Great Lakes Commission
Advisor

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Annual Meeting Registration

A Strategic Plan for the Great Lakes Commission

The Advisor *is published bimonthly by the Great Lakes Commission. The Great Lakes Commission is a binational agency established in 1955 to promote the orderly, integrated and comprehensive development, use and conservation of the water and related natural resources of the Great Lakes basin and St. Lawrence River.*

Promoting sound decisions on water resources issues

Great Lakes Protection Fund supports new Commission initiative

The Great Lakes Commission has received a $745,000 grant for the first phase of developing a *Water Resources Management Decision Support System for the Great Lakes.* Awarded by the Great Lakes Protection Fund in early July, the two-year project will lay the framework for the data, information and process required to ensure timely and well-informed public policy decisions concerning the use and management of surface and groundwater resources. In so doing, it will support ongoing efforts of the Great Lakes-St. Lawrence governors and premiers to develop and implement a management regime to address water withdrawal, consumptive use, diversion and related issues.

A multi-agency, multidisciplinary team of U.S. and Canadian experts has been assembled by the Commission and will direct its efforts in three primary areas:

- **Status Assessment:** Data and information concerning distribution, abundance, interaction and potential threats will be assembled for surface and groundwater resources.
- **Inventory of Water Withdrawal and Use:** The latest available data will be assessed and analyzed as it relates to withdrawals, in-stream uses, diversion and consumptive use. It will be characterized by jurisdiction, lake basin and usage category.
- **Analysis of Ecological Impacts:** Review of the scientific literature, complemented by experts' workshops, will yield a new understanding of the cumulative impacts of water use and withdrawal and how these impacts might be accommodated in a decision support system.

The initiative is application oriented, and products will include a Great Lakes water use web site, updated water use inventories, and information as to how policymakers can include ecological evaluations as a management regime is designed and implemented.

"The Great Lakes Commission welcomes the opportunity to lend its expertise to an issue of overriding concern to the states and provinces of the Great Lakes-St. Lawrence region," stated Commission Chair Irene Brooks. "Data, information and analysis must provide the foundation for any water management regime."

A project management team will be led by Dr. Michael J. Donahue and Thomas Crane, Great Lakes Commission staff, and consist of state, provincial, federal and regional agency representatives. A project advisory committee drawn from the larger Great Lakes-St. Lawrence community will support their efforts. Contact: Mike Donahue, mdonahue@glc.org, or Tom Crane, tcrane@glc.org, both at 734-665-9135.

Shoring up a crumbling foundation

Practitioners of good government will agree that success depends upon at least three essential elements: a well-defined problem, a clearly articulated policy response, and an implementation vehicle to translate intent into action. Each of these elements is fundamentally dependent upon access to, and analysis of, relevant data and information. Unfortunately, this "foundation" of good government is crumbling in the Great Lakes-St. Lawrence region.

Monitoring, surveillance and data gathering are the Rodney Dangerfields of Great Lakes-St. Lawrence governance; they get no respect. New agreements, declarations, policy pronouncements and legislative initiatives make the headlines and draw the attention of policymakers, elected officials and opinion leaders. The "mundane" tasks of monitoring and surveillance, on the other hand, lack a constituency outside of line managers and the research community. When times are good, these tasks are marginally funded; when public finances are tight, they often disappear.

"Data and information are the fuel that drives our policy vehicles."

We don't have to look very far to see the disconnect. Water diversion and export issues are a regionwide priority, yet baseline monitoring and data gathering activities have been underfunded in many jurisdictions and almost nonexistent in others. Aquatic nuisance species prevention and control has also risen to the top of the policy agenda, yet a comprehensive early detection and monitoring program doesn't exist. The Great Lakes Fish Contaminant Monitoring Program, which provides data for consumption advisory decisions, limps along on marginal funding. And, while some claim that Lake Erie phosphorous controls are now "undernourishing" the lake and need to be relaxed, scientists tell us that the data necessary for calculating phosphorous loadings have not been collected since 1994!

The situation is not universally bleak, however, and there is some evidence that monitoring, surveillance and data gathering are being recognized as the underpinnings of resource management efforts. The Great Lakes Protection Fund recognized this in its recent grant announcement concerning a water resources management decision support system (see feature article).

It may be difficult to resurrect the intensive monitoring efforts of the past, such as the "International Field Year of the Great Lakes," studies in the early 1970s. Much, however, can be done:

• State/provincial officials can ensure that their jurisdictions have an adequately funded infrastructure for baseline monitoring, surveillance and data gathering.

• The two federal governments can reaffirm their role in these functions and recommit to an ecosystem-based approach as articulated in Annex 11 of the Great Lakes Water Quality Agreement (Great Lakes International Surveillance Plan).

• The Great Lakes Congressional Delegation can champion the John Glenn Basin Program provisions of the Water Resources Development Act of 1999 and other measures that provide baseline support for policy decisions and resource management efforts. The biohydrological inventory provision in WRDA 1999 is particularly important.

