Photo: Mike Weimer, U.S. Fish & Wildlife Service

Pathways to Achievement

Section 12

Section 12: Pathways to Achievement

Photo: U.S. Fish & Wildlife Service, Lee Karney

12.1 Introduction

Many different projects and programs have been implemented in the Lake Erie basin over the years, some of them binational in scope. Most programs have focused on one particular issue or medium, such as water quality, fish populations, contaminated sediments, physical processes, reducing phosphorus, controlling discharge from industries and wastewater treatment plants, monitoring, etc. The LaMP addresses these same issues but from an ecosystem perspective. The ecosystem approach allows a more holistic, comprehensive assessment of problems and the management actions needed to address them. To the extent possible, implications of management actions are reviewed for the entire ecosystem and not just the ecosystem component the action is meant to address. Many times research, assessment and management needs are not coordinated with each other. With the involvement of all the jurisdictional agencies around the lake, researchers, the private sector and the public, it is the LaMP's intention that programs are not designed in a vacuum, that the most important issues will be identified, and that limited resources will be applied to the highest priorities.

The goal of the LaMP is to describe the current state of the lake and set objectives to achieve what we, as the Lake Erie community, envision for a sustainable Lake Erie ecosystem in the future. As described in Section 3, the Lake Erie vision and ecosystem management objectives consider ecological issues (fisheries, wildlife habitat, etc.), socio-economic issues (resource uses/benefits from the lake), and health issues (both ecological and human). The LaMP will provide a road map to lead us toward these objectives. Many of the management and remedial actions that will be recommended in the LaMP will need to be adopted and implemented under other programs and by the agencies that have jurisdiction over those particular areas/issues in question. The LaMP has already leaned heavily on some existing programs for the vision, ecosystem management objectives, and beneficial use impairment assessments.

The watershed is widely regarded as an appropriate unit to manage natural resources. As part of the Lake Erie LaMP process, the Fuzzy Logic Model developed by and for the LaMP identified land use as the single most important driver of in-lake conditions. Watershed management focuses on these uses and the sources of contaminants associated with land

based activities. As the Lake Erie LaMP progresses, existing and developing watershed plans around the lake will need to be tapped to provide the most effective means to achieve the goals of the Lake Erie LaMP. The current and future LaMP work plans will need to have a strong focus on ways to connect to local watershed plans. Each of the LaMP partner agencies will need to review their domestic programs in relation to how they can complement the binational programs underway.

A number of federal, state, provincial and local government programs and policies are already in place serving to improve Lake Erie environmental quality. Many of these complementary programs are referenced throughout the Lake Erie LaMP document. Listed in Section 12.2 are some of the binational programs that support LaMP goals and represent some binational paths to achievement.

Photo: Upper Thames River Conservation Authority

12.2 Connections to Existing Binational Programs

Remedial Action Plans

In addition to the development of LaMPs, the GLWQA called for the development of Remedial Action Plans (RAPs) for the Great Lakes Areas of Concern. There are 12 Areas of Concern in the Lake Erie watershed (Section 9). The RAPs and the LaMP process are very similar in that they use an ecosystem approach to assessing and remediating environmental degradation, focus on the 14 beneficial use impairments listed in Annex 2, and utilize a structured public involvement process. The RAPs for the St. Clair River and the Detroit River are also binational in scope. However, although the RAP and LaMP programs are alike in theory, they are very different in practice.

The RAPs have a much smaller geographic focus, looking at single watersheds or parts of watersheds. Although there is a component that considers the impact of that particular Area of Concern on Lake Erie, the main focus is on environmental degradation in that specific area and remediating the beneficial use impairments locally. Public participation in the RAPs is quite robust and very hands-on as the stakeholders are working on projects in their own backyards, and many times have the lead on those projects. Implementation has been underway in most RAPs for a number of years using a combination of federal, state, provincial and local resources. In most cases, the causes of impairment are related to sources within the Area of Concern.

