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On behalf of the eight member states of the Great Lakes Commission, it is my pleasure to present the U.S. Commission on Ocean Policy with our perspectives on issues and opportunities associated with the formulation and implementation of a coordinated and comprehensive national ocean policy. In so doing, we fully recognize the significance of the mandate of the U.S. Commission on Ocean Policy and appreciate the opportunity to speak to the planning and management needs of the greatest system of fresh surface water on the face of the earth- the Great Lakes. The precursor to this initiative, the "Stratton Commission" formed under the Marine Resources and Engineering Development Act of 1966, had profound impacts that included the formation of the National Sea Grant College Program, the establishment of the National Oceanic and Atmospheric Administration, and the groundwork for national coastal zone management legislation. We trust that work of the U.S. Commission on Ocean Policy will lead to equally significant initiatives that include a national ocean policy, enhanced efficiency among relevant governmental agencies and, ultimately, marine and freshwater resources that are managed in an efficient, informed and sustainable manner.

As requested, the primary focus of our testimony is directed at issues of governance. Toward that end, our testimony is organized around the eight primary questions presented in *Toward a National Ocean Policy: Ocean Policy Topics and Related Issues* (Working Draft, July 16, 2002). Our responses are prefaced with an overview of the Great Lakes Commission and a brief introduction to the ecological and economic significance of the Great Lakes system. **Our primary message, however, can be summarized succinctly as follows: The formulation and implementation of a national ocean policy must fully recognize and address the critically important issues and opportunities associated with our nation's freshwater resources and, specifically, the Great Lakes. The policy must build upon and fully utilize existing water resource management institutions. It must be state and region-based, enlist partnerships at all levels within and outside of government, and place an emphasis on strong federal/state relationships. It must be science-based, guided by principles of sustainable development, and accommodate issues and opportunities ranging from environmental protection and resource management to transportation and sustainable economic development. Further, any such policy must be accompanied by adequate, long-term and reliable funding to ensure that goals can be met and sustained.**

The Great Lakes Commission

While the members of the U.S. Commission on Ocean Policy are undoubtedly acquainted with the Great Lakes Commission, a brief background statement is appropriate to provide context for the remarks that follow.

The Great Lakes Commission is a binational membership agency of the eight Great Lakes states (Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania and Wisconsin) and the two Canadian provinces of Ontario and Québec. The Commission has legal standing as an interstate compact and was established under state statutes in 1955 and granted Congressional consent in 1968 via P.L. 90-419, the Great Lakes Basin Compact. Associate (non-voting) membership for Ontario and Québec was secured in 1999 via a *Declaration of Partnership* signed by representatives of the eight states and two provinces. The Compact directs the Commission to “promote the orderly, integrated, and comprehensive development, use and conservation of the water resources of the Great Lakes Basin.”

The Commission is comprised of state and provincial delegations whose members include senior agency officials, legislators and governors’/premiers’ appointees. The Commission also maintains a strong and active “Observer” program that ensures the involvement of other key entities (i.e., U.S. and Canadian federal agencies, tribal authorities, regional and international commissions, academic associations) in its work. We are pleased to note that the National Oceanic and Atmospheric Administration, through the National Sea Grant College Program and the Great Lakes Environmental Research Laboratory, has long been an outstanding partner to the Great Lakes Commission and its member states and provinces.

The Great Lakes Commission is mandated to promote sound public policy on issues that include environmental protection, resource management, transportation and sustainable development in the binational Great Lakes region. Three primary functions are provided for in the Compact: information sharing among the membership and the larger Great Lakes community; policy research and development on issues of regional interest; and advocacy of those positions on which the membership agrees. The latter is a unique and vitally important function of the Great Lakes Commission. It has long had an influential voice in representing the interests of its state members on matters of federal legislation, policies, programs and appropriations.