• Advocacy organizations of all types can complement their traditional emphasis on policy matters with vocal support for the research infrastructure that underlies such policy.

Data and information are the fuel that drives our policy vehicles. It's time that monitoring and surveillance needs are addressed and receive the attention, funding and respect they deserve.

Michael J. Donahue, Ph.D.

Commission studies economic benefit of recreational boating

The Great Lakes Commission has launched a new study of recreational boating on the Great Lakes. The initial phase is being conducted this summer under contract to the U.S. Army Corps of Engineers-Detroit District. The study was authorized in the Water Resources Development Act of 1999, Section 455. The current effort will establish a methodological framework for assessing the economic benefits of recreational boating on the Great Lakes. To accomplish this, Commission staff will review literature on Great Lakes recreational boating and compile data on the number of boats registered in the basin in both the United States and Canada, as well as the number of U.S. marina facilities and marine manufacturers and suppliers in the region. The effort also will include development of a methodology to estimate the number of recreational boats actually operating on the Great Lakes. A final report will be available in October.

A full study to identify the economic benefits that accrue from U.S. recreational boating on the Great Lakes has been advocated by the Commission and is contingent upon federal funding. Such a study would provide needed information on the economic and tourism role recreational boating and its sports fishing component have in local communities and the region as a whole. The Commission is concerned that, if operations and maintenance funding for the Corps of Engineers does not keep pace with inflation, dredging of shallow draft, small boat harbors important to recreational boating in the Great Lakes may be reduced. Contact: Steve Thorp, sthorp@glc.org, or John Stone, jstone@glc.org.

Bayfield, Wis., Harbor. Photo credit: Steve Thorp.

Lake Michigan the focus of new Commission projects

Pollution prevention and information management in the Lake Michigan basin is the focus of three new Great Lakes Commission projects.

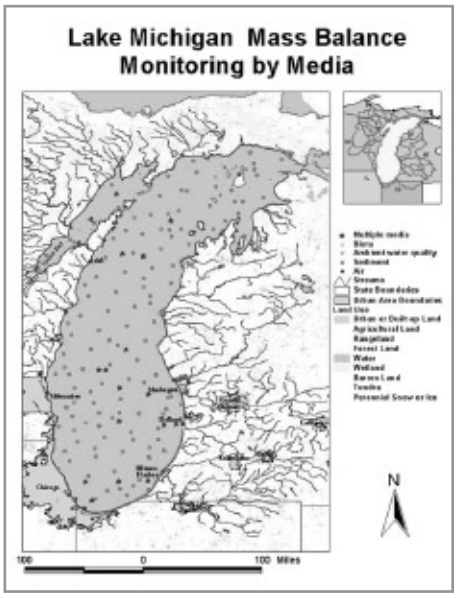
The Lake Michigan Online Monitoring Database will disseminate information collected through the Lake Michigan Tributary Monitoring Project. The tributary monitoring project yielded an inventory of monitoring efforts on Lake Michigan, including both lakewide programs and activities underway in the lake's major tributaries. By integrating the inventory with a map-based online interface, the new project will provide access to real-time information about monitoring efforts throughout the Lake Michigan basin.

The Lake Michigan Online Atlas will provide an Internet-based digital atlas of the Lake Michigan basin. Important ecosystem management information will be viewable using mapping and analysis tools incorporated into the web site. All data layers will be compatible with commercial geographic information system software, and most will be available to download to the user's computer. The project will provide access to local and regional data sets, mapping and analysis tools, and related information.

Bi-state coordination in the St. Joseph River watershed will build capacity to address atrazine and other pollutants that ultimately impact Lake Michigan. The Commission will work with Friends of the St. Joseph River Association, Inc. to convene stakeholders in Michigan and Indiana to cooperate in cleaning up and restoring the river.

Funding for these projects is provided by U.S. EPA's Lake Michigan Team. Noting that we are all "Lake Michigan managers," Judy Beck, U.S. EPA Lake Michigan Team manager, stated, "These projects will provide lakewide information to help inform decisions made every day that affect the lake." Contact: Matt Doss, mdoss@glc.org.

Lake Michigan monitoring assessment released



Sample map from Assessment of the Lake Michigan Monitoring Inventory.

The Great Lakes Commission is pleased to announce completion of an inventory of monitoring projects in the Lake Michigan basin. Findings have been released in a report, *Assessment of the Lake Michigan Monitoring Inventory*, available on the Commission web site at www.glc.org/monitoring/. The report presents project summaries and assessments of 14 tributary watersheds and the open lake across nine categories spanning water quality to wildlife and land-use monitoring. It assesses gaps in monitoring coverage and makes recommendations to improve coordination and information sharing. According to Judy Beck, U.S. EPA's Lake Michigan Team manager, the report will be used as a reference document for the Lake Michigan Lakewide Management Plan.

