

**TESTIMONY OF:  
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**BEFORE THE:  
ENVIRONMENT, TECHNOLOGY AND STANDARDS SUBCOMMITTEE  
COMMITTEE ON SCIENCE  
U.S. HOUSE OF REPRESENTATIVES  
ROOM 2318 RAYBURN HOUSE OFFICE BUILDING  
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**"SEA GRANT: REVIEW AND REAUTHORIZATION"**

**INTRODUCTION AND SUMMARY STATEMENT**

Thank you for the opportunity to testify before the Environment, Technology and Standards Subcommittee of the House Committee on Science. It is my pleasure to share the perspectives of the eight Great Lakes states, acting through the Great Lakes Commission, as they relate to both reauthorization of the National Sea Grant College Program and the President's fiscal year 2003 budget proposal to transfer the program from the National Oceanic and Atmospheric Administration (NOAA) to the National Science Foundation (NSF).

The Great Lakes Commission is an interstate compact agency founded in state and federal law and dedicated to promoting sound public policy on regional issues of environmental protection, resource management, transportation and sustainable development. Through communication, research, policy development and advocacy, we provide the eight Great Lakes states – and the larger Great Lakes-St. Lawrence community – with data, information, analyses and policy recommendations necessary to promote the informed use, management, restoration and protection of the Great Lakes-St. Lawrence System.

A tradition of multi-jurisdictional cooperation has long been maintained in the Great Lakes-St. Lawrence region, and is reflected in partnerships that transcend geopolitical boundaries and the missions of individual agencies and organizations. These partnerships, which include government, academia, business/industry and citizen organizations, are critically important in ensuring that scientific research, policy development and management initiatives are well-coordinated, appropriately targeted, and effectively delivered. The National Sea Grant Program, acting through its seven programs in the Great Lakes region, has long had a central role in this partnership. Through its research, coordination, public information and extension functions, Sea Grant provides unique and irreplaceable services that the Great Lakes Commission – and its eight member states – are fundamentally reliant upon.

Simply stated, the Great Lakes Commission strongly opposes the proposed transfer of the National Sea Grant Program from NOAA to NSF. The Great Lakes states – and the entire region – have been well-served by Sea Grant within its present home, and with its present array of services. While NSF is a fine institution with a well-deserved reputation for innovation in research and research administration, it is not a good fit for the National Sea Grant Program. Rather than focusing on such an ill-advised transfer, it is our view that attention is most appropriately directed at strengthening the program within NOAA, and working toward reauthorization of the National Sea Grant College Program Act (PL 94-461) to strengthen and enhance its ability to work cooperatively with all entities involved in research, policy development and resource management activities.

In the following statement, I will briefly describe the mandate and functions of the Great Lakes Commission, the nature of its relationship to the National Sea Grant Program, and the importance of the services provided by the seven programs operating in the Great Lakes region. With the use of specific examples, I will argue that the Great Lakes states are fundamentally reliant upon Sea Grant for public information and extension services needed to efficiently and effectively implement critical environmental protection, resource management and sustainable development initiatives. I will further argue that the Great Lakes states would be unable to accommodate the loss of these services – whether through proposed transfer to NSF or other means – without significantly compromising the effectiveness of their own programs and, ultimately, the integrity of the resource itself. I will close with observations and recommendations on strengthening the National Sea Grant Program within NOAA and through reauthorization of the National Sea Grant College Program Act.

### **THE GREAT LAKES COMMISSION**

While the Subcommittee members are undoubtedly acquainted with the Great Lakes Commission, I do wish to include a brief background statement 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, Wisconsin) and the two Canadian provinces in the Great Lakes-St. Lawrence region (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 PL 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 ten state and provincial jurisdictions. 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 public entities (i.e., U.S. and Canadian federal agencies, tribal authorities, regional and international commissions, academic associations) in its work.

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 Great Lakes-St. Lawrence region. Three primary functions are provided for in the Compact: information sharing among the membership and the larger Great Lakes-St. Lawrence community; policy research and development on issues of regional interest; and advocacy of those policy positions on which the membership agrees. The latter is a unique and vitally important function of the Great Lakes Commission which, among others, represents 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-St. Lawrence 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-St. Lawrence 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. Thus, partnerships within and among all elements of the Great Lakes-St. Lawrence "institutional ecosystem" are essential to achieving shared goals.

This fifth and final point speaks to the integral role that the National Sea Grant Program – and the seven state Sea Grant Programs – play in supporting the work of the Great Lakes Commission and its member states.

