2000 Annual Report



Great Lakes Commission des Grands Lacs

Vision

Our vision is a Great Lakes-St. Lawrence system that offers a prosperous economy, a healthy environment and a high quality of life for its citizens by applying sustainable development principles in the use, management and protection of water, land and other natural resources.

Mission

The Great Lakes Commission is a binational public agency dedicated to the use, management and protection of the water, land and other natural resources of the Great Lakes-St. Lawrence system. In partnership with the eight Great Lakes states and provinces of Ontario and Québec, the Commission applies sustainable development principles in addressing issues of resource management, environmental protection, transportation and sustainable development. The Commission provides accurate and objective information on public policy issues; an effective forum for developing and coordinating public policy; and a unified, systemwide voice to advocate member interests.

À nos lecteurs Francophones

La Commission des Grands Lacs a traduit pour vous, en collaboration avec le ministère des Relations internationales du Québec, certaines sections choisies de ce rapport annuel de l'année 2000. Vous trouverez ces informations sur le site Internet de la Commission des Grands Lacs, à l'adresse www.glc.org.

To our French-speaking readers

The Great Lakes Commission, in cooperation with Québec's ministère des Relations internationales, has translated selected portions of its 2000 Annual Report for your convenience. You will find the text on the Great Lakes Commission's web site at www.glc.org.

Copyright © 2000 Annual Report of the Great Lakes Commission, *Advisor* Special Edition, January/February 2001, Vol. 14 No. 1. Cover photo: Georgian Bay, Lake Huron. Credit: Kathy Sutton (courtesy of the Georgian Bay Association and Sutton Graphics). Printed on recycled paper.

MESSAGES FROM THE CHAIR AND VICE CHAIR

To paraphrase an old saying, success has a thousand parents! We can all feel proud of the Commission's achievements this past year under the leadership of our Immediate Past Chair Irene Brooks. On behalf of a grateful Commission and personally, thank you, Irene, for a job exceptionally well done!

All of you, our partners and supporters, contributed to our unprecedented success by advancing interjurisdictional and interregional cooperation; supporting our new five-year strategic plan; transforming the Commission into a true binational partnership with Ontario and Québec; and embarking on new initiatives, such as a major effort to develop a science-based, water resources decisionmaking system.

As proud as we are about what we have done, we enthusiastically look to a bright new future. Vice Chair Sam Speck and I are honored to be a part of these exciting and dynamic times as we work hard *to promote and ensure environmental and economic prosperity for the Great Lakes-St. Lawrence region.*

The Great Lakes region is a great place to live, work, play and do business. If we want to keep the Great Lakes region GREAT, each of us must make a personal commitment to work together to ensure our environmental and economic prosperity. If we are to prevail, *and we will*, participation must be inclusive! It is going to take the collective effort of the full team — our friends, colleagues, partners and stakeholders — operating at full performance, all working together to achieve a common goal!

Backed by a fine tradition, a rich heritage, a committed can-do team and hard work, we can effectively promote and ensure the reality of our shared vision of environmental and economic prosperity! With your continuing help, we can *and* will succeed!

It's an exciting time for the Great Lakes Commission. The decisions we make now will have a profound impact on generations to come. How do we safeguard our water resources to ensure their long-term sustainable use? How do we address the invasive species problem in an ecologically sound and economically responsible manner? And, how do we put principles of sustainable development into practice?

These are among the leading questions of our time, and the Great Lakes Commission has an integral role to play in addressing them. Now, more than ever, this region needs the Commission's research, data analysis, policy development and advocacy skills. And, it needs the Commission's unique ability to forge meaningful consensus among all regional interests. Thanks to Nat Robinson's leadership and the commitment of our state and provincial members, we have the motivation to succeed, and a rallying cry to direct it: let's all work together to ensure environmental and economic prosperity for the Great Lakes-St. Lawrence region!



Nathaniel E. Robinson, Chair



لمنتوع کی کسسما Samuel W. Speck, Vice Chair



Executive Committee



Chair: Nathaniel E. Robinson Wisconsin Member since 1992



Hon. Thomas E. Huntley Minnesota Member since 1993

Commissioners

Illinois

F. Ned Dikmen, Publisher, Great Lakes Boating Magazine

Anthony Ianello, Executive Director, IL International Port District

*Frank L. Kudrna, Chief Executive Officer, Kudrna & Associates, Ltd.

Brent Manning, Director, IL Dept. of Natural Resources

Pam McDonough, Director, IL Dept. of Commerce and Community Affairs

Alternates

Dan Injerd, Chief, Lake Michigan Management Section, IL Dept. of Natural Resources

Donald Vonnahme, Director, Office of Water Resources, IL Dept. of Natural Resources

Indiana

Lori Kaplan, Director, IN Dept. of Environmental Management

*Larry D. Macklin, Director, IN Dept. of Natural Resources

E. Peter McCarthy, Port Director, IN International Port/Burns Harbor at Portage

Gerry Nannenga, Assistant Business Manager, N.W. IN District Council of Carpenters

Ray Sierra, Vice Chair, International Longshoremen's Association

Alternate Stephen Lucas, Division of Hearings, IN Natural Resources Commission

Michigan

Hon. William Callahan, State Representative

Frank D'Itri, Professor, Institute of Water Research, Michigan State University P

Vice Chair: Samuel W. Speck Ohio Member since 1999



Dr. Frank L. Kudrna Illinois *Member since 1978*

Hon. Jennifer Granholm, Attorney General

*G. Tracy Mehan, III, Director, Office of the

Hon. Walter North, State Senator

Hon. Cal Larson, State Senator

Hon. Steve Novak, State Senator

Hon. Edward Oliver, State Senator

Sean Hanna, Governor's Appointee

Carl Tuohey, Governor's Appointee

Environmental Conservation, Region 9

Hon. Robert Gardner, State Senator

mental Protection Agency

Christopher Jones, Director, OH Environ-

Environmental Conservation

Alternate

Minnesota

Alternates

New York

Alternate

Ohio

Great Lakes, MI Dept. of Environmental Quality

A. Michael Leffler, Assistant Attorney General

Hon. George Cassell, State Representative

J. Mark Ludlow, Governor's Appointee

Henry Hanka, Byways Resource Specialist,

*John P. Cahill, Commissioner, NY Dept. of

Tom McAuslan, Port of Oswego Authority

John Francis O'Mara, Governor's Appointee

Gerald Mikol, Regional Director, NY Dept. of

Hon. Rex Damschroder, State Representative

National Scenic Byways Resource Center

*Hon. Thomas E. Huntley, State Representative



Immediate Past Chair: Irene B. Brooks Pennsylvania Member since 1995



Larry D. Macklin Indiana Member since 1997

George Ryan, President, Lake Carriers' Association

*Samuel W. Speck, Director, OH Dept. of Natural Resources (Commission Vice Chair since 10/00)

