

Chapter 1

Introduction and Purpose of the Lake Superior Lakewide Management Plan



Minnesota North Shore. Photo Credit: Chris Zadak, MPCA.

**Lake Superior Lakewide Management Plan
2006**

Chapter 1 Contents

1.0	INTRODUCTION	1-1
1.1	THE LAKE SUPERIOR BINATIONAL PROGRAM	1-1
	1.1.1 LaMP Documents Produced To Date	1-4
	1.1.2 Ecosystem Components	1-5
1.2	LaMP ACCELERATION AND THE LaMP DOCUMENT	1-6
	1.2.1 What is LaMP 2006?	1-6
	1.2.2 Action/Projects Matrices.....	1-7
1.3	RELATIONSHIP OF THE LaMP TO OTHER INITIATIVES AND EFFORTS	1-7
	1.3.1 Remedial Action Plans for Areas of Concern.....	1-8
ADDENDUM 1-A: BINATIONAL EXECUTIVE COMMITTEE CONSENSUS POSITION ON THE ROLE OF LaMPS IN THE LAKE RESTORATION PROCESS		
		1A-1
ADDENDUM 1-B: LSBP STRATEGIES TO ACHIEVE LaMP GOALS		
		1B-1
Table 1-1. Three Components of the Great Lakes Legacy Act		
		1-9

Chapter 1

Introduction and Purpose of the Lake Superior Lakewide Management Plan

1.0 INTRODUCTION

The Lake Superior Basin is one of the most pristine and unique ecosystems in North America. Containing the largest surface area of any freshwater lake in the world, Lake Superior has some of the most breathtaking scenery in the Great Lakes and serves as a backdrop to a wide range of recreational and outdoor activities enjoyed by people from all over the world. Sparsely populated even today, Lake Superior has not experienced the same level of development, urbanization, or pollution as the other Great Lakes. Recognizing this unique and invaluable resource, the federal, state, and provincial, and U.S. tribal governments; First Nations; environmental groups; industry; and the public have taken steps to protect this great legacy for generations to come. This shared partnership has served as a model the world over for cooperative binational resource management.

The Great Lakes Water Quality Agreement (GLWQA) between the U.S. and Canada commits the two countries (the Parties) to address the water quality issues of the Great Lakes in a coordinated fashion. Annex 2 of the GLWQA provides a framework for the reduction of critical pollutants as they relate to impaired beneficial uses of open lake waters. In undertaking the Lakewide Management Plans (LaMP), the Parties agree to build upon cooperative efforts with state, tribal, and provincial governments and to ensure that the public is consulted. The Parties, partner agencies, and Tribal/First Nations also recognize the need to conduct lakewide adaptive management using an ecosystem approach which addresses human health, habitat, terrestrial wildlife communities, aquatic communities, and developing sustainability.

1.1 THE LAKE SUPERIOR BINATIONAL PROGRAM

In 1990, the fifth biennial report of the International Joint Commission (IJC) to the U.S. and Canadian governments recommended that Lake Superior be designated as a demonstration area where “no point source discharge of any persistent toxic substance will be permitted.” In response, on September 30, 1991, the federal governments of Canada and the U.S., the Province of Ontario, and the States of Michigan, Minnesota, and Wisconsin announced a **Binational Program to Restore and Protect Lake Superior**. Known as the Lake Superior Binational Program (LSBP), the Program identifies two major areas of activity:

- A Zero Discharge Demonstration Project
- The Broader Program

The LSBP also recognizes that public participation is an important part of the program.

The Zero Discharge Demonstration Program (ZDDP) established Lake Superior as a demonstration project to achieve zero discharge and zero emission of nine toxic, persistent, and bioaccumulative chemicals: mercury, total polychlorinated biphenyls (PCBs), dieldrin/aldrin, chlordane, DDT, toxaphene, 2,3,7,8-TCDD (dioxin), hexachlorobenzene (HCB) and octachlorostyrene (OCS). Voluntary pollution prevention is the preferred approach to achieving reduction goals, but enhanced controls and regulations might be necessary to achieve zero discharge.

