



# LAKE HURON BINATIONAL PARTNERSHIP

## Annual Report 2012

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### What is the Lake Huron Binational Partnership?

The Lake Huron Binational Partnership was formed in 2002 to meet commitments in the Canada-United States Great Lakes Water Quality Agreement for lakewide management, by prioritizing and coordinating environmental activities within the Lake Huron basin.

The Partnership facilitates information sharing and priority setting for binational environmental protection and restoration. It promotes a flexible membership and the development of broader partnerships to undertake efforts, on an issue by issue basis that cannot be accomplished by individual agencies alone.

The U.S. Environmental Protection Agency, Environment Canada, Michigan Department of Natural Resources and Environment and the Ontario Ministries of Environment and Natural Resources form the core of the Partnership which also includes all levels of government, Tribes/First Nations, non-government organizations and the public.

### Overview

The Lake Huron Binational Partnership is an effort that focuses on key priorities and on the ground actions that help to improve and protect the overall quality of Lake Huron. The Partnership's 2012 Annual Report provides information on the following topics:

- Accomplishments: Progress on the Healthy Lake Huron – Clean Waters, Clean Beaches Campaign; Southern Georgian Bay Coastal Initiative; International Upper Great Lakes Water Level Study and Public Outreach, and the Lake Huron Migratory Fish Barrier Project;
- Challenges: Implementing the 2012 Cooperative Science and Monitoring Initiative and Nearshore Fisheries Intensive Monitoring programs; Developing and implementing management programs to meet the objectives of the revised Great Lakes Water Quality Agreement;
- Next Steps: Upcoming activities around Lake Huron, and;
- Contacts: Information on how to obtain more detailed information on any of the Partnership activities.

The partners involved in protecting and restoring Lake Huron hope that you find this brief report informative and interesting. We encourage you to learn more about the lake and the collaborative approaches taken to understand its ecosystem, how we are protecting high quality areas and restoring areas that have been degraded.

For more information visit: [www.binational.net](http://www.binational.net). ♦

**Canada-U.S. Great Lakes Water Quality Agreement (GLWQA) Amendments**  
Negotiations to amend the 1987 GLWQA were launched in early 2010. The Governments of Canada and the United States held the final negotiation session in early 2012 and the amended GLWQA is now in the process of being finalized and approved. It is anticipated that the amended Agreement will be signed in 2012. ♦



Credit: Dave Reid, Ontario Ministry of Natural Resources



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## Accomplishments

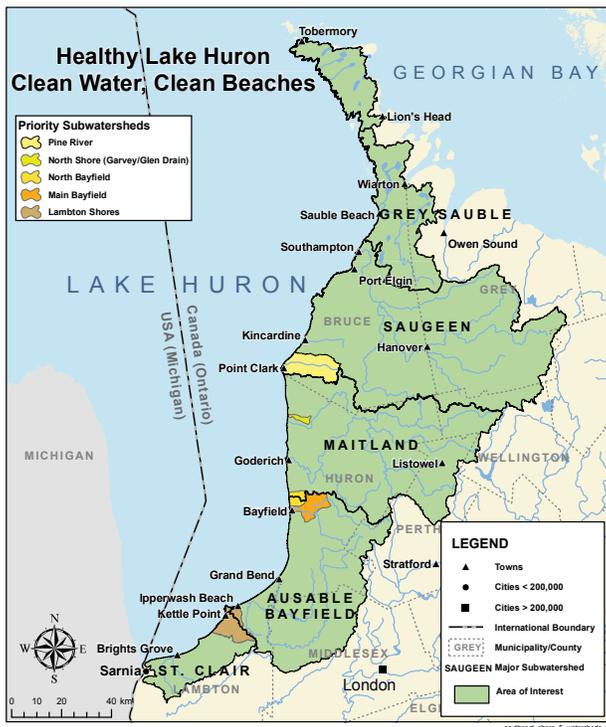
### The Healthy Lake Huron – Clean Waters, Clean Beaches Campaign

Government agencies and local organizations have formed a unique partnership to ensure that popular sandy beaches on Lake Huron’s southeast shore are safe and clean. *The Healthy Lake Huron – Clean Waters, Clean Beaches* initiative focuses on reducing beach postings due to bacteria levels and the growth of nuisance algae along the coastline from north of Sarnia to Tobermory.

The partners are working together to ensure available resources are targeted at priority areas and to support the efforts of communities and groups that volunteer their time on local water quality improvement projects. Five watersheds are identified as priority areas for action, including: Lambton Shores around Ipperwash Beach; Main and North Bayfield; the North Shore (Garvey/Glenn Drain) near Port Albert, and Pine River, south of Kincardine around Point Clark.

Initiatives such as developing and implementing farm stewardship plans, reducing creek bank erosion during storms, and improving septic systems are completed or underway. The plans will also identify requirements for scientific monitoring and targets to measure progress.

For more information visit: [www.healthylakehuron.com](http://www.healthylakehuron.com).



