



Planning and Implementing a Great Lakes Restoration Initiative

An Overview of Eight Public Workshops

February 2005

The Great Lakes Commission, in partnership with the Great Lakes Sea Grant Programs and the Council of Great Lakes Governors, hosted a series of stakeholder workshops in 2003-2004 to help shape and advance action items for ecosystem protection and restoration. During this series of eight workshops, approximately 700 people from a variety of backgrounds voiced their thoughts, concerns and opinions on Great Lakes protection and restoration. Many more submitted input through Internet questionnaires or in writing. These workshops were held concurrent with a flurry of activity within the Great Lakes region concerning development of a large-scale basin-wide protection and restoration strategy. This activity included the announcement of a set of regional priorities for ecosystem protection and restoration by the region's eight Governors and an increased impetus for collaboration among federal agencies on Great Lakes activities pursuant to a Presidential executive order. Collectively, the body of stakeholder input emerging from this series of workshops has informed—and will continue to inform—the development and implementation of protection and restoration priorities.

This broad effort to garner public input on Great Lakes ecosystem protection and restoration provided a unique opportunity to examine the collective thinking of the region's stakeholders on this complex topic. Despite very diverse participant backgrounds and a broad geographic scope, strong support for the Governors' list of priorities was evident at all the workshops. Numerous suggestions were made for translating these priorities from concept into action. The very constructive nature of participant comments revealed a large group of Great Lakes stakeholders eager to participate in planning and carrying out a collaborative protection and restoration strategy. In addressing the restoration themes presented by the Governors, participants urged the region's leadership to engage all stakeholders; incorporate all levels of governance; use existing institutions and programs; set goals and evaluate progress; use science-based decisionmaking; thoroughly support education and outreach programs; learn from other initiatives; train future professionals; and act promptly.

Background

The ecological and economic importance of the Great Lakes basin, coupled with its size, multiple use and multi-jurisdictional characteristics, has fostered the development of a rather complex set of institutional arrangements for its management. Policymaking and management authority is shared by two federal governments, eight states, two provinces, a multitude of First Nations/tribal authorities, several regional binational agencies, and hundreds of sub-state/provincial governments. Inter-agency agreements and cooperative arrangements are a common feature on the governance landscape, and there is growing recognition that an ecosystem-based, partnership-oriented approach is a fundamental component of successful basin governance. In particular, an increasing amount of discussion and action has emerged in recent years concerning development of a shared vision for the Great Lakes and a strategy, or blueprint, to achieve it.

In the mid-1990s, the Great Lakes Commission coordinated the development of “An Ecosystem Charter for the Great Lakes-St. Lawrence Basin.” This document—consisting of a vision statement, set of principles and a series of goals, objectives and strategic actions—was the product of a large binational “drafting committee” comprised of federal, state and provincial officials, and representatives of citizen organizations, business/industry interests, user groups and academia. The intent was to highlight fundamental resource management principles that enjoyed broad support. In essence, the Ecosystem Charter was an affirmation that the members of the Great Lakes community were generally “in the same boat rowing in the same direction.” Once completed, the Ecosystem Charter garnered the signatures of approximately 175 agencies, organizations and other entities.

While initiatives such as the Ecosystem Charter speak to the long standing interest in Great Lakes

protection and restoration, the heightened awareness of this need is largely attributable to several recent developments. Congressional support for the Comprehensive Everglades Restoration Plan (a multi-year, multi-billion dollar initiative) showcased the potential for broadly supported, large scale restoration efforts and prompted many in the Great Lakes basin to consider a similar approach. The Great Lakes Commission heightened regional interest in a comprehensive, consensus-based plan when it began releasing (in March 2001) its *Great Lakes Program to Ensure Environmental and Economic Prosperity*, an annual publication of U.S. federal legislative and appropriations priorities. A multitude of other public agencies with Great Lakes responsibilities have in recent years launched comprehensive strategic planning initiatives that speak—to varying degrees—to Great Lakes protection and restoration.

The Congressional Great Lakes Task Force reaffirmed the desirability of a region-wide, consensus-based strategy that could help inform and direct its legislative/appropriations efforts, and invited the Great Lakes Governors (in a letter dated March 1, 2001) to help coordinate contributions to that effort. This approach made evident the fact that a successful strategy must originate in the region and garner broad-based support among the range of regional interests. In October 2003, the Council of Great Lakes Governors responded by announcing a list of nine priorities for Great Lakes protection and restoration. The priorities are:

- Ensure the sustainable use of our water resources while confirming that the States retain authority over water use and diversions of Great Lakes waters.
- Promote programs to protect human health against adverse effects of pollution in the Great Lakes ecosystem.
- Control pollution from diffuse sources into water, land and air.

