

Chapter 8

Collaborative Efforts



Duluth Harbor skyline at night. Photo credit: Frank Koshere,
Wisconsin Department of Natural Resources.

Lake Superior Lakewide Management Plan 2008

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Chapter 8

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8.0 INTRODUCTION

Chapter 1 describes the relationship of the LaMP to other initiatives and efforts, including the Areas of Concern (AOC)/Remedial Action Plan program.

In this chapter, other collaborative efforts will be elaborated on and described.

8.1 CONNECTING THE COAST CURRICULUM

“Connecting the Coast” is a unique, interactive web-based curriculum based on the information, research, critical issues, and priorities of the Lake Superior Lakewide Management Plan (LaMP). The curriculum uses LaMP-critical priorities to engage students in connecting learning to action through self-directed service learning projects. The objective is to positively affect the stewardship of the Lake Superior ecosystem.

Connecting the Coast uses a systems approach to understanding environmental issues while applying a service-learning curriculum that engages learners to: 1) investigate critical environmental issues impacting Lake Superior; 2) create a service learning project to apply what has been discovered through investigation to a self-initiated service learning project that will result in making personal or community change to positively address critical issues; 3) act to complete the service learning experience; and 4) reflect on the outcomes of the service learning experience through student-directed examination. The curriculum involves high school students, as citizens and future Lake Superior community leaders, applying a service-learning curriculum to address the most important Lake Superior Binational Program issues. Students will act as “learner-doers” and will become the catalysts for personal and community change. The Connecting the Coast web site is accessible to anyone interested in learning more about Lake Superior stewardship and environmental issues specific to and within their community.

The issues addressed as curriculum elements are focused on those identified in the LaMP including: 1) building a sustainable Lake Superior environment; 2) reducing critical Lake Superior pollutants; 3) restoring critical habitats and native species; 4) controlling invasives; and 5) understanding the relationship between the Lake Superior ecosystem and human health.

Further information on Connecting the Coast can be found in Chapter 6, section 6.1.4. The web site for the curriculum is <http://connectingthecoast.uwex.edu/>.

8.2 GREAT LAKES LEGACY ACT (U.S.)

Contaminated sediments at the bottom of rivers and lakes are a significant problem in the Great Lakes basin. For decades, industrial sources contributed substantial amounts of harmful

pollutants to the Great Lakes, including organic molecules like polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs) oil and grease, and heavy metals like mercury and cadmium. Recent improvements in controlling these discharges have greatly reduced the amount of contaminants being released into the environment, but high levels of contamination still remain in the sediment as a “legacy” of the historical contamination. These contaminants continue to enter the food chain where they can cause adverse effects to human health and the environment.

To help address the contaminated sediment problem, the *Great Lakes Legacy Act* (GLLA) was enacted in 2002, and funding for the program began in 2004. The Act authorized \$270 million in funding over five years,¹ to assist with the remediation of contaminated sediment in the 31 designated U.S. AOCs. The goal of the US EPA Great Lakes National Program Office, which administers the GLLA, is to identify all eligible remediation projects within the 31 U.S. AOCs and develop remediation projects for these sites. GLLA remediation projects must lie within a U.S. AOC and may be funded up to \$50 million per year. Priority is given to:

- Remedial action for contaminated sediment;
- Projects identified in a Remedial Action Plan;
- Projects that will use an innovative approach that may provide greater environmental benefits, or equivalent environmental benefits at a reduced cost; and
- Projects that can begin within a year of funding.

Table 8-1 lists GLLA remediation projects completed or substantially completed as of December 7, 2007. The cumulative volume of sediment remediated in the U.S. since 1997 is depicted in Figure 8-1. The map on the following page (Figure 8-2) illustrates the progress and achievements made in sediment remediation activities in the Great Lakes during 2006. Both Figure 8-1 and Figure 8-2 include quantitative estimates as reported by project managers. Data collection and reporting efforts are described in the *Great Lakes Sediment Remediation Project Summary Support, Quality Assurance Project Plan*.² Detailed project information is available upon request from project managers.

