



Lake Ontario Lakewide Management Plan

The Lake Ontario Lakewide Management Plan (LaMP) is in year two of a five year workplan, all part of the long-term goal to restore and protect Lake Ontario. The LaMP focuses on achieving progress through partnership, and works through its partner agencies and others to coordinate environmental efforts, encourage stewardship, and monitor progress.

lake through air deposition. These are just some of the things you will read about in this *LaMP Update 2004*. Also included is an update on the Remedial Action Plans (RAPs) for the Areas of Concern (AOCs) around the lake. You'll also read about the value of stewardship as illustrated by the success of pesticide collection programs on both sides of the border.

In 2003, the LaMP continued its work to better understand the lower aquatic foodweb. Sampling also continued on a binational study to better understand the amount of contamination entering the

As always, the LaMP encourages partnership. If you or your organization/agency would like to get involved with the LaMP, feel free to contact us through the addresses provided.

LAKE ONTARIO LAKELAKE MANAGEMENT PLAN UPDATE '04

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Burn It Smart!

It was cold, it was dark and yet in February, during the middle of the work week, hundreds came out to learn about proper wood burning in woodstoves and why not to burn garbage in their backyards.

The organizers scrambled to find more chairs for the overflow crowds that turned out for the **Burn it Smart** Workshops that were held across Eastern Ontario and around the Lake Ontario basin. The workshop locations were a hub of activity as Wood Energy Transfer Technologists provided information about woodstove changeover to limit smoke and airborne pollutants. Participants also viewed a demonstration on woodstoves outside at the burn display trailer.

The **Burn it Smart** campaign was initially developed by Natural Resources Canada to promote the more efficient, safe and healthier use of wood for home heating and enjoyment. The Eastern Ontario **Burn it Smart** workshop series was organized by the Wood Heat Organization Inc., a non-profit group that promotes the responsible use of wood fuel at home. Support for the Workshops was provided by the Ministry of the Environment and Environment Canada, the two Canadian partners of the four parties under the Lake Ontario Lakewide Management Plan (LaMP). The reduction of airborne pollutants within the Lake Ontario basin and, in particular, the reduction of dioxins and furans is a focus of the LaMP under the area of critical pollutants.

The **Burn it Smart** Workshop series is an example of partnerships that work to help protect and restore Lake Ontario. The participation of sponsors and local partners helped to publicize the workshops and complemented the seed money provided through a contribution agreement with Environment Canada, Ontario Region. "We are really pleased that some of the leading companies in wood heating have come on board as sponsors", says John Gulland of the Wood Heat Organization Inc. "And working with the Ontario Ministry of Environment and the Wood Energy Technical Training people has been a real pleasure."



Participants view the demonstration at the burn trailer showing proper use of woodstoves.

Photo: J. Gulland.

Did you know...That you should not burn garbage in woodstoves or in backyard burn barrels?

The chemical dioxin produced by burning garbage in woodstoves (and in backyard burn barrels) is emitted through smoke and is also concentrated in the residual ash. The burning of garbage at home or at the cottage is the fifth largest known source of dioxins in Canada.

Please don't burn:

- Garbage of any kind
- Treated, painted or coated wood
- Plywood or particle board
- Railroad ties

Burn responsibly...Burn it Smart!



Agricultural Pesticide Collection Events

- **Agricultural Pesticide Collection Events**
- **Public Meeting**

Over the previous decade, both the United States and Canada have made significant efforts to reduce and eliminate stores of unwanted and/or unusable agricultural pesticides by holding a series of pesticide collection events. Pesticides may become unusable due to changes in registration status; altered farming practices, or land ownership (e.g.: inheritance by non-farmers); improper storage; regulatory bans; expiry or the loss of a label. These stored pesticides - which can include LaMP critical pollutants such as DDT, dieldrin, and mercury-based pesticides, are a potential non-point source pollution threat within the Lake Ontario basin.

