



# Great Lakes Commission des Grands Lacs

Eisenhower Corporate Park • 2805 South Industrial Hwy., Suite 100  
Ann Arbor, Michigan 48104-6791  
Office (734) 971-9135 • Fax (734) 971-9150 • glc@glc.org

EXECUTIVE DIRECTOR  
Tim Eder

## BOARD OF DIRECTORS

### CHAIR

**Thomas E. Huntley**  
Minnesota State Representative  
Duluth, Minnesota

### VICE CHAIR

**Lt. Governor John D. Cherry, Jr.**  
Lansing, Michigan

### IMMEDIATE PAST CHAIR

**Samuel W. Speck**  
Director  
Ohio Dept. of Natural Resources  
Columbus, Ohio

### Lt. Governor Patrick Quinn

Governor's Appointee  
Chicago, Illinois

### Kyle Hupfer

Director  
Indiana Dept. Of Natural Resources  
Indianapolis, IN

### Ken DeBeaussaert

Director  
Office of the Great Lakes  
Mich. Dept. of Environ. Quality  
Lansing, Michigan

### Denise M. Sheehan

Commissioner  
New York Dept. of Environmental  
Conservation  
Albany, NY

### William Carr

Team Leader  
Ministry of Intergovernmental Affairs  
Toronto, Ontario

### Cathleen Curran Myers

Deputy Director for  
Water Management  
PA Dept. of Envir. Protection  
Harrisburg, Pennsylvania

### Michel LaFleur

Chargé d'affaires  
Government of Québec  
Chicago, Illinois

### Todd Ambs

Administrator  
Division of Water  
Wisconsin Dept. of Natural Resources  
Madison, Wisconsin

September 15, 2006

Ms. Lisa Bourget  
Secretary, United States Section  
International Joint Commission  
1250 23<sup>rd</sup> Street NW, Suite 100  
Washington, DC 20440

Dear Ms. Bourget:

Based upon Great Lakes Commission (GLC) staff review, I would like to provide comments on the final report of the Lake Ontario – St. Lawrence River Study Board. The GLC is an interstate compact agency, serving the Great Lakes states and provinces, dedicated to the use, management and protection of the water, land and other resources of the Great Lakes - St. Lawrence system.

The GLC has a long history of providing technical and policy support to the IJC and its operational and study components. The Lake Ontario – St. Lawrence River Study (LOSLRS) is a unique, comprehensive and exhaustive investigation, which could have major long-term implications to ecological protection and restoration efforts within the system. Results from the study could significantly affect the economics of shoreline property owners, municipal water systems, coastal community tax revenues, hydropower interests, navigation entities and municipal water systems.

The IJC and its Study Board should be complimented on achieving a high degree of stakeholder engagement and long-term community visioning about the impacts of water level and outflow control.

The GLC recognizes the long-term significance of changes in Lake Ontario regulation criteria, particularly since changes have not occurred to the Orders of Approval for Regulation of Lake Ontario for 50 years. It is likely that comparable investments will not occur for decades to come to complete a similar comprehensive assessment. This concern could be ameliorated, however, if suitable adaptive management formulae are imbedded in new regulation criteria at this time.

On behalf of the GLC, I offer comments on four specific facets of the Study Board report: 1) emphasis within new regulation criteria on protecting and restoring the viability of coastal wetlands; 2) incorporation and implementation of an enhanced monitoring program to support adaptive management; 3) continuation of the information management strategy developed within the study; and 4) implementation of similar environmental prediction tools and economic assessment approaches within the soon-to-be initiated Upper Great Lakes Study.

RECEIVED-IJC  
INT'L JOINT COMMISSION  
2006 SEP 21 P 1:32

Ensuring environmental and economic  
prosperity for the Great Lakes-St.  
Lawrence region through  
communications, policy research and  
development, and advocacy.

International Joint Commission  
\*\*\*\*\*  
ACTION: BM  
INFORMATION: LB, JC, FB, RT, CMBS  
FILE:

### Protecting and Restoring Coastal Wetlands

Coastal wetlands protection and restoration is a major regional objective. As much as 70 percent of historic Great Lakes wetlands have already been lost. This loss is primarily due to shoreline development, urban expansion, resource extraction and agriculture. These same stressors continue to threaten the relatively small amount of natural Great Lakes wetlands that remain today. The loss of coastal wetlands poses special problems for hydrological processes, water quality and fish and wildlife which rely upon them.

The Great Lakes Regional Collaboration, composed of over 1,500 regional stakeholders, with representatives from all major U.S. federal, state and municipal governments, recommended in its December 2005 strategy report to the Great Lakes Interagency Task Force that 550,000 acres of U.S. coastal wetlands be restored over the next five years at a cost to governments of \$57M annually. This near-term objective reflects a regional consensus which recognizes that coastal wetlands provide a full range of ecosystem services including hydrologic retention, nutrient and sediment trapping, as well as spawning, nesting, nursery and other habitat needs of fish and wildlife.

