

Chapter 8

Collaborative Efforts



Photo of Shovel Point, Minnesota.
Photo Credit: Carri Lohse-Hanson, MPCA.

Lake Superior Lakewide Management Plan
2006

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Chapter 8

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8.0 INTRODUCTION

Section 1.3 in Chapter 1 describes the relationship of the LaMP to other initiatives and efforts, in particular the Areas of Concern (AOC)/Remedial Action Plan (RAP) program (and its funding) and the Great Lakes Binational Toxics Strategy.

In this chapter, a number of other important Great Lakes programs are described that either have ongoing collaborative efforts, or anticipate collaborative efforts in the near future.

8.1 THE GREAT LAKES CHARTER

The Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement

On December 13, 2005, the Ontario, Quebec, Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin governments signed an historic agreement to strengthen protection of the Great Lakes.

The Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement:

- Bans diversions, with rare, strictly regulated exceptions such as for communities that straddle the Great Lakes-St. Lawrence River Basin boundary and the boundaries between Great Lake watersheds;
- Strengthens water conservation through programs in each state and province;
- Establishes a stronger new environmental standard for regulating water uses across all Great Lakes-St. Lawrence River Basin states and provinces;
- Builds the information and science needed to support sound decision-making;
- Formally recognizes the authority of the federal governments and the International Joint Commission under the Boundary Waters Treaty, which remains unchanged;
- Builds regional collaboration, for example in the review of water management and conservation programs;
- Is founded on the principles of ecosystem protection, a precautionary approach, recognition of cumulative impacts, and climate change uncertainties.

8.2 CONNECTING THE COASTS

Connecting-the-Coasts (CTC) Web-based Curriculum

Recognizing youth as the future leaders within their communities, the Lake Superior Binational Program (LSBP) has identified high school students within the Lake Superior Basin as a primary target audience group to receive educational outreach on LSBP issues. The goal is to bring this message to every high school student within the Basin and empower them to take action to help resolve these issues.

Using an EPA grant, the University of Wisconsin-Extension will create a web-based interactive curriculum that expands LSBP research based knowledge on identified critical issues into opportunities for student initiated and applied personal and community change. The CTC uses a “service learning” educational model delivered through an interactive curriculum that can be effectively outreached around Lake Superior’s coast, supported by educator training and strategic partnerships to encourage the use of this model.

The issues to be addressed as curriculum elements focus 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, both aquatic and terrestrial, and controlling invasives; and 4) understanding the relationship of the Lake Superior ecosystem and human health.

The website information is currently complete and ready for upload to the Northland College website, where it will be ready for testing, critique, and many modifications to improve its connectivity. The Northland College IT staff is working to get the website uploaded. The CTC site information will be taken to area high schools, and it will be an important component in the Pathfinders curriculum (See Chapter 2, Section 2.2.3 for a description of the Pathfinders Program).

8.3 COASTAL AMERICA

The Corporate Wetlands Restoration Partnership (CWRP) is an innovative private-public initiative that brings together businesses, government agencies, conservation organizations, community groups, and academia to protect, enhance, and restore critically-important wetlands, coasts, and waterways in the U.S. Corporations can voluntarily help restore critical habitats across the U.S. by contributing money and in-kind services, such as engineering, legal, and environmental support. The Lake Superior LaMP is encouraging corporations and businesses in the Lake Superior Basin to participate in this innovative initiative. Additional information may be found at www.cwrp.org, or cwrp@coastalamericafoundation.org.

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, 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).

The Collaboration brought together 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. The initial “Conveners” meeting was held on December 3, 2004. Following the Conveners meeting, the issue area strategy teams began their work. These eight teams were organized using priorities identified by the Council of Great Lakes Governors. The priorities are: 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 teams were made up of subject-matter experts from many diverse backgrounds. Lake Superior Work Group members participated on nearly all of the issue teams. There were more than 1,500 people from all levels of government, and non-governmental organizations, working on the specific issues identified as crucial to the health of the Great Lakes ecosystem. Resulting from this effort was the Great Lakes Strategy, which was released by the Collaboration through a Declaration on December 12, 2005.