We at the Great Lakes Commission share a philosophy that influences every aspect of our work. In brief, we recognize that:

- < Regional environmental protection and sustainable economic development goals are not mutually exclusive. They are inseparable and must be pursued in concert to achieve the region’s full potential.
- < The eight Great Lakes states, acting collectively through the Great Lakes Commission, have a principal stewardship responsibility for the precious and irreplaceable water and related natural resources of the Great Lakes system.
- < Management of this system is of regional, national and international interest. In the United States it is neither the exclusive responsibility of the states nor the federal government. Rather, a federal/state partnership must be sustained and nurtured.
- < The Great Lakes system, despite its vast and resilient nature, is a finite and fragile resource. Maintaining its integrity is a sound and necessary investment in the region’s environmental and economic prosperity and, specifically, in the health, welfare and quality of life of its residents.
- < No single management institution has the authority or capability to develop and administer the programs needed to ensure the informed use, management, restoration and protection of the

resource. The partnerships within and among all elements of the Great Lakes “institutional ecosystem” are essential to achieving shared goals.

Each of these points has relevance to the formulation and implementation of a national ocean policy.

The Ecological and Economic Attributes of the Great Lakes System

The binational Great Lakes system is one of virtually unfathomable expanse and corresponding complexity. Its myriad characteristics are inextricably linked to – and in large part the determinants of – the region's environmental health, economic well-being and overall quality of life. Yet, the expansiveness and complexity of the resource belies its fragility. Even minor stresses – whether they be physical, chemical, biological or political -- can have lasting impacts upon the sustainable use, development and protection of the resource.

The Great Lakes system enjoys global prominence, containing some 6.5 quadrillion gallons of fresh surface water, a full 20 percent of the world's supply and 95 percent of the United States' supply. Its component parts – the five Great Lakes – are all among the fifteen largest freshwater lakes in the world. Collectively, the lakes and their connecting channels comprise the world's largest body of fresh surface water. They lend not only geographic definition to the region, but help define the region's distinctive socio-economic, cultural and quality of life attributes, as well.

An international resource shared by the United States and Canada, the system encompasses some 95,000 square miles of surface water and a drainage area of almost 200,000 square miles. Extending some 2,400 miles from its western-most shores to the Atlantic, the system is comparable in length to a trans-Atlantic crossing from the east coast of the United States to Europe. Recognized in U.S. federal law as the nation's "fourth seacoast," the Great Lakes system includes well over 10,000 miles of coastline. The coastal reaches of all basin jurisdictions are population centers and the locus of intensive and diverse water-dependent economic activity. Almost 20 percent of the U.S. population and 40 percent of the Canadian population resides within the basin.

The role of the Great Lakes system in advancing and sustaining regional, national and binational economic development has long been recognized. The physical presence, geographic configuration, biological diversity and hydrological characteristics of the lakes have been, and continue to be, determinants of locational decisions for business and industry. Much of the early economic activity during settlement of the region was directly attributable to resource exploitation potential (e.g., fisheries, trapping, mining, forestry) and the availability of water-based transport. While the industrial base has diversified over the years, the basin's water resources continue to exercise a substantive role in the attraction, retention and day-to-day operation of industry. Every day, for example, nearly 1 trillion gallons of water (3.75 trillion liters) are withdrawn or used instream for industrial, municipal, agricultural, power generation and other purposes. Every year, basin industry accounts for 70 percent of all U.S. steel production, one-fifth of U.S. heavy manufacturing and one-half of Canada's heavy manufacturing. The Great Lakes-St. Lawrence Seaway contributes \$3.0 billion annually to the region's economy. The sport fishery is valued at \$2-4 billion annually in direct and indirect benefits. Economic activities as diverse as agriculture, recreational boating and water-based tourism are all multi-billion dollar industries, as well.

Governance Issues in the Context of a National Ocean Policy: Great Lakes Commission Perspectives

Political jurisdictions in the binational Great Lakes region have long recognized the benefits of multi-jurisdictional cooperation for the development and implementation of water resources management policies,

plans and programs. As a shared, multi-purpose resource, the Lakes are intensively used and managed at every level from the local to international arena. Eight states and two Canadian provinces share the basin. Literally hundreds of government entities are charged with management of some aspect of the resource, including municipalities, county health boards, state and provincial departments of natural resources and environment, planning and conservation districts, multiple U.S. and Canadian federal agencies, various regional agencies and international bodies as well. Most are limited in management authority to a defined political jurisdiction and/ or a specific management function. Yet, singly and collectively, they contribute to efforts to manage, protect and use the resource in a sustainable manner. Complementing these governmental entities is a constellation of research institutes, academic institutions, business and industry associations, citizen groups and others that influence the direction of water resource policy and planning.

