Purpose

The United States Coast Guard (USCG) has evaluated the impacts to the environment from a range of alternative ballast water discharge standards (BWDS). BWDS would be used to approve ballast water management systems (BWMS) that are at least as effective as ballast water exchange in preventing or reducing the introduction of nonindigenous species (NIS) via discharged ballast water.

Ballast water is taken on by a vessel to increase the water draft, change the trim, regulate the stability, or maintain stress loads within acceptable operational limits. The term NIS refers to organisms found outside of their native or historical range. In cases where they invade ecosystems, NIS may alter aquatic and marine ecosystems and biodiversity, impact commercial and recreational fisheries, cause infrastructure damage, contribute to potential risks to human health, and generally create detrimental economic impacts. Ballast water discharge (BWD) is a major pathway for NIS introduction from vessels operating in or entering United States waters.

On September 26, 2003, the USCG announced its proposed action to establish BWDS that would be effective in preventing the introduction and spread of NIS via discharged ballast water. (68 FR 55559). This Draft Programmatic Environmental Impact Statement (DPEIS) addresses the effects on the human and natural environment of five alternatives for the proposed regulatory action to establish BWDS. This DPEIS is issued in conjunction with a Notice of Proposed Rulemaking, published elsewhere in today’s Federal Register. The DPEIS will be used to make an informed decision about BWDS and to understand the nationwide environmental and socioeconomic implications of the decision.
Draft Programmatic Environmental Impact Statement (DPEIS)

We request your comments on the alternatives analyzed in the DPEIS, methodologies used in the DPEIS, and possible sources of data or information not included in the DPEIS. Your comments will be considered in preparing the Final Programmatic Environmental Impact Statement (FPEIS).

The USCG is the lead federal agency for this action under the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (NANPCA) as reauthorized and amended in the National Invasive Species Act of 1996 (NISA).

Dated: August 17, 2009.

F. J. Sturm,
Acting Director of Commercial Regulations and Standards, U.S. Coast Guard.

[FR Doc. E9–20313 Filed 8–27–09; 8:45 am]
Subject: Proposed Ballast Water Discharge Standard Rulemaking

Issue

The Coast Guard is proposing a two-phase standard for the allowable concentration of living organisms in ships’ ballast water discharged in U.S. waters.

Background

This rulemaking is being carried out under the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (NANPCA), as reauthorized and amended by the National Invasive Species Act of 1996 (NISA). These statutes authorize the Coast Guard to approve alternative ballast water management systems (BWMS) that are found to be at least as effective as mid-ocean ballast water exchange in preventing nonindigenous species introductions.

Proposed Standards and Schedule:

Table 1 compares the Coast Guard’s proposed phase-one and phase-two standards. The phase-one standard is based upon the International Maritime Organization (IMO) “Regulation D-2” standard of the Ballast Water Management Convention. The phase-two standard is based on the most stringent proposed U.S. state regulations that are based on quantitative limits. Table 2 lists the implementation schedules. If a practicability review finds that no systems can meet the entire phase-two standard, but a significant improvement over phase-one can be practicably achieved, then the Coast Guard will propose intermediate standards and their associated timeline.

Applicability:

• Vessels that operate in U.S. waters and are equipped with ballast tanks, unless they are in innocent passage.
• By statute, the following vessels are exempted from Coast Guard BWM regulations:
  o crude oil tankers engaged in coastwise trade, and
• By discretion, the proposed rulemaking would not apply to vessels that operate exclusively in one Captain of the Port Zone, due to the short nature of these voyages.

Approval of Ballast Water Management Systems (BWMS):

Approvals of BWMS would be based on land-based efficacy tests conducted by certified Independent Laboratories in the U.S. with oversight by the Coast Guard and EPA, as well as shipboard testing to verify the systems’ operating capabilities. Biocides used in BWMS may require independent registration by EPA under the Federal Insecticide, Fungicide, and Rodenticide Act. Vessels will also need to meet various water quality criteria established in the EPA Vessel General Permit under the Clean Water Act. A procedure will be developed to evaluate systems which have been type-approved by foreign administrations to ensure they are substantively the same as the U.S. testing procedures.

Future Plans:

The Coast Guard will conduct a 90-day comment period, including a series of public meetings tentatively scheduled for Seattle, WA (28 Sep), New Orleans, LA (30 Sep), Chicago, IL (02 Oct), Washington, DC (08 Oct), Oakland, CA (27 Oct), and New York City (29 Oct). The exact locations and times will be published in the Federal Register. Following the public comment period, the Coast Guard will prepare responses to comments and prepare the final rulemaking for publication.