Alternates

Jeffrey Busch, Executive Director, OH Lake Erie Office

James Hartung, President, Toledo-Lucas County Port Authority

J. William Moody, Assistant Director, OH Dept. of Natural Resources

Wayne Warren, Chief, Division of Real Estate and Land Management, OH Dept. of Natural Resources

Pennsylvania

*Irene B. Brooks, Executive Director, Office for River Basin Cooperation, PA Dept. of Environmental Protection (Commission Chair until 10/00)

Hon. Jane Earll, State Senator

Sidney Smith, President, Erie Sand Steamship Co. Alternate

John Hines, Executive Assistant, Office for River Basin Cooperation, PA Dept. of Environmental Protection

Wisconsin

William Carey, Governor's Appointee

Thomas Kell, Governor's Appointee

*Nathaniel E. Robinson, Executive Assistant to the Director, WI Technical College System Board (Commission Chair since 10/00)

Alternate Jeff Schoepke, Governor's Office



John P. Cahill New York Member since 1997



G. Tracy Mehan, III Michigan Member since 1995

Associate Commissioners Ontario

Douglas Harper, Director, Environmental Liaison Office, Ministry of the Environment

David de Launay, Director, Lands and Natural Heritage Branch, Ministry of Natural Resources

*Lorraine Ratnik, Team Leader, Office of Intergovernmental Relations and Protocol, Ministry of Economic Development and Trade

Jim Whitestone, Director of Transportation Policy, Ministry of Transportation

Alternates Rod Taylor, Freight Office Manager, Transportation Policy Branch, Ministry of Transportation

Paula Thompson, Policy Advisor, Lands and Natural Heritage Branch, Ministry of Natural Resources

Québec

Luc Berthiaume, Director, Intergovernmental Division, Environment Dept.

*Donald Leblanc, Chief of Middle West Desk, U.S. Division, Dept. of International Relations

Hugues Morrissette, Director General, St. Lawrence Development Secretariat, Transportation Dept.

Jacques Pelletier, Director, Transportation Mobility Division, Transportation Dept.

Alternates Louise Lapierre, Intergovernmental Division, Ministry of the Environment

Nicole McKinnon, Acting Director, U.S. Division, Dept. of International Relations



EXECUTIVE DIRECTOR'S REPORT

By any measure, the Great Lakes-St. Lawrence system is the locus of a mature set of institutional arrangements. Agencies, organizations and institutes with "Great Lakes" and/or "St. Lawrence" in their name are readily found within government, academia and the private sector. All have a role to play in managing use of the world's greatest freshwater system, and all have their special interests and emphases. What then, sets the Great Lakes Commission apart and prompts its state/provincial members and many collaborators to invest so heavily in its efforts?

I suggest that the Commission's brand identity is based on four organizational characteristics, all of which are evident on the pages of this annual report. The Great Lakes Commission:

• **Embraces** *sustainability* as a guiding principle. This is an organization that defies labeling as either an environmental or economic group. The Commission recognizes the complementarity of such goals and puts its money where its mouth is. In 2000, thanks to Chair Nat Robinson's leadership, the Commission showcased this principle by formalizing its theme of *ensuring environmental and economic prosperity*.

• Continually reinvents itself to respond to current and emerging issues. Some organizations regard their mandate as a fence that limits their range of activity; the Great Lakes Commission regards its mandate as a door to a limitless range of possibilities. In 2000, the Commission demonstrated this by making the transition from an interstate to a binational agency.

• Views *transparency and inclusivity* as keys to success. There are no smoke-filled back rooms at the Great Lakes Commission. Policy statements are formulated in open forum; partners are sought on all major initiatives; and

discussion and debate are welcomed, not avoided. In 2000, for example, the success of this strategy was evident, producing a *Great Lakes Action Plan for Aquatic Nuisance Species Prevention and Control* signed by all eight governors.

• Focuses on *making a difference*. Everything the Commission does is directed at a single endpoint: making this region a healthy and prosperous place to live, work and play. In 2000, this vision was memorialized in a new five-year strategic plan and incorpo-

rated into more than 50 distinct initiatives. It's also the centerpiece for aggressive advocacy efforts that will ensure environmental and economic prosperity for the Great Lakes-St. Lawrence region.

The Great Lakes Commission had a great year in 2000 and, more importantly, looks for even better things to come in 2001. While the characteristics identified above are important factors in this success, they pale in comparison to the ultimate key: people. We're fortunate to have great leadership in our Executive Committee and larger membership, great friends and partners in our collaborators, and a great resource in a talented and dedicated staff. On to 2001!



Michael J. Dorald

Michael J. Donahue, Ph.D., Executive Director

"Some organizations regard their mandate as a fence that limits their range of activity; the Great Lakes Commission regards its mandate as a door to a limitless range of possibilities."



ADMINISTRATION

Goal: To enhance the Commission's leadership role in regional coordination, policy development and advocacy through efficient, cost-effective and responsive service to its members and the larger Great Lakes-St. Lawrence community.

Selected highlights

Welcomed new leadership in electing Chair Nathaniel E. Robinson (Wisconsin) and Vice Chair Samuel W. Speck (Ohio) • Embraced a new theme of *ensuring environmental and economic prosperity* • Adopted a strategic plan to guide the Commission through 2005 • Adopted a new bilingual logo and expanded state/provincial partnerships • Approved the largest budget in Commission history, exceeding all revenue and investment goals • Expanded service capability through staffing adjustments and additions at all levels

Building a foundation for success

Continuing a decade-long trend, the Commission's hard-earned reputation for innovative program development and creative financing paid big dividends in 2000. Unprecedented success in fundraising yielded a significant increase in the budget over the previous year, despite state dues that remained at 1992 levels. More than 45 revenue sources were secured (exclusive of state dues) to support approximately 55 distinct projects. Total assets increased by 26.2 percent, interest income by 37 percent and the market value of investments by 25.8 percent. The last 12 months saw the foundation laid for several long-term, large-scale projects and, with an eye to the future and even more ambitious goals, a feasibility study for a multimillion dollar endowment fund was initiated.



