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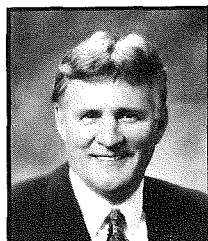
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Guest editorial

Water is a powerful symbol: Perspectives from our new Associate Member



**By the Hon. Paul Begin, Minister of the Environment,
Government of Québec**

*Excerpt from Paul Begin's remarks at the Great Lakes Commission's
Semiannual Meeting, May 18, 1999*

Water is our most precious renewable resource. It is omnipresent in our lives; in fact, human activity depends on it. Water is vital to our survival and that of all living things, and it is essential to our quality of life. Moreover, water is inextricably linked to the economy, as it is the driving force behind many agricultural, industrial and commercial activities. In Québec, as in the Great Lakes region, water is a powerful symbol as it is intimately related to the exceptional beauty of our grandiose landscape.

Protection and restoration efforts in the St. Lawrence

For 10 years, the governments of Québec and Canada have worked together on the implementation of an action plan—St. Lawrence Vision 2000—aimed at protecting and restoring the quality of the St. Lawrence and its environment. Thanks to the efforts of both governments, municipalities, industries, farmers and citizen groups, the overall quality of the mighty river has greatly improved. In June 1998, Phase III of the plan (which will end in 2003) was launched.

Over the five years of this phase, the government of Canada will invest \$123 million and Québec \$116 million for a total of \$239 million for a number of projects: sediment decontamination; shore stabilization and protection; wetland acquisition and development; soil fertilization and phosphorus reduction plans; and protection of natural environments rich in biodiversity.

In June 1998, Canada and Québec also agreed on the creation of a marine park comprising the waters of the Saguenay fjord and the waters of a major segment of the St. Lawrence River immediately north and south of the Saguenay's mouth. Several species of whales and marine mammals spend the summer in the area. The park, managed on a joint basis, is intended to protect this unique ecosystem, and the executive committee includes local representatives in the decisionmaking process.

Water export and interbasin transfer issues

Because of the abundance of water in the Great Lakes-St. Lawrence basin, we have long thought that the resource was inexhaustible, that it could serve a huge variety of purposes in support to expanding populations and economic development without nearly any limit. But that is not the case today. Given the scope of present and future demands throughout the basin, we have all come to realize that we are faced with an increasingly limited resource.

As a result, we have given thought to the issue of water collection for exportation and interbasin transfers. This issue raises a wide range of questions and underscores the need to maintain a balance between present and future demands. Perhaps there is no real difference between the situation of a large drainage basin and an aquifer. Recently, for example, the government and population were forced to decide if it was reasonable to let a firm collect all of the surpluses from the renewable reserve of an aquifer not used by local farmers, knowing that these surpluses could easily meet the community's future domestic and agricultural needs.

This situation could easily arise at the scale of the Great Lakes-St. Lawrence basin, forcing us to make decisions or agree to procedures aimed at ensuring a balance between present water uses, the

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• The ADVISOR is published bimonthly by the Great Lakes Commission •

The Great Lakes Commission is an eight-state compact agency established in 1955

"to promote the orderly, integrated and comprehensive development, use and conservation of the water resources of the Great Lakes basin."

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Great Lakes Commission

The Great Lakes Commission, an eight-state compact agency founded in state and federal law and dedicated to the use, management and protection of the water resources of the Great Lakes basin, provides leadership in the implementation of principles of sustainable development throughout the basin. In partnership with the Great Lakes states, the Commission addresses issues of resource management, environmental protection, transportation and economic development by serving as an accurate and objective source of information; an effective forum for the development and coordination of public policy; and an active and committed advocate of basin interests.

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Introducing the binational Great Lakes Commission

Sometimes, we need to look to our past to see our future.

Forty-five years ago, our Great Lakes governors and legislators had an epiphany of sorts. They realized that cooperation—not competition—was the key to unlocking the economic potential of North America's heartland. They realized that collaboration—not coincidence—was needed to ensure that environmental protection programs were applied consistently. And, perhaps most importantly, they discovered that the dotted line down the middle of the lakes didn't really exist. In fact, they came to realize that the only thing more difficult than managing an entire basin was managing half of one.

The outcome of this enlightened thought, of course, was the Great Lakes Basin Compact of 1955. It envisioned an organization that would look beyond geopolitical boundaries—even international ones—and focus instead on watershed boundaries. States and provinces would be co-equal partners in the endeavor. And, the organization would be something of a Great Lakes ambassador, moving comfortably among all levels of governance to strengthen binational relations and, ultimately, to promote the economic and environmental well-being of the basin and its people.

Any student of Great Lakes governance, of course, knows that the U.S. Congress and the federal administration of the time shared only part of this vision; congressional consent language did not include a provincial membership provision. Consequently, for the first three and a half decades of its existence, the Great Lakes Commission focused largely on interstate relations and U.S. domestic issues, with only informal ties to Ontario and Québec.

The Great Lakes Commission of the 1990s, however, has not been one to perpetuate the status quo. Its members revisited the intent of the Compact and vowed to see it realized. The Commission

adopted a provincial membership initiative that was subsequently endorsed by every Great Lakes governor and premier. The Commission's Strategic Plan embraced a binational focus, and Canadian federal and provincial involvement in Commission activities (and vice versa)

increased exponentially. And, the Commission's legal counsel determined that U.S. Congressional consent legislation was not a necessary precondition to securing full

provincial membership.

A truly significant milestone was reached in Montreal on May 18 with the signing of a "Declaration of Partnership," establishing an Associate Member program for the provinces "as an important step toward the goal of a stronger partnership as provided for in the Great Lakes Basin Compact." The Government of Québec joined officials from every Great Lakes state in signing the declaration, and, with positive signals received from Ontario, a 10th and final signature is anticipated.

To be sure, there's more work to be done as we move toward the kind of state/provincial partnership that only full membership can bring; the kind of partnership envisioned by our founding fathers. We'll be working hard to integrate state/provincial and related binational considerations into our programs and priorities. We'll be demonstrating the value added of this new arrangement to the entire Great Lakes-St. Lawrence community. And, we'll continue dialogue with our U.S. and Canadian federal colleagues to ensure that the benefits of a strengthened state/provincial partnership, via full provincial membership, are fully applied to strengthen binational programs and policies.

The foundation has been laid, and we're well on our way. Welcome to the new binational Great Lake Commission!

Commission News and Views

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



U.S. and Canadian leaders address environmental protection, maritime transportation issues at Commission's Semiannual Meeting

Policymakers and opinion leaders from throughout the binational Great Lakes-St. Lawrence region convened on May 17 in Montreal, Québec, for a full agenda of business at the Great Lakes Commission's Semiannual Meeting. More than 140 Commission delegates, Observers and friends met to discuss legislative and appropriations priorities, partnership opportunities with the governments of Ontario and Québec, new resource management initiatives, and measures to enhance and promote maritime transportation on the Great Lakes-St. Lawrence system.

The meeting was followed by a Seaway Symposium on May 19 (see story on page 9) and the 13th annual International Great Lakes-St. Lawrence Mayors' Conference on May 20-21 (see story on page 5).

The day-long meeting began with a welcome from Montreal Mayor Pierre Bourque and opening comments from Michel Robitaille, director of the U.S. Division of the Ministry of International Affairs and Québec's Observer to the Great Lakes Commission. Paul Begin, Minister of the Environment for the government of Québec, was on hand to keynote the event.

"The choice of Montreal to host this meeting is an eloquent testimony to the role the city has played since the very birth of the Americas as the point of entry and departure for the heart of the continent," said Begin.

Begin also discussed Québec's water management policy, a policy that touches on both water quality and water quantity management issues.

The luncheon keynote address was given by Hugues Morrisette, Directeur General, Secrétariat à la mise en valeur du Saint-Laurent. He extended thanks to all who have had a positive influence on the development of the Great Lakes-St. Lawrence system, and stressed that geography should prevail over politics when it comes to taking care of water resources.

"We are here because of water," said Morrisette. "We are here because we need each other to preserve and develop this unique and wonderful asset that is

the Great Lakes-St. Lawrence system."

Morrisette also received the Commission's "Outstanding Service" award in recognition of his leadership in promoting strong state/provincial relations within the Great Lakes Commission's structure.