In addition to the collection of old pesticides, recent pesticide use habits by the public and the agricultural community have reduced the overall use of chemicals and the amount of unwanted pesticides being stored. Pesticide manufacturers and distributors often accept the return of unused materials. In some areas, there is also a trend towards organic farming or the hiring of custom/commercial applicators and away from farmers applying pesticides, thus reducing the potential for over application of pesticide products and for the generation of unwanted pesticides.

Past collection programs have largely targeted the agricultural sector. Most commonly, stationary sites are chosen to which participants transport their pesticides on appointed collection days. Some collections in the U.S. have utilized the "milk-run" method, in which a contractor travels to each participant's property to collect their unwanted pesticides. In addition, a small number of permanent facilities exist which will accept unwanted pesticides throughout the year - usually charging a fee for the cost of disposal.

Both Canadian and American efforts have been very successful. Seven series of collections have occurred in

the province of Ontario since 1990, which have reported the total collection of over 524,795 kg/1,154,549lb of pesticides. Many of these collections have included areas within the Lake Ontario basin.

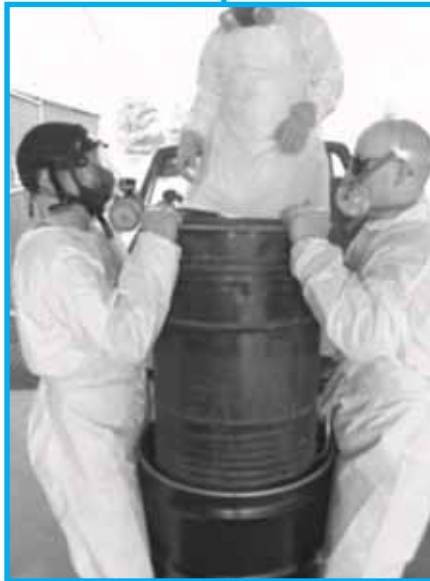
Efforts in the United States have occurred primarily on a county level, with some multi-county efforts. The earliest collections were in the mid-1980's, with collections increasing over time. New York State counties have reported collecting over 269,246 kg/592,341 lb of pesticides from as many as 1065 participants. Collections on both sides of the border have received a wide variety of pesticides, including chlorinated pesticides such as DDT and chlordane, as well as arsenites, mercury-based pesticides, methoxychlor, lindane, malathion, and others.

Funding for collection programs has been provided by a variety of sponsors in Ontario and New York, including federal, state/provincial, county/township, and city governments. Some Canadian efforts have also been partially funded by private and industrial sources.

Although future pesticide collection programs will be needed in both Ontario and New York, the U.S. and Canada consider their collection efforts to date as having been a great success. Collection programs not only reduce the potential risks that improperly stored, unwanted,

surplus or expired pesticides pose to surface and groundwater supplies; these programs accomplish this goal without tremendous cost to farmers and other agricultural pesticide users.

Future LaMP efforts will continue to utilize agricultural pesticide collections as a tool to reduce critical pollutants in the Lake Ontario basin.



Agricultural pesticide collection events have been successful at reducing stores of unwanted or unusable pesticides in rural communities. Photo: USEPA.

Lake Ontario LaMP Public Meeting

The LaMP does not plan to have an annual joint public meeting with the NRTMP this year. As reported last year, the LaMP has begun revising its public information strategy to better focus on reaching the various individual stakeholders and interested groups around the Lake Ontario basin and the Niagara River. We are developing a variety of outreach techniques, some of which are described in the article on page 6, to accomplish this goal. In addition to participating in public meetings around the basin, the Lake Ontario LaMP Update and Niagara River Toxic Management Plan reports will continue to be distributed. For further information, or to join our mailing list, please refer to one of our offices as indicated on page 8 of this Update.

Cooperative Monitoring Progress

The Lake Ontario Lakewide Management Plan (LaMP) coordinated three major binational cooperative monitoring efforts in 2003 to improve our understanding of the Lake Ontario ecosystem. They are the Lake Ontario Atmospheric Deposition Study, the Lake Ontario Lower Aquatic Foodweb Assessment, and the Interagency Laboratory Comparison Study.