¹To date, \$91.5 million has been appropriated over 4 years as follows: \$9.9 million in FY2004, \$22.3 million in FY2005, \$29.3 million in FY2006, and \$30 million in FY2007.

²US EPA. (2006). *Quality Assurance Project Plan for Great Lakes Sediment Remediation Project Summary Support*. Unpublished GLNPO document available from Mary Beth G. Ross (ross.marybeth@epa.gov).

Table 8-1. GLLA remediation projects completed or substantially completed as of Dec. 7, 2007.

Project	Action	Total Cost (\$Million)	Cubic Yards Removed	Major Contaminants	Pounds of Contaminants Removed
Black Lagoon	Removal/Residual Cover	\$8.7	115,000	PCBs, Mercury, Oil & Grease	338,000
Hog Island	Removal	\$5.7	46,000	PAHs, Lead	7,500
Ruddiman Creek	Removal/Residual Cover	\$14.2	90,000	PCBs, Lead, Chromium	333,000
Tannery Bay*	Removal	\$8.0	41,000	Mercury, Chromium	882,000
Ashtabula*	Removal/Residual Cover	\$60.0	496,000	PCBs	25,000

* Costs for Ashtabula and Tannery Bay are estimates, as are the cubic yards and pounds removed for Ashtabula.

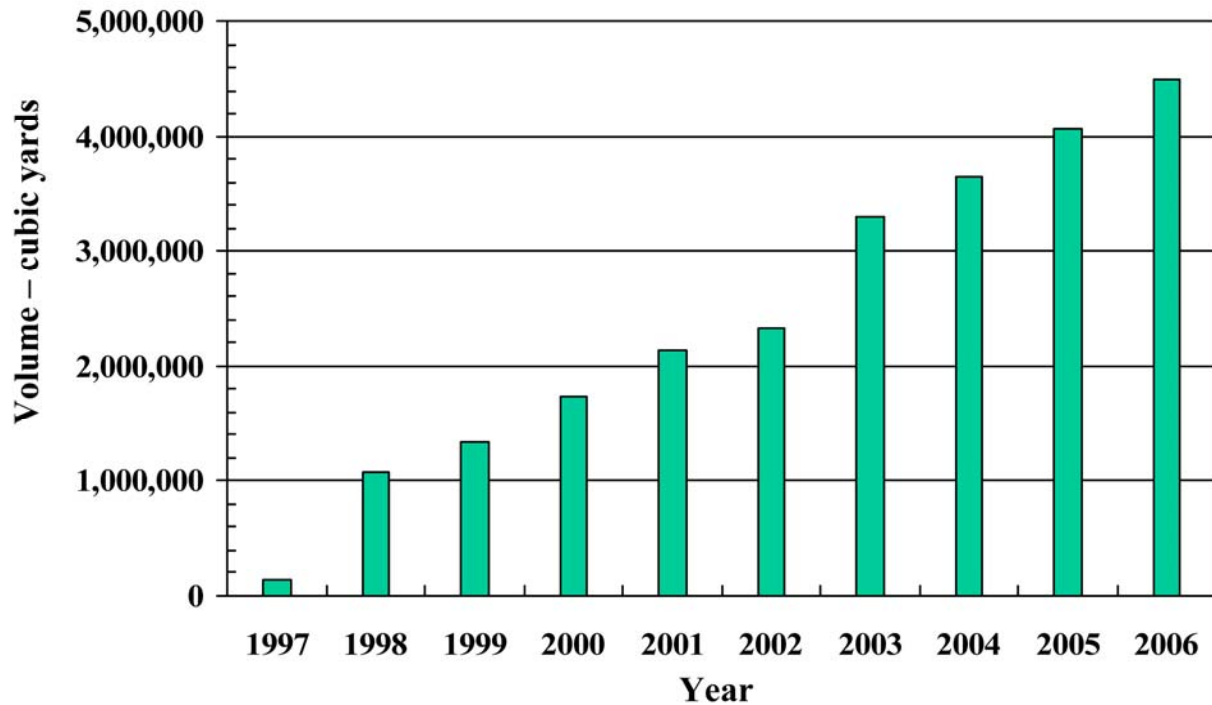


Figure 8-1. Cumulative volume of sediment remediated in the U.S. since 1997. Source: US EPA Great Lakes National Program Office

Great Lakes Sediment Remediations in 2006*

*Information included in the pie charts are quantitative estimates as reported by project managers. Data collection and reporting efforts are described in the "Great Lakes Sediment Remediation Project Summary Support" Quality Assurance Project Plan (GLNPO, March 2006). Detailed project information is available upon request from project managers.