Monitoring project information was collected through a unique collaboration among the Great Lakes Commission, state and federal agencies, and local tributary groups. Kathy Evans, a project participant and water quality coordinator for the Muskegon Conservation District, stated, "The project allowed us to establish better connections with local monitoring agencies and also to work on filling in the gaps with volunteer monitoring." An inventory database generated by the project will be formatted for geographic search and access through the Internet. Contact: Ric Lawson, rlawson@glc.org.

Task force advances beneficial use of dredged material

The Great Lakes Beneficial Use Task Force held its first meeting June 27 in Chicago, Ill. The task force supports the Great Lakes Commission's beneficial use project, the goal of which is to facilitate and coordinate state involvement in the development of federal guidance for beneficial use of dredged material. Beneficial use is the placement or use of dredged material for some productive purpose. The task force is comprised of water quality and solid waste officials from each Great Lakes state.

At the June 27 meeting, special panels discussed state efforts to develop contaminant criteria for dredged material and the use of dredged material management plans in promoting beneficial use. Great Lakes Commission staff presented initial findings on state policies and regulations, including gaps and weaknesses in existing state regulatory frameworks that hamper the beneficial use of dredged material. Participants noted several areas where federal guidance might be able to overcome existing barriers and promote beneficial use among Great Lakes states. These included a broad definition of beneficial use of dredged material, specific testing methods, and a framework specific to dredged material for evaluating environmental and economic benefits versus harm.

The task force will hold its second and final project meeting October 4-5 in Milwaukee, Wis., in conjunction with the Great Lakes Dredging Team meeting. The project also calls for development of a brochure to improve the public's understanding of beneficial use as an alternative to open water disposal or placement in a confined disposal facility (CDF). Removing obstacles to beneficial use and educating the public and policymakers about this alternative management option responds to decreasing CDF capacity in the Great Lakes basin and an increasing intolerance for open water disposal of dredged material. The Commission's beneficial use project is supported by funding from the U.S. EPA-Great Lakes National Program Office. Contact: Victoria Pebbles, vpebbles@glc.org.

TEACH Great Lakes: New gateway for kids and teachers

www.great-lakes.net/teach/

The Education and Curriculum Homesite (TEACH Great Lakes), a new component of the Great Lakes Information Network, focuses on advancing Great Lakes-related educational materials for the broad audience of educators and students in the Great Lakes region and beyond.

TEACH features mini-lessons on Great Lakes topics. Geared for kids, the lessons include links to a glossary to help explain scientific terms and acronyms. The newest modules focus on water levels, Areas of Concern, urban sprawl and non-indigenous invasive species.

In the TEACH Chat section, "Ask and Win" lets kids submit questions about the Great Lakes and enter a drawing to win a prize. (See www.great-lakes.net/teach/forms/ask_form.html) One question will be featured every two weeks, and all answers will be archived in the "Great Lakes Vault of Knowledge."

Upcoming TEACH modules will focus on geography, shipping, the Great Lakes fishery, endangered species and human health issues. The site also will feature environmental stewardship projects in Great Lakes communities, image and map galleries, a speakers bureau, and a directory of Great Lakes-related field trip opportunities. The TEACH project is funded by the U.S. EPA-Great Lakes National Program Office. Contact: Sara Ashley, sashley@glc.org.

Public health/watershed management linkages highlighted at workshop

Integrating public health concerns into the watershed management process was the focus of a June 9 workshop in Kalamazoo, Mich. Sponsored by the Statewide Public Advisory Council (SPAC) and Kalamazoo River Watershed Council, the workshop highlighted environmental health priorities in the Great Lakes basin and opportunities to link watershed management and public health programs and activities.

A mixture of public health and environmental protection professionals allowed for a unique cross-fertilization of ideas and perspectives. Highlighting a major theme from the workshop, Dr. Henry Anderson, chief medical officer for the state of Wisconsin, noted, "Funding has not kept pace with the increasing complexity of environmental public health issues and the need to provide technical support for primary prevention concepts, such as wellhead protection and holistic watershed management."

In response to workshop discussions, the Kalamazoo County Board of Commissioners voted to form a surfacewater quality monitoring program and *E. coli* task force. "The workshop brought diverse partners together and confirmed the need for these programs," said Mary Powers, Kalamazoo River SPAC representative. The workshop was coordinated by the Great Lakes Commission as part of its SPAC support. Contact: Matt Doss, mdoss@glc.org.

GLIN Meeting

A GLIN Advisory Board Meeting will be held Sept. 22 at the USGS Great Lakes Science Center in Ann Arbor, Mich. Contact: Christine Manninen, manninen@glc.org

Baltic Fellowship Program selects six new fellows

The Great Lakes Commission hosted the Baltic Fellowship Program Review Panel meeting in Vilnius, Lithuania, April 27-28. The fellowship program provides opportunities for senior scientists from Baltic Sea countries to visit, study and collaborate with Great Lakes institutions on issues of shared interest. Six applicants were chosen for the 2000 program:

•Vida Auguliene, chief specialist, Joint Research Center in Lithuania, proposes to gain knowledge and experience in calculating mobile toxic air emissions to help develop regulations for traffic control in Vilnius' urban areas.