The Lake Ontario Atmospheric Deposition Study (LOADS) is important because atmospheric deposition is a major source of critical pollutants entering Lake Ontario. This project is developing a more detailed understanding of atmospheric deposition processes within the Lake Ontario basin and may provide information on the relative importance of local and long distance sources of atmospheric contaminants. The results of this study will support the development of contaminant loading mass balance models that are being used to predict how changes in contaminant loadings will impact contaminant levels in fish tissue.

Pesticides, PCBs, dioxins/furans and mercury were measured in air and wet and dry precipitation samples collected from sampling platforms on land and on the lake. Lake water samples were also collected. This work will give the LaMP a better understanding of how contaminants enter and leave the lake via atmospheric processes.

The field and analytical work for the two cruises in 2002 and the 2003 cruise, as well as the land based monitoring, are complete.

Preliminary analysis is now being done with the mercury data collected. Both total gaseous mercury (TGM) and reactive gaseous mercury (RGM) were monitored from the ship and also the Sterling, N.Y. land-based site. RGM is an indicator of local sources and lasts 1-2 days in the atmosphere. The measurements indicate that RGM was at higher levels when the ship was in the vicinity of a major urban area. Source trajectory models point out that reactive gaseous mercury is often indicative of local sources such as coal fired power plants. Analysis of the data will continue to be done during 2004. The preliminary report is expected in Spring 2005.

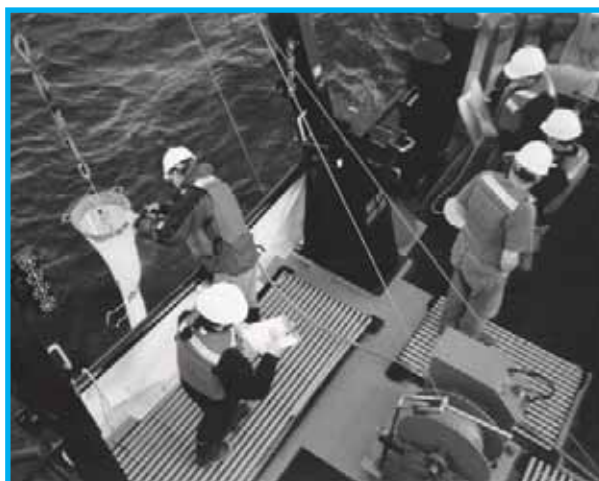
The Lake Ontario Lower Aquatic Foodweb Assessment (LOLA) is developing a better understanding of the changes that are occurring in Lake Ontario's lower aquatic foodweb and its ability to support fish populations. The introduction of exotic species such as zebra and quagga mussels has changed the way nutrients are cycled through Lake Ontario's foodweb impacting the productivity of fisheries and threatening efforts to restore naturally reproducing populations of native fish. Recently introduced exotic zooplankton may also negatively impact native zooplankton communities but the potential impact is not well understood. The LaMP

recently listed two new lakewide impairments: degraded benthos and degraded nearshore phytoplankton, related to the disruption of the foodweb by zebra and quagga mussels. The LaMP and the Great Lakes Fisheries Commission both agree that the need for better information on the lower foodweb is a high priority.

Four sampling cruises were conducted in 2003, sampling approximately 30 stations per cruise. Nutrient, phytoplankton, zooplankton, mysids and benthic samples were collected. Data interpretation and report writing will be coordinated among U.S. and Canadian partners. Pre-zebra mussel lower aquatic foodweb surveys conducted in the 1980s will provide a historical point of comparison for these results.

The third cooperative monitoring project, the Interagency Laboratory Comparison Study is helping us to understand differences in analytical and sampling methods. Accurately measuring extremely low, parts per trillion, concentrations of critical pollutants is very difficult. The use of different sampling methods and laboratory techniques may provide different results for the same sample due to slight differences in the ability of various methods to capture and measure contaminants. This project was designed to give the LaMP a better understanding of how well the analytical results produced by U.S. and Canadian monitoring programs compare with each other and would allow the Four Parties to combine their data sets with confidence to better characterize the lakewide environmental conditions.