Selected policy actions

Federal legislative and appropriations priorities. The meeting featured presentation and discussion of the Commission's recently released legislative and appropriations priorities for the 106th Congress, First Session. The Commission, in a 34-point policy position, is urging the Great Lakes Congressional Delegation, the entire Congress and the Administration to support institutions, programs, laws and appropriations vital to the informed use and management of the resource. The full-text version is available online at <http://www.glc.org/projects/congress/strategy/approp99.html>.

Strategic Plan review process. The Commission membership, with input from the larger Great Lakes community, developed and adopted a Strategic Plan in 1995, which has proven to be an invaluable guide in shaping the organization's priorities. A thorough review will be initiated in 1999 to ensure that any prospective revisions are devised and approved in the year 2000. The proposed review process, which was unanimously approved by Commission delegates, will include solicitation of comments from the entire community of Great Lakes interests to review plan progress, assess plan relevance to future opportunities and challenges, and identify prospective revisions.

Commission sets agenda for next two years. The Great Lakes Commission 1999-2000 Work Plan, presented for review at the meeting, reflects the organization's current actions and initiatives, and builds upon previous actions of the Commission and its Executive Committee. It addresses project-specific initiatives to be undertaken and/or completed prior to the Commission's annual

meeting in 2000. The plan is a "living document"; additional detail and program elements will be added to it regularly, and updates will be prepared as needed.

New Commission priorities, as outlined in the Work Plan, include: review and updating of the Strategic Plan; web-based mapping of beach advisories and closings; development of TEACH Great Lakes, an educators network and web site; publication of a reference guide on Great Lakes funding sources; development of a Great Lakes Water Resources Management Program; and establishment of a Lake Michigan Monitoring Coordination Council.

State/provincial partnership. The governments of Ontario and Québec, as Observers to the Commission, participate in many Commission meetings, task forces, projects and other initiatives. To both celebrate and institutionalize this growing partnership, the member states have pursued full provincial membership, as originally provided for in the Great Lakes Basin Compact. A "Declaration of Partnership" was developed to formally recognize the state/provincial partnership and advance it to a new level.

"This declaration is a non-binding, good faith agreement that acknowledges our shared stewardship responsibility; celebrates a history of state/provincial partnership; and acknowledges that partnership with an 'Associate Member' status," said Commission Chair Irene Brooks.

Representatives from the eight Great

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Louise Beaudoin, Québec's Minister for International Relations, addresses Commissioners and friends as they depart for a St. Lawrence cruise.

Meeting overview

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Lakes states and Québec signed the declaration at the meeting; an Ontario signature is anticipated in the near future. The declaration provides for non-voting associate membership as an interim step toward full membership.

New Soo Lock. An important next step in the effort to construct a second large lock at Sault Ste. Marie, Mich., is agreement among the Great Lakes states on the allocation of the nonfederal cost share for lock construction. The Commission's Soo Lock Funding Alternatives Task Force has narrowed down the funding alternatives, and recommended that a formula based on the average of state and port origin and destination tonnages be applied. The Executive Committee has been charged with endorsing a single alternative on or before July 15.

Discharge of waste materials. At its 1998 annual meeting, the Commission agreed to sponsor a workshop to explore the efficiency of marine sanitation devices in protecting Great Lakes water quality. Wisconsin and Michigan have successfully petitioned the U.S. EPA to have all sanitary discharge from vessels prohibited in their portions of the Great Lakes. However, such discharges are authorized in many other parts of the Great Lakes, including the Indiana and Illinois waters of Lake Michigan. The workshop's draft program was approved by the Commission, and will feature presentations on the operation, maintenance and inspection of marine sanitation



Québec's Michel Robitaille, representing the Commission's new Associate Member, is welcomed by Commission Executive Director Mike Donahue and Vice Chair Nathaniel E. Robinson.

tion devices from the U.S. Coast Guard, Illinois and Indiana departments of Natural Resources, Ontario Ministry of Environment and other agencies. Input from Great Lakes states and provinces will be solicited to learn if and how they should participate in discharge regulation, and how "no-discharge" zones might be enforced.

Using technology to promote maritime transportation and associated economic development. Electronic communications technology, such as the Internet (i.e., World Wide Web) has had an enormous effect on how Great Lakes-related agencies and organizations pursue their missions. The Commission approved a proposal to use the WWW to market and promote the Great Lakes-St. Lawrence system and its ports. The effort will initially focus on U.S. ports and then expand to include Canadian ports and other maritime system data. The goal is to build upon existing efforts, address unmet needs and take advantage of the Commission's ability to employ such technology for publicity and promotional purposes. The Commission has demonstrated its expertise in communications technology through the Great Lakes Information Network, development and maintenance of numerous web sites and email list serves, and GIS applications.

Waterways management. Rear Adm. John McGowan, commander of the U.S. Coast Guard's Ninth District, discussed the creation of a regional Waterways Management Forum. The group's mission is to identify and resolve maritime policy and infrastructure issues of concern in the Great Lakes-St. Lawrence maritime transportation system. The forum's first meeting, convened by the USCG and U.S. Army Corps of Engineers on March 12, identified dredging and public promotion of maritime commerce as leading issues.

Contact: Mike Donahue, mdonahue@glc.org.

St. Lawrence Action Plan

The Great Lakes Commission's Semiannual Meeting concluded with an introduction to Great Lakes-St. Lawrence environmental and marine transportation issues from Québec's perspective. Representatives



Commission Chair Irene Brooks presents Michel Robitaille with a plaque recognizing his leadership in hosting the meeting and sponsoring the St. Lawrence River cruise.

from the St. Lawrence Vision 2000 (SLV 2000) group introduced Phase III of the St. Lawrence Action Plan, which is the culmination of discussions between many government and nongovernment partners. Various Canadian and Québec departments, together with representatives from the SLV 2000 Consultative Committee, Strategies Saint-Laurent, and the Areas of Prime Concern (ZIP) committees have reached consensus on priority areas for environmental action over the next five years.

This third phase of the St. Lawrence Action Plan seeks to achieve three major objectives: protect ecosystem health, protect human health, and involve riverside communities in the process of making the St. Lawrence more accessible as it recovers from its former uses. Phase III emphasizes instituting voluntary measures, adopting good environmental management practices, and focusing on education and consciousness-raising as means to protect the health of the public and the St. Lawrence ecosystem.

Strategies Saint-Laurent is a nonprofit organization that coordinates the activities of the 10 active ZIP committees in Québec. Each ZIP committee consists of local and regional representatives from environmental groups, communities, industry, recreational tourism organizations and educational institutions, among others. The mandate of these groups is to develop an Ecological Remedial Action Plan for their respective territories.

Information on the St. Lawrence Action Plan can be found at <http://www.slv2000.qc.ec.gc.ca>.

Speakers from SLV 2000 at the Commission's semiannual meeting included Francois Duchesneau, George Arsenault, Jean-Pierre Gauthier, Jerome Faivre, and Gervais Bouchard. Contact: SLV 2000, quebec.slv2000@ed.gc.ca.

Water and its connection to communities

Montreal welcomes Great Lakes mayors

Thirty-seven mayors of shoreline communities on the Great Lakes and St. Lawrence River, along with representatives from many other communities, convened in Montreal on May 20-21 for the 13th annual International Great Lakes St. Lawrence Mayors' Conference. The event was hosted by the Montreal Urban Community, a government entity comprised of the many municipalities on the island of Montreal.

This year's program featured mayors serving as presenters and session moderators. Water and its connection to communities was the major theme, with an emphasis on jobs and quality of life. Montreal Mayor Pierre Bourque set the tone for the meeting by describing "Montreal Bleu," a project in which the city and surrounding communities are refocusing on their waterfronts and the archipelago nature of the region.

A topic of discussion included the planned reopening of the Lachine Canal in 2002 following remediation of contaminated sediments and redevelopment of old, adjacent industrial areas. The canal, which was closed when the seaway opened in 1959, eventually will become a recreational waterway through the heart of the urban area. The Lachine reopening and the related redevelopment will include new open space and expanded public access to the canal's waterfront.

A maritime session addressed the issue of public relations in its broadest sense. For example, Michel Turgeon, commu-

nications director for the port of Montreal, described how the port has modified some of its operations to reduce nighttime noise. Also, Erman Cocci, chief operating officer for the Saint Lawrence Seaway Development Corporation, talked about how the Massena, N.Y., office is involved in area schools through presentations, financial support and enhancement of recreational facilities.