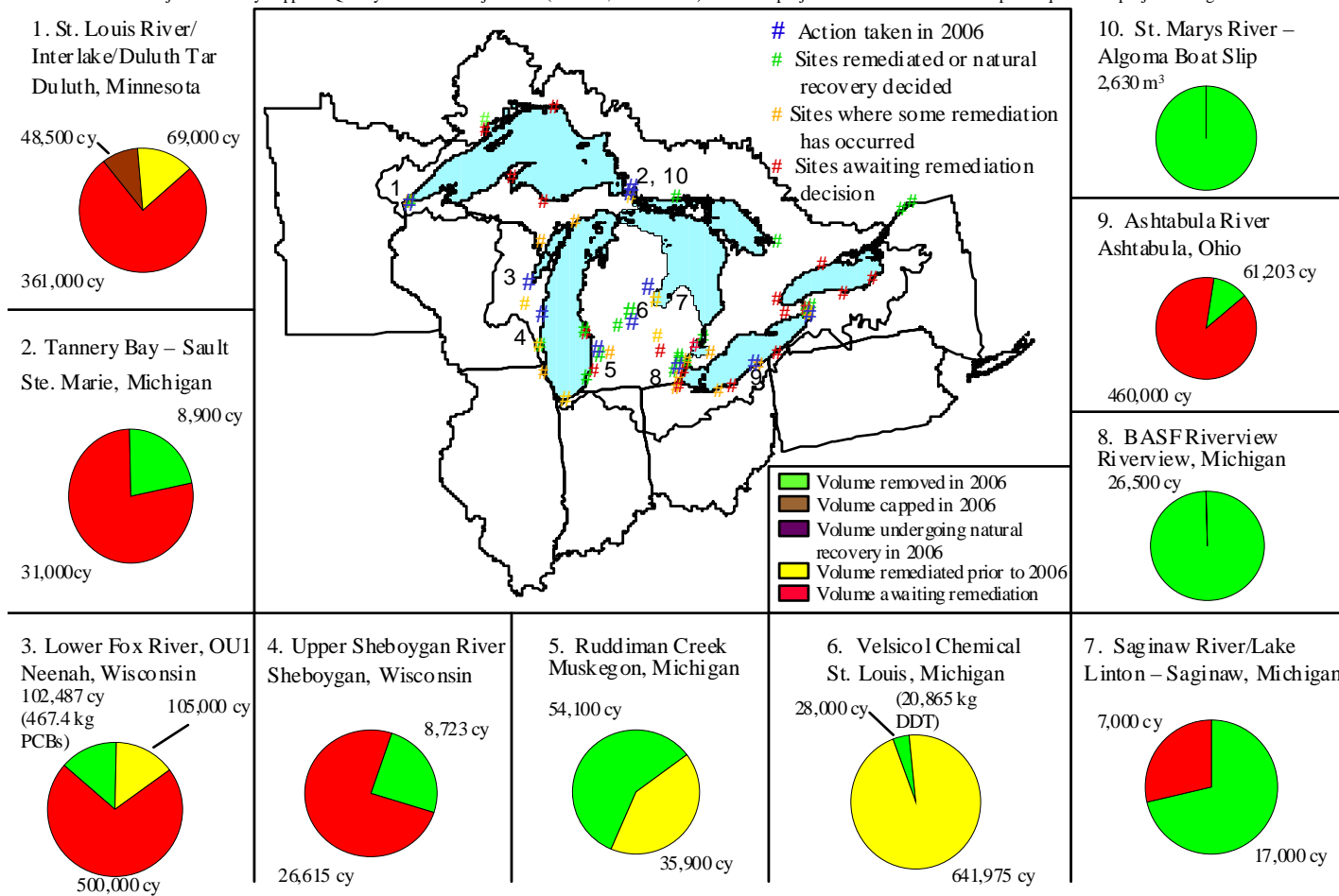


Figure 8-2. Progress in U.S. sediment remediation in the Great Lakes during 2006. Source: US EPA Great Lakes National Program Office
(OU = Operable Unit; cy = cubic yards; m³ = cubic meters)