### **THE RELATIONSHIP OF THE GREAT LAKES COMMISSION AND THE NATIONAL SEA GRANT PROGRAM**

The Great Lakes Commission/National Sea Grant Program relationship is a longstanding one with origins in the enabling legislation of both institutions. The Commission's mandate, as articulated in the Great Lakes Basin Compact of 1955, calls upon its state members to promote sound public policy via communication, policy research and development, and advocacy. The Sea Grant legislative charge, as embodied in the National Sea Grant Program Act (PL 94-461) is to "increase the understanding, assessment, development, utilization, and conservation of the nation's ocean and coastal resources by providing assistance to promote a strong education base, responsive research and training activities, and broad and prompt dissemination of knowledge and techniques. Hence, the Great Lakes Commission views Sea Grant as an integral player in the region's overall decision support process. Sea Grant research, training, public education and extension functions provide the foundation for the formulation and delivery of resource policy and management initiatives.

From an administrative and policy standpoint, the Commission/Sea Grant relationship takes several forms that offer mutual benefits. Two members of the Commission's Board of Directors sit on the National Sea Grant Review Panel and, as such, have an opportunity to ensure that Sea Grant initiatives respond to the research, policy and management needs of the states. Also, I serve on the Policy Committee of the Michigan Sea Grant Program and, in that capacity, advise on research and extension priorities that reflect the needs of the Great Lakes Commission. Other Commission staff have served in technical capacities for various Sea Grant programs, often for peer review of research proposals. Similarly, the chair of the Great Lakes Sea Grant Network (i.e., the consortium of the seven Sea Grant Programs in the Great Lakes states) is a designated "Observer" to the Great Lakes Commission, and various Sea Grant personnel serve on numerous standing committees and task forces of the Great Lakes Commission. Also, a Great Lakes Commission-Sea Grant Fellowship Program is now entering its third year; an arrangement whereby the two institutions mutually support a graduate student who spends a year working with the Commission on regional scientific and policy issues. This type of training has long-term benefits for the region as well. I, in fact, benefitted from Sea Grant support as a doctoral candidate at the University of Michigan, and the Great Lakes Commission has both employed and worked with many former Sea Grant Knauss Fellows whose Sea Grant experiences influenced their career choices.

From a research standpoint, relationships between the two institutions take on several forms, including collaboration as co-Principal Investigators, contractual arrangements to secure necessary expertise, and less formal arrangements to ensure that research outcomes are presented to, and used by target audiences that include government, business/industry interests, citizen organizations and the general public. Representatives from various Great Lakes Sea Grant Programs, for example, have contributed to Commission policy research related work on topics such as aquatic nuisance species prevention and control; soil erosion and sediment control; clean up of Areas of Concern; water management issues ranging from lake level fluctuations to water withdrawal, diversion and consumptive use; environmental and commercial dredging; recreational boating and related water-based tourism; and coastal development and land use management, among others. In addition to such collaborative benefits, the Great Lakes Commission has found the research grants program at Sea Grant, while often modest in resources, to make a measurable contribution to both basic and applied Great Lakes science. In fact, many of its research projects have a "venture capital" orientation with business development implications that have ultimately led to a high return for a modest federal investment.

From an extension standpoint, I can state without qualification that the Great Lakes Commission is fundamentally reliant upon Sea Grant for the "delivery" of many program and project outcomes to target audiences. All of the aforementioned research topics of the Great Lakes Commission have a policy and management dimension that typically involves outreach to audiences such as state legislators, state and local officials, business and industry associations, citizen organizations and school systems. Of particular note is Sea Grant's lead role in public information and education as a basis for aquatic nuisance species prevention and control. The Information/Education Strategy of the Commission-staffed Great Lakes Panel on Aquatic Nuisance Species, for example, reflects the importance of the Sea Grant partnership on such initiatives. In my personal experience, I have found Sea Grant's emphasis on – and expertise in – technology transfer to be a singularly important contribution to the Great Lakes management effort.

### **THE IMPORTANCE OF SEA GRANT TO THE GREAT LAKES STATES**

In addition to Sea Grant contributions at the regional (i.e., multi-state) level, the relationship between individual Sea Grant Programs and public agencies within their host state is particularly strong. As with the Great Lakes Commission at the regional level, the research, education and extension functions of individual Sea Grant Programs are integrated with resource policy and management priorities at the state level. These functions are, in many cases, unique and their absence would compromise the state's ability to effectively deliver services to target groups. Examples of this are readily found in the various Sea Grant Programs.

In Michigan, Sea Grant extension agents serve the needs of state and tribal commercial fishermen. Through research, planning, marketing assistance and education, these efforts have benefitted local economies and ensured that safe supplies of Great Lakes and farmed fish reach markets in the region and beyond. In just one area of southeast Michigan, Sea Grant's Great Lakes Education Program has introduced tens of thousands of students to Great Lakes issues and stewardship responsibility through shoreside and vessel-based educational opportunities. And, Sea Grant leadership on the Detroit American Heritage River initiative has supported state, local, federal and Canadian agencies, and leveraged more than \$5.0 million in grants for Detroit and other coastal communities.