Revenues and expenses: FY2000*



*Revenues over expenses (\$5,107) were placed in a reserve fund for contingencies and future use.





Ensuring environmental and economic prosperity: Leadership for a new era

The vote was unanimous and enthusiastic; in October 2000, commissioners elected Nathaniel E. Robinson and Samuel W. Speck as their new

chair and vice chair, respectively. Building on the legacy of outgoing Chair Irene Brooks, the new leadership promptly announced its environmental and economic prosperity theme. Associated priorities, all initiated in late 2000, included adopting a bolder, more aggressive advocacy program; strengthening the Commission's role as *the* forum for

"Promoting and ensuring environmental and economic prosperity throughout the Great Lakes-St. Lawrence region is more than a slogan. It reflects our values, our future." — Nathaniel E. Robinson, chair, Great

Lakes Commission

regional consensus-building and policy analysis; fully implementing the Commission's "sustainability" mission to achieve environmental and economic prosperity; and thoroughly exploring the potential of state/provincial and related partnerships.

Planning for the new millennium

The last 12 months saw the release of the new Great Lakes Commission Strategic Plan, a statement that will guide the organization's coordination, policy analysis and advocacy efforts through 2005. Featuring five goals, 23 objectives and 92 measurable actions, the bold plan was the product of a review/revision process open to the entire Great Lakes-St. Lawrence community. Led by incoming Chair Nathaniel E. Robinson, the process yielded a vision that will focus Commission efforts in 2001 and beyond.

Symbolizing things to come: A bilingual logo



The Commission's continuing transition from an interstate to a binational agency took significant leaps forward this past year. Provincial representation on all relevant com-

mittees and task forces was pursued, and a binational element to ongoing and new-start initiatives was added following a *Declaration of Partnership* that granted associate member status to Ontario and Québec in 1999. Symbolizing this transition — and many efforts yet to come — the Commission adopted a bilingual logo. Indeed, it's a new era for the *Commission des Grands Lacs*.



Meeting — and exceeding — member expectations

A scholar once claimed that government institutions tend to be "memorials to old problems"; they're established to address one set of issues, yet are unable (or unwilling) to evolve and adapt as the issues themselves change. Not so with the Great Lakes Commission. Its continuing process of reinvention is testament to its top priority: service to its membership. In 2000, service capacity was significantly enhanced through the addition of a new senior staff position (program manager for Environmental Quality), creation of a congressional liaison position to consolidate and expand advocacy efforts, the appointment of the first Great Lakes Commission-Sea Grant Fellow, the hiring of a new manager of financial services, and multiple new hires of program specialists.



How the Commission is organized

What's ahead in 2001

Implementing the new strategic plan • Developing and promoting the environmental and economic prosperity theme • Securing large-scale, multiyear grants to address member priorities • Initiating a new, bold congressional advocacy strategy • Completing an endowment feasibility study and initiating a campaign if recommended • Integrating a binational element into all activities • Leading efforts to establish a multiagency Center for Large Lakes Research and Policy in Ann Arbor, Mich. • Expanding staff to meet emerging needs





RESOURCE MANAGEMENT AND ENVIRONMENTAL QUALITY

Goal: To promote the informed use, management and protection of the water, land, air and related natural resources of the Great Lakes-St. Lawrence system.

RESOURCE MANAGEMENT

Selected highlights

Improved Great Lakes water quality by allocating \$0.35 million to local projects and regionwide initiatives under the Great Lakes Basin Program for Soil Erosion and Sediment Control • Celebrated the 10th anniversary of the Basin Program, having awarded more than \$4.6 million to 158 projects that foster innovative erosion and sediment control methods • Promoted cooperation in the scheduling, operation, maintenance, research and monitoring of Great Lakes science vessels • Initiated development of a Water Resources Management Decision Support System to address issues of water withdrawal, consumptive use, diversion and export • Secured all Great Lakes governors' signatures on a *Great Lakes Action Plan for the Prevention and Control of Aquatic Nuisance Species*

Safeguarding our water resources

The Commission is providing technical support and assistance as the Great Lakes-St. Lawrence governors and premiers develop a management regime to address water withdrawal, consumptive use, diversion and related issues. A *Water Resources Management Decision Support System for the Great Lakes* is under development by the Commission with support from the Great Lakes Protection Fund. The two-year, binational project will lay the foundation for the data, information and processes required to ensure timely and well-informed public policy decisions concerning the use and management of surface and groundwater resources (see www.glc.org/waterquantity/wrmdss).

The project is yielding a series of application-oriented products, such as a water use web site, updated annual water use reports, a means to evaluate the ecological impacts of water withdrawals, and recommended procedures for addressing future Great Lakes-St. Lawrence water resource management issues.

Shutting the door on aquatic nuisance species

The Great Lakes Action Plan for the Prevention and Control of Aquatic Nuisance Species, produced by the Commission-supported Great Lakes Panel on Aquatic Nuisance Species, has been endorsed by the governors of the eight Great Lakes states. This landmark initiative formally recognizes "biological pollution" as a leading regional concern, and pledges the governors'



support in developing and implementing prevention and control programs. The panel's *Policy Statement on Ballast Water Management* will be released early in 2001. A consensus product involving all regional interests, the detailed statement will guide efforts to eliminate aquatic nuisance species introductions through the development and application of ballast management standards, policies, regulations and technologies. Also, an updated version of the panel's *Information/Education Strategy for Aquatic Nuisance Prevention and Control* will be finalized in 2001.

www.freshwaterspills.net

Preventing and responding to spill events

"The Great Lakes Commission staff demonstrated their value as a tremendous resource to the response team during the Western Lake Erie National Preparedness for Response Program exercise ... The technical support provided by the Commission was a significant positive factor throughout the exercise ..."

— Western Lake Erie PREP: Lessons Learned The Commission has greatly expanded its scope of services for oil spill preparedness, prevention and response, including launching the Freshwater Spills Information Clearinghouse, a web site dedicated to linking planning, research and scientific data within the spill prevention/response community. The Area Contingency Planning project, funded by the U.S. Environmental Protection Agency (U.S. EPA) Region 5, delivered final

products for the Phase I mapping effort of the coastal and riverine counties in the Great Lakes and Ohio River basins. Draft mapping is completed or underway for the remaining areas. The Commission continues to assist in the preparation of spill contingency plans for the U.S. EPA in conjunction with the U.S. Coast Guard, and participated in the Western Lake Erie National Preparedness for Response Exercise Program (PREP), providing valuable mapping and planning expertise.