•Sandra Kalnina, chief specialist, Ventspils Regional Environmental Board in Latvia, would like to learn about U.S. EPA's projects connected with planning and sustainability in the Great Lakes region.

•Kestutis Kvietkus, director, Atmospheric Pollution Research Lab, and project leader, Vilnius Air Quality Management Project in Lithuania, is interested in the development of the Devil's Lake (Wisconsin) Mercury TMDL Air Deposition Pilot Project and its application to other impaired waters through a statewide or region-wide strategy for mercury reduction.

•Anda Ikauniece, head of the Hydrobiological Laboratory, University of Latvia, would like to study the exotic species *Marenzelleria viridis* and *Cergopagis pengoi* in order to set up an early warning system that would contribute to a national monitoring program.

•Tadas Navickas, chief specialist, Marine Environment Protection in Lithuania, proposes to study oil pollution and spills policies in the Great Lakes region.

•Urmas Raudsepp, researcher, Estonian Marine Institute, would like to conduct a comparative analysis of the physical process responsible for nearshore-offshore water and mass transport in the Gulf of Riga and Lake Michigan.

Fellowship updates and announcements are posted at www.epa.gov/glnpo/baltic/. Contact: Julie Wagemakers, juliew@glc.org.

Great Lakes experience benefits Gulf of Maine

Despite their geographic and physical differences, the Great Lakes and Gulf of Maine ecosystems share many common concerns and needs. Both, for example, are vulnerable to the pressures of coastal development and accompanying conventional and toxic pollutant problems. Also, both require effective transboundary institutional arrangements to harmonize programs and policies among multiple jurisdictions. These commonalities provided the impetus for a June 19-20 workshop in St. John, New Brunswick, titled "Exploring Transboundary Arrangements for Management of the Gulf of Maine Ecosystem: Focus on Sewage, Toxics and Coastal Development."

Commission Executive Director Mike Donahue was among a delegation of Great Lakes officials sharing their experiences with the Great Lakes Water Quality Agreement (GLWQA) and thoughts on the prospective applicability of such a mechanism to the Gulf of Maine. He was joined by Gary Gulezian (U.S. EPA), Ron Shimizu (Environment Canada), Tom Behlen, (International Joint Commission), Henry Lickers (Mohawk Council of Akwesasne) and John Jackson (Great Lakes United).

Describing the Great Lakes ecosystem as "the world's largest laboratory for institutional experimentation," Donahue suggested that formal, binational arrangements, such as the GLWQA, can be highly effective in promoting federal/state/provincial cooperation and action. Local support, sustained political commitment and adequate resources, however, are necessary ingredients. "Adaptability is also essential," he noted. "Narrowly defined agreements quickly become memorials to old problems, rather than blueprints for addressing emerging ones." Contact: Mike Donahue, mdonahue@glc.org.

Executive Committee adopts record budget

The Great Lakes Commission enters FY2001 with a record-level budget of $6.03 million, thanks to Executive Committee action in late June. Reflecting a 40 percent increase over the previous year, the budget will support 50 ongoing and new-start projects, as well as coordination, policy development and advocacy services.

The budget increase is largely attributable to three factors: a marked increase in grants and contracts that advance strategic plan goals; an expanded emphasis on advocacy efforts directed at federal legislative and appropriations priorities; and enhanced member services and program development efforts, given the Commission's emerging binational focus.

"Our FY2001 initiatives reflect our ecosystem-based approach to regional problems and opportunities," says Vice Chair Nathaniel E. Robinson. "Projects address land, air and water issues and include systemwide and local projects."

Regional advocacy efforts — including an enhanced presence in Washington, D.C. — will also benefit from the FY2001 budget allocation. "The Great Lakes Commission's advocacy function is unique among regional institutions," observes Chair Irene Brooks. "We have an obligation to provide a unified and influential voice on legislation, policy and appropriations that affect us." Contact: Mike Donahue, mdonahue@glc.org.

Final Ontario delegate named

Ontario has named Jim Whitestone an Associate Commissioner, completing the province's delegation to the Great Lakes Commission. Whitestone currently serves as director of the Transportation Policy Branch in the Ontario Ministry of Transportation. He has held numerous positions in provincial government since 1986, many in Ontario's Ministry of Finance. He holds a master's degree in agricultural and resource economics from Michigan State University and a bachelor's degree from the University of Guelph.

Rod Taylor will serve as Whitestone's alternate. Taylor is manager of the Freight Office in the Transportation Policy Branch of Ontario's Ministry of Transportation. He has been involved in policy work related to freight transportation since joining Ontario public service in 1982.

Commission staff updates

After nearly 35 years of dedicated service, Cappy Bilakos retired from her position as financial officer in August. Best wishes, Cappy!

Sara Ashley has been promoted to program specialist. She replaces Morgan Anderson as the Great Lakes Commission webmaster. Anderson left the Commission in April to pursue a career with an Internet company in California.