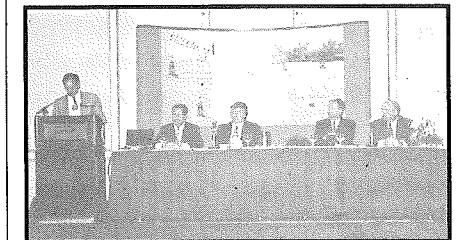
A session titled *When Water Becomes a Threat: Managing Emergencies and Disasters* focused on the ice storm of January 1998 that struck portions of the Great Lakes-St. Lawrence region with such ferocity that its aftermath is still visible on the landscape. The result of the storm was a renewed appreciation for emergency preparedness and a realization of how dependent modern life is on transportation and electricity. In Montreal, 1.4 million households were without power and phones. Even gas stations couldn't pump gas. The mayor of Kingston, Ontario, described how every road in the city was blocked by fallen trees. The city now has a blueprint for action detailing how city employees will respond if a similar crisis occurs again. The mayor of Plattsburgh, N.Y., recounted how his community's morale was boosted when residents organized a 100-truck convoy that delivered firewood to a neighboring community.

As part of the annual business meeting, resolutions were considered and adopted.

One resolution objected to the possible shipping of radioactive material on the Great Lakes for use at Canadian nuclear energy plants. This material, which is a byproduct of the process to neutralize weapons-grade plutonium, is proposed to be further deactivated through use in nuclear reactors.

Another resolution addressed water level management policy and urged the International Joint Commission, along with other government entities, to consult with Great Lakes-St. Lawrence waterfront communities before making decisions regarding water levels and flow control. Other resolutions addressed grain transportation and infrastructure investment, as well as encouragement for private industry to control toxic discharges at the source.

Next year's Mayors' Conference will be hosted by Scott King, mayor of Gary, Ind., in May. Contact: Steve Thorp, sthorp@glc.org.



When Water Becomes a Threat panel (l. to r.): Gary Bennett, mayor of Kingston, Ontario; Clyde Robideau, mayor of Plattsburgh, N.Y.; Denis Lapointe, mayor of Salaberry-de-Valleyfield, Québec; Jean-Bernard Guindon, Montreal Urban Community Emergency Preparedness Center; and Peter Yeomans, mayor of Dorval, Québec.

Guest editorial, continued from page 1

resource's natural rate of renewal and the possibility of retaining surpluses, if any, for future demands.

Maintaining water levels in the Great Lakes and St. Lawrence River

For Québec, maintaining water levels in the Great Lakes and St. Lawrence System is vital. We must not only keep the seaway open to navigation, but also protect the sensitive ecosystems used by birds and aquatic species to migrate, rest and reproduce. If we are to preserve the natural ecosystems that border the system, suf-

ficient quantities of water for life cycles to occur will be required. People, too, have great expectations regarding the protection of shores and banks, and they want access to the river to carry on water sports, hunting, fishing and other outdoor activities.

The Great Lakes Charter clearly describes our common concerns as well as the goals and principles that must guide us as trustees of the basin's natural resources. For its part, the Ecosystem Charter for the Great Lakes-St. Lawrence Basin offers a series of principles of which

one is sure to become the basis of all our current and future actions. This principle states that "Ecosystem integrity and the economic well-being of human communities are interdependent; achieving and protecting ecosystem integrity is, therefore, an essential part of economic activity within the basin."

The topics addressed at the Commission's Semiannual Meeting and the Seaway Symposium show just how much ecosystem integrity and the economic well-being of communities are interdependent and essential to our future actions.

Water quantity management issues: Regulating levels and flows on the Great Lakes-St. Lawrence River system

A scientific perspective on water levels

The water is falling, the water is falling! Precipitation drives the hydrologic system, and precipitation has dropped considerably throughout the basin. With increased temperatures, as has been the case in recent years, evaporation is fairly high. Less precipitation and more evaporation results in lower lake levels. Between 1996 and 1998, Lake Superior's precipitation has decreased by 23 percent. Precipitation on Lake Michigan-Huron is down 16 percent, while Erie has decreased by 5 percent and Ontario by 6 percent.

Dr. Frank Quinn, a scientist at NOAA's Great Lakes Environmental Research Laboratory, introduced a session on levels and flows on the Great Lakes-St. Lawrence River system. He discussed the low Great Lakes water levels, with Lake Ontario the lowest it has been since the mid-1960s. Even though most of the system is low, however, Lake Erie still is above its mean.

NOAA and Environment Canada predict that dry conditions are likely to continue through at least July, which means there is a probability (5 to 6 percent) of record low levels on Lake Superior. There also is a high probability that Lake Erie water levels will be low, although there only is less than a 3 percent chance that record lows will be reached.

Often tied to discussion about lake levels is the issue of climate change. As part of the Great Lakes regional component of the U.S. National Climate Change Assessment Program, an assessment will be undertaken of the potential impacts of the changed climate on Great Lakes water management. Impacts on various stakeholders will be analyzed and potential options for future Great Lakes water management strategies for Lake Ontario will be suggested. The U.S. Army Corps of Engineers (Buffalo District) will serve as the lead for this effort.

"You have to have water management policies that are robust enough that they will stay in force if the levels are like this [low] or if they might be a little higher

than what we've had in the past," said Quinn. "We've noted that for these studies, the regulation plans on both Lake Superior and Lake Ontario cannot meet the International Joint Commission's criteria under climate change scenarios."

The International Joint Commission and its role in water level regulation

The U.S. and Canadian federal governments have presented the IJC with a new reference on water diversion, consumptive use and removal. Established by the Boundary Waters Treaty of 1909, the IJC has two major responsibilities in the area of water quantity management: adjudicate on applications from either or both countries for projects that are built in boundary waters and affect levels and flows; and conduct studies and respond to questions that arise between the U.S. and Canada regarding water level regulation. Dr. Murray Clamen, secretary of the IJC's Canadian section, was on hand to discuss the IJC and its role in water quantity management issues.

The IJC's International St. Lawrence River Board of Control ensures that outflows from Lake Ontario meet the requirements of the IJC's regulation plan, which went into effect in 1958. The plan specifies weekly outflows based on the water level of Lake Ontario and trends in water supplies to the lake. The plan has a number of flow limitations to protect various interests in the St. Lawrence River that may be affected by extreme flows or levels. These include adequate flows for hydropower production, minimum depths for navigation and protection against flooding.

"The IJC recognizes that the St. Lawrence Board can't always operate on plan," said Clamen. "Deviations from the plan are sometimes necessary to deal with a number of existing or emerging conditions. The Board also has some limited discretionary authority to deviate if it can provide beneficial effects or relief to one interest without appreciable adverse effects to others."

Clamen recognizes that there are limi-

tations in the IJC's regulation policies in the St. Lawrence River area and throughout the basin. "Climate change is a big issue," said Clamen. "We have to make these regulation plans a bit more resilient, yet still adaptable."

This February, the two governments asked the IJC to examine and report on consumption, diversion and removal of waters along the common border.

"The first assignment is to focus on the potential effects of bulk water removal in the Great Lakes basin," said Clamen, "and to provide interim recommendations in August of this year. The effort will build on our 1985 report and our extensive experience in the Great Lakes."

The biological side of changing water levels

Thomas Brown, a consultant to the New York State Department of Environmental Conservation, concluded the session on water quantity management issues with a discussion of the biological effects of water level manipulation.

Brown mentioned that environmental and recreational interests are not explicitly addressed in current regulation plans. Hydropower, navigation and riparian interests are the only ones mentioned in the IJC's orders of approval and regulation criteria. The regulation plan for the St. Lawrence River system from the 1950s predated the environmental sensitivity of today.

Prior to the regulations, levels on the St. Lawrence River could range 8 feet between maximum and minimum values. Today, with the current regulation, this range has been compressed to 4 feet. This reduction has damaged the ecology of Lake Ontario and the upper St. Lawrence River. The impacts include a decrease in biodiversity and a loss of spawning habitat for many fish, including the northern pike.

"In my view, the option that holds the most promise is to update the 1958 regulation plan to better reflect all of the needs of today and to incorporate the environmental and recreational criteria and interests," said Brown.

Strong presence by Commission at ANS conference

Taking action to prevent and control aquatic nuisance species

Prevention and control of exotic species were the focus of the Ninth International Zebra Mussel and Aquatic Nuisance Species Conference, held April 26-30 in Duluth, Minn., and hosted by the University of Minnesota Sea Grant Program.