What's ahead in 2001

Safeguarding water resources by generating the data, information, process and components of a regional decision support system • Supporting revision and reauthorization of the National Invasive Species Act • Providing a regional voice in the Farm Bill reauthorization process • Advancing sound watershed planning and management practices by convening planning training workshops that bring together state, regional and local watershed practitioners • Advancing oil spill protection and preparedness under the guidance of the U.S. EPA's Great Lakes National Program Office and the Great Lakes Spill Protection Initiative • Exercising leadership in aquatic nuisance species prevention and control through release and implementation of a *Policy Statement on Ballast Water Management* • Implementing a new regional information and education strategy under the guidance of the Great Lakes Panel on Aquatic Nuisance Species





ENVIRONMENTAL QUALITY

Selected highlights

Supported restoration efforts in Michigan's 14 Great Lakes Areas of Concern (AOCs) through a legislative briefing and training workshops • Advanced lakewide management efforts through information, education and outreach • Highlighted environmental conditions in Lake St. Clair and recommended protection and restoration measures • Assessed environmental monitoring programs in the Lake Michigan basin

www.epa.gov/glnpo/aoc

Supporting local and lakewide cleanup efforts

The Commission expanded its support for the AOC and Lakewide Management Plan (LaMP) programs in 2000 through training workshops, advocacy and outreach. The Commission completed its sixth year of support to the Statewide Public Advisory Council (SPAC) for Michigan's AOC Program. The council includes representatives from each of Michigan's 14 AOCs and pursues an array of communication, advocacy and training activities.

The SPAC sponsored training workshops on contaminated sediments and public health concerns related to water quality, as well as a capacity-building workshop for the chairs of local public advisory councils. The SPAC was particularly active in communicating AOC funding needs to elected officials through testimony to state and federal committees and an annual briefing for the Michigan state legislature.

The Commission updated online information on the AOCs, and is working with the U.S. Environmental Protection Agency's (U.S. EPA) Great Lakes National Program Office to develop a uniform approach for displaying online information on the LaMPs. "The Commission's technical advice, and their ability to focus diverse stakeholders on common goals, has helped maintain momentum in implementing Remedial Action Plans for Great Lakes Areas of Concern."

To publicize the release of new LaMP documents for lakes Michigan, Erie and

— Kathy Evans, chair, Statewide Public Advisory Council

Superior, the Commission prepared a special newsletter insert highlighting these documents, as well as lakewide management efforts underway for lakes Huron, Erie and St. Clair. Several of the Commission's monitoring projects, discussed below, also support the Remedial Action Plan (RAP) and LaMP programs.

Promoting sound management through monitoring

The Lake Michigan Tributary Monitoring Project and Lake Michigan Online Monitoring Database reflect the Commission's new emphasis on coordinating, enhancing and communicating environmental monitoring efforts in the Great Lakes basin.

Under the Lake Michigan Tributary Monitoring Project, the Commission and local partners conducted an inventory and assessment of monitoring



"The Commission's monitoring coordination efforts have produced valuable tools that continue to aid us in implementing our water quality monitoring program."

— Gary Kohlhepp, Michigan Department of Environmental Quality programs in the Lake Michigan basin. The project culminated in a report documenting federal, state and local monitoring programs. The report assessed the adequacy of these efforts to support critical ecosystem indicators and recommended steps to address monitoring priorities for the Lake Michigan LaMP. Using the inventory developed in the

tributary monitoring project, the Commission is developing a Lake Michigan Online Monitoring Database that will be made available on the Great Lakes Information Network. This map-based online database will allow users to geographically search the Lake Michigan basin for monitoring projects in their area of interest.

In a related effort, the Commission is providing secretariat support to the Lake Michigan Monitoring Coordination Council, formed in 1999 to foster cooperation and coordination among groups involved in ecosystem monitoring in the Lake Michigan basin.

The Commission also initiated a project that will review monitoring programs in the upper Great Lakes connecting channels and help coordinate U.S. and Canadian efforts to delist the binational AOCs.

www.great-lakes.net/lakes/stclair.html

Addressing unmet needs on Lake St. Clair

Lake St. Clair is now receiving much needed planning and management attention, thanks to Commission efforts in 2000. The Commission released a summary report from its highly successful 1999 conference, *Lake St. Clair: Its Current State and Future Prospects,* that yielded findings and recommendations to guide future efforts. The report is available online at www.great-lakes.net/lakes/stclairReport/summary_00.pdf.

Conference participants called for a binational process for integrating disparate management efforts into a rational, collective framework. In response, the Commission began a study, funded by the U.S. EPA, to establish a framework for a Lake St. Clair Management Initiative. The initiative will address major unmet needs in the binational management regime for the corridor linking Lake Huron and Lake Erie. Project outcomes will provide a foundation for additional work supported by the U.S. Army Corps of Engineers.

What's ahead in 2001

Advocating for increased federal and state support for the AOCs • Building capacity among RAP groups • Promoting agency-funded and volunteer monitoring activities in the AOCs • Assessing, coordinating and disseminating ecosystem monitoring programs and data • Forming coordinated monitoring networks, including a Volunteer Monitoring Network for Lake Michigan • Undertaking a Lake St. Clair Management Initiative





TRANSPORTATION AND SUSTAINABLE DEVELOPMENT

Goal: To promote sustainable, water resource-based economic activity and the use, development and maintenance of the Great Lakes-St. Lawrence transportation system.

Selected highlights

Advanced regional brownfields redevelopment and greenfields protection efforts • Completed an overview of Great Lakes-St. Lawrence region recreational boating activity • Secured nonfederal funding for a new Soo Lock through state commitments • Promoted the beneficial use of dredged material • Strengthened the land-use/water quality connection by developing indicators for the State of the Lakes Ecosystem Conference

www.glc.org/projects/dredging

Resolving dredging issues

The Great Lakes Dredging Team's emphasis on public outreach was evident through the widespread distribution of its dredging overview brochure and upgrades to the team's web site in 2000. The

team is a state/federal partnership formed in 1996 to address regional dredging issues. New initiatives include planning for a recreational harbor dredging workshop and creating a regional task force on environmental windows. Environmental windows are time constraints placed on dredging or dredged material operations to protect biological resources or their habitats from detrimental effects.