Matt Doss has been promoted to program manager. Doss will oversee the environmental quality component of the Commission's Resource Management and Environmental Quality Program.

Ric Lawson has been promoted to project manager. He manages the Lake Michigan Tributary Monitoring Project, Lake Michigan Monitoring Coordination Council, Areas of Concern web site, Ohio Watershed Training Project and the Lake Michigan Online Monitoring Database Project.

Victoria Pebbles was promoted to project manager in January. She manages the Beneficial Use Project, co-manages the BRIDGES project, and is responsible for advocacy related to brownfields, farmland protection and related land-use issues.

Selected Great Lakes Commission projects, FY2001

Aquatic Nuisance Species (ANS) Dispersal Barrier • ANS Retrospective and Ballast Water Forum • Areas of Concern Online • Ballast Management • Baltic Fellowship Program • Beach Closures Web Site • Beneficial Use of Dredged Material • Brownfields Redevelopment/ Greenfields Preservation • Commission-Sea Grant Fellow • Great Lakes Dredging Team • Great Lakes Funding Guide • Great Lakes Geographic Information Systems (GIS) Online • Great Lakes GIS Metadata Online • Great Lakes Information Network • Invasive Plants Video • Lake Michigan Atlas • Lake Michigan Monitoring Council • Mayors' Conference • Recreational Boating Data • Regional Toxic Air Emissions Inventory • Second Large Lock at the Soo • Sediment Transport Modeling • Soil Erosion and Sediment Control • Spill Prevention and Response • Statewide Public Advisory Committee (MI) • Teach Great Lakes • Tributary Monitoring • Water Resources Decision Support System • Watershed Management Training

Should children and women of childbearing age eat Great Lakes fish?

POINT

Lawrence J. Fischer, Ph.D., Director, Institute for Environmental Toxicology, Michigan State University*

Fish contain natural omega-3 fatty acids in higher concentrations than most other foods and are beneficial to a variety of organ systems, including the cardiovascular, vision and immune systems. Offsetting these potential benefits are the potential risks that arise from ingestion of chemical contaminants in fish, such as PCBs and methylmercury.

The consumption of fish, like every other type of food we eat, represents a balance of benefits and risks. When women of childbearing age and children are advised not to eat fish, are we doing them a favor? Not when the benefits of fish consumption outweigh the risks. Relevant to fish contaminants is the decision made by some mothers to reap the benefits of nursing their infants. Pediatricians tell us the benefits of nursing are greater than the small risks associated with exposure of infants to contaminants known to occur in mothers' milk.

Our state agencies, using methods designed to protect public health with a large margin of safety, have individually constructed advisories based on current knowledge of the toxic effects of contaminants in fish. Adhering to these fish consumption advisories reduces risks to sufficiently low levels, allowing the public to enjoy the benefits of eating fish. There is scientific data to support the assumption that developing humans may exhibit higher health risks than adults from exposure to toxic chemicals before, and for some time after, birth. Therefore, it is reasonable to advise pregnant women, women who may become pregnant and young children to reduce consumption of fish containing higher amounts of contaminants. Some have suggested that women of childbearing age and children should be cautioned to eat no fish. This would be wise only if fish contaminants were so high that the risks would outweigh benefits.

counterpoint

David O. Carpenter, M.D., Professor, School of Public Health, University at Albany*

Eating Great Lakes fish is clearly dangerous to the developing fetus and almost certainly has adverse health consequences even to adults. While the levels of some Great Lakes contaminants have declined somewhat, our understanding of the health consequences (especially to the developing organism) has increased such that, if anything, these substances are presently an even greater public health hazard than was appreciated in the past when the contaminant levels were higher. The major contaminants of concern are methyl mercury, PCBs, pesticides and dioxins/furans. All bioaccumulate and persist in both fish and people who consume the fish. Children born to women who ate either Lake Michigan or Lake Ontario fish show neurobehavioral abnormalities which appear to be irreversible. Women who eat PCB-contaminated Great Lakes fish and also have a genetic trait found in 15 percent of the population, have a significantly increased risk of breast cancer. Fertility is reduced in men who eat contaminated Great Lakes fish, and menstrual cycle length is shortened in women. Infants born to PCB-exposed mothers are more likely to be of low birth weight. Thyroid hormone levels are reduced in an inverse relation to serum PCB levels, resulting in altered metabolism, energy level, weight and mental alertness. Fish consumption is the major source of PCBs in humans and a significant source for dioxins/furans, all of which are more potent carcinogens than previously appreciated. There is increasing evidence that there may be synergistic interactions between methyl mercury and PCB effects on neurobehavior. Certainly not all Great Lakes fish have equal levels of contamination. However, consumption of contaminated fish should be avoided by everyone, especially by children (particularly girls who will bioconcentrate these contaminants for years and then pass them on to their own children) and women of childbearing age.