Any improvement in an Area of Concern will eventually help to improve Lake Erie, but the effect will be much more visible and measurable locally. In some cases, remediation of

a contaminated site within an Area of Concern may have impacts on the entire lake, particularly if the cleanup involves removal of a source of persistent toxic substances. It is important to continue to cultivate a strong connection between the RAPs and the LaMP, particularly in establishing priority actions that will be most effective in restoring the Lake Erie basin. Updates and the current status of Lake Erie's RAPs are included in Section 9.

Great Lakes Fishery Commission

The Great Lakes Fishery Commission oversees a binational, Great Lakes basinwide fisheries management program. The role of the Great Lakes Fishery Commission is to conduct coordinated fisheries research on the lakes and recommend measures that will permit the maximum sustained productivity of stocks of fish of common concern between the U.S. and Canada. They also have the responsibility to formulate and implement a program to eradicate or minimize sea lamprey populations in the Great Lakes. The Great Lakes Fishery Commission takes into account water quality, habitat and other environmental factors, with the main goal of preserving and enhancing the fish community by supporting establishment of a healthy Lake Erie ecosystem. The Lake Erie Committee (LEC) of the Great Lakes Fishery Commission develops and implements the management strategy specific to Lake Erie. Members of the LEC have been very active in developing the vision and ecosystem management objectives for the Lake Erie LaMP, and some of the LEC's goals and objectives for Lake Erie were used as the basis against which to determine the status of several of the beneficial use impairments. The LEC is also the major action arm of the Great Lakes Fishery Commission that oversees the implementation and development of operational plans under the binational inter-jurisdictional *Joint Strategic Plan for Management of Great Lakes Fisheries.* The Joint Strategic Plan was adopted in 1981 in response to the need to better coordinate fisheries and ecosystem management initiatives. The Joint Strategic Plan was revised in 1997 to strengthen fisheries and ecosystem management coordination based on lessons learned since the 1981 signing and in regard to implementation of the Great Lakes Water Quality Agreement. Building strong ties with the LaMPs and RAPs is particularly specified in the goals of the Plan.

North American Waterfowl Management Plan

The North American Waterfowl Management Plan (NAWMP) is a strategic framework to protect, enhance and create 6 million acres of wetland habitat critical to waterfowl and other wetland wildlife in Canada and the U.S. The goal is to restore waterfowl populations to the averages observed during the 1970-1979 period. The NAWMP was developed in cooperation with all the applicable state, provincial and federal wildlife management agencies. Objectives are translated into action through "joint venture areas". Joint ventures are regional public/private partnerships where the partners agree to develop goals and objectives for a particular species or habitat in a particular geographic region. An example is the Lake Erie Marshes Focus Area Plan, which applies to the Lake Erie basin in Ohio. The plan calls for enhancement and restoration of 7,000 acres of existing protected wetland habitat and acquisition or protection of 11,000 additional acres.

Great Lakes Binational Toxics Strategy (GLBTS)

Although there has been significant reduction in the amount of contaminants released directly into the Great Lakes, there is a continuing presence of persistent toxic substances resulting from atmospheric deposition, contaminated sediment, releases from certain industrial processes, non-point source runoff and the continuous cycling of substances within the lakes themselves. Inter-basin transfer of persistent toxic substances from one lake to another, and the short-range and long-range movement and deposition of these substances from air, prompted U.S. EPA and Environment Canada to sign the Great Lakes Binational Toxics Strategy (GLBTS) in 1997. The goal of this binational strategy is to work towards the virtual elimination of persistent toxic substances resulting from human activity, particularly those that bioaccumulate. Specific reduction targets for the Great Lakes basin have been set

for many of the contaminants of concern in the Lake Erie LaMP, with a primary emphasis on achieving reductions using pollution prevention.

The GLBTS states that more strategic and coordinated interventions are required at various geographic scales from the local watershed/area of concern to the lakewide, basinwide, national and international arenas. The Lake Erie LaMP looks to the GLBTS to provide some support for the reduction of out of basin sources, particularly those related to atmospheric long-range transport. The GLBTS reaffirms the two countries' commitment to the sound management of chemicals, as stated in *Agenda 21: A Global Action Plan for the 21st Century* and adopted at the 1992 United Nations Conference on Environment and Development. The GLBTS is also guided by the principles articulated by the International Joint Commission's Virtual Elimination Task Force.