8.3 DECISION-MAKING FRAMEWORK FOR CONTAMINATED SEDIMENTS IN ONTARIO

A risk-based decision-making framework for contaminated sediments was completed under the 2002-2007 *Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem* (COA) and placed on the Province of Ontario Environmental Registry for a public comment period (November 21, 2006, to January 20, 2007). The Ontario Ministry of Environment (MOE) is integrating the document with existing guidance to produce “Guidelines for Identifying, Assessing and Managing Contaminated Sediments in Ontario: An Integrated Approach”. Pending final internal MOE review, the guidance will be applied throughout the province.

The COA framework is being applied to evaluate the need for management actions in a number of the project sites in the Areas of Concern.

8.4 GREAT LAKES REGIONAL COLLABORATION

In May 2004, President Bush signed Executive Order 13340 to create a cabinet-level interagency task force and to call for a “regional collaboration of national significance.” After extensive discussions, the federal Great Lakes Interagency Task Force (IATF), the Council of Great Lakes Governors, the Great Lakes Cities Initiative, Great Lakes tribes, and the Great Lakes Congressional Task Force moved to convene a group now known as the Great Lakes Regional Collaboration (GLRC or Collaboration).

The Collaboration includes the US EPA-led federal agency task force, the Great Lakes states, local communities, tribes, non-governmental organizations, and other interests in the Great Lakes region. In December 2005, the Collaboration released recommendations for the following areas: aquatic invasive species, habitat conservation and species management, near-shore waters and coastal areas, areas of concern, non-point sources, toxic pollutants, sound information base and representative indicators, and sustainability. The full set of recommendations can be found in the *Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes*.³ The GLRC has encouraged and supported the initiation of several projects to restore and protect the Great Lakes basin, including the Lake Superior ecosystem. Actions taken to date to implement these recommendations are presented below.

Federal Great Lakes Interagency Task Force Near-Term Actions

On December 12, 2005, US EPA Administrator Stephen Johnson announced a federal commitment to further the recommendations contained in the *Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes* through implementation of a series of near-term actions. The list included 48 specific actions consisting of one or more activities to be accomplished. The IATF is making progress both in terms of implementing projects to restore and protect the Great Lakes and in improving coordination and communication among the Task Force members. Highlights of progress include:

³ Great Lakes Regional Collaboration. 2005. Strategy to Restore and Protect the Great Lakes. Available at <http://www.glrc.us/strategy.html>.

- Twelve of the 48 original near-term actions are completed; three have been moved to long-term status; the other 33 are on track.
- US EPA, working with state and local partners, has developed a standardized beach sanitary survey form for state and local governments to use in assessing their beaches. US EPA is supporting implementation pilots using the new survey.
- The U.S. Fish and Wildlife Service has listed the Asian Silver Carp, Largescale Silver Carp, and Black Carp as injurious under the Lacey Act.
- In its fiscal year 2008 budget, the National Oceanic and Atmospheric Administration (NOAA) requested funding to establish habitat restoration partnerships focused on Areas of Concern in the Great Lakes, and to create a special NOAA Office on Great Lakes Habitat Restoration that would provide a focal point for all of NOAA's restoration efforts in the Great Lakes.
- Twenty-two environmental restoration projects around the Great Lakes, including the Lake Superior basin, are being funded this year under the Great Lakes Watershed Restoration Grant program. The program is providing \$1.1 million in federal money and leveraging an additional \$1.9 million in contributions by non-federal partners. Partner agencies are US EPA, U.S. Fish and Wildlife Service, NOAA, Forest Service, and the Natural Resources Conservation Service.
- US EPA has completed five Legacy Act projects (four remediation/one monitor and evaluate), and has six additional projects underway (all monitor and evaluate).
- The IATF's Regional Working Group has been meeting weekly for over a year to oversee implementation of the list of near-term actions, as well as other provisions of the President's Executive Order on the Great Lakes. The meetings have also become an important forum to share information about new programs/initiatives and funding opportunities among members.
- The IATF created the Wetlands Subcommittee and the Aquatic Invasive Species Rapid Response Subcommittee to improve interagency coordination on two high-priority areas for the Great Lakes. Both subcommittees are also bringing in non-federal partners through joint projects in cooperation with the GLRC.