Strategy Team recommendations focus on those high-priority actions that can be taken over the next five years and that will achieve the greatest results. The Great Lakes Strategy recommendations include:

Aquatic invasive species (AIS)

1. prevention of AIS introductions by ships through ballast water and other means;
2. stopping invasions of species through canals and waterways;
3. restricting trade in live organisms;
4. passage of comprehensive federal AIS legislation;
5. establishing a program for rapid response and management; and
6. education and outreach on AIS introduction and prevention.

Habitat conservation and species management

1. native fish communities in open waters and near shore habitats;
2. wetlands;
3. riparian (streams) habitats in tributaries to the Great Lakes; and
4. Coastal shore and upland habitats.

The near shore waters and the coastal areas

1. major improvements in wet weather discharge controls from combined and sanitary sewers;
2. identify and control releases from indirect sources of contamination;
3. implement a “risk-based approach” to manage recreational water;
4. protect sources of drinking water; and
5. improve the drinking water infrastructure and support source water protection.

Areas of Concern (AOC)

1. amend the U.S. *Great Lakes Legacy Act* to increase funding and streamline the process;
2. improve federal, state, and local capacity to manage the AOC cleanups;
3. create a federal-state AOC coordinating committee to work with local and tribal interests to speed cleanups; and
4. Promote clean treatment and disposal technologies as well as better beneficial use and disposal options.



Figure 1. Lake Superior winter shoreline.
Photo Credit: Chris Zadak, MPCA.

Non point sources

1. wetland restoration;
2. restoration of buffer strips;
3. improvement of cropland soil management;
4. implementation of comprehensive nutrient and manure management plans for livestock operations; and
6. improvements to the hydrology in watersheds.

Toxic pollutants

1. reduce and virtually eliminate the discharge of mercury, PCBs, dioxins, pesticides, and other toxic substances to the Great Lakes;
2. prevent new toxic substances from entering the Great Lakes;
3. institute a comprehensive research, surveillance, and forecasting capability;
4. create consistent, accessible basinwide messages on fish consumption and toxic reduction methods and choices; and
5. support efforts to reduce continental and global sources of toxics to the Great Lakes.

A sound information base and representative indicators

1. better coordinate the collection of critical information regarding the Great Lakes ecosystem and support the U.S. Integrated Earth Observation System (IEOS) and the Integrated Ocean Observing System (IOOS) as key components of the Global Earth Observation System of Systems (GEOSS);
2. promote the continued development of science-based indicators, including those developed through the SOLEC process;
3. double funding for Great Lakes research over the next five years;
4. establish a regional information management infrastructure; and
5. create a Great Lakes communications workgroup to manage scientific and technical information.

Sustainability

1. adapt and maintain programs that promote sustainability across all sectors;
2. align governance to enhance sustainable planning and management of resources;
3. build outreach that brands the Great Lakes as an exceptional and competitive place to live, work, invest, and play; and
4. provide leadership for sustainable development through implementation of the Strategy recommendations.

The Lake Superior LaMP will consider the recommendations of the Great Lakes Regional Collaboration and will incorporate, as much as possible, the highest priority actions in LaMP workplans.

8.5 THE U.S. – CANADA GREAT LAKES BINATIONAL TOXICS STRATEGY

Signed between the U.S. and Canada in 1997, the Great Lakes Binational Toxics Strategy (GLBTS) helps provide an overall coordinating effort across the lakes to reduce and virtually eliminate persistent toxic substances in the Great Lakes Basin. The GLBTS provides a framework for actions to reduce or eliminate persistent toxic substances (PTS) and establishes reduction challenges in the time frame 1997 to 2006 for twelve Level 1 (highest priority) persistent toxic substances, including mercury and PCBs.

This effort is critical to the toxic reduction efforts of the Lake Superior LaMP for several reasons. First, the GLBTS can work in the national and international arenas to address out-of-basin air deposition sources of toxic substances, an increasingly important source of inputs to the Lake. Second, it can help coordinate ongoing toxic reduction efforts across the basin, disseminating critical information on these successful projects. Also, because the GLBTS effort is closely coordinated with the U.S. national Persistent, Bioaccumulative and Toxic Chemical Initiative at US EPA headquarters, the GLBTS can disseminate the most current national and international scientific information on the Lake Superior critical pollutants. Finally, the ambitious reduction time frames and schedules for virtual elimination of critical pollutants at the basinwide and national levels can help support similar reduction efforts in Lake Superior.