Samples containing PCBs, pesticides and PAHs were carefully prepared in the lab and split four ways, then analyzed by laboratories that perform analytical work for the Four Parties. The results are now being carefully reviewed to identify any data comparability issues. Later stages of this study will include the collection and analysis of actual field samples at Niagara-on-the-Lake.



Monitoring activities from the deck of the Lake Guardian. Photo: USEPA.

- **Cooperative Monitoring Progress**

Lake Ontario Areas of Concern Update 2004

- **Lake Ontario Areas of Concern Update**

Introduction

There are nine Areas of Concern (AOCs) identified around Lake Ontario. Two of these AOCs are binational. For each AOC the Remedial Action Plan (RAP) process strives to: identify environmental problems, causes, and sources; implement remedial strategies to restore the beneficial uses; and document progress towards the ultimate goal of delisting.

Binational Areas of Concern

Niagara River: For the U.S. side of the Niagara River, AOC priority activities address: stream water quality; inactive hazardous waste site remediation; fish and wildlife habitat improvements; and, enhanced environmental monitoring activities. A million dollar habitat restoration project has been funded for Strawberry Island. The recent International Joint Commission Status Assessment report attributes significant progress to the Niagara River Toxics Management Plan.

For the Canadian side of the AOC, actions focus on combined sewer overflow (CSO) treatment; non-point source control; and habitat restoration. A management strategy for contaminated sediments at Lyons Creek East is under development. A number of the RAP's beneficial use impairments and restoration targets are also being reassessed. Once assessments are complete, a comprehensive remediation timeframe and budget will be developed for the RAP. Full implementation of required actions will take many years. The Region of Niagara has recently completed its Water Quality Protection Strategy, which when implemented will compliment RAP objectives and actions.

St. Lawrence River: The Canadian RAP (Cornwall) is close to completing all actions. However, implementation of a management strategy for contaminated sediments in the river at Cornwall is essential to completing all actions by 2007. Stormwater management and infrastructure improvements may need additional funding. A monitoring strategy is being developed. Recovery requirements will determine the timing of delisting.

The Massena RAP (U.S.) Strategies involve completing the land-based and contaminated river sediment remediation, conducting further investigations, and reassessing use impairment status in light of remedial progress and additional study results. Accomplishments include significant progress in all land-based and contaminated river sediment remediation. Fund raising continues for the construction of the St. Lawrence Aquarium and Ecological Center (SLAEC). The current RAP Status Report includes delisting criteria for the AOC and is to be updated in 2004. The RAP Remedial Advisory Committee is currently focusing on the identification of endpoints for establishing delisting criteria and goals.

U.S. Areas of Concern

Eighteenmile Creek: A Status Report was completed in June 2001. Currently, RAP activities are focused on continuing the investigation and assessment of creek sediments; evaluating possible sources of PCBs and other contaminants in the watershed; remediating inactive hazardous waste sites; correcting combined sewer overflows (CSOs); and continuing surveillance activities. A recent USACE grant awarded to Niagara County Department of Planning, Development, and Tourism focuses on various projects on habitat restoration and watershed management to benefit the AOC. The projects provide for streambank stability, sediment assessment, best management practices, and community outreach. An EPA funded investigative study and report of the plankton community was completed by SUNY College at Brockport and determined no impairment. At an October 2003 RAP Workshop, the Remedial Advisory Committee decided to explore next step opportunities for the RAP.

Rochester Embayment: Starting October 2003, Monroe County received EPA funding to provide RAP coordination. The focus is on research, priority project implementation, and delisting considerations. Current projects address non-point sources, habitat restoration and watershed open space improvements. The most recent RAP report is the December 2002 RAP addendum. To address the algae and nutrient issues a workshop was conducted and followed up by a conference on the "troubled coastline". The Water Education Collaborative coordinates public involvement.