The Lake Erie Millennium Network

The Lake Erie Millennium Network (LEMN) is a collaborative group formed to address lakewide issues. Binational, federal, state, provincial, and local agencies, advocacy groups, and companies whose mandate or concerns relate to the condition of Lake Erie voluntarily sponsor this open, self-assembled association. Formed in 1998, the LEMN evolved from independent efforts by scientists at four research institutes in the U.S. and Canada. Each group had hosted brainstorming sessions to consider the causes and assess possible solutions to complex, lakewide environmental problems. The Network formed with the realization that coordinated, ongoing research was needed to understand the lake, but that most funding opportunities are short-term grants to address specific environmental problems identified by the agencies. Research initiatives were only likely to receive agency support if they were seen to be relevant to the most pressing needs of the agencies. The LEMN provides the major research arm of the Lake Erie LaMP.

To ensure that the Network would be a truly binational and collaborative project, four co-conveners coordinate it. The conveners are research institutions whose members actively interact and collaborate with the broader Lake Erie community of researchers, managers, and public groups. The co-conveners are:

- Great Lakes Institute for Environmental Research, University of Windsor
- U.S. EPA's Large Lakes Research Station, Grosse Ile
- National Water Research Institute, Environment Canada
- Ohio Sea Grant - F.T. Stone Laboratory, Ohio State University

Funding for activities is solicited from organizations that have a responsibility or mandate related to the status of Lake Erie. Agencies who have elected to formally participate and who have contributed financial support through either competitive grants or donations are designated and acknowledged as sponsors. Collaborating agencies are organizations that are active participants in the planning, information transfer, or research aspects of the Millennium project. Collaborators provide in kind and/or technical support that further the goals of the Network.

The LEMN was formed with three objectives:

1) To summarize the current status of Lake Erie;
2) To collectively document the research and management needs of users and agencies; and
3) To develop a framework for a binational research network to ensure coordinated collection and dissemination of data to address the research and management needs.

Lake Erie resource managers and concerned individuals attended the initial workshop in 1998 to identify and prioritize the most pressing problems and data needs facing Lake Erie. Seven major issues were identified:

1) Eutrophication
   a) limits to production
   b) land use issues
2) Contaminants
3) Habitat

Photo: Scott Gillingwater

4) Non-native invasive species
   a) dreissenids
   b) other exotic species
5) System processes (diversity, stability, trophic transfer)
6) Population dynamics/exploitation of fishes
7) Other issues
   a) human health
   b) policy

Beginning in 1999 and every two years thereafter, the LEMN has organized a binational scientific conference to exchange and summarize information on the status of Lake Erie and its biological and physical processes. The first conference was convened to summarize the state of scientific knowledge on Lake Erie, forecast trends for the next few years, and identify critical research gaps. Forty-eight invited speakers gave presentations, organized into seven sessions:

- Physical features
- Loadings and flux
- Environmental features
- Open-water biotic processes
- Nearshore and coastal biotic processes
- Invaders
- Human-related concerns

Speakers were asked to cast their special expertise in the context of the previously identified management and data needs. Each speaker provided a brief historical survey and described the changes through the 1990s to the present. They then speculated on the next three to five years. Lastly, they identified major research questions/data needs necessary to improve understanding and predictive ability.

Several common themes emerged in discussion sessions after the presentations. Priorities included needs to:

- understand the linkages in energy and contaminant flow between the land immediately surrounding the lake and the lake itself;
- understand the linkages in energy and contaminant flow between the lake bottom and the mid-water regions and their biota (especially the top predators - fishes and birds);
- understand the present and likely future role of non-native invasive species in the Lake Erie ecosystem;
- anticipate the effects of environmental warming on the lake's physical and biological structure; and
- gain a better grasp of whether the rate of change in Lake Erie is accelerating or slowing down.