The Broader Program recognizes that zero discharge of persistent toxic substances alone will not be sufficient to restore and protect Lake Superior. The Broader Program focuses on the coordination needed among the many resource and environmental agencies.

Public Involvement is critical to the success of the Binational Program. The LSBP highlights the importance of the partnership approach to achieve specified common goals. The Program encourages the commitment of all partners to develop new and innovative approaches to ecosystem management. The citizens of the basin are partners and stakeholders in the Binational Program.

LSBP Organization

Lake Superior Task Force

The Task Force consists of senior Canada and U.S. federal, provincial, tribal, and state representatives who make management decisions related to Lake Superior. The Task Force serves as a steering committee and is responsible for program direction.

Superior Work Group

The Work Group is comprised of Canadian and U.S. technical experts who represent various agencies and organizations that manage Lake Superior water and other resources. The Work Group reports to the Task Force. The Work Group is comprised of a number of committees, currently including: critical pollutants, habitat, aquatic communities, terrestrial wildlife communities, developing sustainability, and public involvement. These committees address pollution prevention and reduction, habitat issues, aquatic and terrestrial community diversity and sustainability, special designations, ecosystem integrity and monitoring, human use and health issues, and public communication and involvement.

Lake Superior Binational Forum

The Forum is a group of 24 Lake Superior citizen volunteers who make recommendations to the governments, consult with the broader public, and carry out joint LaMP implementation projects. Forum members bring perspectives from a variety of community sectors including business, environmental groups, academia, and industry. The vision statement endorsed in 1992 by the Forum is also a philosophical backdrop for the Binational Program.

A VISION FOR LAKE SUPERIOR

As citizens of Lake Superior, we believe ...

that water is life and the quality of water determines the quality of life.

We seek a Lake Superior watershed ...

that is a clean, safe environment where diverse life forms exist in harmony; where the environment can support and sustain economic development and where the citizens are committed to regional cooperation and personal philosophy of stewardship;

that is free of toxic substances that threaten fish, wildlife and human health; where people can drink the water or eat the fish anywhere in the lake without restrictions;

where wild shorelines and islands are maintained and where development is well planned, visually pleasing, biologically sound, and conducted in an environmentally benign manner;

which recognizes that environmental integrity provides the foundation for a healthy economy and that the ingenuity which results from clean, innovative and preventive management and technology can provide for economic transformation of the region;

where citizens accept the personal responsibility and challenge of pollution prevention in their own lives and lifestyles and are committed to moving from a consumer society to a conserver society; and

where there is greater cooperation, leadership and responsibility among citizens of the basin for defining long-term policies and procedures which will protect the quality and supply of water in Lake Superior for future generations.

We believe that by effectively addressing the issues of multiple resource management in Lake Superior, the world's largest lake can serve as a worldwide model for resource management.

*Endorsed by the Lake Superior Binational Forum on January 31, 1992
as an expression of the hearts and minds of all of us.*

This vision statement expresses the commitment and desire of members of the Lake Superior community to foster a healthy, clean, and safe Lake Superior ecosystem. It reflects the diverse pathways and mechanisms by which humans and nature interact within land and water ecosystems, and challenges the inhabitants of the Lake Superior watershed to accept personal responsibility for protecting the Lake and the landscape that sustains it. The vision statement specifies broad, powerful objectives for the Lake Superior ecosystem, in plain language.

1.1.1 LaMP Documents Produced To Date

Historically, formal LaMP “stages” were to be submitted to the IJC when a key stage of work was completed, in accordance with the framework outlined in Annex 2 of the 1987 amendments to the GLWQA:

- Stage 1: When problem definition is complete and critical pollutants are identified;
- Stage 2: When chemical load reduction schedules are completed;
- Stage 3: When remedial measures have been selected: and
- Stage 4: When monitoring indicates that the contribution of critical pollutants to impaired beneficial uses has been eliminated.