- Continue to reduce the introduction of persistent bioaccumulative toxics into the Great Lakes ecosystem.
- Stop the introduction and spread of non-native aquatic invasive species.
- Enhance fish and wildlife by restoring and protecting coastal wetlands, fish and wildlife habitats.
- Restore to environmental health the Areas of Concern identified by the International Joint Commission as needing remediation.
- Standardize and enhance the methods by which information is collected, recorded and shared within the region.
- Adopt sustainable use practices that protect environmental resources and may enhance the recreational and commercial value of our Great Lakes.

On May 18, 2004 the President signed an Executive Order calling the Great Lakes a “national treasure,” and directing the federal government to work with the region’s leaders to create a Great Lakes Regional Collaboration to address the significant challenges

that remain from past and current environmental impacts to the Great Lakes. The Collaboration was launched on December 3, 2004. The Collaboration will develop a Great Lakes protection and restoration strategy within one year, using the Governors’ priorities as its organizing principles.

In partnership with the Great Lakes Sea Grant Programs and the Council of Great Lakes Governors, the Great Lakes Commission hosted a series of stakeholder workshops from 2003-2004 to help shape and advance action items for ecosystem protection and restoration. The Governors’ priorities were a focal point for discussion at each of the workshops (with exception of the first, which preceded announcement of the priorities). The large body of input received during these public workshops has provided a valuable basis for the work being done through the Great Lakes Regional Collaboration as well as related efforts. Thorough consideration of the full range of stakeholder input, as gathered during this workshop series, will be important in achieving broad support for the outcomes of such initiatives.

Process

Workshops were held throughout the Great Lakes region over an eleven month period. Workshop agendas varied from one state to the next to meet distinct needs, but all centered around two key questions: 1) what are the priority components of a basin-wide Great Lakes protection and restoration strategy? and 2) what important considerations should be made in organizing and implementing such activities? A listing of the protection and restoration priorities released by the Council of Great Lakes Governors in October 2003 provided a basis for discussion in all but the first workshop (Michigan), which was held the week prior. Input on these and related topics were received from the hundreds of attendees through recorded discussions, comment sessions, written and online questionnaires, and letters and email.

Throughout the series of workshops, participants enthusiastically shared their thoughts on the topic of Great Lakes protection and restoration. All workshops were well attended by a diverse group of Great Lakes stakeholders. In total, approximately 700 attendees shared their views, including representatives of local, state/provincial and federal governmental agencies; elected officials; non-governmental organizations; binational institutions; academic institutions; industry and commercial interests; tribal entities; and private citizens. Due to this diverse participation and the broad geographic scope of the workshop series, these events yielded a wealth of information and ideas that warrant careful consideration as any protection and restoration effort (state-specific or regional) moves forward.

Toward a Shared Vision for a Restored Great Lakes

Early in any discussion of Great Lakes restoration, questions emerge. For example, what does “restoration” mean in this context? And, what is to be restored, and to what state? The cumulative results of the workshops provide valuable insight into stakeholders’ interpretation of “restoration” and what they see as a desirable endpoint of a restoration initiative. Many participants recognized that achieving some precise, pre-existing state of the ecosystem is an impossibility. Rather than looking backward at where the lakes have been, the majority of workshop discussion focused on moving forward; on what the lakes might be. Rather than targeting a return to a precisely defined physical, chemical or biological state, the majority of comments centered on maintaining or restoring general qualities of the lakes that are commonly identified as desirable.

One frequently discussed quality was the notion of sustainability. Participants repeatedly referred to a need to achieve a sustainable state for fisheries, water use, ecosystems, industry, and land use, among others. Implicit in all these statements is the notion of allowing the present generation to use the resource in such a way that its quality and availability are maintained so future generations can fully benefit from its use as well. It was clear from the workshop outcomes that the notion of sustainability is a

primary metric by which Great Lakes stakeholders identify the desired results of a restoration initiative.