Fundamental to all concerns was the need to ensure that a suite of basic physical, chemical, environmental, and biological variables, key to monitoring the pulse of Lake Erie, is measured regularly, reliably, and consistently.

Summaries of conference findings and abstracts of the presentations are posted at the LEMN web site (http://venus.uwindsor.ca/erie2001/index.html). The proceedings for the first conference will appear in 2004 as a publication on the present and expected future state of Lake Erie, entitled *Lake Erie at the Millennium - Changes, Trends, and Trajectories*, published by Canadian Scholars' Press.

Since the initial workshops and 1999 conference, presenting scientists and co-conveners have participated in a series of 'research needs' workshops with the aim of developing a research strategy that will address each of the most pressing research issues, at the same time generating data needed to resolve uncertainties in the fundamental management issues (monitoring). Three workshop series have been convened to date. Meeting agendas, summaries of presentations and findings are posted at the LEMN web site. The topics included:

Eutrophication and limits to production in Lake Erie

- *Energy Limitation at the Base of the Food Web*, Grosse Ile, Michigan, September 1999 (hosted by the Large Lakes Research Lab of U.S. EPA)
- *Energy Limitation at the Base of the Food Web - Re-evaluation*, University of Windsor, November 2003

Contamination Processes in Lake Erie

- *Trends, Loadings, and Spatial Patterns-Compartments*, Presque Isle State Park, Erie Pennsylvania, September 2000 (sponsored by Pennsylvania Department of Environmental Protection and Pennsylvania Sea Grant)
- *Mechanisms and Processes* (forthcoming)
- *Ecosystem Implications* (forthcoming)

Habitat

- *Planning needs for a research strategy to understand habitats in the Lake Erie basin,* University of Windsor, May 2002
- *Development of an integrated habitat classification system for the Lake Erie basin,* University of Windsor, December 2002
- *Restoring and maintaining ecosystem integrity of habitats in the Lake Erie basin,* Windsor, February 2003 (sponsored by U.S. EPA)
- *Evaluating impacts of urban development and agriculture on natural habitats* (forthcoming)

Each of the workshop series has resulted in the generation of research plans that have formed the foundation for proposals submitted to granting agencies.

The first research needs workshop, held in 1999, addressed eutrophication and limits on production at the base of the food web. Participants proposed a series of investigations to distinguish whether phosphorus concentrations in the lake were being regulated most strongly by changes in amounts of phosphorus entering the lake, physical limnological processes, or changes in the food web (notably zebra mussels). When surprisingly high concentrations of phosphorus were reported at the 2001 LEMN binational conference, the U.S. EPA called for a coordinated research initiative to investigate the possible causes. This led to U.S. EPA providing funding and many Network researchers undertaking the previously proposed research plan. It is expected the findings will help explain the causes of increasing spring phosphorus concentrations in the water and whether episodes of anoxia in the central basin are due to known processes or possibly to new changes in the food web.

On the recommendation of the contamination processes workshop, an extensive review was commissioned to evaluate how persistent contaminants are transferred from Lake Erie sediments to resident biota (Gewurtz and Diamond 2004). Several proposals written to address recommendations of the workshop have been submitted to funding agencies, with limited success to date.

The habitat research workshop panel has proposed adoption of a single, integrated classification scheme and map of the entire Lake Erie basin that would summarize the kinds

and quality of habitats using common terminology and units. Proposals written to request funding for pilot scale evaluation of the classification have not yet been successful.

A long-term goal of the LEMN is to develop and submit two linked research proposals. One will be sent to the Natural Sciences and Engineering Research Council of Canada to form a Great Lakes Research Network. The second will be submitted to the U.S. EPA Science to Achieve Results (STAR) Ecosystem Protection Research program or other suitable funding source. Explicit in the goals of the research program will be the need for longer-term (four to five year horizon) commitment to the collection, compilation, interpretation and application of data to test specific, well-designed *a priori* hypotheses. Proposals will emphasize the time frame required to implement scientifically sound work. Because the sponsoring agencies will have been involved in identifying the questions and needs, their active support as funding and/or in-kind partners is anticipated. This form of partnership underlies the spirit of research network programs both in Canada and the U.S.