LaMP Stages 1, 2, and 3 have been completed for the chemical portion of the Lake Superior LaMP.

The Lake Superior Stage 1 LaMP, which was submitted to the IJC in September 1995, used environmental data to identify 22 critical pollutants that 1) impaired or were likely to impair beneficial uses in the Lake, 2) were likely to affect human health or wildlife because they exceeded chemical yardsticks, or 3) impaired Lake ecosystem objectives. The Stage 1 LaMP summarizes all known data on critical pollutant loadings from point sources throughout the Lake Superior Basin.

The Stage 2 LaMP, which was submitted to the IJC in July 1999, sets remediation goals or load reduction schedules for the nine virtual elimination pollutants identified in the Stage 1 LaMP. The Lake Superior Binational Forum stakeholders group submitted pollutant reduction recommendations, which were public and agency reviewed, edited, and formed the basis for the final targets set in the Stage 2 LaMP. In Stage 2, the critical pollutants were placed into management categories that reflect pollutant impacts, tendency to bioaccumulate, and occurrence at toxic levels.

The Stage 3 LaMP requirements under the GLWQA, captured in Chapter 4 of LaMP 2000, selects pollutant load reduction strategies and remedial actions with respect to the nine virtual elimination pollutants: mercury, PCBs, dieldrin/aldrin, chlordane, DDT, toxaphene, dioxin, hexachlorobenzene, and octachlorostyrene.

In addition to staged LaMP reporting on the ZDDP, work proceeded in two areas between 1991 and 1998: habitat and non-regulatory special designations. In the program area of habitat, agencies developed ecological criteria for important Lake Superior habitat, set up a database for habitat sites, prepared a comprehensive GIS-based map of important habitat sites and areas, and examined the impact from major dischargers on habitat. In the program area of sustainability, criteria for non-regulatory special designations were developed.

1.1.2 Ecosystem Components

While the initial focus of the LaMP work was on strategies for reducing the critical pollutants and establishing the ZDDP, as well as a broader program that advanced our understanding of habitat and landscapes, work has been carried out in other areas as well. The partner agencies have developed LaMP documents for a number of ecosystem themes, including aquatic communities, terrestrial wildlife communities, habitat, human health, and developing sustainability. The work in these themes was released for the first time for public comment and review in LaMP 2000.

Adopting an ecosystem approach has initiated a shift from a narrow perspective of managing environmental media (water, air, and soil) or a single resource (e.g., fish or trees) to a broader perspective that focuses on managing human uses and abuses of watersheds or bioregions and that comprehensively addresses all environmental media and resources within the context of a living system. The Lake Superior LaMP is guided by a set of ecosystem objectives and indicators to judge progress. Published as a discussion paper in 1995, the document ***Ecosystem Principles and Objectives, Indicators, and Targets for Lake Superior*** describes extensive ecosystem objectives and sub-objectives. These objectives have been refined and updated (see Chapter 3) since the document's original release and are described in abbreviated form below:

1. General Objective - Human activity in the Lake Superior Basin should be consistent with *A Vision for Lake Superior*. Future development of the basin should protect and restore the beneficial uses as described in Annex 2 of the GLWQA.
2. Chemical Contaminants Objective - Levels of persistent, bioaccumulative, and toxic chemicals should not impair beneficial uses of the natural resources of the Lake Superior Basin. Levels of chemical contaminants which are persistent, bioaccumulative, and toxic should ultimately be virtually eliminated in the air, water and sediment in the Lake Superior Basin. A zero discharge demonstration program is the primary means for achieving reductions of in-basin sources of contaminants.
3. Aquatic Communities Objective - Lake Superior should sustain diverse, healthy, reproducing and self-regulating aquatic communities closely representative of historical conditions.
4. Terrestrial Wildlife Objective - The Lake Superior ecosystem should support a diverse, healthy and sustainable wildlife community in the Lake Superior Basin.
5. Habitat Objective - To protect, maintain and restore high-quality habitat sites in the Lake Superior Basin and the ecosystem processes that sustain them. Land and water uses should be designed and located compatible with the protective and productive ecosystem functions provided by these natural landscape features.
6. Human Health Objective - The goal of the Lake Superior LaMP Human Health Chapter is to fulfill the human health requirements of the GLWQA, including: defining the threat to human health and describing the potential adverse human health effects arising from