The GLC believes that changes in Lake Ontario outflow regulation that can return levels and flows to a more natural setting would make a substantial contribution to the overall Great Lakes wetlands restoration target. In particular, restoration of the dynamic diversity of Lake Ontario wetlands by adding low lake-level years when supplies are low would increase the extent, composition and vigor of wetland plant species.

Such modifications, meanwhile, will come with relatively predictable trade-offs to riparian interests in increasing risks for erosion and flooding. Ecological benefits could also result in adverse effects to recreational boating, commercial navigation and hydropower interests. Mechanisms for mitigating these prospective losses were not fully addressed within the Study Board report, requiring further more detailed policy development actions on the part of the IJC. In particular, regulatory process relief considered by the Study Board would accentuate further hardening of the Lake Ontario shoreline and inevitable and irretrievable loss of sediment supply to the system. The unintended consequences of such actions would in turn reduce opportunities for natural protection of coastal properties from storm events historically provided by sandbars and baymouth barrier beach complexes. Hence, the IJC should endorse mitigation measures that are consistent and compatible with forward looking coastal zone management practices.

The Study Board struggled with developing defensible economic values for wetland services to directly compare with projected costs and benefits realized by other interests affected by within this part of the system. The GLC recognizes that the state-of-the-science in economic evaluation of wetland services is still evolving and supports all efforts by the IJC to advance these scientific investigations in the future.

### Monitoring program and adaptive management approach

The Study Board clearly recognizes the importance of implementing adaptive management approaches to potential changes in climatology, ecological conditions and economic uses within the system. The GLC recommends that the IJC include an explicit program within Lake Ontario outflow criterion for performance tracking on a five-year frequency to assess whether the new plan is achieving its objectives. This program would require that the IJC and its operational board would need to support a regional information management and sharing network (largely initiated under this Study), improved monitoring, and consistent modeling of nearshore processes and coastal habitats.

A monitoring program to support implementation of an adaptive management plan would require multi-jurisdictional commitments, additional authorities and continual funding, all of which are major challenges. Efforts currently underway in both the U.S. and Canada to implement components of the Global Earth Observing System of Systems (GEOSS) should be strongly encouraged by the IJC. A clear definition of monitoring needs for the Lake Ontario – St. Lawrence River system would help the GLC to seek adequate resources for the region.

Bourget  
September 15, 2006

An adaptive management plan implemented by the IJC should assess the performance of the new regulation plan for the following areas:

- erosion and flooding occurrences that differ from Study predictions;
- the extent and composition of coastal wetlands that differ from Study predictions;
- changes in economic viability of recreational boating, commercial navigation and hydropower production; and
- improvements in forecasting water supplies and hydraulic responses that occur over time.

#### Information Management Strategy

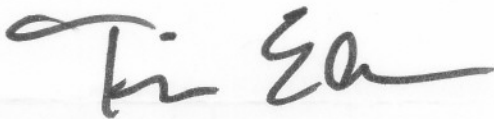
The Study Board invested heavily in the development of an integrated and shared information management strategy, engaging key data managers in federal, state and provincial agencies across the region. We believe that management of information resources will continue to be critical for operational implementation of the new Lake Ontario outflow regulation plan, particularly if the IJC implements an adaptive management plan as part of the criterion review. Management of geospatial data assets, particularly those dealing with high resolution habitat mapping, nearshore topographic and bathymetric detail and coastal structures will require strong multi-jurisdictional coordination between the State of New York, Province of Ontario and Government of Quebec. The GLC is positioned to provide technical and coordinative support in this area, if requested.

#### Applications to the UGLS

The LOSLRS Board attained a high degree of stakeholder participation and integration of cutting-edge economic, social and ecological modeling to arrive at its final report. When the IJC initiates its Upper Great Lakes Study (UGLS), we recommend that many of the same procedures, methods, techniques and personnel be employed to advance the water quantity management of lakes Superior, Michigan-Huron and Erie. Emphasis within the UGLS on improved ecological predictions, hydrologic and climatologic forecasting and adaptive management procedures will be of significant importance to all ten jurisdictions which make up the GLC. Plan formulation in the UGLS which employs a similar Shared Vision Model approach will greatly assist in attaining a high degree of stakeholder participation and increase the likelihood of acceptance from often-competing interests on the upper lakes.

Thank you for your attention to these comments. For further clarification, please contact me at: [teder@glc.org](mailto:teder@glc.org) or Roger Gauthier, Program Manager, Data and Information Management at: [gauthier@glc.org](mailto:gauthier@glc.org).

Sincerely,



Tim Eder  
Executive Director