Oswego River: The resolution of the Oswego RAP use impairments is based on elimination of any contamination sources specific to the AOC and issuance of the Federal Energy Regulatory Commission (FERC) power dam license. The delisting strategy relies on the responsibility for resolving the larger (non-AOC) concerns by the appropriate oversight agency programs. For instance, because the fish consumption advisory is lakewide and not specific to the AOC, it is to be addressed by the Lake Ontario Lakewide Management Plan. The fish habitat and population concerns are to be addressed by the FERC license. This is consistent with federal delisting criteria and supported by NYSDEC's Priority Waterbody Listing (PWL) in conjunction with the federal listing guidelines, the new Watershed Restoration and Protection Strategies (WRAPS) initiative, and New York's Fish Health Advisory. Together, these responsible and appropriate agency programs address the non-AOC sources and larger watershed concerns that are beyond the RAP scope. A delisting proposal is being prepared for a formal public comment period. Comprehensive agency review processes are underway.

Canadian Areas of Concern

Hamilton Harbour: The updated Stage 2 document was submitted to the International Joint Commission (IJC) in September 2003. Municipal funding for required

AOC Updates Continued...

infrastructure upgrades for Wastewater Treatment Plants and CSOs, is contingent on federal-provincial infrastructure resources being secured. Local politicians (including mayors, Members of Parliament, and Members of Provincial Parliament) have proposed a separate, tri-partite, multi-year funding arrangement, since approximately \$600M will be required for municipal infrastructure upgrades. Strategies to increase the diversity of the existing fish populations are being developed. A management strategy for dealing with Randle Reef contaminated sediments has been prepared and efforts are underway to acquire funding for remediation.

Toronto and Region: Wet weather flow management and habitat restoration/protection are the two priorities for this AOC. Significant infrastructure funding is required to meet RAP targets. For example, \$12 billion is required for the City of Toronto for wet weather flow alone. While the City has committed \$1 billion (\$40 million per year over 25 years), long term federal-provincial funding support for infrastructure upgrades is being sought. A plan is being developed to revitalise the Toronto waterfront, including specific improvements to both aquatic and terrestrial ecological attributes of the harbour, which will significantly advance the goals of the RAP.

Port Hope: In 2001, a 10-year, \$260M Port Hope Area Initiative began to clean up and manage low level radioactive waste (LLRW) within the Port Hope area, including the harbour. The Low-Level Radioactive Waste Management Office of Natural Resources Canada is the lead for the Initiative and is working in co-operation with Environment Canada to address the remediation of Port Hope Harbour. Year two of a five year environmental assessment is underway. Progress will be dependent on the selection and approval of an appropriate waste facility but removal and containment of contaminated harbour sediments is not expected until 2011.

Bay of Quinte: A number of the beneficial use impairments and restoration targets are currently being reassessed (e.g. fish tumours and other deformities and beach closings). Measurable delisting criteria for the fish and wildlife habitat and populations impairments have yet to be set. A wildlife strategy is being developed and will help in determining progress against these impairments. A fisheries habitat management plan is also being developed to protect existing high-quality habitats from future development and restore degraded habitats. Fish community changes that have resulted from increased water clarity (reduced phosphorus and mussel invasions) are being studied. A monitoring strategy will be developed and recovery requirements will determine the timing of delisting. A phosphorous loading model, currently under development, will be the key to establishing phosphorous targets for the Bay. If studies indicate that phosphorous loadings can be managed and capped, management strategies are in place, and fish and wildlife habitat and population impairments are favourably assessed, recognition of this AOC as an "Area in Recovery" by 2007 could occur with concentrated efforts by agencies and adequate funding.



Picton Harbour is in the Bay of Quinte Area of Concern. Photo: Environment Canada.

- **The New Look of LaMP Biennial Reports**

The New Look of LaMP Biennial Reports

The Lake Ontario Lakewide Management Plan has adopted a new way of keeping its agency partners and the International Joint Commission informed of progress. Starting in 2004, the Lake Ontario LaMP will use a "virtual binder" format for reporting all technical and workplan information. This new format was chosen by the Great Lakes Binational Executive Committee (BEC), the group of senior government representatives to the Great Lakes Water Quality Agreement.