The GLBTS sets forth 17 interim reduction goals for 12 Level 1 PTS over a 10 year time frame which ends in 2006. In anticipation of this important milestone, in 2004, the Parties (US EPA and EC), working with many stakeholders from industry, non-governmental organizations, Provinces, States, Tribes, cities, and academia, commenced an overall program review of each of the Level 1 substances.¹ The purpose of the Level 1 reviews was to review progress made to date in reducing these substances and to explore future directions for the continued management of these substances. The following provides a concise summary of each substance review. This report also addresses two non-substance-specific goals in the GLBTS: 1) to assess atmospheric inputs of Level 1 substances from worldwide sources, and 2) to complete or be well advanced in remediation of priority sites with contaminated bottom sediments in the Great Lakes Basin by 2006.

The substance reviews include two major parts: 1) an overall environmental assessment of Level 1 substances in the Great Lakes environment, including a review of current levels in Great Lakes media and biota, an evaluation of these levels against available health based/risk based criteria, historical trends and projected trends looking forward; and 2) a source reduction assessment that looks at use and emission reductions accomplished to date under the GLBTS against the original targets, as well as an analysis of the remaining source sectors, and further opportunities for the GLBTS and others to continue to effect reductions toward our ultimate goals of virtual elimination. Finally, these reviews provide recommendations to the Parties for the future management of each Level 1 substance.

General Outcomes

With regard to source reductions, much progress has been made to date. Of 17 reduction goals, 10 have been met, three more will be met by 2006, and the remaining four will be well advanced toward their respective targets. Notwithstanding these accomplishments, much remains to be done to achieve the ultimate goal of virtual elimination in the Great Lakes.

Overall, the environmental analyses show many of the Level 1 substances remain in the Great Lakes environment at levels which exceed health based criteria, particularly mercury, PCBs, and the cancelled pesticides. These substances continue to impair the Great Lakes, and limit fish consumption, particularly among sensitive populations such as pregnant women and children, and among subsistence fishers.

The Level 1 analyses suggest that source reduction opportunities remain for the “active substances” (i.e., substances for which there are ongoing GLBTS workgroup activities). These include mercury, PCBs, dioxins and furans, HCB, and B(a)P. With respect to the “inactive” (i.e., no ongoing workgroup activity) Level 1 substances, which include the cancelled pesticides, alkyl lead, and OCS, the Parties have decided to suspend GLBTS workgroup activities indefinitely, pending periodic review, and to leverage other programs, as appropriate. However, these substances will continue to be tracked and monitored in the Great Lakes. Finally, the GLBTS will continue to monitor and report on progress of sediment remediation activities in Areas of

¹ Mercury, PCBs, dioxins and furans, hexachlorobenzene (HCB), benzo(a)pyrene (B(a)P), octachlorostyrene (OCS), alkyl lead, mirex, aldrin/dieldrin, toxaphene, DDT, chlordane

Concern in the Great Lakes Basin, and will continue to study issues associated with long-range transport of toxic substances from worldwide sources, in order to better inform GLBTS priorities and identify necessary action steps to move forward.

Specific Recommendations

Table 8-1 provides a brief summary of GLBTS management recommendations and future opportunities by substance/challenge.

Table 8-1. Summary of GLBTS Management Recommendations and Future Opportunities by Substance/Challenge

Substance	Recommendation	Future Opportunities
Mercury	Continue Active Level 1 Status	Source reduction opportunities remain for the GLBTS Mercury Workgroup in the auto scrap, appliance, industrial equipment, and dental sectors. In addition, the GLBTS will continue to encourage and track efforts to reduce mercury releases in sectors with regulatory systems in place or under implementation (e.g., mercury cell chlor-alkali plants and coal-fired power plants).
PCBs	Continue Active Level 1 Status	Source reduction opportunities remain for the GLBTS PCB Workgroup to continue to encourage decommissioning of in-service PCB equipment. Other significant future Workgroup opportunities include updating the current inventories, which will help in identifying additional intervention steps; mandatory dates for PCB phase out in Canada through voluntary activities (via the anticipated Canadian PCB phase out proposal scheduled for publication next year) and proposed regulatory amendments to existing Canadian PCB regulations; and incentives and recognition for PCB phase out and outreach programs.
Dioxins/ Furans	Continue Active Level 1 Status	Source reduction opportunities remain for the GLBTS Dioxin Workgroup to address the use of burn barrels. Other significant future Workgroup opportunities include characterization of sources such as uncontrolled burning, and exploring pathway interventions to mitigate exposure to dioxins and furans.
HCB	Continue Active Level 1 Status	Future Workgroup opportunities include continuing to update and improve the emissions inventories, identifying long-range transport contributions of HCB to the Great Lakes, and cooperating with the Dioxin Workgroup on similar source sectors to take advantage of the HCB reduction co-benefits that may also be achieved. The Workgroup should determine the co-benefits of reducing specified chlorobenzene compounds as a result of actions that reduce HCB.