Commission Executive Director Mike Donahue discussed efforts of the Great Lakes Panel on Aquatic Nuisance Species to develop an action plan for ANS prevention and control in the Great Lakes. Since it was convened in 1991, the Great Lakes Panel has helped establish a regional framework for ANS research, policy development and program implementation in the Great Lakes.

"Despite the impressive progress already made by the panel, the region still lacks a formal vehicle for interstate decisionmaking and a mechanism for facilitating prompt, collective action on ANS prevention and control," said Donahue.

The action plan, a regional policy agreement comprised of principles, goals and objectives, articulates a collective

vision for the region and a means to achieve it. The plan will enhance the effectiveness of current prevention and control efforts, strengthen interjurisdictional consultation and decisionmaking, and promote actions that reduce or eliminate future ANS introductions. The Great Lakes governors and premiers will be invited to sign the action plan's principles, with the full document signed by members of the Great Lakes Panel.

The role of consensus in developing regional policies for ANS prevention and control was the focus of a presentation by Kathe Glassner-Shwayder, project manager at the Great Lakes Commission. Glassner-Shwayder profiled the consensus-based approach that the Commission used in developing two Great Lakes Panel products: the *Model Comprehensive State Management Plan for the Prevention and Control of Nonindigenous Aquatic Nuisance Species* and the *Model State Guidance on Legislation and Regulations for Preventing the Introduction and Dispersal of Nonindigenous Aquatic Nuisance in the*

Great Lakes Region.

On April 28, the Great Lakes Panel sponsored a day-long symposium titled *Ballast Water Management and Aquatic Nuisance Species: Setting a Research Agenda for the Great Lakes*. More than 70 participants drawn from the research, management and maritime communities assessed current approaches to ballast water management and identified promising technologies and research approaches for preventing new ANS introductions via ballast water. This fall, the Panel will release a proceedings document presenting findings, conclusions and recommendations in the area of ballast water research needs; and options for strengthening linkages between the scientific, policy and user communities. This initiative is supported by the U.S. EPA's Great Lakes National Program Office.

Next year's ANS conference will be hosted by Fisheries and Oceans Canada on Feb. 14-18, 2000, in Toronto, Ontario. Contact: Elizabeth Muckle-Jeffs, profedg@renc.igs.net, www.zebraconf.org.

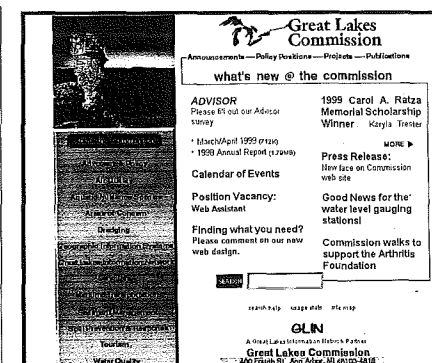
New face on Commission web site

The Great Lakes Commission is pleased to announce that its web site, <http://www.glc.org>, has a new look, greater content and improved navigability.

The new site features an issue-oriented menu to guide visitors efficiently through the Commission's wide variety of program initiatives. A section devoted to "What's new @ the Commission" provides links to press releases, a calendar of Commission events, the ADVISOR newsletter and other breaking news items.

The site provides an overview of the Commission, including its five program areas and more than 40 projects. Policy positions on issues of importance to the Great Lakes region are outlined in depth, and soon visitors will be able to place orders for Commission publications online. The site also features the photography of John and Ann Mahan and is searchable from every page, so visitors will be able to find what they are looking for easily and quickly.

Currently, more than 100,000 visitors per



month access the site, a figure expected to increase substantially with enhancements in content and navigability.

"We've worked hard on the site redesign to promote usability and quick access to project information," said Commission Executive Director Mike Donahue. "We are striving to make our site among the very best."

Comments or suggestions regarding the new site should be directed to Morgan Anderson, anderson@glc.org.

Executive Committee adopts record budget

The Commission is well-positioned to meet the challenges of FY2000, thanks to a record budget of \$4.34 million and an unprecedented 43 programs and projects supported by grants, contracts and other outside revenue sources. The new budget, adopted June 24 by the Commission's Executive Committee, reflects a 2.1 percent over the current fiscal year. It is expected to increase over the course of the year as anticipated grants and contracts are received.

Approximately 16 percent of the total budget is directed at coordination and advocacy work, while the balance goes to project-specific initiatives consistent with the Commission's Strategic Plan.

"Our goal is to serve as a strong advocate for the region, while applying technical and policy expertise to member priorities," explains Mike Donahue, Commission Executive Director. Contact: Mike Donahue, mdonahue@glc.org.

Bad timing: Commission opposes plan to reduce number of Great Lakes gauging stations

In May 1999, NOAA's National Ocean Service (NOS) released a report proposing the elimination of 13 of 49 water level gauging stations on the Great Lakes-St. Lawrence River system. Budget constraints, combined with the need to upgrade stations for Y2K compliance and automation purposes, prompted the downsizing plan. The proposal took many Great Lakes interests by surprise and, in recent weeks, a GLIN announcement posted by the Great Lakes Commission elicited letters and calls of concern from many constituency groups. The Commission expressed its concern via correspondence to NOAA and every member of the Great Lakes Congressional Delegation.

Fluctuations in water levels can dramatically affect commercial navigation and recreational boating, both multibillion dollar economic sectors in the Great Lakes basin. Also, Great Lakes jurisdictions are faced with many complex issues associated with lake level regulation, dredging needs and priorities, and issues of water withdrawal, consumptive use and removal,

including export. NOAA data provides a basis for sound decisionmaking for Great Lakes states regarding these issues, and reducing gauging capability will compromise their ability to make such decisions.

"Operational budget constraints notwithstanding, we believe the proposal is ill-advised," stated Commission Executive Director Mike Donahue in a letter to Nancy Foster, assistant administrator at NOAA. "We believe the economic consequences of this dramatic reduction in gauging capability will far outweigh the modest savings to the National Ocean Service."

In response to growing concerns, a June 15 meeting between NOS officials and various constituents was held at NOAA's Great Lakes Environmental Research Laboratory (GLERL) in Ann Arbor, Mich. Extended discussions resulted in a compromise agreement that appears to meet the interests of all parties over the short term (i.e. 12 months) while a long-term solution is developed. (Approximately \$390,000 would be required for the upgrading

and maintenance of the 13 stations.) The following outcomes resulted from the meeting:

- The 13 stations proposed for elimination will be maintained at a basic level, as resources permit, for a minimum of 12 months.
- To fund this, upgrading of 1-2 other stations will be delayed.
- GLERL and the U.S. Army Corps of Engineers (Detroit District) will assist with processing station data from the 13 stations.
- The broader Great Lakes-St. Lawrence constituency will be consulted over the course of the next 12 months concerning the 13 stations and their future status. The Great Lakes Commission agrees to lead/assist with constituency notification and the conduct of hearings, a survey or associated mechanism.
- Based upon results of constituent input, recommendations will be directed to NOAA and the Congress to ensure the upgrading and maintenance of stations of interest. Contact: Mike Donahue, mdonahue@glc.org.

Commission leads advocacy efforts for Great Lakes region

Advocating sound public policy on environmental quality and economic issues in the Great Lakes region is a top priority of the Great Lakes Commission. Representing the interests of the eight Great Lakes states on legislative and appropriations issues before Congress, the Administration and relevant federal agencies, the Commission is the leading voice for the region in shaping policies that affect the Great Lakes.

The Commission's congressional advocacy strategy for FY2000 includes targeted correspondence to legislators in the appropriate committees and subcommittees. Since January, letters advancing the Commission's 34-point policy position have been directed, among others, at the following:

Brownfields redevelopment, greenfields preservation and "smart growth" strategies. The Commission

supports the U.S. EPA Brownfields Program, the Administration's proposed Better America Bonds initiative, the Farmland Protection Program and the Department of Housing and Urban Development's Regional Connections Initiative.

Improvement of water quality and agricultural productivity. The Great Lakes Basin Program for Soil Erosion and Sediment Control is a key component of the region's conservation efforts, and the Commission is advocating for an increase in its program funding.

Promotion of Great Lakes research agencies. The Commission has sent letters in support of funding for NOAA's Great Lakes Environmental Research Laboratory, U.S. EPA's Great Lakes National Program Office, the Great Lakes Fishery Commission, the International Joint Commission, Sea

Grant College Programs and the Water Resources Research Institute program, among others.

Monitoring, assessment and rehabilitation of the Great Lakes ecosystem. The advocacy strategy targets initiatives such as the National Invasive Species Act, U.S. Geological Survey Water Resources Investigations, USGS National Park Service Water Quality Partnership, and Great Lakes Fish and Wildlife Restoration Act.