Documenting the value of recreational boating

The Commission is ensuring that recreational boating is recognized for what it is: a leading water-based sector of the economy that merits enhanced federal attention. An economic impact study has been launched under a contract with the U.S. Army Corps of Engineers; it is an initial step in a large-scale initiative. The Corps, responsible for much of the dredging in the Great Lakes, faces increasing pressure on its operations and maintenance budget. As a result, future funding for shallow-draft harbor dredging in the Great Lakes region may get tighter, leaving some places without needed channel maintenance, particularly during periods of low



water. The Water Resources Development Act of 1999 authorized the economic impact study, which the Commission believes will suggest a need for more federal funding for recreational harbor maintenance.



More than 6 million recreational boats are registered in the eight Great Lakes states and the provinces of Ontario and Québec. Of these, about a quarter of the U.S. boats are registered to people residing in Great Lakes coastal counties, and about 75 percent of the Canadian boats have a Great Lakes or St. Lawrence connection. Great Lakes and St. Lawrence marinas make up half of the region's marinas, and the Great Lakes states accounted for 29 percent, or \$2.6 billion, of U.S. national recreational boat retail expenditures in 1999. Sportfishing, with its estimated \$4 billion annual impact, is closely tied to boating and represents around half of all boating activity. Photo credit: Steve Thorp.

www.glc.org/bridges

Promoting sustainable development

Promoting urban revitalization, brownfields redevelopment and greenfields protection throughout the basin was a Commission priority in 2000. Funded by the Charles Stewart Mott Foundation, the BRIDGES project identified and promoted linkages between brownfields redevelopment and greenfields protection in the interest of advancing sustainable development. The Commission teamed up with the National Wildlife Federation's Great Lakes Natural Resource Center and the Council of Great Lakes Industries in this unique public agency/private sector/citizen group partnership. Local brownfields workshops were held in Milwaukee and Detroit to garner neighborhood input into recommendations for improving community involvement in brownfields decisionmaking. Workshop outcomes and results from analyses of relevant Great Lakes state and provincial policies were developed into a series of strategic actions for consideration by public and private sector leaders. Also, the BRIDGES Great Lakes Sustainable Land Use web site was launched, providing a gateway to information about land-use issues that integrates the Commission's Great Lakes Regional Online Brownfields Information Network (ROBIN) and the Great Lakes Greenfields Exchange.







Advancing beneficial use of dredged material

With oversight from the Great Lakes Dredging Team, the Commission's Great Lakes Beneficial Use Task Force has developed a series of recommendations for advancing beneficial use of dredged material. With proper testing and government guidelines that protect human health and the environment, beneficial use of dredged material offers a sustainable, long-term management option for dredged material in the Great Lakes basin. However, beneficial use faces regulatory, financial and public perception hurdles. The Commission's project, *Advancing the Beneficial Use of Dredged Material*, is working to overcome these.

A final report that includes the task force's recommendations will be published in spring 2001, along with a brochure on the issue. The report also will describe a variety of types of beneficial uses with examples from the Great Lakes basin, highlight innovative technologies for treating contaminated dredged material, and profile regulatory frameworks for beneficial use in each Great Lakes state.

Building a new Soo Lock: Closer now than ever

Great Lakes states have agreed on a cost-share formula and are individually preparing letters of support that direct \$54 million in state funds for a new large lock. The balance of the \$225 million construction project is being sought by the Commission through congressional appropriation. A U.S. Army Corps of Engineers project report has been completed, setting the stage for developing the Project Cooperation Agreement between the Corps and the Commission, the project's nonfederal sponsor.

What's ahead in 2001

Focusing federal attention on recreational boating and shallow-draft harbor dredging requirements • Documenting and promoting the beneficial use of dredged material • Advocating strategic actions to redevelop brownfields and protect greenfields • Developing a regional policy on environmental windows to ensure responsible dredging activity • Seeking and securing an initial construction appropriation for a new Soo Lock • Assuming a leadership role in documenting the linkage between land use, environmental quality and sustainable economic development



COMMUNICATIONS AND INFORMATION MANAGEMENT

Goal: To promote informed public policy by applying communications and information management technology to the environmental protection, resource management, transportation and sustainable development needs of the Great Lakes-St. Lawrence system.

Selected highlights

Received up to 2.8 million hits per month on the redesigned Great Lakes Information Network (GLIN), which features new sections on Great Lakes daily news, teaching tools, and maps and geographic information systems (GIS) • Advanced coastal wetlands protection efforts by forming a consortium of scientists and policymakers to develop a long-term monitoring plan • Released the AirMapper, a tool that maps toxic air emissions across the Great Lakes • Added basinwide reference layers for political boundaries and watersheds to GLIN's Maps and GIS section • Promoted information/education by researching, designing and marketing TEACH Great Lakes, the new education component of GLIN • Redesigned the Commission's newsletter, the *Advisor* • Awarded the Carol A. Ratza Memorial Scholarship to Ivona Lerman, a master's student in environmental journalism at Michigan State University

www.great-lakes.net or www.glin.net

GLIN: Targeting new audiences with online services

Great Lakes Information Network unveils new design, daily news services

After an intense, six-month redesign process, the GLIN project team unveiled a new look and enhanced navigation for the site on May 15, 2000. The site now features a condensed Daily News page and an advanced search engine that allows visitors to narrow their searches by agency, keyword and topic. Content enhancements include new sections



devoted to educational resources, and maps and GIS. The Commission

"Getting a summary of news coverage each morning is incredibly valuable and allows us to be more effective. The GLIN Daily News service is a great idea, executed superbly."

 David Rankin, vice president and director of programs, Great Lakes Protection Fund is currently marketing a suite of daily news services, including a regional press room, searchable archive of Great Lakes headlines, and free Daily News box that allows partner agencies to provide a "window" to the latest regional news on their own web sites. Since the redesign, monthly hits on GLIN have seen a four-fold increase, peaking at 2.8 million for the month of November.