The LaMP 2004 amalgamates existing information from previous LaMP reports, and provides some updates to longer-term, on-going activities. The new format uses the Stage 1 report of 1998 as its base, along with other reports up to 2003. It outlines the LaMP background, beneficial use impairments, sources and loadings of critical

pollutants, and ecosystem goals, objectives and indicators. It also reviews habitat restoration, human health considerations, and emerging issues. The full five-year LaMP workplan is also included in this document.

This LaMP 2004 is the first "virtual binder" for the Lake Ontario LaMP and represents the format that will be used in coming years. The new binder is considered a living document for partner-agency use, and will be updated regularly and submitted to the International Joint Commission every two years. Copies of the LaMP 2004 were distributed to agency partners and the IJC on Earth Day April 22, 2004.

For more information about the report, contact Marlene O'Brien, Environment Canada or Mike Basile, USEPA.

- **Lake Ontario Mass Balance Model Update**
- **Lake Ontario LaMP Public Involvement and Outreach**

Lake Ontario Mass Balance Model Update

Monitoring progress is one important component of the Lake Ontario LaMP. Existing air, water and sediment monitoring programs and studies on both sides of the border, can provide an estimate of the levels of contaminants currently going into Lake Ontario. Scientists have now gone one step beyond. By incorporating historical trends and current data into computer modeling, a “mass balance” of a contaminant's input and output to the lake can be established. By comparing results for various load reduction scenarios to Lake Ontario, the relative importance of inputs (source loads) can be evaluated.



In the late 1990s EPA funded the University at Buffalo to lead the effort to develop the LOTOX mass balance model for predicting future levels of PCBs in Lake Ontario. The model was also designed to predict how current and projected levels of total PCBs in the lake affect the bioaccumulation of PCBs in the fish tissue of Lake Ontario Lake Trout. By running the model for multiple years, trends over time can be forecast. These predictions can help managers assess the most effective strategies to reduce contamination in fish.

The LOTOX modeling for PCBs was effectively completed in January 2004. We know already that concentration levels of PCBs in the lake, and in Lake

Trout, have decreased significantly in response to control measures implemented in Canada and the United States in the 1970s. The good news is that these declining trends are projected to continue. However, the mass balance model shows that in spite of control measures and reductions, it may take at least fifty years for the Lake Trout to reach the fish flesh concentration goal.

The PCB levels in the lake and its biota are largely controlled by three main inputs: existing contaminated sediments, air pollution, and water from Lake Erie. Lake Ontario sediments are historically contaminated with PCBs and this reservoir provides the primary source of contamination to the waters and fish of Lake Ontario. Air deposition and the waters from Lake Erie are other significant sources of PCBs to Lake Ontario. Reducing these inputs will depend, in part, on other Great Lakes programs (such as the Canada-Ontario Agreement, the U.S. Great Lakes Strategy and the Great Lakes Binational Toxics Strategy) and other national, binational and global initiatives that address persistent toxics reductions.

Photo: Monitoring air deposition of contaminants in Lake Ontario. Credit: USEPA.

Lake Ontario LaMP Public Involvement and Outreach

Did you know that ships are an important part of Lake Ontario LaMP outreach and public involvement? They are, but not the kind that you find in the lake - we're talking about stewardship and partnership.

This year the LaMP enhanced its focus on stewardship, encouraging people to be responsible for actions that might have an effect on the health of the lake. To that end, on the Canadian side of the basin, the governments of Canada and Ontario produced a Lake Ontario poster targeted toward Grade 7 and 8 students and teachers. While the front of the poster is an attractive graphic of the Canadian side of the basin, the back features nine panels with tips on how students (and their families) can take action to help protect the lake: in the home, in the yard, at the cottage, on the farm, on the street, and in the community. The poster also provides a list of web sites for more information on environmental protection. The posters were sent to all of the schools and libraries on the Canadian side of the basin with the intention that teachers could use these resources in their lesson plans.

The LaMP agencies are also looking at a number of other stewardship initiatives to be implemented in the coming year including activities around the outdoor burning of waste and pesticide reduction activities.