Recipients of the Commission's advocacy correspondence include Senate and House committee and subcommittee chairs, ranking minority members and members of the Great Lakes Congressional Delegation. Copies of the letters are available from the Commission. Contact: Mike Donahue, mdonahue@glc.org; or Victoria Pebbles, vpebbles@glc.org.



Celebrating Interstate and International Cooperation in Water Resources Management

Mark Your Calendars!

- ◆ 1999 Annual Meeting of the Great Lakes Commission
- ◆ Joint Session with the Interstate Council on Water Policy

September 13-15, 1999 ~ Sheraton Station Square ~ Pittsburgh, Pennsylvania

In an unprecedented move, the Great Lakes Commission will join with delegates from river basin organizations throughout the U.S. and Canada to identify and pursue opportunities to enhance their individual and collective profile and influence on regional, national and international issues.

Dear Friend:

Our 1999 Annual Meeting takes the concept of interjurisdictional cooperation and joint action to a new level. To complement our well established intra-regional initiatives, we'll focus on inter-regional opportunities. How can we build bridges with other river basin organizations to raise our profile and influence at the national and international levels? Come join us in Pittsburgh this September as we discuss and act on these, and specific environmental/economic issues of interest.

Irene Brooks

Irene Brooks, Chair
Great Lakes Commission

Featured Items

A conference centerpiece will be the signing of a watershed management resolution by delegates of the many river basin organizations participating. Other key items include:

- ◆ Great Lakes Commission Business Meeting: State/Provincial Dialogue and Action on Regional Priorities
- ◆ Point/Counterpoint Session on the President's Clean Water Action Plan
- ◆ Water Resources Development Act of 2000
- ◆ Endangered Species Act Reauthorization
- ◆ Clean Water Funding Issues
- ◆ U.S./Canada Water Quantity/Supply Management Issues
- ◆ Watershed-based Management - Issues and Opportunities in Interstate/Interprovincial Cooperation



Celebrating Interstate and International Cooperation in Water Resources Management

- ▶ 1999 Annual Meeting of the Great Lakes Commission
- ▶ Joint Session with the Interstate Council on Water Policy

September 13-15, 1999 ■ Sheraton Station Square ■ Pittsburgh, PA

Please register me for the 1999 Annual Meeting of the Great Lakes Commission (May 17-18) and Joint Session with the Interstate Council on Water Policy. I will attend the following: (Check all that apply)

- ☐ September 13 (6 - 7:30 p.m.), Opening Reception
- ☐ September 14 (8:30 a.m. - 5 p.m.), Great Lakes Commission Annual Meeting and Joint Session (and luncheon) with ICWP on National/International Issues.
- ☐ September 14 (6 - 8 p.m.) - Dinner Cruise on the Gateway Clipper
- ☐ September 15 (8:30 a.m. - 4 p.m.) - Joint Session (and luncheon) with ICWP on National/International Issues (cont.)

Note: All registrants will receive detailed program information in the mail.

Program: The 1999 Annual Meeting of the Great Lakes Commission will feature action and information items on policy matters addressing environmental protection, resource management, transportation and economic development issues. A special session addresses national/international water resource policy issues of interest to U.S. and Canadian officials. In an unprecedented action, delegates from river basin organizations in the U.S. and Canada will convene to discuss inter-regional cooperation and explore opportunities to raise their profile and influence on national/international issues.

Lodging: The conference will be held at Pittsburgh's only river front hotel: the Sheraton Station Square, located at 7 Station Square Drive. A block of rooms has been reserved at a special rate of \$139.00 -U.S.(single or double) plus tax, under the Great Lakes Commission's name. Please call 412-261-2000 or 1-800-255-7488 to reserve your room. **Deadline: August 23, 1999.**

Transportation to/from Greater Pittsburgh Airport: Allow 45 minutes for ground transportation between airport and hotel. Airlines Transportation Co. runs an hourly shuttle service for \$12 (U.S.) each way or \$20 (U.S.) round trip. Call 412-321-8157 for details and reservations. Taxi service is available at approximately \$30-35 (U.S.) each way.

Registration Fee Policy: A single registration fee of \$150 (U.S.)/\$240 (CA) provides access to all meeting materials and events, including the opening reception, two lunches and a dinner/special event. **Please register by August 23, 1999.** Cancellations received before September 6 will be reimbursed, less a \$50 processing fee. Cancellations after that date will not be reimbursed.

Name: _____ Title: _____

Organization: _____

Address: _____

City: _____ State/Province: _____ Zip/Postal Code: _____

Phone: _____ Fax: _____ E-mail: _____

Enclosed is my check, voucher or purchase order for \$150 (U.S.)/\$240 (CA) payable to the Great Lakes Commission.

Please register me; payment will follow or will be provided when I arrive on site.

Please complete and return this form by August 23, 1999 to: Great Lakes Commission, The Argus II Bldg., 400 Fourth St., Ann Arbor, MI 48103-4816. Phone: 734-665-9135; Fax: 734-665-4370; E-Mail: glc@great-lakes.net

Effort underway to improve quality, quantity and accessibility of lake levels data

Great Lakes water levels have declined dramatically over the past year, and public interest is high for levels, precipitation and outflow data and information. The Great Lakes-St. Lawrence Hydrology section on the Great Lakes Information Network (<http://www.great-lakes.net/envt/water/hydro.html>) provides a centralized means to access all this data from the many different agencies responsible for its collection and distribution.

On June 9-10, NOAA's Great Lakes Environmental Research Lab in Ann Arbor, Mich., hosted an Internet Coordination/GLIN Hydrology Workshop, organized by the Great Lakes Commission in cooperation with the Coordinating Committee on Great Lakes Basic Hydraulic and Hydrologic Data.

Other regional data providers represented were the U.S. Army Corps of Engineers (Detroit and Buffalo districts), Environment Canada, Department of Fisheries and Oceans (Canadian Hydrographic Service), U.S. Geological Survey, NOAA National Ocean Service and the Midwestern Climate Center.

The workshop focused on the next phase of the GLIN Hydrology section and current and future Internet needs of the Coordinating Committee.

Among the tasks already completed is creation of a new email listserv (glhydro) for electronic broadcasting of water levels news, publications and meeting

schedules (see <http://www.great-lakes.net/lists/glhydro/glhydro.info>).

The Coordinating Committee advises the U.S. and Canadian agencies responsible for collecting and compiling Great Lakes and St. Lawrence hydraulic and hydrologic data.

Distribution of this data through one coordinated web site on GLIN is strengthening the collaborative effort and making outreach more cost effective.

The U.S. Army Corps of Engineers (Detroit District) is providing financial support to the Commission for this initiative. Look for new updates and features on the site in coming months. Contact: Christine Manninen, manninen@glc.org.

1999 Carol A. Ratza Memorial Scholarship

Scholarship awarded to environmental communications major



Karyla Trester is the winner of the 1999 Carol A. Ratza Memorial Scholarship. A master's student in Environmental Communications

at the University of Illinois at Springfield, Trester is producing a video on declining amphibian populations in the Midwest.

"I hope by documenting the current status of amphibians in an engaging way, I can create an awareness about the need to preserve what makes our backyard so precious and unique," Trester says.

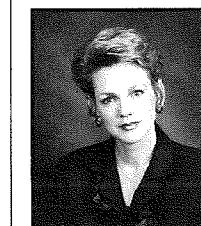
Trester holds undergraduate degrees from Knox College in Galesburg, Ill.,

and Highland Community College in Freeport. She was one of 60 students named nationally as a Watson Fellow in 1997-98. Through this fellowship she studied waste policy and practice in the Pacific Rim, which involved extensive travel in Australia, Fiji, Singapore and New Zealand. Currently, Trester is an environmental policy intern at the Illinois Environmental Protection Agency in Springfield.

The Commission's scholarship is named for the late Carol Ratza, who managed its Communications and Information Management Program and pioneered the Great Lakes Information Network and the application of electronic communications technology to Great Lakes management.

New Commissioners and Observers welcomed

The Commission welcomes two new Commissioners, Michigan Attorney General Jennifer Granholm and Minnesota Rep. George Cassell.



Granholm

Granholm is Michigan's first new attorney general in 37 years following the retirement of Frank Kelley, the first and only recipient of the Commission's

Lifetime Achievement Award. She is Michigan's first female attorney general and also serves as a state bar commissioner.