More Information:

This proposed rulemaking can be found at: http://www.regulations.gov. In Search, enter docket number USCG-2001-10486.
Table 1. Comparison Between Phase-One and Phase-Two Discharge Standards

<table>
<thead>
<tr>
<th>Organism Size</th>
<th>&gt; 50μm*</th>
<th>&gt;10μm &amp; ≤50μm</th>
<th>≤10μm</th>
<th>Pathogens and indicators</th>
<th>Toxicogenic <em>V. cholerae</em> O1 &amp; O139</th>
<th>E. coli</th>
<th>Intestinal enterococci</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase One</td>
<td>&lt; 10 / m³</td>
<td>&lt; 10 / ml</td>
<td>N/A</td>
<td>&lt;1 cfu / 100 ml</td>
<td>&lt;250 cfu / 100 ml</td>
<td>&lt;100 cfu / 100 ml</td>
<td></td>
</tr>
<tr>
<td>Phase Two</td>
<td>&lt; 1 per 100 m³</td>
<td>&lt; 1 per 100 ml</td>
<td>&lt;1,000 bacteria &amp; 10,000 viruses per 100 ml</td>
<td>&lt;1 cfu / 100 ml</td>
<td>&lt;126 cfu / 100 ml</td>
<td>&lt;33 cfu / 100 ml</td>
<td></td>
</tr>
</tbody>
</table>

cfu = colony forming unit

Table 2. Phase One and Phase Two Implementation Schedules

<table>
<thead>
<tr>
<th>Vessel Category and BW Capacity (cubic meters, m³)</th>
<th>Vessel Construction Date</th>
<th>Vessel Compliance Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase One Implementation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Vessels ALL</td>
<td>On or after January 1, 2012</td>
<td>On Delivery</td>
</tr>
<tr>
<td>Existing Vessels Less than 1500 m³</td>
<td>Before January 1, 2012</td>
<td>First drydocking¹ after January 1, 2016</td>
</tr>
<tr>
<td>Existing vessels 1500-5000 m³</td>
<td>Before January 1, 2012</td>
<td>First drydocking after January 1, 2014</td>
</tr>
<tr>
<td>Existing vessels Greater than 5000 m³</td>
<td>Before January 1, 2012</td>
<td>First drydocking after January 1, 2016</td>
</tr>
<tr>
<td><strong>Phase Two Implementation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Vessels ALL</td>
<td>On or after January 1, 2016</td>
<td>On delivery</td>
</tr>
<tr>
<td>Existing Vessels &lt;1500 m³</td>
<td>Before January 1, 2016</td>
<td>First drydocking after January 1, 2016 or 5 years after installation of BWMS meeting phase-one standard, whichever occurs later.</td>
</tr>
<tr>
<td>Existing vessels 1500-5000 m³</td>
<td>Before January 1, 2016</td>
<td>As above</td>
</tr>
<tr>
<td>Existing vessels &gt;5000 m³</td>
<td>Before January 1, 2016</td>
<td>As above</td>
</tr>
</tbody>
</table>

* μm: micrometer, a measurement of length, is equal to 1/1,000 of a millimeter or about 4/100,000 of one inch.

¹ Refers to scheduled drydocking which, depending on vessel type and service, could be either a 2.5, 5 or (in very rare cases) 10 year interval.
Why did EPA issue this permit?
This action is in response to a District Court ruling that vacates, as of February 6, 2009, a long-standing EPA regulation that excludes discharges incidental to the normal operation of a vessel from the need to obtain an NPDES permit. As a result, all vessels operating in US waters must have some form of NPDES permit coverage or else they will be discharging, and consequently operating, illegally in Waters of the United States.

Does this final permit apply to me?
The VGP applies to discharges incidental to the normal operation of all non-recreational vessels of 79 feet or greater in length. In addition, the ballast water discharge provisions also apply to any non-recreational vessel of less than 79 feet or commercial fishing vessel of any size discharging ballast water.

What is generally required?
The permit incorporates the Coast Guard’s mandatory ballast water management and exchange standards, adds additional ballast water management practices and provides effluent limits for other types of discharges including deck runoff, bilgewater, graywater, anti-foulant hull coatings and other discharge types. It also establishes specific corrective actions, inspection and monitoring requirements, and recordkeeping and reporting requirements.