The LaMP continued to build on the important area of partnerships in 2003/2004. On the U.S. side of Lake Ontario, the USEPA held successful working media events aboard the USEPA's research vessel, The Lake Guardian, taking media from Rochester, Oswego and the Buffalo/Niagara region to witness first hand how scientists and academia team up to conduct a variety of sampling activities on Lake Ontario. During the 2002 and 2003 seasons, USEPA scientists were joined by researchers from Environment Canada, National Oceanic Atmospheric Administration (NOAA), Clarkson University, and State Universities at New York - Oswego and Fredonia on research cruises. The cruises focused on taking air deposition samples over 16-24 hour periods. Water samples were also collected to help evaluate changes occurring in the lake's lower foodweb and its ability to support fish populations.

The LaMP continues to reach out to many organizations each year, using displays and brochures to showcase its Four Party, basin-wide activities. The Four Party exhibit has been displayed at symposiums, fairs, forums and other events throughout the Lake Ontario basin.

Public Involvement and Outreach activities constantly evolve, based on the implementation activities going on in the lake. We hope that the outreach improvements presented here, enhance our efforts to reach out and we look forward to future changes and improvements.

Conserving Lake Ontario & Upper St. Lawrence River Bald Eagle Habitats: A LaMP Partnership in Action!

The Lake Ontario LaMP has adopted the bald eagle as one indicator that is used to track progress in restoring the Lake Ontario ecosystem. The challenge is to conserve sufficient suitable nesting and over wintering habitat and to limit human disturbance within existing eagle habitats to allow for the eagle's continued expansion throughout the Lake Ontario basin.

The bald eagle habitat project is designed to support the LaMP Objective that shoreline and inland bald eagle nesting territories be established and sustained through natural reproduction throughout the basin. The target for this objective is that all suitable habitat for bald eagle nesting be successfully utilized.

The project has been designed as a binational, multi-agency, partnership between: Bird Studies Canada; the Ontario Ministry of Natural Resources; the Canadian Wildlife Service; the New York State Department of Environmental Conservation; and the US Environmental Protection Agency.

Up-to-date information on bald eagle populations and habitats is limited in the Lake Ontario basin. One component of this project will focus efforts on the identification of historical and current nesting and over wintering habitats that could be slated for protection and rehabilitation efforts for bald eagle populations located along the Lake Ontario shoreline.

A second component of the project will be linked with research by the Ministry of Natural Resources, Bird Studies Canada and the Canadian Wildlife Service to evaluate population size and reproductive success. The Southern Ontario Bald Eagle Monitoring program on Lake Erie is well established and data and habitat characteristics of eagles on the Lake Erie shoreline will be used as a basis for evaluating the Lake Ontario shorelines. Satellite telemetry of juvenile birds from the lower Great

Lakes basin will be used to identify potential sources of exposure to heavy metals. Results from this work will be beneficial to both lakes in tracking potential contaminant sources that may be impacting Southern Ontario populations.

Ultimately, the project will seek to identify and prioritize the remaining high priority bald eagle nesting and over wintering habitat. Once this has been accomplished, the partners will seek to develop and implement selected conservation strategies, including the identification of site-specific habitat conservation projects with strong local government and conservation group partner support and involvement.