Figure 8-3. Bark Bay wetlands. Photo credit: Janet Keough, US EPA.

Great Lakes Regional Collaboration Strategy – Collaboration Efforts

The Collaboration partners have begun a series of joint initiatives to address issues in the GLRC Strategy, including invasive species, toxic reductions, habitat protection and restoration, and clean beaches. These initiatives are described below.

Aquatic Invasive Species

Aquatic Invasive Species Rapid Response Initiative

While preventing the introduction of aquatic invasive species (AIS) is the first line of defense against invasions, even the best prevention efforts may not stop all AIS introductions. In 2007, the GLRC Executive Committee endorsed the formation of an Aquatic Invasive Species Rapid Response Initiative to increase the likelihood that invasions will be addressed successfully through early detection and rapid response efforts, while populations are still localized and can be contained and eradicated. In the summer of 2007, a Communication Protocol was developed at the direction of the GLRC Executive Committee, and Points of Contact were identified by participating GLRC agencies. In December 2007, a compendium of the Points of Contact and Communication Protocol was finalized and distributed to GLRC agencies. GLRC agencies are now developing plans for a mock exercise to test the Communication Protocol in early summer 2008.

Great Lakes Clean Boat Initiative

GLRC partners and the media will promote a “Great Lakes Clean Boat Day” early in the 2008 boating season. This effort will celebrate recreational boating in the Great Lakes and promote practices which will reduce the spread of aquatic invasive species. The Great Lakes are one of the top recreational boating destinations in the nation. Nearly 4.3 million boats are registered in the eight Great Lakes states—with approximately \$16 billion spent on boats and boating activities in a single year, directly supporting 107,000 jobs. Outreach efforts to this user group can help ensure a healthy Great Lakes ecosystem, as well as help support a strong and sustainable recreational economy. Agencies are compiling educational material over the winter of 2008. At the same time, the Great Lakes states are determining the preferred day or days for holding “Great Lakes Clean Boat Day.”



Figure 8-4. Bayfield, Wisconsin, Madeline Island Ferry leaves the dock. Photo credit: Frank Koshere, WDNR.

Toxic Pollutants

Toxic Pollutants Initiative

The Toxic Pollutants Initiative sets forth a series of near-term activities undertaken by members of the Collaboration to reduce or virtually eliminate persistent toxic substances such as mercury and PCBs in the basin, as well as prevent new toxic threats to the basin through pollution prevention and enhanced surveillance, protect public health through education and outreach, and work with international forums to address sources outside the basin. Initiative activities include:

1. **Mercury Phase-down Strategy** – In 2007, a workgroup of state, tribal, and city staff developed a basinwide Great Lakes mercury product stewardship strategy to fulfill the GLRC Strategy recommendation to phase down mercury in products and waste. The draft *Mercury in Products Phase-Down Strategy* is posted at <http://www.glrc.us/initiatives/toxics/draftthphasedownstrategy.html>.
2. **Burn Barrel Education and Outreach Campaign** – US EPA and Great Lakes states, tribes, and cities are jointly developing an education and outreach program to address open burning across the Great Lakes basin. Targeted at local and tribal waste management officials, this project provides information on infrastructure and alternatives to burning in communities, as well as tools to strengthen burning ordinances and support greater compliance with current regulations. This program is being presented at meetings in all Great Lakes states.
3. **Pharmaceutical and Electronic Waste Disposal Education and Outreach** – US EPA, Great Lakes states, tribes, and cities are developing an education and outreach effort to address pharmaceutical and electronic wastes in the Great Lakes basin. This effort, targeting waste management officials, provides information about disposal and recycling policies and options. Illinois/Indiana Sea Grant, Great Lakes states, and US EPA staff have presented information to local solid waste management officials and others on pharmaceutical waste at numerous conferences throughout the basin.
4. **Great Lakes Sport Fish Consortium Project** – The Great Lakes Sport Fish Consortium, the Wisconsin Department of Health and Family Services, and representatives of Great Lakes states and tribes finalized the *Protocol for Mercury-based Fish Consumption Advice: An addendum to the 1993 Protocol for a Uniform Great Lakes Sport Fish Consumption Advisory*, with funding from US EPA. Basinwide fish consumption outreach materials related to mercury will be produced by the end of 2008.