Participants did recognize, however, that there is more to the vision of a restored Great Lakes than sustainability. They agreed that protection and restoration of the basin should entail the preservation and enhancement of the many qualities that make the Great Lakes basin unique, including native species, characteristic ecosystem structures, a clean environment, and natural landscapes.

The vision of a restored and sustainable Great Lakes emerging from these workshops included emphasis on preserving and enhancing the unique human history of the lakes, including recreational opportunities, transportation, industry, and components of pre- and post-European settlement cultures. This vision sees a system where a clean and healthy environment is sustained by a prosperous human population that enjoys the many opportunities provided by the region’s unique natural resources. Presented below is a summary of key findings that collectively emerged from the eight workshops. Considerable additional detail is provided in the proceedings of the individual events, available at www.glc.org/restwkshp.

Key Findings

Stakeholder input at the workshops touched upon many topics, including objectives for Great Lakes protection and restoration; current and potential impairments to the lakes; causes of impairments; recommendations for protection and restoration actions; and considerations in organizing and implementing a basin-wide protection and restoration strategy.

Much of the input received concerned desired objectives for a region-wide protection and restoration initiative. In the broadest sense, these objectives delineate the vision the participants have of what a restored Great Lakes ecosystem might look like: specific qualities they would like to see achieved, maintained or re-established. Objectives identified at the workshops include diverse, stable ecosystems; healthy people; native species; wide species distribution; clean water, air, soil and

sediment; water-based recreational opportunities; accessibility; edible fish; preservation of property rights; equality of use/environmental justice; security; natural landscapes and waterscapes; an informed and active public; open and inclusive management; naturally fluctuating water levels; drinkable water; safe beaches; a scientific understanding of Great Lakes system; and economic factors such as employment, productivity, efficient transportation, and economic opportunity.

For each of the above objectives, current and potential impairments must be addressed by a protection and restoration strategy. Understanding the nature of these challenges, and associated risks, is essential if the strategy is to be successful. Throughout the workshops, many of the underlying causes of ecosystem impairments were identified, consisting of a range of contributing factors. The complexity and inter-related nature of these issues is primary justification for a comprehensive and integrated protection and restoration strategy and cause for rejection of fragmented and compartmentalized approaches.

Workshop participants provided a wealth of valuable comments on how to achieve and/or maintain each of the above mentioned objectives. In particular, comments centered on essential action items for achieving a restored and sustainable Great Lakes basin, and on how a large-scale strategy for addressing these action items should be established and carried out. Major themes are presented below.

Stakeholder Input – Action Items for Protection and Restoration Activities

Workshop participants contributed numerous constructive ideas for addressing and preventing impairments to the Great Lakes system. Actions suggested were largely complementary; stakeholders across the basin expressed a remarkable degree of common interests, concerns and suggestions. Collectively, these recommended actions present a

general sense of what the components of a basin-wide protection and restoration strategy might be. The most frequently suggested action items are provided below. Additional suggestions were voiced during the workshops, and the individual proceedings from these events offer a more complete record.

Water resources management

Efforts to ensure sustainability of the Great Lakes are highly dependent upon effective management of the basin's water resources. Prevention of excessive water withdrawal, consumption and diversion was a frequent theme at the workshops. A lack of adequate information was frequently cited regarding locations and quantities of current water withdrawals, water dynamics within the system, and interactions between surface water, groundwater and the atmosphere. Key recommendations included addressing these knowledge gaps, instituting an improved regional water management framework (such as that being pursued under the Great Lakes Charter Annex 2001), promoting water conservation, and enhancing water recharge efforts.

Aquatic invasive species

Stopping the introduction of new aquatic invasive species and preventing or slowing the spread of existing invasive species were recognized as urgent priorities for restoring and protecting the basin ecosystem. Ballast water was cited as a common introduction route and suggestions to counter this ranged widely, including developing ballast treatment technologies, banning ballast discharges and restricting access to the lakes by vessels without adequate capability to prevent introductions. Many other routes of entry were also recognized and actions to counter them included construction of additional electric barriers in canals, and banning the possession or sale of live species with invasive characteristics. Other frequently mentioned suggestions for preventing the spread of existing or new invasives included monitoring, early detection systems, and rapid response programs. In instances where invasive species have permanently altered the ecosystem, suggestions were made to adapt management policies and practices accordingly.