The LEMN has attracted broad participation. Agency managers devote resources for meetings and workshops because they can provide input and receive relevant answers. Researchers gain access to critical data by working with monitoring agencies, have good prospects of receiving support for their investigations, and know that their results will reach those who can influence policy. Most importantly, researchers can take an integrated view of the critical issues and questions.

12.3 Lake Erie LaMP 2004 Work Plan

Outlined in Table 12.1 are projects and programs that the Lake Erie LaMP plans to pursue over the short term (2004-2006) and long term (2004-2010). The work plan is limited to those projects over which the Lake Erie LaMP has control, and does not include those programs implemented by partner agencies under other program mandates. However, LaMP partner programs are key to the successful implementation of the LaMP, and the LaMP partners are encouraged to develop, implement and track agency-specific work plans in support of LaMP goals.

12.4 References

Gewurtz, S.B. and M.L. Diamond. 2004. Distribution and burdens of bioaccumulative contaminants in the Lake Erie food web: A review. Environmental Reviews 12: in press.

Photo: Upper Thames River Conservation Authority

Table 12.1: Lake Erie LaMP Work Plan 2004 - 2010

	Deliverable	Completion	Status
1	***Ecosystem Objectives, Indicators, and Beneficial Use Impairments***		
a	In response to changing ecosystem conditions, re-assess the status of beneficial use impairments and clearly identify causes of the impairment.	2010	Ongoing
b	Conduct a gap analysis to determine the adequacy of existing programs to restore beneficial use impairments.	2006	Ongoing
c	Complete an inventory of activities that support Lake Erie LaMP Objectives.	2006	New
d	Examine existing management strategies for tributaries in the Lake Erie basin, watershed and sub-watershed management plans, and relevant policies and legislation gaps that need to be addressed to meet Lake Erie LaMP objectives.	2010	New
e	Develop targets to work towards in terms of habitat and biodiversity protection in the Lake Erie basin through LaMP indicators process.	2010	New
f	Provide input to RAP teams working on AOCs on the testing and outcomes of Lake Erie LaMP indicators.	2010	New
g	Complete selection of recommended Ecosystem Management Indicators.	2006	Ongoing
h	Define endpoints for recommended Ecosystem Management Indicators.	2008	New
i	Develop monitoring protocol for completed Ecosystem Management Indicators.	2008	New
2	***Land Use Objective: All land use activities result in gains in the quantity and quality of natural habitat in order to support the maximum amount of native biodiversity and community integrity that can be achieved and be sustained for the benefit of future generations***		
a	Network with other groups to identify existing protected areas and possibilities for expanding the protected areas network.	2006	Ongoing
b	Identify existing special management zones/protection measures for lake use (e.g. boating, hunting, and dredging restrictions) designated by all government agencies.	2006	Ongoing
c	Support opportunities for the establishment of appropriate conservation areas in Lake Erie.	2006	New
d	Encourage protection of more natural areas in the Lake Erie basin.	2006	New
e	Determine research needs, information gaps and additional programs to further habitat protection/restoration and improve habitat function through the Lake Erie Millennium Network.	2006	Ongoing
f	Encourage better management practices in landscapes containing natural areas or in buffer zones surrounding natural areas. Implement measures to address erosion and runoff, reduce nutrient loadings, and pesticide use in the basin.	2006	Ongoing
g	Establish more functional linkages between protected areas throughout the watershed, particularly in priority watersheds.	2006	New
h	Characterize submerged moraines such as the Norfolk moraine.	2008	New
i	Establish an emergency response framework to protect key habitats in the Lake Erie basin from development pressures and emerging issues.	2006	New
j	Identify and focus efforts on Thames and Grand River watersheds and work to ensure that management plans adequately address lake-effect zones of tributaries along with headwater and upper tributary sections. Monitor before, during and after restoration	2006	New