**Views expressed are those of the authors and do not necessarily represent the views of their affiliated organizations.*

Thunder Bay named Great Lakes' first national marine sanctuary

The Great Lakes' first national marine sanctuary, and the 13th in the United States, will be Thunder Bay National Marine Sanctuary and Underwater Preserve in Alpena, Mich. An agreement to protect the site was announced June 19 by Jeff Benoit, director of the National Oceanic and Atmospheric Administration's (NOAA) Office of Ocean and Coastal Resource Management, and Michigan Gov. John Engler. The sanctuary is historically significant, containing more than 100 shipwrecks within its 448 square miles. NOAA will publish the final regulations in the Federal Register, and the sanctuary will be officially designated after a four-month congressional and state review.

The National Marine Sanctuary Program was established in 1972 to conserve, protect and enhance the biodiversity, ecological integrity and/or cultural legacy of selected marine and Great Lakes areas. For more information, visit www.sanctuaries.nos.noaa.gov/ or www.glerl.noaa.gov/glsr/thunderbay/index.html

Did You Know?

It takes a typical Great Lakes freighter seven to eight days to travel from Duluth, Minn., to the Atlantic Ocean.

Channel keeper program to benefit Lake Huron-Lake Erie corridor

Water Keeper Alliance, an international environmental action group co-founded by Robert F. Kennedy, Jr., has established the St. Clair Channel Keeper program for the Lake Huron-Lake Erie corridor. Kennedy keynoted a June 8 fund-raising event at Metropolitan Beach in Harrison Township, Mich., in which hundreds of local officials and citizens participated. St. Clair becomes the 43rd river/channel keeper designation for Water Keeper Alliance.

A citizen-based, nonprofit organization, the St. Clair Channel Keeper promotes grassroots activism to enforce existing laws and regulations by individuals, corporations and governments. Specific activities will include patrols to identify pollution sources and illegal dumping, water quality testing, public education, and legal action to ensure enforcement of water quality laws. Contact: Doug Martz, 810-791-7379.

Overseas cargo vessels in Great Lakes up 15 percent

Overseas ships bound for Great Lakes ports via the St. Lawrence Seaway (March through June 2000) totaled 188, up 15 percent over this period in 1999. They accounted for 49 percent of the upbound or westbound cargo vessels. Sixty-three percent of these "salties" carried steel products to U.S. and Canadian lake ports.

This year's steel cargoes represent a 40 percent increase over the number of cargoes at this point in 1999. The estimated March through June steel traffic of 1.9 million metric tons, nearly all import trade, is an increase of 52 percent over this period in 1999.

Outbound ocean vessels through June totaled 156, 69 percent of them carrying grain or feed products. Thunder Bay, Ontario, and Duluth-Superior, Minn., at the head of Lake Superior, are the leaders among the eight lake ports engaged in this export trade. Among the 25 lake ports engaged in overseas trade this season, Thunder Bay and Hamilton, Ontario, lead in number of foreign flag calls with 68 and 64, respectively. Contact: Al Ballert, aballert@glc.org.

A vessel upbound in the 26-mile long Welland Canal, which links lakes Ontario and Erie to bypass Niagara Falls. Photo credit: Al Ballert.

Assessment of the Lake Michigan Monitoring Inventory
www.glc.org/monitoring/

TEACH Great Lakes
Check out this new component of the Great Lakes Information Network at www.great-lakes.net/teach/

Great Lakes/Baltic Sea Partnership Program
www.epa.gov/glnpo/baltic/

National Marine Sanctuaries
www.sanctuaries.nos.noaa.gov/ and www.glerl.noaa.gov/glsr/thunderbay/index.html (for Thunder Bay news)

Northeast-Midwest Institute
View Great Lakes congressional updates online at www.nemw.org/greatlakes.htm

Welland Canal Photo Archive
www.vaxxine.com/jcameron

Tenth Biennial Report on Great Lakes Water Quality
This document was released by the International Joint Commission (IJC) in early August. View it online at the IJC's web site: www.ijc.org

Great Lakes Trends: Into the New Millennium
This report, produced by the Michigan Department of Environmental Quality's Office of the Great Lakes, is designed to help residents assess progress in reducing chemical, biological and physical threats to the Great Lakes. View it at www.deq.state.mi.us/ogl

Living with the Lakes
This booklet offers a broad overview of how water levels on the Great Lakes change and how the changes affect those who live or play along the Great Lakes. View it online (www.glc.org/docs/lakelevels/lakelevels.html) or order a free hard copy from the U.S. Army Corps of Engineers (huron.lre.usace.army.mil/order/lwls.html)

Great Lakes appropriations update

The U.S. Congress is presently acting on numerous legislative and appropriations priorities as articulated by the Great lakes Commission in a policy statement released in March of this year. The following table, adapted from a July 2000 report by the Northeast-Midwest House and Senate Coalition Great Lakes Task Force, addresses selected Commission priorities. The figures presented have been approved by the relevant House and Senate committees, but final action is still pending. The appropriations listed are subject to rescission. View appropriations updates online at www.nemw.org/greatlakes.htm. Contact: Rochelle Sturtevant, 202-224-1211, rochelle_sturtevant@levin.senate.gov; or Mike Donahue, 734-665-9135, mdonahue@glc.org.