Educating the next generation

With the launch of The Education And Curriculum Homesite (TEACH) on GLIN, students and teachers have a new source for Great Lakes educational materials. Focusing on a different Great Lakes topic each month, TEACH is geared for elementary through high school students. Recent modules high-light Great Lakes Native Americans, fish and fishing, and shoreline geology, with links to a glossary that explains scientific terms and acronyms. Supported by the U.S. Environmental Protection Agency (U.S. EPA), TEACH also provides answers to questions that kids submit about the lakes. Future enhancements include a Great Lakes image gallery and timeline, and features on environmental stewardship projects and field trip opportunities.

www.glc.org/monitoring/wetlands

Improving the health of coastal wetlands

The ecological health of Great Lakes coastal wetlands will be improved, thanks to the Commission and a binational consortium of Great Lakes wetland scientists and resource managers. Representatives from U.S. and Canadian federal governments, states, provinces, nonprofit organizations and academia are developing and refining indicators of ecological health for Great Lakes coastal wetlands recommended at the State of the Lakes Ecosystem Conference in Hamilton, Ontario, in October 2000. The consortium also is designing a long-term monitoring program for Great Lakes coastal wetlands and a binational database that will be accessible to the public.

www.glc.org/monitoring/beaches

Promoting the health of our beaches

In partnership with the U.S. EPA, the Commission is addressing rising concern over contaminated beaches and associated public health problems. This information/education initiative features a web site and interactive map. Visitors to the site can retrieve information about individual beaches, the monitoring agency, and standards used to determine advisories and closures.

www.great-lakes.net/gis

Placing Great Lakes GIS data online

Commission initiatives in 2000 provided researchers, managers and policymakers with quick access to accurate Great Lakes spatial data, such as the Great Lakes Hydromet Station Directory and Lake Michigan Online Atlas. The Hydromet Station Directory maps characteristics of hydrological and meteorological stations from a database developed by the National Oceanic and Atmospheric Administration's Great Lakes Environmental



Research Laboratory. The maps and query tools, which will be served through the Online Mapping page of GLIN's Maps and GIS section (www.glin.net/ gis), identify stations based on location and types of data collected, and direct users to the appropriate agency for individual data records. This project is a prototype for map serving software and techniques involving large data sets. The Lake Michigan Online Atlas, a data consolidation and distribution effort covering the Lake Michigan basin, involves placing planning and ecosystemoriented map layers on an Internet site equipped with basic GIS mapping tools. Data layers developed for this project may be expanded to cover other lake basins within the Great Lakes region.

www.glc.org/air/airmapper.html

Mapping toxic air emissions

The Commission has developed new tools to improve air quality through informed management. Its Great Lakes Regional Air Toxic Emissions Inventory project has unveiled AirMapper, an online GIS application used to view emissions inventory information. Visitors can create customized maps of the Great Lakes region by choosing a pollutant to display, or they can identify individual counties and retrieve selected pollutant totals. Toxic emissions inventories for 1997, 1998 and 1999 are nearing completion and feature data in the categories of point, area, on-road and non-road sources.

Partnering with Baltic states

Two principal areas of cooperation in the Great Lakes/Baltic Sea Partnership are multilateral watershed management, and an expert fellowship and exchange program. To date, the Commission has placed 10 Baltic fellows with U.S. and Canadian host organizations, resulting in mutual benefits in matters of environmental diplomacy and in establishing sustainable networks for scientific and policy exchange. The program has successfully established a risk assessment network between the United States, Canada and the Baltic states, and is coordinating efforts to develop environmental indicators for the Baltic and Great Lakes regions.

What's ahead in 2001

Keeping the Commission on the cutting edge of electronic communications technology • Developing a geospatial reference gallery for Great Lakes habitat and health data • Developing TEACH Great Lakes to include an interactive Great Lakes timeline and stewardship initiatives • Expanding the scope of the GLIN Daily News suite of services • Providing interactive atlas maps of the Great Lakes through GLIN • Enhancing air toxic data access through an interactive database







REGIONAL COORDINATION

Goal: To strengthen the collective Great Lakes management effort by providing regional leadership, generating consensus on regional priorities among diverse interests, and building partnerships for decisive regional action.

Selected highlights

Provided a unified, leading voice on Great Lakes-St. Lawrence issues, needs and priorities • Secured U.S. federal funds and programs by developing and advocating legislative and appropriations priorities • Forged regional consensus on pressing issues through government/private sector/citizen group dialogue • Brought the expertise of more than 400 regional scientists, managers and policymakers to bear on priority issues • Expanded provincial partnerships and initiated partnerships with First Nations/tribal authorities • Served as the region's leading source for objective, applied policy research on key issues

Advocating the region's interests

The Commission took full advantage of its unique advocacy mandate in 2000, formulating a 34-point policy statement to guide Congress on legislative and funding priorities for federally supported research and management institutions, resource management and environmental protection programs, and mar-

itime transportation and other sustainable development matters. The Commission also communicated via targeted correspondence and extensive interaction with member offices. Through its priorities, the Commission ensured that tens of millions of dollars were directed to the region in continuing and new-start initiatives.

"We have an obligation to provide a unified and influential voice on legislation, policy and appropriations that affect our region."

— Irene Brooks, immediate past chair, Great Lakes Commission

Making every day Great Lakes Day in Washington

A receptive "standing room only" crowd was on hand as the Commission released its 2000 priorities statement at the annual Great Lakes Day in Washington. Keynoted by Sen. Herb Kohl (Wis.) and Rep. Vern Ehlers (Mich.), the event attracted many Great Lakes Congressional Delegation members and staff and leading U.S. and Canadian officials, including directors of more than two dozen federal, state and regional agencies. A subsequent issues briefing featured U.S. and Canadian presentations emphasizing federal interest in the lakes and actions needed to address problems ranging from Areas of Concern cleanup to aquatic nuisance species prevention and control. These events set the theme for advocacy efforts throughout the duration of the 106th Congress.



Looking beyond our boundaries

The Commission pioneered the notion of management by hydrologic rather than geopolitical boundaries; it has never recognized the mythical "dotted line" down the middle of the lakes. It took this notion a step further last year as the Commission reached across regional boundaries to advance its vision and support of sound water resources policy. For example, the Commission teamed up with regional organizations through the Interstate Council on Water Policy to strengthen Washington's understanding of state and regional needs. It also formed alliances to strengthen individual and collective approaches to issues such as aquatic nuisance species prevention and control. Commission expertise on regional governance was widely sought, resulting in visits with delegates from the Baltic states, Africa, the Gulf of Maine and South America, among others. And, where necessary, the Commission didn't hesitate to oppose ill-advised federal legislation directed at other regions (e.g., Dakota Water Resources Act) that would have an adverse impact on the Great Lakes-St. Lawrence region.