Mercury Emission Reduction Initiative

In 2007, the GLRC decided, under its Toxic Pollutants Initiative, to develop a strategy for reducing mercury emissions across the Great Lakes region. This effort should produce institutionalized activities to sustain mercury emissions reduction from new and existing sources whose mercury emissions have not been regulated, and from sources where regulations have been implemented but additional reductions are technically feasible and economically reasonable. Examples of potential sources include manufacturing processes that produce

mercury emissions, and the disposal of mercury-containing products. A strategy will be drafted in 2008, including an evaluation of the major sources of mercury deposition in the Great Lakes region, identification of priority sectors, and reduction approaches.

Habitat/Species

Habitat/Wetlands Initiative

The GLRC Strategy outlined the problems associated with habitat loss and degradation and provided recommendations for protecting and restoring Great Lakes habitat. To address the strategy's key habitat and wetland issues, the Collaboration launched a Wetlands Initiative with two near-term goals: 1) a wetlands challenge to federal and non-federal partners to protect and restore 200,000 acres of wetlands in the Great Lakes basin; and 2) improving coordination of federal wetlands management programs.



Figure 8-5. A Habitat/Wetlands Initiative will seek to address the key problems identified in the GLRC Strategy. Photo Credit: Steve Durocher, Cedar Tree Institute.

At the same time, the U.S. Army Corps of Engineers launched a \$1 million Great Lakes Habitat Initiative that builds upon the recommendations of the GLRC Strategy. The initiative will help partners advance habitat and wetland restoration projects by connecting partners with the information and resources they need to make projects happen. This effort includes developing a database and detailed inventory of potential habitat and wetlands restoration projects.

The two initiatives share similar goals and have been merged into one overarching Habitat/Wetlands Initiative, focusing initially on coordination to accomplish the wetlands challenge to federal and non-federal partners to protect and restore 200,000 acres in the Great Lakes basin.

Beach Project Initiative

The GLRC identified coastal health as a challenge, recognizing the significance of beaches to the economic well-being, health, and quality of life of the region's citizens. Because contamination leading to beach advisories continues to be a concern in the basin, the GLRC called for the identification of sources of contamination and remediation. Several federal, state, local, and tribal partners who work together with the Great Lakes Beach Association are creating and improving the use of sanitary surveys and beach forecasting models. The GLRC will increase this cooperation by supporting and encouraging the use of sanitary surveys and predictive modeling. Ultimately, the GLRC hopes to recognize and integrate sanitary survey tools and predictive modeling as a coastal health initiative to enhance the health of beaches along the Great Lakes to promote recreational activity and reduce risk to human health. In 2008, the partners are developing outreach materials for distribution and utilization of the sanitary survey tools and predictive models.