Congressional action on selected Great Lakes Commission priorities (as of July 2000) *Funding in millions of dollars*	**Great Lakes Commission request**	**FY2001 House**	**FY2001 Senate**
Agriculture			
Great Lakes Basin Program for Soil Erosion and Sediment Control	0.75	0.7	0.75
Farmland Protection Program	65	0	0
Commerce, Justice and State			
National Sea Grant College Program	65.8	61.25 [1]	64.75
Great Lakes Environmental Research Laboratory (NOAA)	7.5	7.125	7
Great Lakes Fishery Commission	12.4	9.353	12.4
International Joint Commission	7	3.418 + 2.1 [2]	3.771 + 2.1 [2]
National ANS Task Force & Ballast Water Demonstration Program	1.65	1.65	1.85
Energy and Water			
Water Resources Development Act (WRDA)			
Environmental Dredging (Sec. 312)	3	2.084	0.384
John Glenn Great Lakes Basin Program (Sec. 455)	1.5	0 [3]	
Restoration of Environmental Quality (Sec. 1135)	20	18	17
Beneficial Use of Dredged Materials (Sec. 204)	10	4	2
Sediment Transport Models and Sediment Management Planning (Sec. 516)	1	0.5	0
RAP Assistance (Sec. 401)	1.5	0.6	0
Improvement of Soo Lock	1	1	1
Dispersal Barrier Demonstration (NISA, Sec. 1202)	0.6	0.4	0.4
Interior			
National Invasive Species Act			
Aquatic Nuisance Species Program (F&WS)	4.6	Probably level (4.692)	Probably level (4.692)
Great Lakes Science Center (USGS/BRD)	8.5	6.575 + 0.5 for vessel retrofit [4]	7.375 + 0.5 for vessel retrofit
Great Lakes Fish & Wildlife Restoration	8	1.978	1.978 [5]
USGS Great Lakes Mapping Coalition	0.5	0.5	0.5
Transportation			
Icebreaker *Mackinaw*	110	110 [6] 110 [7]	40 110 [7]
Ballast Water Guidelines and Prevention Program (NISA) *Includes Ballast Discharge Study and Information Clearinghouse*	Continued funding	3.5 [8]	3.592 + not less than 1 R&D
VA, HUD and Independent Agencies			
Great Waters Program	3	President's Request	
Great Lakes National Program Office	15.1	13.2 [9]	
EPA Brownfields	91	91.6	

1 Including 3 million for zebra mussel research

2 2.1 million for the IJC Lake Levels Study (administration request) was included in the Supplemental Appropriations Conference Report H. Rept 106-710. Passed by the House on June 29, 2000, and the Senate June 30, 2000.

3 Rep. Ehlers offered an amendment to provide .1 million for Great Lakes Biohydrological Information. The amendment was withdrawn following assurances from Chairman Packard that the committee would reconsider this program in conference.

4 A small increase was approved for the facilities account, but it is uncertain whether this will got to deferred maintenance.

5 Not less than .398 million shall be awarded as grants to federal, state, local and tribal entities.

6 The committee has not included provisions proposed in the budget ... in regard to funding Coast Guard icebreaking activities. [user fees]

7 110 million funding for the Great Lakes replacement icebreaker (administration request) was included in the Supplemental Appropriations Conference Report H. Rept 106-710.

8 The committee did not earmark .5 million within the Coast Guard R&D budget line for invasive species as in FY2000. However, the committee provided an overall increase of 3.6 percent to the Coast Guard R&D budget line above FY2000 which could be directed to invasive species work (at the discretion of the administration).

9 Lack of a specific earmark for GLNPO indicates that the program funding decisions devolve to the agency.

Great Lakes passage aboard *Le Levant*

On June 17, *Le Levant* departed Chicago chartered by the Smithsonian Associates. Helping to spark a revival in Great Lakes passenger cruising, this 330-foot, luxury ship was the setting for the Smithsonian study tour, "A Passage through the Great Lakes." Dr. Jennifer Read, a Fulbright Fellow (1998) at the Great Lakes Commission, served as the tour's study leader.

Passengers from Texas, California, Florida, the Carolinas and other corners of the continental United States learned about water quality, lake levels and the issues associated with Great Lakes water diversion. Most had never visited the Great Lakes and were curious to see Lake Superior's majesty and the spectacle of Niagara Falls. However, they were also very interested in learning as much as possible about the lakes themselves. This was the second Smithsonian study tour through the Great Lakes, and many passengers had been on a waiting list for the previous year's trip.

"People on the west coast really have no knowledge of what is going on in the middle of the continent," said passenger Sam Brainin. "To grasp the sheer size of the Great Lakes has been wonderful," added passenger Sylvia Sawyer.