Our regional, multi-jurisdictional institutions are the key elements in this highly complex “institutional ecosystem.” By transcending the parochialism of traditional political jurisdictions and addressing resource planning and management needs on a hydrologic – or watershed – basis, they add a new dimension of governance that enhances efficiency and effectiveness by coordinating and advancing the activities of those jurisdictions. Our grand “institutional experiment” began well over 100 years ago, and the Great Lakes region is widely recognized for its highly developed and effective approach to basin water resources planning and management. Its premier regional institutions for such services include the Great Lakes Commission, the International Joint Commission, the Great Lakes Fishery Commission and the Council of Great Lakes Governors. Each of these institutions has considerable experience with large scale, multi-jurisdictional planning initiatives and, as such, has much to offer the U.S. Commission on Ocean Policy in terms of “lessons learned.”

What A Comprehensive National Ocean Policy Might Look Like

The Great Lakes Commission recognizes an unmet need for a national policy on marine and freshwater resources that presents a clearly articulated vision and a series of science-based goals, objectives and strategic actions needed to both achieve and sustain that vision. A multiplicity of federal agencies presently share planning and policymaking responsibilities for the nation’s marine and freshwater resources. While our experience tells us that good faith efforts are typically made to minimize duplication of effort and partner on matters of shared jurisdiction, the process is nonetheless overly complex and inherently inefficient.

The Great Lakes region is, in many respects, a microcosm of the jurisdictional complexity experienced at the federal level with regard to water resource policy. In the last two years, in fact, our regional leadership within and outside government has recognized the need for an overarching, large scale, consensus-based Great Lakes Restoration Plan that can serve as a coordination device; a blueprint to guide individual and collective restoration efforts. We believe that a similar need exists at the federal level.

In addition to the piecemeal approach to ocean policy that occurs at present at the federal level, we in the Great Lakes region share an ongoing- and significant- concern over the bifurcated treatment of marine and freshwater resources. Too often, we find freshwater and marine interests competing with one another for legislation, policies, programs and appropriations. This occurs, unfortunately, even within the National Oceanic and Atmospheric Administration. The Great Lakes Commission, for example, has on numerous occasions found it necessary to remind the Congress- and our federal agencies- that the Great Lakes are formally recognized in U.S. federal law as the nation’s “fourth seacoast” and, as such, have equal standing with the nation’s other three coasts. We believe that a formal ocean policy, properly devised and implemented, can eliminate or reduce such problems and appropriately recognize the need for the integrated management of all the nation’s water resources.

Guiding Principles for Ocean Governance

As previously noted, the Great Lakes region has a long and rich history of experimentation with regional, multi-jurisdictional approaches to water resource management. A multitude of plans and policies- both issue specific and broad based- have been successfully crafted and implemented to ensure a consistent and coordinated approach to basin management needs. Those experiences elicit a series of guiding principles that will be of interest as a national ocean policy is developed. Toward that end, we offer the following:

A national ocean policy must:

- < Be the outcome of an open, inclusive process that seeks and secures meaningful input from the range of governmental and constituent groups that will influence, or be affected by that policy
- < Fully recognize and address the nation's freshwater resources on an equitable and integrated basis with the nation's marine resources
- < Embrace sustainability principles and accommodate environmental protection, resource management and economic development considerations
- < Build upon and fully utilize the considerable institutional resources already available at the state and, in particular, regional levels
- < Be a "bottom up" process that elevates, showcases and synthesizes state and regional policies rather than replacing or competing with them
- < Be pursued on a hydrologic rather than political jurisdictional basis, recognizing that the watershed is inherently the most appropriate planning and management unit
- < Be of sufficient detail to provide a meaningful "blueprint" that Congress and governmental agencies at all levels can use for practical guidance in the formulation of laws and programs, the appropriation of necessary funds, and benchmarking to allow for evaluation of progress and necessary mid-course corrections
- < Be willing to reject the status quo and make bold, fundamental changes, if warranted, to enhance the efficiency and effectiveness of our current approach to managing our freshwater and marine resources
- < Provide for an institutional arrangement- either new or existing- that will be responsible for coordinating implementation efforts and sustaining progress over the long term

We also know from experience that the success of any plan is determined, in large part, by constituent support. NOAA's National Sea Grant Program is a well acknowledged success story in the Great Lakes region for many reasons, and its extension services are principal among those reasons. Consideration should be given to an extension service program throughout NOAA and modeled after the National Sea Grant approach. We must connect with our constituents!