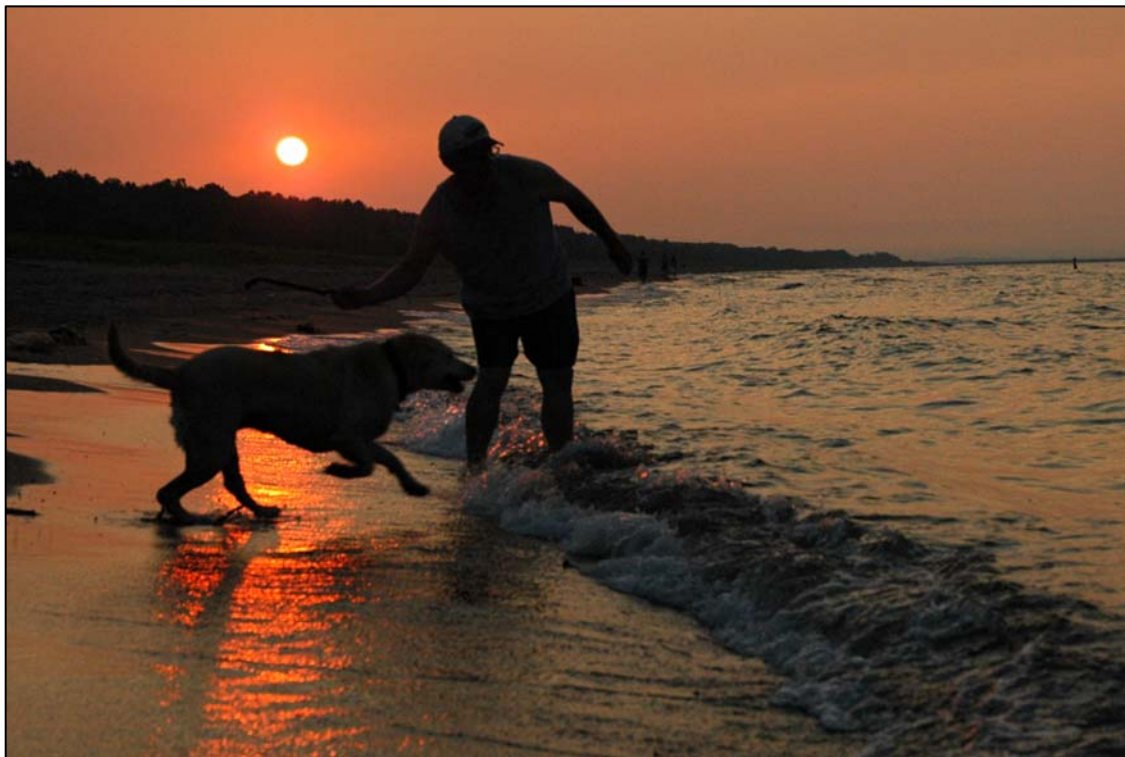


Figure 8-6. A man plays catch with his dog at Wisconsin Point on Lake Superior. Photo credit: Frank Koshere, WDNR.

Great Lakes Watershed Restoration Grant Program

For the past three years, the Great Lakes Watershed Restoration Grant Program (Program) has funded projects to develop and implement local watershed plans that: address water quality and living resources in Great Lakes watersheds; help restore critical sand dune, wetland, forest, and stream habitats for fish and wildlife; and control invasive plant species. In response to a September 1, 2007, request for proposals, 54 proposals were received and are now being reviewed by Program partners. Decisions on grant awards will be announced in late March 2008.

Funding for the Program has come from five federal agencies: US EPA, U.S. Fish and Wildlife Service, Forest Service, NOAA, and Natural Resource Conservation Service. For the last three years, the five agencies have contributed discretionary money for the Program through agreements with the National Fish and Wildlife Foundation (NFWF). NFWF coordinates the Program, including issuing yearly requests for proposals, conducting proposal reviews, and administering grants.

In fiscal year 2006, 14 projects were funded with \$827,000 in federal funds and more than \$1.3 million in non-federal contributions. In fiscal year 2007, 22 projects were funded with \$1.1 million in federal funds and more than \$1.8 million in non-federal contributions from partners. This year, more than \$1 million in federal funds will be available. In addition, NFWF has

secured funding in the amount of \$700,000 for each of the next three years from ArcelorMittal Steel to supplement the Program.



Figure 8-7. Boaters explore Huron Island National Wildlife Refuge. Photo credit: Frank Koshere, WDNR.

8.5 CANADA-ONTARIO AGREEMENT RESPECTING THE GREAT LAKES BASIN ECOSYSTEM

On August 16, 2007, Canada and Ontario announced the official signing of the 2007-2010 Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem (COA). This renews a commitment by the governments of Canada and Ontario to work towards restoration, protection, and maintenance of the Great Lakes basin ecosystem.