exposure to critical pollutants and other contaminants (including microbial contaminants) found in the Lake Superior Basin, addressing current and emerging human health issues of relevance to the LaMP, and identifying implementation strategies currently being undertaken to protect human health and suggesting additional implementation strategies that would enhance the protection of human health.

7. Developing Sustainability - Human use of the Lake Superior ecosystem should be consistent with the highest social and scientific standards for sustainable use, and should not degrade it, nor any adjacent ecosystems. Use of the basin's natural resources should be consistent with their capability to sustain the ecosystems' identity and functions, should not risk the socioeconomic and cultural foundations of any citizens, nor deny any generation the benefits of a healthy, natural Lake Superior ecosystem. The obligation of local communities to determine their future should be incorporated in any policies directed at the management of natural and social resources in the basin.

In the *LaMP 2002 Update*, it was noted that a comprehensive set of ecosystem targets needed to be developed to guide management actions over the long term. In keeping with the public's recommendation to integrate the habitat, terrestrial wildlife, and aquatic committees, the three committees started work on developing a set of ecosystem goals. The ecosystem goals being developed are for (1) uplands, (2) wetlands, (3) tributaries and inland lakes, (4) open lake, and (5) basinwide considerations. The proposed ecosystem goals can be found in Chapter 3.

While LaMP 2002 was a summary progress report, the LaMP 2004 was the first of the biennial updates, with the latest available scientific and technical information incorporated into the existing LaMP document. The primary audience for these biennial reports is the Parties and their partners who are charged with lakewide management. Secondly, this report will also be used to meet reporting requirements to the IJC.

1.2 LaMP ACCELERATION AND THE LaMP DOCUMENT

1.2.1 What is LaMP 2006?

In May 1999, the Great Lakes States Environmental Directors issued a challenge to the U.S. Environmental Protection Agency (US EPA) that all LaMP documents were to be completed by Earth Day 2000. This challenge was accepted at a meeting of the Binational Executive Committee (BEC), which is composed of senior managers from the US EPA, Environment Canada, the Great Lakes states, the Province of Ontario, and several tribes. A resolution was adopted by the BEC that calls for the completion by April 2000 of a "LaMP 2000" document which would reflect the state of the knowledge and progress of the LaMPs at that time (See Addendum 1-A to this chapter).

LaMPs were published in 2000, and progress reports were released in the spring of 2002 and 2004. Analysis by various LaMP work groups identified a need to refine the LaMP reporting process, particularly with regard to the time, effort, and resources needed to produce the

documents. Greater emphasis needed to be placed on implementation and partnerships to protect each Lake basin. To that end, the BEC endorsed an approach to reporting in 2003 that strikes a balance between consistency among LaMPs and individual LaMP needs, while minimizing reporting efforts. LaMP teams endeavor to spend at least 80 percent of their time on LaMP implementation, and a maximum of 20 percent on reporting.

The LaMP document serves several purposes. First, it summarizes the technical research and scientific study of the Lake Superior ecosystem. Second, it represents a framework and road map for guiding and supporting priority actions and/or additional research in the basin. Third, the document presents actual pollution prevention, restoration, and other actions that governments, industries, tribes, and other stakeholders can take to achieve the overall goals and visions of the LaMP. Finally, the document will serve as a strategic plan to help achieve sustainability in the basin ecosystem. Addendum 1-B reflects the current thinking on Lake Superior Binational Program Strategies to achieve LaMP goals.