Persistent toxic substances

Workshop participants identified the elimination/reduction of persistent toxic substances as an important priority for

restoring the Great Lakes, including both past and continuing contamination. Regarding historical (e.g., legacy) contamination, participants emphasized a need to increase support for programs to identify, characterize, remediate (where appropriate) and monitor contaminated sites, particularly in Areas of Concern. It was frequently noted that the atmosphere is a primary pathway for many toxic substances in the lakes, and that atmospheric contaminants can originate from sites far outside the Great Lakes basin. A need exists to better characterize atmospheric emissions, transport and deposition and to reduce emissions on a regional, binational and world-wide scale. Restructuring the region's transportation and energy systems to be more efficient and less polluting was frequently noted as a means to decrease toxic air emissions. Many participants advocated improved fish monitoring and advisory programs to provide more accurate information in an accessible and understandable way.

Microbiological contamination

Many participants expressed concern over microbiological contamination, particularly at public beaches. Frequently cited sources of this contamination included municipal sewage systems—particularly combined sewer overflows—and livestock. Recommended actions to address this problem involved a combination of improved detection and advisory systems and programs to prevent beach contamination. Suggestions to reduce bacterial loading at beaches included upgrading sewer infrastructure to eliminate overflows and accommodate extreme weather events; identifying and eliminating illicit connections; and improving waste management at agricultural facilities. To improve beach closing advisories, participants suggested developing monitoring and modeling tools to allow determination of coliform levels on a real-time and forecasted basis.

Aquatic, nearshore, wetland and terrestrial habitat

Continuing habitat loss, fragmentation and degradation were frequently cited problems impairing wildlife populations, recreational opportunities, fisheries and natural landscapes. A particular emphasis was placed on nearshore and wetland habitat. Participants cited a need for improved understanding and inventories of species abundance and distribution. Urban sprawl and poor land use policies were frequently cited as causes for loss of terrestrial and wetland habitat. Programs to prioritize and

preserve/restore highly sensitive habitat areas were strongly supported.

Nutrient loadings

Excessive nutrient loadings to the lakes and their tributaries were noted as high priority problems. Sources of particular concern include agricultural facilities, residential lawns, roadways, municipal waste systems, industrial facilities and the atmosphere. Establishing buffers around tributaries was also recommended to reduce loadings. A connection was often drawn between land use patterns and their impact on the quality of receiving waters.

Shoreline access, recreational opportunities and property rights

Many workshop participants expressed concern over limited shoreline access and associated implications for recreational opportunities. Factors cited included decreasing public ownership of shoreline, lack of public boating infrastructure, and closed, contaminated or eroding beaches. Many participants emphasized the need to increase access to the lakes and their shoreline and to improve infrastructure to support water-based recreation. They explained that public support for Great Lakes protection and restoration is a function of the public's ability to access and enjoy the resource. Many participants also expressed concern over rights of shoreline property owners and urged that potential protection and restoration efforts be respectful of such rights.

Workshop Participant Input - Organization and Implementation

Workshop participants provided significant insight into the challenges associated with organizing and implementing a basin-wide protection and restoration strategy. This insight builds upon the large amount of experience in Great Lakes issues collectively possessed by the hundreds of participants. The most frequently offered comments relating to the process of strategy development and implementation are presented below.

Engage interested parties

Involvement in planning, decision making, implementation and assessment must be broadly distributed among

interested parties. Binational coordination is important in all aspects of planning and implementation. Among others, engagement must include individual citizens and citizen groups; Tribes and First Nations; government agencies (local, state/provincial, federal and binational); non-governmental organizations; industrial and commercial groups; and academics.

🔗 Ensure coordinated intergovernmental efforts

A wide range of local problems and impairments was identified from one workshop to the next. While specific aspects differed due to unique State and local circumstances, the general themes present in participant comments were consistent across all workshops. It was noted that many such issues are regional in nature due to their causes and prospective solutions; a compelling argument for a well-coordinated protection and restoration strategy that approaches problems at a regional level, with a reliance on local level programs and institutions for implementation. Empowerment at the local level is essential to success. Scales that must be considered in developing a protection and restoration strategy include local/municipal, county, watershed, State, lake basin, regional, binational and, in some cases, international.

🔗 Employ and empower existing institutions and programs

The region is characterized by a rich and detailed fabric of laws, policies, programs and institutions with a regional, multi-jurisdictional focus. Although some new programs may be necessary, full funding and support for currently authorized programs would allow them to achieve their full potential. Similarly, improving enforcement of, and accountability for existing laws and regulations is at least as important as promulgating new ones.