Educating and motivating our constituents

Ensuring effective public policy relies as much on publicity and promotion as it does on thorough and objective research and analysis. The Commission acted accordingly, with staff sponsoring, speaking at or otherwise participating in more than 200 events that advanced organizational goals. This, and other conventional means of communication, were complemented by the electronic communication capabilities for which the Commission has received global recognition. Over the past year, Great Lakes Information Network monthly hits skyrocketed to 2.8 million, and monthly hits to the Commission's redesigned web site climbed to more than 300,000, a fourfold increase over 1999. Commissioners and staff also served on dozens of regional and national boards (e.g., International Joint Commission, National Sea Grant Review Panel, Interstate Council on Water Policy, Inter-American Water Resources Network) that served as vehicles both for formulating and advancing Commission policies and priorities.

What's ahead in 2001

Fine tuning congressional advocacy efforts to maximize regional success • Consolidating and expanding advocacy through a new congressional liaison staff position • Strengthening relationships with First Nations/tribal authorities • Involving provinces in all relevant initiatives • Building on past success with government/private sector/citizen partnerships • Remaining vigilant in supporting sound legislation and opposing ill-advised legislation • Looking within and beyond the region to advance our vision





SUPPORTING THE COMMISSION

The Great Lakes Commission was established by joint legislative action of the eight Great Lakes states in 1955 (the Great Lakes Basin Compact) and granted congressional consent in 1968. A *Declaration of Partnership* established associate membership for the provinces of Ontario and Québec in 1999. Each jurisdiction appoints a delegation of three to five members comprised of senior agency officials, legislators and/or appointees of the governor or premier.

A committee and task force structure is the primary vehicle for identifying and addressing issues and recom-

mending the adoption of policy positions by the membership. Observer organizations — including U.S. and Canadian federal, regional and tribal governments — participate extensively in Commission activities.

The Commission is supported by a growing and experienced professional staff with scientific, policy and technical credentials. The staff is responsible for supporting three primary Commission functions: information sharing among regional interests, policy research and development, and advocacy of member priorities. Commission offices are located in Ann Arbor, Mich.

Commission Observers

Tom Behlen, International Joint Commission, Great Lakes Regional Office Jeffrey Benoit, National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management

Dr. Stephen Brandt, National Oceanic and Atmospheric Administration, Great Lakes Environmental Research Laboratory

John Christian, U.S. Fish and Wildlife Service

Dr. Christopher Goddard, Great Lakes Fishery Commission

Maggie Grant, Council of Great Lakes Governors

Gary Gulezian, U.S. Environmental Protection Agency, Great Lakes National Program Office

Capt. Randy Helland, U.S. Coast Guard, Ninth District, Marine Safety Division

Larry Hiipakka, U.S. Army Corps of Engineers, Great Lakes and Ohio River Division

Rear Adm. James Hull, U.S. Coast Guard, Ninth District

Albert Jacquez, U.S. Department of Transportation, St. Lawrence Seaway Development Corp.

Tony MacDonald, Coastal States Organization

Dr. Nancy Milton, U.S. Geological Survey, Great Lakes Science Center

Jim Nicholas, U.S. Geological Survey, Water Resources Division

- Janet Oertly, U.S. Department of Agriculture, Natural Resources Conservation Service
- Dr. Jeffrey Reutter, Great Lakes Sea Grant Network

Mike Ripley, Chippewa Ottawa Resource Authority

Sheila Tooze, Canadian Embassy

- Gary Vequist, National Park Service, Midwest Region
- Patrick Wilkey, U.S. Department of Energy, Center for Environmental Restoration Systems

Staff



Wurster Park, Ann Arbor, Mich., home of the largest chinkapin oak (Quercus muehlenbergii) in Michigan. Photo credit: Kevin Boyd.

Back row, left to right: Richard Garcia, Hao Zhuang, Ric Lawson, Stuart Eddy, Thomas Rayburn, Thomas Crane, Ron Hasselbring, Stephen Thorp, Michael Donahue, Matthew Doss, Julie Wagemakers, Sara Ashley

Front row, left to right: Karl Geil, Pat Gable, Marcia Woodburn, Sarah Whitney, Rita Straith, Katherine Glassner-Shwayder, Lisa Koch, Christine Manninen, Courtney Shosh, Michael Schneider, Chase Huntley, Albert Ballert

(Not pictured: Derek Moy, Victoria Pebbles, Marilyn Ratliff, Jennifer Read, Elizabeth Repko, John Stone)



Commission staff (continued)

EXECUTIVE DIRECTOR

Michael J. Donahue (mdonahue@glc.org) is the Commission's chief executive officer, with responsibilities in areas of administration, strategic planning, program development, and federal/congressional and state/provincial relations. He manages the Administration and Regional Coordination programs and serves as an ex-officio member of all task forces and committees. Donahue is also an adjunct professor at the University of Michigan. Among other appointments, he serves as U.S. chair of the Science Advisory Board of the International Joint Commission.

ADMINISTRATION

Financial Officer

Cappy Bilakos (through 8/00) served as the Financial Officer until retiring in August.

Ron Hasselbring (ronh@glc.org) handles banking transactions, payroll, accounts receivable and payable, financial reports for general operating funds and outside grants and contracts, audits, and staff benefits.

Administrative Assistant

Pat Gable (pegable@glc.org) assists with support services and handles requests for publications and information.

Database Administrator

Marilyn Ratliff (mratliff@glc.org) manages the Commission's mailing lists and assists staff with database-related activities.

Manager, Support Services

Rita J. Straith (rstraith@glc.org) serves as the office manager, assists with project production, and oversees support service staff and tasks.

PROGRAM MANAGERS

Thomas Crane (tcrane@glc.org) manages the Resource Management Program. He oversees numerous projects, including the Great Lakes Basin Program for Soil Erosion and Sediment Control, the Water Resources Management Decision Support System for the Great Lakes, and the Great Lakes Spill Protection Initiative.

Matthew Doss (mdoss@glc.org) manages the Environmental Quality Program. He manages the Commission's support for Great Lakes Remedial Action Plans and Lakewide Management Plans, including the Statewide Public Advisory Council for Michigan's Areas of Concern Program, the Lake Michigan Monitoring Coordination Council and several associated projects. He also is coordinating efforts to establish a Lake St. Clair Management Initiative.

Stephen Thorp (sthorp@glc.org) manages the Transportation and Sustainable Development Program, and is responsible for transportation and economic issues research and policy analysis at the Commission. He works closely with the Great Lakes Dredging Team and heads the Commission's effort for a new Soo Lock.

Julie Wagemakers (juliew@glc.org) manages the Communications and Information Management Program. She oversees staff support for numerous projects, including the wetlands consortium, Great Lakes Information Network, Great Lakes GIS Online, Baltic Fellows Program and Great Lakes Regional Air Toxic Emissions Inventory.