Cassell is a state legislator involved in the following committees:

agriculture and rural development, jobs and economic development, higher education finance and education policy. He is a retired educator and school administrator.

New Observers include Janet Oertly, state conservationist for the USDA—Natural Resources Conservation Service; and Jim Nicholas, district chief of the Water Resources Division, U.S. Geological Survey.



Cassell



Commission walks to support the Arthritis Foundation

The Great Lakes Commission participated in "A Joint Parade," a walk benefiting the national Arthritis Foundation, April 17 in Ann Arbor, Mich. Commission families and friends took part in the walk-a-thon in memory of Carol Ratza, a longtime staff member who was lost to the disease in 1997. The Great "Legs" Commission team, joined by colleagues from U.S. EPA and the International Joint Commission, raised \$1,500 to support the fight against arthritis.

Symposium commemorates 40th anniversary of St. Lawrence Seaway

This year marks a milestone for the Great Lakes-St. Lawrence maritime community: the 40th anniversary of the St. Lawrence Seaway. As part of the Great Lakes Commission's Semiannual Meeting, a Seaway Symposium was held to help commemorate this anniversary. Since 1959, the Seaway has provided a vital link between the industrial and agricultural heartland of North America and markets throughout the world.

The Commission was a seaway advocate even before it was built. In fact, planning for the binational seaway, and its economic development potential, was a major reason the Commission was established in 1955.

The organization has played an important role through lobbying activity in retiring the U.S. seaway construction debt and virtually eliminating U.S. seaway tolls. More recently, the Commission has advocated for the elimination of Canadian seaway tolls and the creation of a single, binational seaway operating entity to trim administrative costs between the two countries.

The Seaway Symposium focused on the seaway's future, with only an occasional look back. The dynamic and global marketplace, combined with technological innovation and modal competition, raises not only uncertainties but opportunities to do business more efficiently and profitably. The symposium brought together more than 130 decisionmakers who have a stake in the system's future.

The following are excerpts from selected symposium presentations.

Transforming the transportation business

For the St. Lawrence Seaway, last year's navigation season was one of our best. Cargo transiting through the system was valued at more than \$7.5 billion and general cargo volume increased by more than 42 percent. The number of ocean vessel transits grew by some 35 percent and our toll revenue was the highest in seaway history at \$80 million.

We're sufficiently competitive to retain many old and valued customers and to attract some new business each year, but are we competitive enough? It doesn't seem so since our market share has been steadily eroding. Things have been changing rap-

idly in the Great Lakes-St. Lawrence transportation arena.... Free trade, a truly global marketplace, and technological progress are transforming the transportation business. It is an era of lean and mean competitors, and the seaway has no choice but to keep pace or, even better, lead the pace. If we are going to compete successfully, we have to provide the kind of service customers want and do it efficiently at low cost.

— Guy Veronneau, President,
The St. Lawrence Seaway
Management Corporation

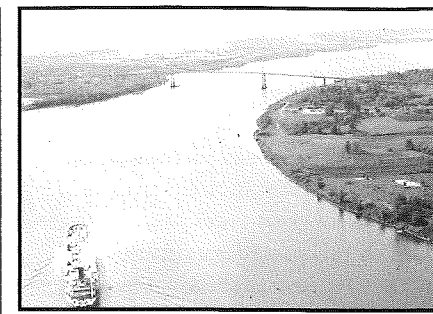
Keeping pace with shippers' competitive needs

Forty years later, what do we have to show for the initial vision demonstrated by the designers and builders of the seaway? Quite a lot! Although the seaway system has had many ups and downs over the decades, it now adds \$3 billion dollars annually and up to 17,000 jobs to the Canadian economy, and \$2 billion annually and 49,000 jobs to the U.S. economy.

With a total tonnage of approximately 50 million tons moving annually through the seaway system, the flow of traffic through this truly international waterway is exceeded only by the Panama and Suez canals. And it is now commercially managed, with input from experienced, dedicated carriers and shippers who are determined to maintain the economic viability and competitiveness of the trade....

In the last 40 years since the building of the seaway, innovation has taken place in the marine transportation industry to keep pace with shippers' competitive needs. The development of technologically sophisticated self-unloading ships, advances in information technology and employee training, and investments that optimize fleet efficiency through retrofitting, renovation and new buildings, are examples of how both lakeland and deep-sea shipping companies have responded to these challenges. Greater efficiency, therefore, is achieved in the first place by the use of better, newer, more economically viable vessels. Overall, well over \$500 million is being invested by shipping companies in the future of the seaway.

— Laurence G. Pathy,
President and CEO, Fednav Ltd.



The St. Lawrence River near the Cornwall Bridge, circa 1975. Photo by Dr. Albert G. Ballert.

Assuring greater customer satisfaction

Working together over the past 40 years, we have extended the maximum allowable sizes for vessels using seaway navigation facilities. We have incrementally lengthened the shipping season. We have invested in navigational technology to increase the safety and reliability of our vessel traffic management systems. And we have adopted the highest international standards of quality management to assure greater customer satisfaction.

When the seaway opened in 1959, the shipping season was only 223 days. Last year, the shipping season was nearly two months longer. This change in length has served to increase the volume of business moving over the entire season. The maximum dimensions of vessels allowed to enter the seaway when it opened were 730 feet in length, 76 feet in beam, and 26 feet in draft. Today, those vessel dimensions are 740 feet in length, 78 feet in beam; and 26 feet, 3 inches in draft.

While these changes may seem small, they add up to substantial increases in capacity and profitability. For example, every inch of increased draft allows seaway-sized vessels to carry an additional 100 metric tons of cargo. It is estimated that within the Great Lakes-St. Lawrence Seaway system, each inch of draft increases annual cargo capacity by approximately a quarter of a million metric tons. Together with the changes we have made in maximum beam and length dimensions, the deeper draft has increased cargo revenue for seaway-sized vessels by as much as 6 percent.

— Albert Jacquez, Administrator, Saint
Lawrence Seaway Development Corporation

News from the Great Lakes Panel on Aquatic Nuisance Species

Spring/Summer 1999

ANS UPDATE

Volume 5, No. 2

Model Guidance on ANS Legislation, Regulation and Policy: A Step Forward in the Prevention and Control of Great Lakes Biological Invaders

By Katherine Glassner-Shwayder, Project Manager, Great Lakes Commission

The Great Lakes Panel on Aquatic Nuisance Species takes aim at closing the door on Great Lakes biological invaders with implementation of its recently completed policy document titled *Legislation, Regulation and Policy for the Prevention and Control of Nonindigenous Aquatic Nuisance Species: Model Guidance for Great Lakes Jurisdictions*. The model guidance is a tool kit from which states, provinces, tribal authorities and local entities can select the legislative, regulatory and policy provisions best suited to address ANS problems.

The impetus for development of this regional model was the lack of interjurisdictional consistency in laws, regulations and policies directed at ANS prevention and control efforts. "Regional policy to help prevent ANS introduction and spread is needed immediately to respond to the increased likelihood of introductions due to the increase in international and domestic trade and travel," says Jay Rendall, Panel member representing the Minnesota DNR. "The model guidance is a good start at familiarizing the governing agencies in the Great Lakes region and elsewhere on ways to respond proactively to ANS problems."

The primary building blocks of the model guidance include:

- ♦ designation of management authority;
- ♦ a four-tiered classification system for non-indigenous aquatic species (prohibited, regulated, unregulated and unlisted species) and criteria to guide in the classification process;
- ♦ designation of infested waters and activities subject to regulated/prohibited activities in infested waters;
- ♦ permit and regulatory protocol pertaining to beneficial uses of nonindigenous aquatic species;

- ♦ inspection of recreational vehicles/equipment and beneficial use operations;
- ♦ establishment of enforcement authority and related penalties; and
- ♦ protocol for an ANS emergency action plan.

Among others, the guidance suggests rules covering the transport of watercraft from infested waters. Boats must be properly drained, and any visible plants, animals and mud must be removed before the vessel is launched elsewhere. Another suggested regulation prohibits the diversion, appropriation and interstate transport of water taken from infested waters. Provisions pertaining to the movement of high-risk fishing gear from infested waters to uninfested waters call for the decontamination of gear with removal of plant material, animals and mud, along with freezing, drying, or use of separate gear as alternatives.