In Pennsylvania, Sea Grant has been instrumental in publicizing fish consumption advisory information in its Lake Erie watershed, with a special focus on subsistence anglers who do not speak English. This initiative promotes informed health decisions by those who would otherwise have no access to such. Educational partnerships with the state's Department of Conservation and Natural Resources have focused on the state's new Visitor and Research Center at Presque Isle, and Sea Grant is also coordinating environmental education throughout Pennsylvania's portion of the Great Lakes basin. Pennsylvania Sea Grant has also worked with its

New York counterpart to address the avian botulism problem in Lake Erie, which has been responsible for the deaths of thousand of waterfowl in recent years and may be related to sporadic fish kills over the same period.

In Ohio, the Sea Grant director provided expert testimony on proposed fishing regulations, a request that was prompted by the program's reputation for sound, objective research and the level of trust placed in it by state legislators. Sea Grant partnerships with various state and local governments, as well as private sector interests, have led to the establishment of eight artificial reefs, with all the attendant economic and habitat creation benefits. The Division of Wildlife (Department of Natural Resources) relies upon Ohio Sea Grant to promote sport fishing participation among youth through various educational programs. And, Ohio Sea Grant leadership on/support for the Remedial Action Plans in the state's Areas of Concern has moved clean-up efforts forward.

In Illinois and Indiana, the joint Sea Grant program has worked closely with agencies in both states on aquatic nuisance species prevention and control. Its contributions to science, monitoring, public education and policy development have greatly enhanced the states' individual and collective capabilities to address the issue on a state and regional basis.

In Minnesota, research, education and outreach activities that support and advance state programs are found in thematic areas that include aquaculture, ecosystems and habitats, coastal technologies, coastal communities and economies, education and human resources, urban coasts, fisheries, seafood science and technology, and communications. All such activities make important contributions to state agencies and relevant programs.

In New York, the Sea Grant Program has a particularly extensive relationship with the state Department of Environmental Conservation. The latter has relied upon Sea Grant and its extension agents to carry out education/ outreach for Clean Vessel Act legislation; coordinate the Dune Stewards Program in the Eastern Basin of Lake Ontario; and undertake fisheries outreach and education, including that for Native American communities.

In Wisconsin, methods, principles and data developed through Sea Grant-supported research formed the basis for the comprehensive Green Bay Mass Balance Study coordinated by the U.S. Environmental Protection Agency. This first-of-its-kind national study documented PCB loading from the Fox River, the spatial distribution of PCBs within sediments of Green Bay and the potential for remediation of the most contaminated sediment zones. The Wisconsin Department of Natural Resources has relied upon this investigation in developing a management plan for dredging PCB-contaminated sediments from the Fox River to reduce the long-term input of PCBs to the bay and ultimately Lake Michigan.

The above examples offer anecdotal evidence as to the extent to which Sea Grant Programs partner with, or otherwise support state-level programs and service delivery efforts within the Great Lakes region. Despite the diversity of issues addressed, all have one factor in common. **If the U.S. federal government provided less (or no) funding for these activities, the ability of the Great Lakes states – both individually and collectively—to perform their mandated functions would be severely compromised at best and, at worst, involve the elimination of entire research, education and outreach programs.** Exacerbating this is the fact that Sea Grant Programs 1) use their federal funds to leverage significant additional financial support (by requiring a 50% nonfederal match); 2) partner with many other non-state entities (both within and outside government) to provide services that directly benefit the states; and 3) typically provide services that states are ill-equipped to provide due to budgetary or other resource constraints. The implications of less (or no) funding to Sea Grant for such services varies with the nature of the activity, but outcomes would include loss of local economic development opportunities; a less informed (and hence less involved) public; a compromised decision support system for state legislators and other

decisionmakers; increased exposure to environmental contaminants among sectors of the population; and degraded environmental conditions due to the absence of Sea Grant-brokered remediation/protection initiatives.

### **STRENGTHENING THE NATIONAL SEA GRANT PROGRAM WITHIN NOAA**

The Great Lakes Commission is strongly opposed to the proposal to transfer the National Sea Grant Program to NSF. This opposition is founded on three observations: 1) NSF, while an outstanding institution, is a poor fit for Sea Grant; 2) Sea Grant has a track record of success within NOAA and their respective missions are complementary; and 3) given that success, the federal government is well-advised to direct its attention to strengthening the program where it is now housed, rather than focusing on a transfer.