Credit: Map of priority watersheds, Ontario Ministry of Environment



Credit: Dredging and shoreline alteration near Collingwood, Ontario. Google Earth, 2010

### Southern Georgian Bay Coastal Initiative

The unique natural setting of the southern Georgian Bay coast between Tobermory and Port Severn has undergone significant human alteration. Although portions of the shoreline remain relatively intact, many areas continue to experience dense development, extensive dredging, and the construction of shoreline protection works. Left unchecked, these activities could have detrimental impacts on natural coastal processes, ecological functions, and aquatic and coastal habitats and species.

Public and agency concern over shoreline alteration spurred the formation of a Steering Committee made up of federal, provincial, and municipal representatives. To date, a great deal of work has been completed, including: a review of how agencies regulate shoreline development; an assessment of shoreline alterations between Tobermory and Port Severn, a guide that clarifies permit application requirements, and a draft stewardship guide for property owners, builders, and planners. Ultimately, the goal is to conserve and restore nearshore and coastal habitat structure and function while allowing for environmentally sustainable development.

### International Upper Great Lakes Water Level Study and Public Outreach

The International Upper Great Lakes (IUGLS) Study Board and its Public Interest Advisory Group (PIAG) engaged residents around Lake Huron during the summer of 2011. The Study Board presented preliminary findings and recommendations on potential improvements to the current water level regulation plan for Lake Superior outflows at Sault Ste. Marie and an analysis of restoration scenarios for raising Lake Michigan-Huron water levels. A report discussing options for restoring Lake Michigan-Huron water levels can be found at: (<http://www.iugls.org/IndependentPeerReview.aspx>).



A progress report covering activities from April 1 through September 30, 2011 is available at: <http://www.iugls.org/Docs/10th%20IUGLS%20Progress%20Report.pdf>. Comments from the public show that preferred water levels are very much a perception of the individual, with conflicting views and interests depending on shoreline location. Future efforts to facilitate discussions between people from different regions who have contrasting views are being planned.

### Lake Huron Migratory Fish Barrier Project

Migratory river-spawning fishes directly link the Great Lakes to our inland rivers. Because of the importance of these species to both the lakes and their tributaries, they were identified as a key feature for biodiversity conservation in Lake Huron. For most native river-spawning fishes, migration from the lake to tributaries has been reduced through the construction of dams and barriers and certain populations have declined or disappeared. This is particularly evident in species such as lake sturgeon whose low numbers warranted its threatened status in Michigan.

Better information on population distribution will allow managers to more effectively conserve existing migratory fish populations and to prioritize potential locations for restoration where barriers exist. To address this critical need, a list of 28 native river-spawning fish was assembled. Historic and recent information on eleven coastal or riverine fish have been obtained on the U.S. side and important connected and unconnected tributaries were identified for each species. While different parts of the basin are important to different species, some watersheds are more important to a greater number of species than others. Identification of these areas can be used to focus conservation efforts like habitat protection and restoration. ♦



Lake Huron tributary Credit: Dave Reid, Ontario Ministry of Natural Resources

## Challenges

### Nearshore Fisheries Intensive Sampling for the Cooperative Science and Monitoring Initiative

The 2011 State of the Great Lakes Ecosystem Conference (SOLEC) provided a status report on Lake Huron highlighting dramatic ecosystem changes affecting the open waters and nearshore aquatic ecosystems. Shifts in nutrient cycling and the distribution of nutrients within and between nearshore and offshore regions may be restructuring fish communities and impacting food chains that are critical in supporting the diversity of aquatic life in the lake. Organisms living in the offshore waters of the lake are declining in abundance while nearshore waters are experiencing nutrient enrichment favouring benthic fish communities.

Increased fish production in nearshore waters means rethinking fish community monitoring approaches. As part of the 2012 Cooperative Science and Monitoring Initiative, the United States Environmental Protection Agency (EPA) will fund the Michigan Department of Natural Resources (MiDNR) to document fish species composition and diversity (native and non-native), look for evidence of predatory controls of native and invasive prey fish, and provide information that will allow governmental agencies to better monitor and manage the commercial and recreational fisheries of Lake Huron.

Understanding nearshore fish community dynamics and predicting future changes are significant challenges; especially in the face of uncertainty and the competing public interests. ♦

## Next Steps

Upcoming activities taking place on Lake Huron include:

- Implementing the Lake Huron Cooperative Science and Monitoring Initiative in the 2012 field season;
- Coordinating efforts to implement the Healthy Lake Huron – Clean Waters, Clean Beaches Plans;
- Completing a Southern Georgian Bay Coastal Stewardship Guide for Property Owners, Builders, and Planners; and
- Implementing a Lake Huron Watershed Community Collaboration and Youth Summit by the Northeast Michigan Council of Governments modeled after the Lake Huron-Georgian Bay Watershed Framework for Community Action. ♦



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## Lake Huron's Biodiversity Features

Effective management of Lake Huron's open and nearshore waters, coastal wetland and coastal terrestrial ecosystems, islands, aerial migrants, and native migratory fish will ensure the conservation of its native biodiversity.



### For More Information:

Please visit our website at [www.binational.net](http://www.binational.net) or contact:

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