Operations involving aquatic nuisance species for beneficial uses, such as the live-bait industry, aquaculture trade, and the horticultural business are also addressed in the guidance. Panel Chair Gary Isbell, of the Ohio DNR, points out that "although implementation of the model's provisions may not be popular with everyone, it is a critical move to strengthen ANS prevention and control measures in the Great Lakes region and beyond."

The model guidance is not presented as an "all or nothing" proposition, but rather as a map to guide Great Lakes jurisdictions toward achieving a higher level of consistency regarding their legislative, regulatory and policy mandates to prevent ANS introductions and dispersal. A multi-watershed, interjurisdictional approach is essential in addressing the insidious problems caused by invasive species since they are coming from other parts of the country as well as waters around the world.

Panel Vice Chair Ron Martin, of the Wisconsin DNR, views this policy document as "providing an opportunity for more regulatory consistency in laws and policies directed at ANS prevention and control; and at the same time, allowing each jurisdiction the flexibility to select from the guidance the provisions that best suit individual jurisdictional needs." The Panel's work on the model guidance reflects the long-standing commitment of this regional body to mitigate problems stemming from biological invasions in Great Lakes waters.

The model guidance, approved by the Great Lakes Panel, is available for \$10 upon request. It is also accessible on the Great Lakes Panel's publications page (<http://www.glc.org/ans/anspubs.html>). This initiative is funded by a grant from the National Oceanic and Atmospheric Administration and the Michigan Department of Environmental Quality, Coastal Management Program. Contact: Kathe Glassner-Shwayder, Great Lakes Commission, 734-665-9135, shwayder@glc.org.

Great Lakes Panel Update

The draft ANS Action Plan has been revised and is under review by the Panel membership and will be submitted for formal approval at the Panel's fall meeting. Staff is preparing recommendations for Great Lakes ballast water research based on input received at the April 29 symposium held in Duluth, Minn. The final document to be presented for Panel approval next fall, will provide a detailed ballast water research agenda for the Great Lakes Basin. Contact: Kathe Glassner-Shwayder, Great Lakes Commission, 734-665-9135, shwayder@glc.org.

The *ANS Update* is a quarterly publication of the Great Lakes Panel on Aquatic Nuisance Species, which was convened by the Great Lakes Commission (under P. L. 101-646) to address ANS issues in the Great Lakes Basin. Please contact Kathe Glassner-Shwayder at the Great Lakes Commission, The Argus II Bldg., 400 Fourth St., Ann Arbor, MI 48103-4816. phone: 734-665-9135 fax: 734-665-4370 email: shwayder@glc.org. Contributions to this newsletter are encouraged.

Washington Watch

Both House and Senate Appropriations Committees have begun to draft and mark appropriations bills. House and Senate allocations differ considerably; most notable for ANS programs are likely to be the allocations for Interior (House mark a 19 percent cut below FY1999, Senate mark a 4 percent cut) and Commerce, Justice, State and Judiciary (House mark a 7.5 percent cut below FY 1999, Senate mark a 1 percent increase).

The House Appropriations Subcommittee on Transportation has marked up its Transportation Appropriations bill, which will include funding for U.S. Coast Guard ballast water regulation efforts. Despite an overall cut of nearly 10 percent to the Senate Transportation Appropriations allocation, the bill includes level funding (\$3 million) for the Coast Guard's Ballast Water Guidelines and Prevention Program and increased funding (at least \$1.5 million) for Coast Guard research relating to ballast water exchange verification.

For the Energy and Water Development Appropriations Committee, overall cuts resulted in a bill with relatively few earmarks for specific ANS programs and almost no funding for new initiatives. The bill does not provide funding for the Corps' Zebra Mussel Control Program (ANS Public Facility Research and Development) and only \$100,000 for completion of the dispersal barrier in the Chicago Ship and Sanitary Canal (the Corps' project estimates place total federal cost at an additional \$300,000). The Senate bill does provide a substantial increase for Aquatic Nuisance Plant Control (research authorized under the Rivers and Harbors Act) from \$3 million to \$5 million, but accompanying report language shifts the program away from its research framework in favor of cost-shared "on-the-ground" control efforts. The committee recommends that "the Corps place a higher priority on actual plant harvesting and eradication... that be undertaken only when a local sponsor agrees to provide 50 percent of the cost of the work." Contact: Rochelle Sturtevant, Senate Great Lakes Task Force, Northeast Midwest Institute, 202-224-1211, rochelle_sturtevant@levin.senate.gov.

News from Around the Basin

ILLINOIS: The annual meeting of International Association for Great Lakes Research (IAGLR), held in late May at Case Western Reserve, featured papers from the latest in round goby research and identified related research priorities. Conference sponsors included IL-IN Sea Grant, Ohio DNR, Ohio Sea Grant and IAGLR. The state ANS management plan is completed and will be sent in July to constituents for comments. Contact: Pat

Charlebois, IL-IN Sea Grant, 847-872-0140, p_char@ix.netcom.com.

INDIANA: Information will be evaluated on the design and feasibility of a fish barrier for Bixler Lake (Noble County in northeast Ind.) to prevent carp from moving into the lake from downstream areas. Modifications to the outlet structure of Pine Lake (LaPorte County) are being considered to protect downstream areas from zebra mussel colonization. Contact: Randy Lang, 317-232-4094, lang@dfw.dnr.state.in.us.

MICHIGAN: The Office of the Great Lakes received a final report titled *Analysis of Laws and Policies Concerning Exotic Invasions of the Great Lakes* prepared by Eric Reeves, Commander, U.S. Coast Guard (Ret.). The report was commissioned pursuant to Michigan's ANS State Management Plan. Contact: Mark Coscarelli, 517-335-4227, cosarem@state.mi.us.

MINNESOTA: State statutes have been changed to prohibit the harvest of live bait from infested waters, with an exception to allow harvest from Eurasian watermilfoil waters by permit (after required annual ANS training for permittees). The DNR provided ANS training for several bait dealers this spring, which was considered valuable by the dealers. The DNR plans to inspect boats entering and leaving several noninfested waters this summer to raise awareness of ANS threats and related state laws. The DNR is developing an enforcement plan to provide the conservation officers with information on ANS threats and enforcement priorities for their districts. Contact: Jay Rendall, MN DNR, 651-297-1464, jay.rendall@dnr.state.mn.us.

NEW YORK: Two ANS research projects will be conducted at Cornell University, based on a cooperative agreement that was signed between the U.S. Fish & Wildlife Service (U.S. FWS) and the DEC to facilitate the transfer of funds. Dr. Edward Mills is investigating the ecological relationships between zebra mussels and quagga mussels, and the consequences of zebra mussel displacement by quagga mussels in Lake Ontario. Dr. Robert Johnson is investigating the efficacy of Eurasian watermilfoil control by aquatic weevils and moths. Contact: Bill Culligan, NYS DEC, 716-366-0228, nysdecdk@netsync.net.

OHIO: The DNR's ANS Advisory Team and Steering Committee are currently reviewing existing state ANS laws, rules and regulations in comparison with the Great Lake Panel's model guidance. Based on their reviews and input, changes may be recommended to the appropriate agencies. Contact: Randy Sanders, OH DNR, 614-265-6344, randy.sanders@dnr.state.oh.us.

WISCONSIN: The DNR, with assistance from volunteers, will be sampling over 100 lakes for zebra mussels this summer.

In 1998, zebra mussels were discovered in seven inland lakes in the state. As of April 1998, the DNR has had the authority to close waters to bait harvest if they are infested with invasive species. It is expected that the DNR will receive \$50,000 in state funds between 1999 and 2001 to fund information and education activities related to zebra mussels and other aquatic nuisance species. The state ANS management plan is nearly complete and soon will be sent out for public review. Contact: Ron Martin, WI DNR, 608-266-9270, martinr@dnr.state.wi.us.

National ANS Task Force

The ANS Task Force meeting is scheduled for Aug. 18-29, 1999 in Olympia, Wash. A field trip is planned for Aug. 17 to visit ballast water facilities on a vessel and a local shell fish aquaculture business. Gary Edwards, ANS Task Force Co-Chair representing the U.S. FWS, recently transferred to Alaska. His replacement is Cathleen Short, serving as U.S. FWS Assistant Director of Fisheries. In addition, the ANS Task Force Executive Secretary, Robert Peoples, has retired and has been replaced by Sharon Gross of the U.S. FWS. Contact: Sharon Gross, 703-358-2308, sharon_gross@fws.gov.