Are the requirements consistently applied nationally?
No. Under the CWA Section 401 certification requirements, if a State believes that any permit condition(s) more stringent than those contained in the draft permit are necessary to meet the applicable requirements of either the CWA or State law, then the State may include those condition(s) in their certification. A number of States have incorporated additional conditions into the permit including limits on ballast water discharges, graywater discharges, underwater husbandry discharges, and others, which apply in those state’s waters. See Part 6 of the VGP for a complete list of these additional conditions.

How can I get copies of the permit and other related information?
- The Permit and Permit Fact Sheet are available on EPA’s webpage at [www.epa.gov/npdes/vessels](http://www.epa.gov/npdes/vessels).
- Publicly available docket materials are available electronically through [www.regulations.gov](http://www.regulations.gov).

How do I obtain permit coverage?
All covered vessels are granted automatic permit coverage until September 19, 2009. If your vessel is greater than 300 gross tons, or it has the capacity to carry more than 8 cubic meters (~2113 gallons) of Ballast Water, you must file a Notice of Intent (NOI) before September 19, 2009 to retain your permit coverage; other covered vessels retain coverage automatically so long as they comply with the VGP’s provisions. You may file your NOI at [www.epa.gov/npdes/vessels/enoi](http://www.epa.gov/npdes/vessels/enoi).

What if I think the Permit Conditions aren’t appropriate for my vessel?
You may apply for individual permit coverage consistent with the regulatory requirements found in 40 CFR 122.21 and Part 1.8.2 of the VGP.

Who can you contact if you have questions?
After reviewing the Permit and Fact Sheet, please contact EPA at [commercialvesselpermit@epa.gov](mailto:commercialvesselpermit@epa.gov) if you have additional questions.
<table>
<thead>
<tr>
<th>State</th>
<th>Regulatory Vehicle</th>
<th>Existing Oceangoing</th>
<th>New Oceangoing</th>
<th>Existing Lakers</th>
<th>New Lakers</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michigan</td>
<td>State permit</td>
<td>Discharge prohibited unless approved</td>
<td>Discharge prohibited unless approved</td>
<td>---</td>
<td>---</td>
<td>Rights reserved to modify 401 Cert. if it is determined that ballast</td>
</tr>
<tr>
<td></td>
<td>401 Certification</td>
<td>treatment to prevent AIS in place</td>
<td>treatment in place</td>
<td></td>
<td></td>
<td>treatment on lakers is necessary, available and cost effective</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>401 Certification</td>
<td>IMO by Jan. 2016</td>
<td>Various standards more stringent than</td>
<td>IMO by Jan. 2016</td>
<td>Various standards more stringent than IMO for ships launched after Jan. 2012</td>
<td>Can request to extend compliance date if can justify</td>
</tr>
<tr>
<td>New York</td>
<td>401 Certification</td>
<td>100x IMO by Jan. 2012</td>
<td>1000x IMO for ships launched after Jan. 2013</td>
<td>100x IMO by Jan. 2012</td>
<td>1000x for ships launched after Jan. 2013</td>
<td>Can request to extend compliance date if can justify</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>Draft State Permit</td>
<td>100x IMO by Jan. 2012; if no technology then IMO applies</td>
<td>1000x IMO for ships launched after Jan. 2013, if no technology, then IMO applies</td>
<td>BMPs and sediment management plan, may have discharge standard in future</td>
<td>BMPs and sediment management plan</td>
<td>Hearing held March 23 – evaluating comments submitted on General Permit which state plans to issue with revisions</td>
</tr>
</tbody>
</table>

*Prepared by the Great Lakes Commission  
June 2009*
States' proposed or existing ballast water treatment standards for vessels using the Great Lakes and the region's ports*

**Existing oceangoing vessels**

- Comply with proposed International Maritime Organization (IMO) standard by 2016
- Comply with standard 100 times more stringent than IMO standard by 2012 (if not technically feasible, Wisconsin then uses IMO standard)
- Michigan does not use IMO standard; treatment requirements are based on 2005 legislation and permit program already in place

**Existing “lakers” (non-oceangoing vessels)**

- Comply with proposed IMO standard by 2016
- Comply with standard 100 times more stringent than IMO standard by 2012
- No standard (Wisconsin requires management plan of lakers)

*In many cases, earlier and/or more-stringent requirements apply to new oceangoing vessels or lakers that launch after 2012 or 2016. States' permit programs and treatment standards have been initiated in different ways, including legislation, state agency-initiated permit programs and “401 certification” (as part of the U.S. Clean Water Act, states have the authority to protect their waters beyond minimum federal standards).