This is but a sampling of the types of guiding principles that can be drawn from decades of "lessons learned" in the Great Lakes region. The Great Lakes Commission would be pleased to elaborate and share other experiences of relevance.

The Appropriate Role and Scale for Ocean Governance

Our experience in the Great Lakes region tells us that no single level of government is capable of delivering the types of services necessary to ensure the informed and sustainable use, management and protection of our shared water and related natural resources. Further, we have found that planning and policymaking initiatives are merely exercises in futility if they are not pursued in an open, inclusive and consensus-based manner.

What is required is a careful balance; a need exists for a lead agency that can initiate, coordinate, maintain and advocate policy by nurturing, rather than attempting to force or bypass consensus.

In our view, a national approach to ocean policy development is needed, but the building blocks for that approach must be assembled at the regional level. Toward that end, we suggest that consideration be given to the structure provided in the Water Resources Planning Act of 1965 as it related to the formation of a national system of (multi-state) river basin commissions and a federal U.S. Water Resources Council. Under that model, the river basin commissions were charged with the development of comprehensive, coordinated joint plans for their geographic areas of responsibility. As designed, those plans were to be forwarded to the U.S. Water Resources Council for assembly into a national water resources management plan that would provide an “umbrella” of consistency across the nation while respecting the unique aspects and requirements of individual river basins. While the objectives of this legislation were not fully realized before the termination of this process in 1981, we do see merit in such an approach. In advising this, however, it is important to reiterate that formulation and implementation of a national ocean policy must build upon existing plans, policies and institutions at the regional level.

Improving Governance by Modifying Current Legal, Regulatory and Management Mechanisms

The Great Lakes Commission supports the development of an organic statute that would provide guidance to federal agencies with respect to their roles and responsibilities for freshwater and marine policy. Recent decades have seen increased recognition of the environmental protection, resource management, social and economic dimensions of our water resource management decisions. That recognition has been accompanied by an increase in the number of agencies with an interest in those areas. Further, we have seen a trend toward multi-agency and multi-jurisdictional approaches to policy, planning and management. While this is a positive trend, it is increasingly clear that the traditional agency-by-agency approach to policy development is no longer sufficient for current and emerging needs. Thus, a comprehensive analysis of roles, responsibilities and unmet needs in ocean policy is well advised, and should include active consideration of an organic act.

A related issue concerns the Congressional appropriations process for current ocean programs. A multitude of committees are involved in the process and, as a result, it is piecemeal, time-consuming and inherently inefficient. Thus, in addition to organic legislation, we need a more focused appropriations process with fewer and better coordinated committees.

Should reorganization of federal agencies be considered, the Great Lakes Commission urges the U.S. Commission on Ocean Policy to embrace the same principles that we outline above with respect to formulation and implementation of a national ocean policy. In particular, we emphasize that a strong and clearly defined federal/ state partnership must be established. The federal government, in consultation with the states (and relevant interstate agencies) must establish overarching policy, maintain an associated plan, promote consistency among states and regions, and support strong monitoring and research programs. At the same time, such plans and policies must be developed from the “bottom up;” they must be responsive to the unique needs and requirements of different regions, and they must provide those regions (via state and interstate governments) with the latitude and authority to develop and administer programs consistent with overarching federal policy. And, as noted earlier, it is critically important that the needs of freshwater systems are fully accommodated and addressed.

Enhancing Coordination in Management of Our Ocean Resources

In the experience of the Great Lakes Commission, the federal government has generally done a commendable job in embracing a partnership-based approach to the management of water and related natural resources. These partnerships, however, are typically specific to individual programs and projects and are often pursued largely on an ad hoc basis. We do see a need for organic legislation to codify roles and responsibilities between and among federal agencies, to characterize the nature of the federal/ state relationship, and to specify the prospective role of multi-state and related regional institutions in the formulation and implementation of such policy. We further believe that the development of a large scale, consensus-based national ocean plan is needed to guide coordination efforts.