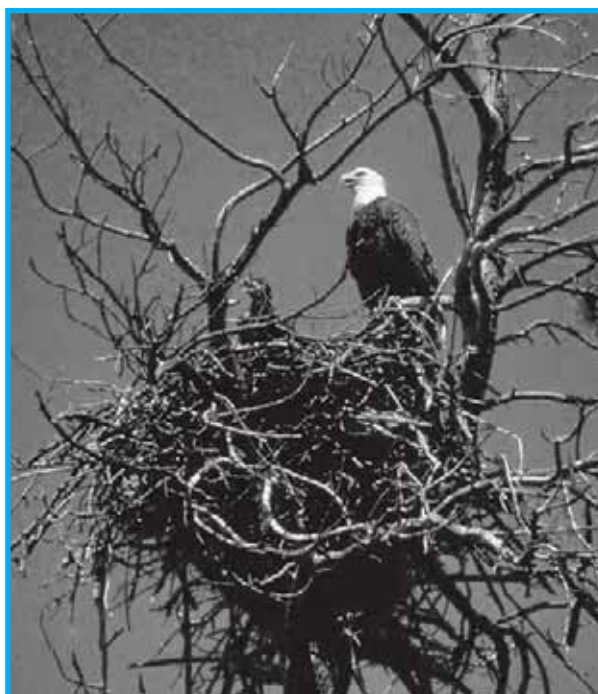


Photo: Don Simonelli, courtesy Michigan Travel Bureau.

Putting Together Pieces of the Contaminated Sediment Puzzle - Binational Sediment Workshop

Over the last few years, the Four Parties have independently undertaken a number of significant sediment surveys in Lake Ontario. While the studies addressed different pieces of the contaminated sediment issue, they were complimentary. Once the results of the surveys were in, there was a need to put the pieces of the contaminated sediment puzzle together. To that end, on March 4-5, 2004, sediment experts, as well as interested LaMP workgroup and management committee members participated in a binational sediment workshop which was held in East Aurora, New York.

The objectives of the workshop were to:

- share the results of recent open water sediment surveys as well as nearshore sediment investigations carried out by the Four Parties;
- improve our understanding of the nature and significance of sediment sources of critical pollutants to Lake Ontario; and
- reach consensus on next steps with respect to a binational sediment monitoring program.

A report summarizing the findings and conclusions of the workshop is being prepared and will be made available later this year.

- [Conserving Bald Eagle Habitat](#)
- [Binational Sediment Workshop](#)

- **Next Steps**
- **For More Information**

Next Steps

The Four Parties will continue efforts to restore and protect Lake Ontario and its biological resources. The LaMP workplan is a fundamental component in maintaining progress for this goal, and is now in the second year of its five year schedule.

Coordination of binational monitoring efforts, particularly those related to the LaMP's ecosystem indicators, will be a special area of emphasis in future years. The LaMP successfully completed a binational cooperative monitoring year in 2003 and will work to identify ways for U.S. and Canadian programs to conduct another intensive binational cooperative monitoring year in the future. The adoption of indicators to meet ecosystem goals and objectives lays out well-defined endpoints for the LaMP's restoration efforts, and a commitment to coordinated monitoring will build even stronger binational relationships necessary to achieve these ambitious goals.

Work will continue to restore beneficial use impairments through the LaMP. New and better approaches to pinpoint sources and deal with them are being used in trackdown activities in the tributaries to Lake Ontario. The implementation of remedial and pollution prevention actions will continue to reduce critical pollutant loadings to the lake.

Now that the LaMP has adopted a suite of ecosystem indicators, future work will focus on the collection and synthesis of information needed to report on the status of these indicators as part of future LaMP and SOLEC activities. The data collection and interpretation process will foster increased communication and coordination between U.S. and Canadian environmental programs. Partnerships with other scientific groups will be broadened to share data, conduct analyses, and assist with peer review.

In the area of habitat management, Canada will use its habitat assessment report and the U.S. will review its information base to identify priorities and follow up on recommendations. A binational habitat strategy for the LaMP will follow in future years.

Providing the public with a sound understanding of the complex problems facing the lake is the first step in gaining public support and participation in achieving the LaMP's goals. Ongoing activities include using opportunities to meet with existing groups, forming partnerships to assist in LaMP projects, and providing information when requested and regularly through the LaMP web site and mailings. We will continue to inform the public through reporting and public meetings, and will participate in other meetings such as SOLEC and International Joint Commission (IJC) biennial sessions.

The Lake Ontario ecosystem has seen many changes since the early beginnings of the Lake Ontario Toxics Management Plan through to the transition to the LaMP. Critical pollutant levels have declined dramatically since the mid 1970s and with our continued collective efforts, we will stay on the road to recovery.

We are looking forward to this next phase of progress for Lake Ontario and its ecosystem.

For More Information

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