	Deliverable	Completion	Status
k	Prepare status reports for priority watersheds that outline the current status of the ecosystem including headwater and upper reaches of the tributary. Encourage work in headwater areas although this will not be focus of LaMP efforts.	2006	New
l	Identify and characterize the condition of priority habitats for restoration work. Determine where Lake Erie LaMP habitat priorities match or overlap with priorities and objectives of other habitat protection and restoration initiatives.	2006	New
m	Identify any restoration and rehabilitation efforts already recommended or underway in Lake Erie basin, particularly in priority watersheds. Link to Inventory of Activities.	2006	New
n	Adopt a habitat classification system. Use standardized habitat zones and biologically defensible classifications that reflect functional use and interrelationships of each watershed and the Lake Erie basin as a whole.	2008	New
o	Incorporate biodiversity layers and physiographic layers into a binational map and use to help identify areas for protection/restoration and monitoring.	2008	New
p	Identify Lake Erie and associated watersheds in terms of focal or refuge habitats, adjunct habitats, nodal habitats, source areas, and degraded habitats and integrate into binational map.	2008	New
q	Use elements of the binational map with information at the appropriate scale in land use zoning and setting restoration priorities across the Lake Erie basin.	2008	New
3	***Nutrient Objective: Nutrient inputs from both point and non-point sources be managed to ensure that ambient concentrations are within bounds of sustainable watershed management and consistent with the Lake Erie Vision***		
a	Promote the implementation of land owner incentive programs to encourage agricultural best management practices.	2006	Ongoing
b	Promote the implementation of programs to protect groundwater and surface water.	2006	Ongoing
4	***Natural Resource Use and Disturbance Objective: Natural resource uses be managed to ensure that the integrity of existing healthy communities be maintained and/or improved, and provide benefits to consumers.***		
a	Using new techniques in fish stock assessment assess the status of fish stocks in Lake Erie and increase OMNR's in-house competency.	2006	New
b	Promote the implementation of programs to ensure wise stewardship of natural resources and protect the environment in permitting and regulating the extraction of sand, gravel and topsoil by the surface mining method (e.g. Pennsylvania).	2006	New
5	***Chemical Contaminants Objective: Toxic chemical contaminant concentrations within the basin be virtually eliminated.***		
a	Determine process for identifying new critical pollutants (including emerging chemicals) for Lake Erie.	2006	New
b	In partnership with the GLBTS, agencies will promote energy conservation program (e.g., U.S. side: U.S. EPA Energy Star Program) within the Lake Erie basin.	2006	Ongoing
c	In partnership with the GLBTS, agencies will seek funding to initiate or continue household and agricultural clean sweeps and hazardous waste (HAHW) collection depots in the largest Lake Erie basin cities.	2006	Ongoing