On the Bookshelf

- ♦ *Legislation, Regulation and Policy for the Prevention and Control of Nonindigenous Aquatic Nuisance Species: Model Guidance for Great Lakes Jurisdictions.* June 1999. Publication of the Great Lakes Panel on Aquatic Nuisance Species. Contact: Kathe Glassner-Shwayder, Great Lakes Commission, 734-665-9135, shwayder@glc.org.
- ♦ *Abstracts: International Zebra Mussel and Aquatic Nuisance Species Conference.* April 1999. Minnesota Sea Grant Program publication X60. Contact: Doug Jensen, MN Sea Grant, 218-726-8712, djensen1@d.umn.edu.
- ♦ *Help Prevent the Spread of Aquatic Exotic Plants and Animals.* IL-IN Sea Grant brochure. 1998. Contact: Robin Goettel, IL-IN Sea Grant, 217-333-9448, goettel@uiuc.edu.

Upcoming Events

- ♦ *Meeting of the Great Lakes Panel on Aquatic Nuisance Species,* Oct. 19-20, 1999, Chicago, Ill. Contact: Kathe Glassner-Shwayder, Great Lakes Commission, 734-665-9135, shwayder@glc.org.
- ♦ *Meeting of the ANS Task Force,* Aug. 18-19, 1999, Olympia, Wash. Contact: Sharon Gross, 703-358-2308, sharon_gross@fws.gov.
- ♦ *Meeting of the Western Regional Panel on ANS,* Oct. 5-6, 1999, Austin, Texas. Contact: Linda Drees, USFWS, 785-539-3474, Ext. 20, linda_drees@fws.gov.

New initiatives in farmland preservation

By Victoria Pebbles and Kate Hackett, Great Lakes Commission

Between 1981 and 1997, the binational Great Lakes region lost more than 11 million acres of its farmland, an area greater than the size of lakes Ontario and Erie combined. Between 1992 and 1997 alone, the U.S. side of the Great Lakes basin lost over 650,000 acres of farmland. Much of this loss can be attributed to the expansion of urban areas in the form of urban sprawl, which often overtakes highly fertile agricultural land.

As metropolitan areas expand, developers are willing to pay farmers high prices for nearby agricultural land. As outlying agricultural lands are developed, the unique character and quality of life of rural areas is compromised by traffic congestion, cookie-cutter housing, roads, car dominated boulevards, parking lots and strip malls. Meanwhile, inner cities and older suburbs become caught in a cycle of degradation and abandonment, which further encourages new development to locate, literally, in "greener pastures." Together, the loss of prime agricultural land and increase in urban sprawl threaten the future of our region's agricultural economy, environment and quality of life.

Over the past few decades, each of the Great Lakes states has developed numerous tools to protect their agricultural lands and economy. However, all recognize that more needs to be done. Recently, several Great Lakes states have developed stronger, more comprehensive policies and programs to help alleviate the financial burdens of farmers, encourage greater land use planning efforts and cultivate agricultural land protection. For example, the governors of Ohio, Indiana and Illinois have recently created land preservation task forces to examine and report on the causes of agricultural land loss and urban sprawl. Several of Ohio's recommendations released in June 1997 already are in place, including a new state Office of Farmland Preservation, the family farm program and a purchase of development rights (PDR) program. The family farm program, targeted at young farmers who may not have the

resources necessary for capital-intensive projects, helps young family farmers secure loans for developing new operations or expanding existing ones. The state hopes this program will help family farms remain active and productive despite rising capital costs and increasing development pressures.

One tool used by several states is the purchase of development rights. PDR programs are voluntary and allow the land to remain in private ownership. They help reduce the pressure to sell to developers by allowing farmers to sell development rights to state or local governments. These programs have claimed moderate success in minimizing farmland conversion in the region. For example, 115,000 acres of farmland have been protected under Pennsylvania's statewide PDR program since mid-1998.

The first local PDR program in the Great Lakes basin was established on Old Mission Peninsula, a 17-mile strip of land that juts out into Grand Traverse Bay (Mich.). In 1994, residents passed a 15-year millage to finance a local PDR program to protect approximately 2,000 acres of scenic farmland.

Another example of farmland preservation tools is tax credits for farmers. Three years ago, New York state passed legislation creating an innovative tax incentive that allows farmers to receive an agricultural tax credit for their school taxes, saving farmers an estimated \$60 million each year.

Loss of agricultural lands to urban sprawl is a national as well as regional problem. The Administration's FY2000 budget includes several specific federal programs that promote and enhance farmland preservation, such as an expansion of the federal Farmland Protection Program. Since 1996, this program has helped protect more than 24,000 acres of farmland in the Great Lakes region. The Administration also proposes \$50 million for open space planning and \$700 million in revenue-neutral bonds that can be used for farmland and other "greenfields" protection.

FARMLAND LOSS: U.S. Great Lakes Basin (acres)	
	1982-1997
Illinois	55,283
Indiana	214,084
Michigan	1,071,568
Minnesota	133,311
New York	1,157,034
Ohio	427,284
Pennsylvania	95,745
Wisconsin	900,914
TOTAL	4,055,223

Source: Census of Agriculture

State and federal agencies recognize that effective agricultural land preservation and land-use planning initiatives require local leadership and support. Accordingly, they also are in the process of developing support systems such as GIS mapping and federal funding alternatives to assist local governments. Low-density and leap frog expansion of urban and suburban areas continues to pose serious threats to the region's agricultural land base and the region as a whole. Although many challenges remain, the increasing attention to urban sprawl and adoption of more coordinated and comprehensive strategies among Great Lakes states hold promise for preserving the agricultural land base of the Great Lakes region.

Information presented in this article highlights some of the ongoing research being undertaken by the Great Lakes Commission as part of the Building Bridges for Sustainable Development in the Great Lakes Basin (BRIDGES) project. BRIDGES is a collaborative effort of the Commission, the Council of Great Lakes Industries and the National Wildlife Federation-Great Lakes Natural Resource Center to promote and link brownfields redevelopment and greenfields protection in the Great Lakes basin. Contact: Victoria Pebbles, vpebbles@glc.org.

Great Lakes Calendar

This calendar is a compilation of selected events of interest to the Commission. Further details and a more extensive calendar are available online via the Great Lakes Information Network (www.great-lakes.net). We encourage your input to the calendar. If you know of an event you'd like us to include, please contact Lara Slee, ADVISOR editor, at 734-665-9135; lslee@glc.org.

Commission events

September

13-15 Celebrating Interstate and International Cooperation in Water Resources Management: Annual Meeting of the Great Lakes Commission and Special Session with the Interstate Council on Water Policy. Pittsburgh, Pennsylvania. Contact: Mike Donahue, mdonahue@glc.org.

October

19-20 Great Lakes Panel on Aquatic Nuisance Species. Chicago, Illinois. Contact: Kathe Glassner-Shwayder, shwayder@glc.org.

Basin events

August

18-20 8th Annual U.S./Canada Workshop on Great Lakes Operational Meteorology. Ann Arbor, Michigan. Contact: Dick Wagenmaker, NWS Detroit/Pontiac, 248-625-3309 ext. 766; or Dr. Peter Sousounis, University of Michigan, 734-936-0488.

September

1 8th Annual Ohio Lake Erie Conference. Bowling Green, Ohio. Contact: Ohio Lake Erie Office, 419-245-2514, oleo@www.epa.state.oh.us.

16-17 Improved Decisionmaking for Water Resources: The Key to Sustainable Development for Metropolitan Regions. Chicago, Illinois. Contact: UIC Great Cities Institute, 312-355-1276.

24-26 International Joint Commission's 1999 Biennial Forum on Great Lakes Water Quality. Milwaukee, Wisconsin. Contact: Jennifer Day, IJC, 519-257-6733 in Canada, 313-226-2170 ext. 6733 in U.S., dayj@windsor.ijc.org.

24-26 Great Lakes Environmental Expo. Milwaukee, Wisconsin. Contact: Chuck Stoffle, 888-366-0357, info@epsglobal.com.

Changes ahead for the ADVISOR

The ADVISOR soon will have a new look, format and content, and we need your input! Please take a moment to respond to the online survey at <http://www.glc.org/docs/advisor/survey.html>.

You also can send your general comments by fax to 734-665-4370, or by e-mail to Lara Slee, lslee@glc.org. Thank you for your input!

These are some of the questions we'd like answered:

- What do you find most informative and/or interesting in the ADVISOR?
- What would you like to see that is not already there?
- Do you read the electronic version of the newsletter (<http://www.glc.org/docs/advisor/advisor.html>)?

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