Substance	Recommendation	Future Opportunities
B(a)P	Continue Active Level 1 Status	Source reduction opportunities remain for the GLBTS HCB/B(a)P Workgroup in residential wood combustion and scrap tire pile mitigation. Other significant future Workgroup opportunities may be identified through continued updating and improvement of emissions inventories. The Workgroup should determine the co-benefits of reducing Level 2 PAHs (Anthracene, Benzo(a)anthracene, Benzo(g,h,i)perylene, Perylene, Phenanthrene) resulting from activities that reduce B(a)P emissions.
Alkyl Lead	Suspend GLBTS Workgroup Activities	The Parties will refer to the National Programs to continue to work with National Association of Stock Car Auto Racing (NASCAR) to reduce the use of leaded fuel in race cars, and with the Federal Aviation Administration and aviation industry to find alternatives to leaded gasoline in aviation fuel.
Pesticides (aldrin/dieldrin, chlordane, DDT, mirex, toxaphene)	Suspend GLBTS Workgroup Activities	The Parties will refer to National, Provincial, State, Tribal and local Clean Sweep programs to continue to address the stockpile of cancelled pesticides in the Great Lakes Basin, and to various remediation programs that address pesticide contamination. The Parties will participate in international fora that address pesticide phase-outs and disposal, worldwide.
OCS	Suspend GLBTS Workgroup Activities	The Parties will continue to monitor OCS in the Great Lakes environment, and study OCS via long-range transport.
Sediments	Continue Remediation Activities	The Parties will continue to report annually on progress made in the Areas of Concern to remediate sediments contaminated with Level 1 Substances
LRT	Continue Study of Long-Range Transport of Level 1 and 2 Substances	The Parties will continue to study the long-range transport of Level 1 and 2 substances to the Great Lakes, evaluate the relative contributions from worldwide sources, and work within international fora such as UNEP to reduce releases.

GLBTS Conclusions

The GLBTS presents a unique model of how international cooperation and collaborative problem solving of issues that are beyond the reach of existing regulations can lead to real results in environmental protection. There may be an important ongoing role for the GLBTS, not only with respect to the current Level 1 substances, but also for newer chemicals of emerging concern. New innovative reduction strategies could be applied to the sources of current Level 1 PTS that can be eliminated from products and production processes as well as to additional chemicals that may fall under the scope of the GLBTS. The Parties intend to focus on next steps for the GLBTS in 2006. Protecting the chemical integrity of the Great Lakes, advancing the goals of the Great Lakes Water Quality Agreement, and virtually eliminating PTS from the Great Lakes Basin are of paramount importance. The GLBTS is one important tool to move us toward these goals. For more information, see <http://www.binational.net>.

8.6 STATE OF THE LAKES ECOSYSTEM CONFERENCE

The State of the Lakes Ecosystem Conference (SOLEC) is hosted biennially by the US EPA's Great Lakes National Program Office (GLNPO) and Environment Canada. The conferences are intended to provide a forum for exchange of information on the ecological condition of the Great Lakes and surrounding lands. A major goal is to bring together a large audience of government, corporate, and non-profit environmental managers to discuss the current problems that affect the lakes. The next SOLEC is scheduled for November 2006 in Milwaukee, Wisconsin; the theme of this conference will be "Chemical Integrity". The SOLEC 2004 Lake Superior Report may be found in the Executive Summary of this document. Further information may be found at <http://www.epa.gov/solec/index.html> and http://cfpub.binalational.net/solec/intro_e.cfm.



Figure 2. Duluth lift bridge early in the morning. Photo Credit: Cindi Kahrman, MPCA.