	Deliverable	Completion	Status
d	In partnership with the GLBTS, U.S. agencies will seek funding to initiate and continue Lake Erie basin HAHW education programs that will include information about how individuals can practice home environmental stewardship and how to identify HAHW.	2006	Ongoing
e	Produce binational sediment mapping report including a summary of the findings of the sediment workshop held in 2002.	2006	Ongoing
f	Through the United States Geological Survey, undertake a basin-wide initiative to map fish tissue contaminant data, similar to the sediment mapping effort.	2006	Ongoing
g	Calculate a Sediment Quality Index (SQI) for the sediment quality data across the basin.	2006	New
h	Communicate sediment quality results to AOCs.	2006	New
i	Complete an analysis of source contaminants information in the basin to assess if monitoring gaps exist (e.g., sources with no nearby monitoring data) or if there are sites of unexplained environmental quality (e.g., hot spots with no known sources).	2008	New
6	***Non-native Invasive Species (NIS) Objective: Non-native invasive species be prevented from colonizing the Lake Erie ecosystem. Existing invasive species be controlled and reduced where feasible and consistent with other objectives.***		
a	Identify initiatives, policy/legislation, and remedial options available for aquatic and terrestrial non-native invasive species in the Lake Erie basin.	2006	New
b	Promote the development and implementation of legislation and policies protecting Lake Erie from further invasions.	2006	New
c	Publicize the need for protection against further NIS introductions by holding workshops and information sessions at key forums.	2006	Ongoing
d	Facilitate preparation of educational materials for the public and elected officials.	2006	New
e	Continue to track the spread of zebra mussels in Pennsylvania. Artificial substrate samplers are deployed in significant PA lakes and monitored throughout the summer growing season for the presence of settled post-larval mussels.	2006	Ongoing
f	Through the Pennsylvania Invasive Species Council develop and implement an invasive species management plan, provide guidance on prevention, control, and rapid response initiatives, and facilitate coordination among regional, federal, state, and local efforts.	2006	New
7	***Science and Monitoring***		
a	Develop and implement a binational monitoring plan for Lake Erie, facilitating cooperative monitoring that will focus on the needs of the LaMP (Cooperative Monitoring Year).	2006	New
b	Support Lake Erie Millennium Network.	2006	Ongoing
c	Monitor progress in habitat protection and restoration on Lake Erie through existing programs and newly created programs.	2006	New
d	Use combination of GIS-based tools and maps, decision-support systems, and selected indicators relevant to habitat and ecosystem function to evaluate progress in protecting habitats.	2010	New
e	Review adoption/implementation of habitat guidelines and natural heritage plans by municipalities in priority watersheds and elsewhere in the Lake Erie basin.	2006	New

	Deliverable	Completion	Status
f	Use indicators and targets developed by the indicator process to monitor habitats and changing land use at the appropriate scale (e.g. watershed, subwatershed) and by various habitat zones and types.	2010	New
g	Continue to track the progress of the Great Lakes Binational Toxics Strategy (GLBTS) program in regard to actions that may reduce loadings of the Lake Erie pollutants of concern.	2006	Ongoing
h	Develop a 5-year priority research plan for Lake Erie.	2006	New
8	***LaMP Program Management***		
a	Undertake a membership review of WG and MC as LaMP moves towards implementation.	2006	New
b	Complete an "orientation package" for new members of the WG and MC.	2006	New
9	***Communication and Public Involvement***		
a	Complete communication products for Vision and Ecosystem Management Objectives.	2006	New
b	Host a RAP / LaMP "sharing experiences" technical workshop.	2006	New
c	Complete "Lake Erie Update" publication for 2005.	2006	Ongoing
d	Provide support to the Lake Erie Public Forum so they can continue to provide input and support to the Lake Erie LaMP process.	2006	Ongoing
e	Raise awareness of Lake Erie LaMP among watershed municipalities. Prepare a short (5-10 minute) presentation about the LaMP.	2006	Ongoing
f	Notify agency offices in the Lake Erie basin of LaMP habitat protection and rehabilitation priorities to encourage more funding for rehabilitation work.	2006	Ongoing
g	Provide input, from a Lake Erie perspective, to habitat protection and restoration efforts in the 12 AOCs in the Lake Erie basin.	2006	Ongoing
h	Facilitate and encourage the adoption of sustainable land use practices in priority watersheds and throughout the basin.	2006	Ongoing
i	Communicate and explain goals and targets of land use/ habitat components of Lake Erie LaMP to local stakeholders.	2006	New
j	Network with individuals implementing federal, state/provincial agricultural best management practices programs.	2006	Ongoing
k	Develop and distribute brochures, CDs, and/or fact sheets for priority watersheds. Coordinate where possible, with existing watershed, habitat stewardship or lake programs.	2006	Ongoing
l	Communicate habitat protection and restoration success stories in the Lake Erie basin. Link reporting with existing stewardship activities/programs where possible.	2006	New
m	Develop a 4 to 6 page summary of broad-scale impacts of non-native invasive species on habitats in the Lake Erie basin in cooperation with LaMP partners.	2006	New
n	Catalogue existing habitat protection and restoration information, and put together a "habitat toolbox" for distribution.	2008	New