The National Sea Grant Program features complementary missions of research, education and outreach, and the emphasis throughout is on applications to the policy, management and business needs of its constituents within and outside government. We note that NSF places special emphasis on basic research, and lacks any demonstrated interest in the type of education and outreach programs that Sea Grant so effectively undertakes at the state level. Further, NSF is largely a Washington-based institution, with little presence (beyond funded research projects) at the regional and state levels. One of the major strengths of Sea Grant is that it is not just a research institution, but maintains a stable, reliable institutional infrastructure in all coastal states for a range of other functions. **A "reconstructed" Sea Grant that lacks education and outreach functions – even if it features a substantially enhanced and efficiently administered research element – would not provide the services needed by the Great Lakes states and broader regional constituency.** The Administration proposal not only calls for a substantial reduction in appropriations for the program, but also provides no assurance that the program's multiple functions will be retained. Thus, from our perspective, the proposal offers only risks and is devoid of potential benefits.

The argument, on the other hand, for retaining the National Sea Grant Program in NOAA is compelling. Sea Grant's reputation for results-oriented applied research, educational innovation and community-based extension has been recognized by the National Research Council and the Byrne Committee/Kellogg Commission, and outside reviewers have consistently rated the majority of the 30 programs as "excellent" in achieving significant results. Further, the National Sea Grant Program is the only federal institution whose mandate is to focus on sustainable development of coastal resources, and is the only NOAA program that focuses on technology transfer of information through a national extension program. And, to my knowledge, the "return on investment" for Sea Grant-funded initiatives is without equal. This is testament to the innovative, application-oriented nature of the program, and its ability to leverage funding support from a range of partners from the national to local level.

In the opinion of the Great Lakes Commission, the interests of this region – and the nation – are best served by retaining the National Sea Grant Program in NOAA and initiating a thorough evaluation of the program to ensure that it is well-positioned to meet future needs. Several areas require careful attention. For example:

- ▶ The National Sea Grant Program has been essentially level-funded for a number of years, despite the growing needs of coastal areas, the addition of new programs, and the increased complexity and costs of research, education and extension. Its stature within NOAA, along with its base funding, needs to be substantially elevated if it is to realize its full potential in addressing its mission.
- ▶ The continued downsizing, or "devolution," of government has placed increased burdens on localities for resource management programs and service delivery. Sea Grant's outreach needs have increased accordingly, but budgets have not. In most cases, programs have fewer than six extension agents statewide. Enhanced commitment to this aspect of Sea Grant is, from a state perspective,

critically important. Major metropolitan centers in the Great Lakes region, such as Detroit and Chicago, for example, have but a single extension agent.

- ▶ The competitive grant programs administered by Sea Grant at the state level are modest by any measure, with an average of \$1 million in available funds annually. Programs are generally able to accommodate only a small number of grants in the \$100,000 range. Competition is intense, and the rigorous review process helps ensure the high quality of successful proposals. However, the application and grant award processes can be laborious and time consuming. Continued erosion of available grant funding could compromise the number and quality of proposals.
- ▶ The National Sea Grant Program is to be applauded for a very rigorous review and evaluation process that ensures that state research, education and outreach programs are of the highest quality. However, the linkage between evaluation outcomes and funding allocation decisions can be tenuous. Attention should be given to both reviewing the effectiveness of evaluating programs in light of the time and effort expended, and to the overall funding allocation process for programs nationwide.
- ▶ The National Sea Grant Program is primarily state-oriented and, while regional initiatives exist (e.g., Great Lakes Sea Grant Network), the regional relevance and potential contributions of Sea Grant at that level have yet to be realized. A prospective role in assisting multi-state regions and associated institutions (e.g., Great Lakes Commission) with priority setting and large scale, science-based restoration initiatives is substantial, and should be pursued.

The Great Lakes Commission believes that the essential first step in this process is reauthorization of the National Sea Grant College Program. Appropriations of not less than \$100 million are needed to ensure adequate attention to a growing demand for research, education and outreach functions. Also, as the process moves forward, opportunities to raise the stature and profile of the National Sea Grant Program within NOAA should be pursued, and consideration should be given to consolidating other NOAA elements (e.g., Coastal Ocean Research Program) within Sea Grant in the interest of strengthening collaboration among program elements with complementary missions.

## **CONCLUSION**

The Great Lakes Commission, on behalf of its eight member states, expresses its strong opposition to the proposed transfer of the National Sea Grant Program to NSF. The Great Lakes states – and the entire nation – have been well-served by the program's research, education and outreach services. The preferred action is to retain NOAA as the program's institutional home, but initiate a thorough review and evaluation of the program to ensure that it is adequately positioned – via funding, administrative structure, program authorities, and state and regional services – to meet future challenges. An essential first step is reauthorization of the National Sea Grant College Program Act.

Thank you for the opportunity to share the views of the Great Lakes Commission on this matter.