Specifically, LaMP 2006 has several notable sections that should be highlighted. First, pursuant to public comment, the habitat, aquatics and terrestrial wildlife ecosystem chapters have been combined into one consolidated chapter – Chapter 6. In that chapter, up to date information on the latest invasive species can be found. Since substantial progress has been made on a number of Lake Superior Areas of Concern (AOCs), including Torch Lake, St. Louis River, Thunder Bay, and Nipigon Bay, we have included narrative AOC progress reports, as well as a summary matrix. An important Great Lakes Basinwide restoration effort, the Great Lakes Regional Collaboration, is detailed and summarized in Chapter 8. The Critical Pollutants section, Chapter 4, is abbreviated this year because a comprehensive report on the status of progress toward the chemical milestones will be issued in Summer 2006. The Developing Sustainability Chapter (Chapter 7) describes on-the-ground sustainability projects in Lake Superior communities.

1.2.2 Action/Projects Matrices

Each of the LaMP chemical and ecosystem components contain specific actions and projects that will be taken to help achieve the goals and objectives of the LaMP. Some of these actions already have commitments and funding by various state, federal, provincial, or other entities. Other actions are categorized as high priority but still need agency commitment or funding. These actions can be found in the respective chapters in the LaMP document.

1.3 RELATIONSHIP OF THE LaMP TO OTHER INITIATIVES AND EFFORTS

There are many ongoing collaborative efforts, two of which are highlighted in this chapter. A more comprehensive and detailed description of other collaborative initiatives may be found in Chapter 8.

1.3.1 Remedial Action Plans for Areas of Concern

The GLWQA amendments of 1987 also called for the development of Remedial Action Plans (RAP) for designated Areas of Concern. The primary goal of the RAPs is to restore impaired “beneficial uses,” both ecological and cultural, as identified in Annex 2 of the GLWQA amendments, in degraded areas within the basin. The GLWQA amendments directed the two federal governments to cooperate with state and provincial governments to develop and implement RAPs for each AOC. In the Great Lakes Basin, 43 AOCs have been identified by the U.S. and Canadian governments, 26 in U.S. waters, and 17 in Canadian waters (five are shared between the U.S. and Canada on connecting river systems).

Collingwood Harbour and Severn Sound, in Ontario, are the first two of these 43 sites to be delisted. There are eight AOCs in the Lake Superior Basin, four in Canada, three in the U.S., and one shared between the two countries along the St. Marys River. Narratives and a matrix summarizing the current status of the Lake Superior RAPs may be found in Appendix A of the LaMP. The Michigan Department of Environmental Quality (MDEQ) has developed new statewide delisting guidance. The guidance, as well as proceedings from a February 2006 Michigan AOC Summit can be found on the “Virtual Library of RAP Resources” website at <http://www.glc.org/rap/resources/>. For more information, see <http://www.epa.gov/glnpo/aoc/index.html> and http://www.on.ec.gc.ca/water/raps/intro_e.html.

The RAPs and LaMPs are similar in that they both use an ecosystem approach to assessing and remediating environmental degradation, consider the 14 beneficial use impairments outlined in Annex 2, and rely on a structured public involvement process. RAPs, however, encompass a much smaller geographic area, concentrating on an embayment, a single watershed, or stretch of a river. The main focus of a RAP is on environmental degradation in that specific area, and remediating the beneficial use impairments locally. Most of the Lake Superior RAPs have had active local Public Advisory Committees (PACs), with stakeholders in some cases undertaking local remediation projects. In most AOCs, the beneficial use impairment (e.g. habitat loss) can be related or connected to local activities. On the other hand, some fish advisories are attributable to the lakewide concentrations of persistent, bioaccumulative toxic chemicals.

Forging a strong relationship between the LaMPs and the RAPs is important to the success of both efforts. The AOCs can, in many cases, serve as point source discharges to the lake as a whole. Improvements in the AOCs will, therefore, eventually help to improve the entire lake. Much of the expertise about the use impairments and possible remedial efforts reside at the local level; cooperation between the two efforts is essential in order for the LaMPs to remove lakewide impairments.