The COA includes collaborative actions between six federal and three provincial agencies focused on achieving specific results towards the agreement's long-term vision of a healthy, prosperous, and sustainable Great Lakes ecosystem. It contains over 180 commitments that are supported by hundreds of individual projects. The agreement focuses on cleaning up 15 severely degraded ecosystems in the Great Lakes (Areas of Concern), reducing harmful pollutants, improving water quality, conserving fish and wildlife species and habitats, lessening the threat of aquatic invasive species, and improving land management practices within the Great Lakes basin. The COA also contains new areas of cooperation such as protecting sources of drinking

water, understanding the impacts of climate change, and encouraging sustainable use of land, water, and other natural resources. It ensures that scientific information is available to support remediation and protection efforts and to measure their success for the benefit of the growing number of Canadians dependent upon the lakes. The COA will also contribute to meeting Canada's obligations under the Canada-U.S. *Great Lakes Water Quality Agreement*, which has recently undergone review by both countries. A new COA beyond 2010 would consider the recommendations and results of that review.

Annex 3 of COA focuses on Lake and Basin Sustainability. The approach for Annex 3 is to continue to work via binational lakewide and basinwide programs to respond to the interrelated and cumulative challenges facing the long-term prosperity of the Great Lakes. There are six goals in Annex 3:

1. Encourage and enhance Great Lakes sustainability;
2. Improve water quality in each Great Lake by making progress on virtual elimination of persistent bioaccumulative toxic substances and the reduction of harmful pollutants;
3. Conserve and protect aquatic ecosystems, species and genetic diversity;
4. Reduce the threat of aquatic invasive species in the Great Lakes Areas of Special Focus;
5. Understand the impact of climate change on the Great Lakes ecosystem; and
6. Develop and implement locally-created, science-based source protection plans to identify and mitigate risks to drinking water sources in the basin.

8.6 GREAT LAKES BINATIONAL TOXICS STRATEGY

The Great Lakes Binational Toxics Strategy (GLBTS or Strategy) marked its 10-year anniversary in May 2007. Over the past 10 years, the governments of Canada and the U.S., along with stakeholders from industry, academia, state/provincial and local governments, Tribes, First Nations, and environmental and community groups, have worked together toward the achievement of the Strategy's challenge goals for 12 Level 1 persistent toxic substances. Of the Strategy's 17 challenge goals that were established in 1997, 12 have been achieved and one more is expected in the near future; significant progress has been made toward the remaining four challenge goals.

While the substance-specific workgroups for mercury, PCBs, dioxins/furans, and hexachlorobenzene (HCB) and benzo(a)pyrene (B(a)P) continued to work toward meeting their challenge goals, the highlight of 2007 for the GLBTS Integration Workgroup was a series of 10-year anniversary events held in Chicago in May. The events began with a Stakeholder Forum followed by an evening reception and dinner. A GLBTS Future Focus Workshop to consider broadening the GLBTS to address emerging chemical threats to the Great Lakes basin was also held in conjunction with the 10-year anniversary events.

Considering stakeholders' ideas about future directions for the GLBTS, including emerging substances of interest in the Great Lakes, US EPA and Environment Canada proposed a new path forward for the GLBTS that aligns with work being undertaken by other existing Great Lakes programs, such as the *Great Lakes Water Quality Agreement*, and is consistent with domestic and international chemical management programs, including the *Canada-Ontario Agreement Respecting the Great Lakes Basin*, Canada's Chemicals Management Plan, U.S. High Production Volume program, and the tri-lateral U.S./Canada/Mexico Security and Prosperity Partnership.



Figure 8-8. In May 2007, the GLBTS marked its 10-year anniversary with a series of events in Chicago, Illinois. Photo credit: Kelly Phillips, Environment Canada.

The new path forward for the GLBTS includes the creation of two new groups focused on emerging substances and their associated sectors: a new Substance Group and Sector Group. The Substance Group will focus on information gathering and integration of data on potential toxic substances in the Great Lakes basin. The Sector Group will review information on industrial sectors within the basin and explore potential opportunities for the GLBTS process to enhance the environmental management activities of select industries. These groups will work together to identify potential opportunities for action that may be accomplished through the GLBTS.