The “new federalism” philosophy that emerged in the 1980’s is now firmly in place in the Great Lakes region and throughout the United States. State governments have accepted greater stewardship responsibility and associated resource management authority, and substate entities (i.e., counties, municipalities, regional planning commissions) have done the same. Tribal authorities have also increasingly asserted stewardship responsibility and are playing a larger role in policy and planning initiatives. Further, nongovernmental interests, ranging from academic research institutes to citizen organizations, are actively involved in policy discussions and planning activities that affect the current and future state of our marine and freshwater resources. We have found that meaningful involvement of all such interests in the policy and planning process is key to consensus building and, in many cases, is a determinant of ultimate implementation success.

Moving from Single Issue to Comprehensive Management

In its own document, *Toward a National Ocean Policy* (Working Draft, July 16, 2002), the U.S. Commission on Ocean Policy recognizes the complexity of the current management challenge. Dimensions of a prospective policy, as presented in that document, include living marine resources; pollution/water quality; coastal zone management; nonliving marine resources; research, exploration and monitoring; education; technology and marine operations. We in the Great Lakes region have seen a similar, steady progression toward such multi-objective policy development with regard to the water and related natural resources of the Great Lakes region. Consider, for example, just a few of the leading management challenges facing the Great Lakes region today:

- < Intensive development activity in coastal areas that is threatening habitat and other nearshore resources
- < The introduction and spread of invasive species that compromise ecosystem integrity, disrupt the food chain and have significant attendant economic impacts
- < Increasing conflicts associated with the withdrawal and use of water resources, including concerns over the growing threat of both large scale in-basin consumptive uses and diversion/ export to non-basin areas
- < The legacy of past abuses, as evidenced by designated Areas of Concern, (i.e., “toxic hotspots”), as well as the plethora of contaminated sites, or brownfields, that characterize the shorelines of many current/former industrial areas
- < The rising incidence of beach closures and associated human health concerns brought on by improper sewage treatment practices and other factors yet to be fully understood
- < Continued challenges associated with the management of the commercial and sport fishery, including food web disruption, aquatic nuisance species impacts, and fish consumption advisories
- < The impacts of urban sprawl on the quality of land, air and water resources, and associated infrastructure needs

- < Maintenance and enhancement of a viable maritime transportation infrastructure given both economic needs and environmental considerations

The unifying factor in reconciling these and many other challenges, at least through the work of the Great Lakes Commission, has been the adoption of sustainability principles to guide all policy development and planning activity. This has included a recognition that environmental and economic prosperity goals are not mutually inconsistent, and can and must be pursued in concert to achieve our shared vision.

Models for Improving the Approach to Resource Use, Protection and Management

The types of challenges being investigated by the U.S. Commission on Ocean Policy have been experienced to varying degrees in the Great Lakes region as well. Our binational region is home not only to the largest system of fresh surface water on the face of the earth, but to some of the most water-dependent economic activity in the world as well. The magnitude, complexity and diversity of the resource and its people has led to ecosystem stresses that have demanded creative, multi-agency and multi-jurisdictional responses. Three specific initiatives come to mind that may provide useful models for improving our existing approach to resource use, protection and management of marine and freshwater resources on a national scale:

- < Program evaluations and benchmarking: The federal presence and performance in Great Lakes management has been the focus of concerted attention in recent years. Both the U.S. General Accounting Office and the Auditor General of Canada have recently completed investigations to assess efficiency and effectiveness and examine opportunities for improvement. In addition, numerous agencies at the state and federal level have initiated “state of the lakes” reporting to provide the policy and management community – and the public – with periodic qualitative or quantitative assessments of ecosystem health. Principal among these efforts is the State of the Lakes Ecosystem Conference (SOLEC) process sponsored by the U.S. Environmental Protection Agency and Environment Canada. Incorporating an ongoing evaluation process into policy implementation activity is well advised, as is the development of benchmarks (i.e., measurable indicators) that allow for assessment of progress and mid-course corrections, as needed.
- < Regional, multi-jurisdictional management institutions: The binational Great Lakes region is widely recognized and lauded for a well-developed set of institutional arrangements at the regional level that contribute to greater efficiencies in the formulation and implementation of policies that advance environmental protection, resource management and sustainable economic development goals. Among others, principal public entities with a binational, basinwide focus include the Great Lakes Commission, International Joint Commission, Great Lakes Fishery Commission and the Council of Great Lakes Governors. In developing and implementing a national ocean policy, it is imperative that the full potential of such entities be explored and, where they do not exist, due consideration for their establishment is advised.
- < Regionwide agreements and plans: In addition to the several regional organizations mentioned above, the Great Lakes region has benefited from a series of regional agreements that have helped shape the substance and direction of policy associated with issues of shared interest. The U.S.- Canada Great Lakes Water Quality Agreement, for example, established a series of goals, objectives and programs to coordinate joint action by the two federal governments under the auspices of the International Joint Commission. The Council of Great Lakes Governors addresses continuing issues of water quantity management under the terms of a Great Lakes Charter of 1985 and its Annex 2001. The Great Lakes Fishery Commission maintains a binational fisheries management plan with signatories that include federal agencies, states, provinces and tribal authorities/First Nations. The Great Lakes Commission also

has coordinated the adoption of a series of regional agreements that range from aquatic nuisance species prevention and control to the maintenance of an economically viable and environmentally responsible maritime transportation system. The Commission-coordinated *Ecosystem Charter for the Great Lakes St. Lawrence Region*, which has garnered over 175 signatures from public agencies and nongovernmental interests since 1995, is the most comprehensive summary of management principles, goals and objectives assembled to date. The Commission has also authored an eight point plan, titled *The Great Lakes Program to Ensure Environmental and Economic Prosperity*, that offers another model for consideration. More recently, the U.S. Policy Committee, comprised of federal and state agencies with Great Lakes management responsibilities, released its *Great Lakes Strategy* highlighting restoration priorities.

In recent years, the notion of a large scale, consensus-based Great Lakes Restoration Plan has gained support within the Great Lakes region including its Congressional Delegation, governors and state agencies, regional agencies and nongovernmental interests. This process will yield a vision for the region and the restoration goals, objectives, strategic actions and partnerships necessary to achieve it. We're pleased to note that the National Oceanic and Atmospheric Administration and, in particular, the National Sea Grant Program, will be valued partners in that process. The Great Lakes Restoration Plan could provide one of the regional building blocks for a larger national ocean policy.

Improving U.S. Leadership and Cooperation to Further International Ocean Policy

Without question, the United States has a responsibility to play a strong leadership role in working with other nations on international ocean policy issues. In the binational Great Lakes region, we have long recognized that the success of any water management initiative is fundamentally dependent upon a strong partnership with other nations that share the resource. More recently, we have realized that actions and policy decisions in nations far removed from our basin can still have significant environmental and economic implications for us (e.g., demand for water export, introduction of aquatic nuisance species, climate change impacts, contaminants from air deposition). Toward this end, enhancing international relationships is now a stated priority of the Great Lakes Commission, and we are actively involved in international fellowship/ exchange programs, technology transfer initiatives, joint technology development projects, and organizational efforts to strengthen linkages between and among multi-jurisdictional commissions around the world. The U.S. Commission on Ocean Policy would be well advised to thoroughly investigate and actively participate, as appropriate, in current and prospective international organizations and summits for ocean management. Any such involvement, we emphasize, should reflect the partnership approach embraced in the United States and provide opportunities for regional, multi-jurisdictional agencies to participate at the international level.

Conclusion

The Great Lakes Commission, on behalf of its eight member states, appreciates the opportunity to offer its perspectives on governance with regard to the prospective formulation and implementation of a national ocean policy. We endorse such an initiative and urge that it fully and equitably address the freshwater resources of the nation's "fourth seacoast" – the Great Lakes; make full use of existing regional water resource management agencies; represent a "bottom up" approach that provides for state and regional partnership; embrace principles of sustainable development that accommodate environmental and economic prosperity goals; be based upon sound science; and be accompanied by a funding strategy that ensures long term support. In making such an endorsement, we are pleased to offer our full support and assistance to the U.S. Commission on Ocean Policy as its critically important work moves forward.