Sources: Great Lakes Commission, Great Lakes United and CSG Midwest research

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**Ballast Water Treatment Requirements Based on the International Convention for the Control and Management of Ships’ Ballast Water and Sediments (International Maritime Organization (IMO))**

<table>
<thead>
<tr>
<th>Parameter: Living Organisms</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisms greater to or equal to 50 micrometers in minimum dimension</td>
<td>Less than 10 viable organisms per cubic meter</td>
</tr>
<tr>
<td>Organisms less than 50 micrometers in minimum dimension and greater than or equal to 10 micrometers in minimum dimension</td>
<td>Less than 10 viable organisms per milliliter</td>
</tr>
</tbody>
</table>

**Parameter: Concentrations of Indicator Microbe**

| Toxicogenic Vibrio cholerae (O1 and O139) | Less than 1 colony forming unit (cfu) per 100 milliliters or less than 1 cfu per 1 gram (wet weight) zooplankton samples |
| Escherichia coli | Less than 250 cfu per 100 milliliters |
| Intestinal Enterococci | Less than 100 cfu per 100 milliliters |
International Upper Great Lakes Study

Attached is a synopsis of Report 1: Impacts on Upper Great Lakes Water Levels: St. Clair River, authored by a 10-member binational Study Board of experts and public members, who commissioned dozens of research projects that engaged more than 100 scientists and engineers. A draft of the report was released May 1, 2009, followed by a 90-day public comment period. The final report, to be submitted to the International Joint Commission at the end of October 2009, will reflect extensive peer review, additional research and full consideration of all public input.

Additional fact sheets on the Upper Great Lakes Study will be available from IJC representatives in Erie, following their Observer comments.
The International Upper Great Lakes Study (IUGLS) report, *Impacts on Upper Great Lakes Water Levels: St. Clair River*, is the product of intense effort by a 10 member binational Study Board of experts and public members, who commissioned dozens of research projects that engaged over 100 scientists and engineers. A draft of the report was released May 1, 2009, followed by a 90-day public comment period. The final report, to be submitted to the International Joint Commission (IJC) at the end of October 2009, will reflect extensive peer review, additional research and full consideration of all public input. The following is based on the draft report and is subject to revision.

**Study Findings**

After an exhaustive effort to collect and verify historical data, conduct new research and analyze results, three key factors were identified as contributing to the decline in head (or difference in water levels) between Lake Huron and Lake Erie, estimated to be 23 centimetres (cm) or 9 inches (in) from 1963 through 2006:

- **A change in the conveyance capacity** of the St. Clair River (an enlarged channel) accounts for about 8 to 13 cm (3.2 to 5.1 in) decrease in Lake Huron levels between 1971 and 2007 with conveyance capacity actually decreasing since 2000. The change appears to have occurred in the mid-1980s, potentially resulting from a single event, possibly a major ice jam. This change in conveyance capacity resulted in a temporary increase in flows (approximately 270 m$^3$/second or about 5%), which returned to pre-change conditions by the end of the decade.

- **Changes in climatic patterns** account for a drop in head of about 9 to 27 cm (3.5 to 10.6 in). While climate and conveyance changes were major factors from 1962 to 1986, since 1986, climate (less water being supplied to Lake Michigan-Huron and Lake Superior) has been the major factor contributing to the change in head difference between Lakes Michigan-Huron and Erie.

- **Glacial isostatic adjustment**, the rebounding of the earth’s crust after the retreat of the glaciers, accounts for about 4 cm (about 1.6 in), but varies greatly throughout the basin. From 1963 through 2006, this effect is 11 cm in Parry Sound on Georgian Bay compared to -6 cm (2.4 in) in Milwaukee, WI.

**Study Recommendations**

As the Study Board reviewed an extensive amount of information based on three scientific approaches, several key elements contributed significantly to the recommendations. For example, there are concerns about the quality of early data (e.g. 1971 bathymetry); yet, high quality data collected since 2000 contribute to a high degree of confidence in the finding that the conveyance capacity has actually decreased since 2000. In addition, while the findings are expressed in ranges, signifying some uncertainty, they are the result of analyses from numerous models and contribute to a high degree of confidence as the findings from multiple perspectives are remarkably close (see figure, right).