PROJECT MANAGERS

Katherine Glassner-Shwayder (shwayder@glc.org) provides support to the Great Lakes Panel on Aquatic Nuisance Species in the areas of policy development and information/ education. She serves as editor of the panel's newsletter, the ANS Update.

Ric Lawson (rlawson@glc.org) provides management and support for numerous projects, including the Lake Michigan Tributary Monitoring Project and the Great Lakes Coastal Wetlands Consortium. He focuses on environmental monitoring coordination and information dissemination, as well as watershed management facilitation and coordination.

Christine Manninen (manninen@glc.org) leads development of the Great Lakes Information Network and related web projects, and serves as managing editor of the *Advisor* newsletter and the Commission's web site.

Victoria Pebbles (vpebbles@glc.org) assists in transportation and economic development issues research and policy analysis, focusing primarily on land use, brownfields redevelopment and sustainable development. She also supports congressional advocacy efforts and the Great Lakes Beneficial Use Task Force, and assists in supporting the Great Lakes Dredging Team.

Thomas Rayburn (tray@glc.org) manages the Commission's Area Contingency Planning, Water Resources Management Decision Support System and Freshwater Spills Information Clearinghouse projects. He also provides support to the Great Lakes Spill Protection Initiative.

PROGRAM SPECIALISTS

Morgan Anderson (through 4/00) served as webmaster of the Commission's web site and assisted with development of the Great Lakes Information Network.

Sara Ashley (sashley@glc.org) assists with development of the Great Lakes Information Network, including TEACH Great Lakes, and is webmaster of the Commission's web site.

Stuart Eddy (seddy@glc.org) focuses on Commission GIS activities, in particular the Great Lakes GIS Online project. He also provides technical support for Commission computer systems.

Richard Garcia (rgarcia@glc.org) collects data and uses a GIS to develop databases and digital map products on environmentally and economically sensitive areas for the Commission's Area Contingency Planning project.

Karl Geil (kgeil@glc.org) collects data and uses a GIS to develop databases and digital map products on environmentally and economically sensitive areas for the Commission's Area Contingency Planning project. He is also the webmaster of the Freshwater Spills Information Clearinghouse.

Derek Moy (dmoy@glc.org) works on the Great Lakes Regional Air Toxic Emissions Inventory and assists with the Great Lakes GIS Online project and Beaches Environmental Assessment, Closure and Health Program. He also provides technical support for Commission computer systems.

Jennifer Read (jread@glc.org) supports the Great Lakes Basin Program for Soil Erosion and Sediment Control and serves as editor of the Basin Program's newsletter, *Keeping it on the Land*, through a cooperative arrangement with the Great Lakes Institute for Environmental Research, University of Windsor.

Michael Schneider (michaels@glc.org) assists with collecting and mapping economically and environmentally sensitive data for the Area Contingency Planning project.

Courtney Shosh (cshosh@glc.org) serves as editor of the *Advisor* newsletter. She also assists in writing, designing and editing other Commission publications and maintaining the Commission's web site and the Great Lakes Information Network.

Sarah Whitney (swhitney@glc.org) supports the Great Lakes Panel on Aquatic Nuisance Species, the Ohio watershed planning training project, and the Great Lakes Basin Program for Soil Erosion and Sediment Control.

Hao Zhuang (hzhuang@glc.org), a web database programmer, assists with design and implementation of applications for the Great Lakes Information Network and related projects.

RESEARCH ASSOCIATES

Chase Huntley (chuntley@glc.org) supports the Great Lakes Panel on Aquatic Nuisance Species with economic and policy analysis, focusing on ballast water management.

Elizabeth Repko (erepko@glc.org) assists with the Commission's work on aquatic nuisance species and water management issues related to the operation of the Great Lakes Regional Water Use Database.

Marcia Woodburn (through 12/00) developed and maintained metadata for the Commission's GIS databases on environmentally and economically sensitive areas related to the Commission's Area Contingency Planning project.

DIRECTOR OF RESEARCH, EMERITUS

Albert G. Ballert (aballert@glc.org) joined the Commission in 1956, a few months after its formation. He authors the *Great Lakes Research Checklist*, a bibliography of current Great Lakes-related publications. Other research activities include assembling data and reporting on Great Lakes-overseas vessel traffic; ports of call; and the traffic flow of coal, iron ore and grain on the Great Lakes.

COMMISSION FELLOWS

Commission-U.S. EPA Fellow

John Stone (through 10/00), worked at the Commission through an Environmental Anthropology Fellowship Program sponsored jointly by the Society for Applied Anthropology and the U.S. EPA. Stone demonstrated the utility of an ethnographic approach called Risk Perception Mapping to the public consultation and social research interests of the Commission and other relevant regional organizations.

Commission-Sea Grant Fellow

Lisa Koch (through 12/00), served as the first Great Lakes Commission-Sea Grant Fellow, providing scientific and policy analysis services to multiple projects.



Thanks to our funders

Charles Stewart Mott Foundation Commonwealth of Pennsylvania Council of Great Lakes Governors **Environment Canada** Federal Geographic Data Committee Great Lakes Protection Fund Great Lakes Sea Grant Network International Association of Great Lakes and St. Lawrence Mayors International Joint Commission Michigan Department of Environmental Quality, Surface Water Quality Division National Oceanic and Atmospheric Administration, Great Lakes Environmental **Research Laboratory** National Oceanic and Atmospheric Administration, National Marine **Fisheries Service** National Oceanic and Atmospheric Administration, National Sea Grant Program Ohio Environmental Protection Agency, Division of Surface Water State of Illinois State of Indiana State of Michigan State of Minnesota State of New York State of Ohio State of Wisconsin U.S. Army Corps of Engineers, Detroit District U.S. Army Corps of Engineers, Great Lakes and Ohio River Division U.S. Department of Agriculture, Natural Resources Conservation Service U.S. Environmental Protection Agency, Great Lakes National Program Office U.S. Environmental Protection Agency, Region 5, Air and Radiation Division U.S. Environmental Protection Agency, Region 5, Superfund Division U.S. Environmental Protection Agency, Region 5, Water Division U.S. Fish and Wildlife Service University of Michigan

Great Lakes Commission Argus II Building • 400 Fourth Street • Ann Arbor, Michigan 48103-4816 Phone 734-665-9135 • Fax 734-665-4370 www.glc.org

and the li