Due in part to the passage of the U.S. *Great Lakes Legacy Act*, described below, AOCs have taken on added importance and urgency in the U.S. Delisting of the AOCs is a top priority for the U.S. and Canadian governments; increased funding for the Legacy Act will help accelerate the delisting process in the U.S. The main federal funding programs for the RAP program are detailed below.

The Great Lakes Legacy Act (U.S.)

Contaminated sediments at the bottom of our 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 authorizes \$270 million in funding over five years, to assist with the remediation of contaminated sediment in the 31 designated U.S. AOCs. There are three components to the act: remediation, new technology development, and informing the public (see Table 1-1). The goal of the US EPA Great Lakes National Program Office, who is administering GLLA, is to identify all eligible remediation projects within the 31 U.S. AOCs, and begin developing remediation projects for these sites. GLLA remediation projects must lie within a U.S. AOC.

Table 1-1. Three Components of the *Great Lakes Legacy Act*

Remediation Projects (up to \$50 million per year)	<i>Priority is given to:</i> <ul style="list-style-type: none"> • 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 • Projects that can begin within a year of funding
Research and Development (up to \$3 million per year)	<ul style="list-style-type: none"> • Conduct research on the development and use of innovative approaches, technologies and techniques for the remediation of contaminated sediment at U.S. AOCs • No non-federal match required
Public Information (up to \$1 million per year)	<ul style="list-style-type: none"> • Provide funding for public outreach and public information at U.S. AOCs regarding sediment remediations • No non-federal match required

Remediation of contaminated sediments in the Hog Island Inlet and Newton Creek was recently completed in Superior, Wisconsin. See inset below.

Hog Island Inlet and Newton Creek Sediment Remediation

Recently the Hog Island Inlet and Newton Creek Sediment remediation was completed in Superior, Wisconsin. This project is in the St. Louis River Area of Concern in Superior, Wisconsin (river is part of the MN and WI state boundary). The Wisconsin DNR submitted a proposal in March 2004 for a cost-shared (65 percent Federal, 35 percent non-Federal) sediment remediation project at Hog Island Inlet. The project cost was approximately \$6.3 million.

The project involved digging up and disposing of 50,000 tons of petroleum-contaminated sediment and soil from Newton Creek and parts of Hog Island Inlet. After the contaminated sediments were removed, the banks of the creek and inlet were landscaped to prevent erosion. Further planting and re-seeding will occur in spring of 2006. The result is a healthier habitat for fish and other aquatic life, and eventually, reduced levels of contaminants in fish consumed by humans; the inlet is also now safer for recreation. As part of the project completion ceremony, the “No Swimming” sign was removed from Hog Island.

Pollution in the creek was primarily caused by PAHs and metals. Other contaminants include oil and grease, lead, mercury, and chromium, and Volatile Organic Compounds (VOCs). The site is bordered by public and private land. Hog Island (actually a peninsula) is owned by the county. The next step for this site is to develop a full restoration plan, and all parties to continue working together to implement the restoration effort.



Wisconsin Governor Doyle and US EPA Great Lakes National Program Office Director Gary Gulezian symbolically remove the “No Swimming” sign from Newton Creek/Hog Island Inlet following completion of the *Great Lakes Legacy Act* cleanup.



Contaminated sediment excavation at Hog Island, Superior, Wisconsin.

Great Lakes Action Plan (Canada)

The 2005-2010 Great Lakes Action Plan for Areas of Concern provides \$40 million from the Government of Canada toward its commitment to restore, protect, and conserve the Great Lakes.

Improving the ecological integrity of the Great Lakes ecosystem has been, and continues to be, a priority for the Government of Canada. This funding, spread over five years, will continue the environmental restoration of key aquatic areas of concern in Ontario.

The Great Lakes Action Plan program is a coordinated effort of the seven federal government departments participating in the federal Great Lakes Program: Environment, Fisheries and Oceans, Health, Public Works and Government Services, Agriculture and Agri-Food, Natural Resources, and Transport.

The \$40 million is directed towards remediation activities at the 15 remaining AOCs contained either entirely within Canada (10) or joint Canada-U.S. sites on connecting channels (5). These remediation activities are identified in RAPs that have been prepared for each AOC.