Le Levant transits an interesting route between Toronto, Ontario, and Chicago, Ill., that includes stops in Saugatuk and Mackinac Island, Mich.; and Manitoulin Island, Windsor and Niagara Falls, Ontario. The ship's reinforced, ice-resistant hull also enables travel to Hudson Bay. At 11 feet, its shallow draft is designed to take the ship deep into the Amazon River basin and enables *Le Levant* to reach Great Lakes ports that its larger counterparts cannot. Additionally, the ship releases no wastes directly into the Great Lakes, in compliance with public health and environmental protection regulations. Contact: Jennifer Read, jread@glc.org.

Le Levant *in the Welland Canal. Photo credit: Jeff Cameron, www.vaxxine.com/jcameron*

Great Lakes Calendar

Ohio Lake Erie Commission Meeting
September 6; Sandusky, Ohio
Contact: Ohio Lake Erie Commission Office, oleo@www.epa.state.oh.us

9th Annual Ohio Lake Erie Conference
September 7; Sandusky, Ohio
Contact: Jill Woodyard, 419-245-2514, jill.woodyard@www.epa.state.oh.us

Ohio Inland Spills
September 18-20; Toledo, Ohio
Contact: Linda Fields, linda.fields@epa.state.oh.us

GLIN Advisory Board Meeting
September 22; Ann Arbor, Michigan
Contact: Christine Manninen, 734-665-9135, manninen@glc.org

Great Lakes Commission Beneficial Use Task Force Meeting
October 4-5; Milwaukee, Wisconsin
Contact: Victoria Pebbles, 734-665-9135, vpebbles@glc.org

NACD-Great Lakes Committee Meeting
October 4-5; Milwaukee, Wisconsin
Contact: Jennifer Read, 734-665-9135, jread@glc.org

Great Lakes Dredging Team Meeting
October 5-6; Milwaukee, Wisconsin
Contact: Steve Thorp, 734-665-9135, sthorp@glc.org

Soil Erosion and Sedimentation Task Force Meeting
October 5-6; Milwaukee, Wisconsin
Contact: Tom Crane, 734-665-9135, tcrane@glc.org

Great Lakes Commission Annual Meeting
October 15-16; Hamilton, Ontario
Contact: Mike Donahue, 734-665-9135, mdonahue@glc.org

State of the Lakes Ecosystem Conference
October 17-19; Hamilton, Ontario
Contacts: Harvey Shear, 416-739-4704, harvey.shear@ec.gc.ca; Paul Horvatin, 312-353-3612, horvatin.paul@epa.gov

45th Annual Midwest Ground Water Conference
October 17-19; Columbus, Ohio
Contact: Mike Hallfrisch, 614-265-6745, mike.hallfrisch@dnr.state.oh.us

Society of Environmental Journalists' National Conference
October 19-22; East Lansing, Michigan
Contact: CVM Outreach, 517-355-4466, whiting@cvm.msu.edu

Further details and a more extensive calendar are available online via the Great Lakes Information Network (www.great-lakes.net). If you have an event you'd like us to include, please contact Courtney Shosh, *Advisor* editor, at 734-665-9135 or cshosh@glc.org.

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If you prefer to read the electronic version of the *Advisor* online via the Commission's home page (www.glc.org), please let us know and we'll cancel your print subscription.

The Last Word

Sound basis for decisionmaking: A collective approach

The Great Lakes Commission is about to embark on an exciting new endeavor that will contribute to a *Water Resources Decision Support System for the Great Lakes*. This effort will lay the framework for a state-of-the-art decision support system that will provide the data and information needed to make sound public policy decisions to protect the world's greatest freshwater resource.

Why is this data and information so important? The Great Lakes play an increasingly vital role in the regional and national economies of the United States and Canada. Although the Great Lakes system is often perceived as an inexhaustible supply of freshwater, it is in fact a finite, ecologically fragile system that we must protect as stewards. In order for us to make sound decisions, we must continue to strengthen our understanding of the relationship between water supply and water quality and its subsequent impacts on regional sustainability.

As members of the Great Lakes Commission, we are well-positioned to use a multi-agency, multidisciplinary approach to solve numerous national and international issues. As chair, I look forward to the Commission helping the region to resolve some of these complex issues through this new endeavor.

Irene B. Brooks
Commission Chair

Photo credit: Julie Wagemakers

Where in the Great Lakes?

Guess the location pictured in this Great Lakes photo, and you could win a prize! Send your guess via e-mail to cshosh@glc.org along with your name, address and daytime phone number (or call Courtney Shosh at 734-665-9135). All correct responses received by Sept. 15 will be entered into a drawing. The winner will receive his/her choice of a Great Lakes Commission t-shirt or a $10 credit toward the purchase of a Commission publication.

The location of last issue's "Where in the Great Lakes?" photo was Fort Mackinac on Mackinac Island in Lake Huron. The contest winner was Georgia Bobinsky of Berea, Ohio.

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