**Primary.** Based on these deliberations and the directive from the IJC, the Study Board recommends:

1. Remedial measures not be undertaken on the St. Clair River at this time.
2. Mitigative measures in the St. Clair River must be examined as part of the comprehensive assessment of the future effects of climate change on water supplies in the upper Great Lakes basin in Report 2 of the Study, on Lake Superior regulation.
LEGACY. The Study Board also made recommendations to the Governments of the United States and Canada:

1. Support and maintain key data collection and monitoring programs, including operation of the stream flow gauging stations and eddy co-variance (evaporation) gauges installed as part of the Study; in addition, conduct bathymetric surveys every 5-years to monitor changes in the bed of the St. Clair River.
2. Integrate new hydraulic and hydrological models that were developed as part of the Study into an operational framework to provide improved estimates of the water balance in the upper Great Lakes.
3. Strengthen the standardization of data collection, analysis and reporting; formalize the existing ad-hoc Coordinating Committee on Great Lakes Hydrology and Hydraulics.

Study Elements

RESEARCH. The St. Clair River Task Team is supported by six Technical Work Groups (TWGs) that each focus on a specific fundamental scientific discipline such as sedimentology, hydraulic modeling and hydroclimatology. Each TWG includes scientists and engineers from Canadian and U.S. agencies and academic institutions and is supervised by two co-leads. The task team co-leads bring forward to the Study Board products for their review, input and approval. Ultimately, the Study Board analyzes and synthesizes the information that has been developed by multiple researchers in order to make recommendations.

PEER REVIEW. The Study review process includes both internal reviewers from among Study scientists and engineers and external reviewers who are independent of the Study. The IJC contracted with the Environmental and Water Resources Institute (EWRI) of the American Society of Civil Engineers and with the Canadian Water Resources Association (CWRA) to provide Independent Peer Review. The continuous and on-going independent scientific review of work plans, technical research, and reports is the cornerstone of the review process. This approach allows for recommendations and advice from peer reviewers to be incorporated throughout the Study process. Reviews received to date have been supportive of Study workplans and methodology.

PUBLIC CONSULTATION. The Study Board provided a range of opportunities for interested members of the public and organizations to be informed of the Study and to make their views known. A number of briefings were held at the time of the draft report release for government agencies and, using online conferencing technology, for various groups including the Council of Great Lakes Governors, Non-Government Organizations, and members of the press. The Study Board also provided in-depth briefings and received comments at 17 public meetings held throughout the upper Great Lakes basin May – June 2009:

- Bay City, MI
- Cleveland, Ohio
- Evanston, Illinois
- Fish Creek, WI
- Grosse Pointe Farms, MI
- Little Current, ON
- Mequon, WI
- Midland, ON
- Muskegon, MI
- Owen Sound, ON
- Parry Sound, ON
- Sarnia, ON
- Sault Ste. Marie, ON
- Superior, WI
- Town of the Blue Mountains, ON
- Thunder Bay, ON
- Traverse City, MI

Recordings of all public meetings are available for download on the Study website: www.iugls.org.

In an effort to open up the consultations to people and organizations unable to attend the public meetings, the Study Board also established an interactive website with a form available for the public to submit comments on the draft report.

All three contributions, research results, peer reviews and public comments are taken into account in preparing the final report to the IJC.

Next Steps

The Study will continue to examine whether the current regulation plan for outflows from Lake Superior through the compensating works and power dams on the St. Marys River at Sault Ste. Marie needs to be modified to reflect broader interests and the potential impacts of a changing climate. The St. Marys River regulation plan report is scheduled to be completed early in 2012.
Great Lakes Days in Washington 2010

Attached is a flyer with dates and location. Updates and agendas, as they become available, will be found at www.glc.org/greatlakesday
February 21-24, 2010
WASHINGTON, D.C.
HAMILTON CROWNE PLAZA

SAVE THE DATE
GREAT LAKES COMMISSION
SEMIANNUAL MEETING
and
GREAT LAKES DAYS
IN WASHINGTON

WWW.GLC.ORG/GREATLAKESDAY
This section includes membership lists (*Commissioners and Alternates, Observers and staff*).

Please contact the Commission staff for information on the following task forces/committees that the Commission sponsors and staffs:

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1. Great Lakes Air Deposition (GLAD) Program Management Team
2. Great Lakes Dredging Team
3. Great Lakes Information Network (GLIN) Labs Advisory Team
4. Great Lakes Panel on Aquatic Nuisance Species
5. Great Lakes Soil Erosion and Sedimentation Task Force
6. Great Lakes Wind Collaborative
7. Lake Michigan Monitoring Coordination Council
8. Michigan Statewide Public Advisory Council (SPAC)
9. National Association of Conservation Districts (NACD) Great Lakes Committee
10. Regional Inventory of Air Toxics Contaminants Steering Committee
September 16, 2009

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