Remediation activities which are the responsibility of the federal government, as identified in RAPs, will include:

- Working in partnership with other agencies on fish and wildlife rehabilitation projects;
- Completing contaminated sediment assessment and remediation strategies for relevant AOCs;
- Undertaking engineering and technical studies to identify cost-effective wastewater treatment technologies and approaches that will assist municipalities in securing infrastructure funding; and
- Leading the development and implementation of multi-agency monitoring plans essential to support the design and evaluation of these activities.

Through the Great Lakes Sustainability Fund (GLSF), partners will be engaged to carry out projects related to habitat restoration, sediment assessment, and municipal wastewater improvements. GLSF provides financial and technical support to projects that aim to significantly accelerate work to restore the environmental quality of Canada's 15 remaining AOCs. GLSF projects reflect diverse and dedicated partnerships with local and provincial governments, community groups, academia, and industry, and focus on an extensive range of restoration activities. These include the development and implementation of innovative strategies for improving municipal wastewater treatment, assessment and remediation of contaminated sediment, restoration of fish and wildlife habitat, non-point source pollution control and watershed stewardship, and public outreach activities to promote various tools and strategies. By completing these federal actions, progress should be made toward the ecological restoration of AOCs.

Federal actions have been completed in Severn Sound and Collingwood Harbour, and ecological restoration has been achieved. These locations have been successfully delisted, or removed from the list of AOCs. Federal actions have been completed in Spanish Harbour, and monitoring of its recovery is underway. Federal actions will be completed in Port Hope under another process.

Added to previous funding, this \$40 million budget commitment means more than \$300 million of dedicated federal resources have been directed at restoring and protecting the Great Lakes since the first Great Lakes Action Plan was launched in 1989.

ADDENDUM 1-A:**BINATIONAL EXECUTIVE COMMITTEE CONSENSUS POSITION ON THE ROLE OF LaMPS IN THE LAKE RESTORATION PROCESS****Binational Executive Committee Consensus Position on the Role of LAMPS in the Lake Restoration Process**

The development and implementation of Lakewide Management Plans (LaMPs) are an essential element of the process to restore and maintain the chemical, physical, and biological integrity of the Great Lakes ecosystem. Through the LaMP process, the Parties, with extensive stakeholder involvement, have been defining the problems, finding solutions, and implementing actions on the Great Lakes for almost a decade. The process has taken much longer and has been more resource-intensive than expected.

In the interest of advancing the rehabilitation of the Great Lakes, the Binational Executive Committee calls on the Parties, States, Provinces, Tribes, First Nations, municipal governments, and the involved public to significantly accelerate the LaMP process. By accelerate, we mean an emphasis on taking action and a streamlined LaMP review and approval process. Each LaMP should include appropriate actions for restoration and protection to bring about actual improvement in the Great Lakes ecosystem. Actions should include commitments by the governments, parties and regulatory programs, as well as suggested and voluntary actions that could be taken by non-governmental partners. BEC endorses the April 2000 date for the publication of "LaMP 2000", with updates every two years.

BEC is committed to ensuring a timely review process and will be vigilant in its oversight.

The BEC respects and supports the role of each Lake Management Committee in determining the actions that can be achieved under each LaMP. BEC expects each Management Committee to reach consensus on those implementation and future actions. Where differences cannot be resolved, BEC is committed to facilitating a decision. BEC recognizes the Four-Party Agreement for Lake Ontario and the uniqueness of the agreed upon binational workplan.

The LaMPs should treat problem identification, selection of remedial and regulatory measures, and implementation as a concurrent, integrated process rather than a sequential one. The LaMPs should embody an ecosystem approach, recognizing the interconnectedness of critical pollutants and the ecosystem. BEC endorses application of the concept of adaptive management to the LaMP process. By that, we adapt an iterative process with periodic refining of the LaMPs which build upon the lessons, successes, information, and public input generated pursuant to previous versions. LaMPs will adjust over time to address the most pertinent issues facing the Lake ecosystems. Each LaMP should be based on the current body of knowledge and should clearly state what we can do based on current data and information. The LaMPs should identify gaps that still exist with respect to research and information and actions to close those gaps.