🔗 Set goals and evaluate progress

A thorough evaluation system must be implemented, and include establishment of baseline conditions, indicator development, goal setting, monitoring, and assessment of progress. Restoration objectives presented in the workshop discussions must be precisely defined in specific, quantifiable and measurable terms. Participants recognized that defining such metrics for each objective is an essential preliminary task in implementing a basin-wide protection and restoration strategy. Means to accomplish this were suggested over the course of the workshop series and can be found in the individual proceedings. A successful protection and restoration strategy must involve

a significant assessment component that monitors conditions and determines progress toward established goals. To support this, regional monitoring systems must be updated and expanded. Data collection, storage, processing, exchange systems and protocols must be improved and standardized. Wherever possible, up-to-date data and information should be shared in readily accessible, electronic format.

🔗 Make science-based decisions

Great Lakes protection and restoration decisions should be based on best available science, and, toward that end, scientific and data analysis tools need to be enhanced. Improved forecasting tools that predict system conditions and impacts under various scenarios must be developed to better support informed management decisions.

🔗 Educate and reach out to the public

Public education and outreach must be incorporated in all phases of planning and implementation. Many of the actions necessary for successful Great Lakes protection and restoration require informed actions by individual citizens. Building broad public awareness of the state of the Great Lakes environment and encouraging individual actions to improve environmental quality are essential components of a successful protection and restoration strategy. Throughout the series of workshops, enhanced educational programs were strongly advocated, including primary and secondary education, professional training and adult education.

🔗 Learn from other initiatives

Numerous large-scale ecosystem restoration initiatives are underway in other regions of North America, and there exists a rapidly-growing body of science on ecosystem restoration. Great Lakes ecosystem restoration efforts should draw on this experience (and literature) to ensure that efforts are well planned and implemented. In adopting lessons from other regions, the unique characteristics of the Great Lakes system must be considered.

🔗 Train tomorrow's leaders

Secondary and graduate education programs focusing on Great Lakes issues need to be enhanced to ensure that the next generation of Great Lakes professionals are well-prepared for the challenges they will face. The need to provide quality educational opportunities for a coming generation of regional leaders and professionals was

frequently mentioned as an important step in achieving and maintaining a restored basin ecosystem.

Act with urgency

Although planning and research are vital, they should not delay the onset of a basin-wide protection and restoration strategy. Workshop participants argued that many high-priority issues require immediate action, and any delay could result in long-lasting or permanent alterations and impairments to the Great Lakes system.

The above discussion provides a broad overview of comments presented or submitted during the series of eight workshops. The reader is referred to the individual workshop proceedings for more comprehensive coverage of outcomes (available on the Great Lakes Commission's website at www.glc.org/restwkshp.)

Next Steps

Large scale, ecosystem-based protection and restoration strategy development is a matter of significant and growing interest in the binational Great Lakes basin. Recent years have seen many priority setting exercises at the agency, jurisdictional and regionwide levels; studies by the U.S. General Accountability Office focusing on intergovernmental coordination; multiple legislative and appropriations initiatives at the Congressional level; joint statements by the Great Lakes Governors; and the report of the U.S. Commission on Ocean Policy that elevates the stature of the Great Lakes to the national and international levels. The President's Executive Order of May 18, 2004 has prompted the development of a Great Lakes Regional Collaboration that has attracted broad support and participation that will yield an ecosystem protection and restoration strategy providing a blueprint for action. The goal of the Collaboration is to have a finalized strategy by the end of 2005.

The restoration workshops initiative is ideally suited to support, assist and advance Great Lakes Regional Collaboration efforts, as well as all associated / complementary activities. Individual and collective outcomes of the workshops will be broadly disseminated to the region's policy makers and opinion leaders including, but not limited to, Members of Congress; Governors and Premiers; state and provincial legislators; mayors; regional and binational agencies; federal, state/ provincial and

local government officials; the scientific community; academic institutions; business and industry; citizen environmental interests and individual stakeholders. In particular, workshop series outcomes will be directed to the hundreds of individuals involved in the Great Lakes Regional Collaboration process. The many workshop sponsors, as well as the approximately 700 stakeholders participating in them, provide an impressive cadre of individuals with the interest, motivation and background to inform and advance ecosystem protection and restoration efforts from the local to basin-wide level.

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For more information, including full workshop proceedings, see www.glc.org/restwkshp