Adopted by BEC on July 22, 1999.

ADDENDUM 1-B:
LAKE SUPERIOR BINATIONAL PROGRAM STRATEGIES
TO ACHIEVE LAMP GOALS

Background

The Lake Superior LaMP 2000 lays out the vision, strategies and actions for achieving binational program goals. The Work Group committee work plans are the short-term (2 year) plans for implementation.

In 2002, the Task Force and Work Group initiated discussion on current issues requiring longer-term activities/strategies to meet the needs of the program. Development of these strategies is not a major new initiative - work group committees are to continue to implement their work plans - but is to be primarily a task of the Task Force and the Work Group leadership. It is anticipated that these strategies be reflected in Work Group committee work plans in the years to come.

It is proposed that these strategies identify attributes of the program by which we can measure management/leadership success. The real purpose of these strategies, however, is to enable the binational program agencies to collectively achieve the vision and goals that are developed for the lake (e.g. load reduction schedules and ecosystem goals) as described in LaMP documents. In that sense, the strategies and building capacity items assist the Work Group committees to implement their work plans.

The following also address a number of requirements in the Task Force's 1997 terms of reference, including to "Focus on long-term goals; articulate strategic program direction and define priorities; Commit resources and work with the Superior Workgroup membership to secure funding and program commitment. Coordinate with other LaMP Management members, as needed, to assure consistency in core program matters and to further progress of the Binational Program".

A summary of the discussions to date, with some additional thoughts from the Work Group and Task Force co-chairs was discussed by the Work Group and Task Force at their April 2003 meetings. There were also discussions and decisions regarding LaMP reporting and outreach during the September 2003 Work Group; and October and December Task Force meetings. Finally, the Task Force agreed to the strategies at its June 9, 2004 Task Force meeting. Tactics and an implementation plan for how the Task Force can help will be the basis of discussions at future Task Force meetings. It is suggested that priorities be established to order these discussions.

The Strategies

1. Research and Monitoring:
 - a. Comprehensive Binational Research priorities/agenda and delivery mechanism/network (which harnesses the resources of the academic community).

- e.g. acoustical mapping of lower trophic levels and the gap in Herptile information and analysis in the basin
- b. Clear, Coordinated Binational Monitoring Program
 - i. Designed and at least partially implemented
 - ii. Comprehensive set of agreed to Indicators
 - iii. Sources measured and data available on a regular basis
 - iv. Emerging issues are identified, such as new chemical toxins and invasive species.
- 2. Reporting and Evaluation
 - a. LaMP progress is regularly reported and evaluated. A long-term planning cycle of LaMP review based on the above Monitoring and Research program goals (adaptive management).
- 3. Building Capacity
 - a. Strong, Diverse Funding Base (people and \$) to meet LaMP goals
 - i. Need funding for monitoring
 - ii. Better connections with national programs and priorities
 - iii. Need to look beyond GLNPO and “traditional” funding sources.
 - iv. Industrial trust fund to develop: 1) control technologies and 2) alternative energy technology.
 - v. Need expanded representation and participation by partners in SWG and TF.
 - b. Strong and expanded Partnerships around the Lake (to implement LaMP)
 - i. Complete CARD program
 - ii. More of a community-level focus on communications, outreach and projects to influence/inform local watershed planning activity and land use planning.
 - iii. Additional partners at all levels.
 - c. Strong linkages to other programs (BTS, GLRC, SOLEC, RAPs, GLFC, Marine Conservation Area)
 - i. Participate in GLFC exercise to develop environmental objectives for the lake
 - ii. LSBP to make better connections within its own agencies
 - iii. Coordinate existing resources (GLFC, IJC, GLC, AOC Legacy Act and other) to implement LaMP work plans