



Building Sea Grant

The Role of the National Sea Grant Office

Prepared by
**The National Sea Grant Office Review Committee
of the National Sea Grant Review Panel**
June 2002

Letter from the National Sea Grant Review Panel

May 20, 2002

The report of the National Sea Grant Review Panel's committee that recently reviewed the organization, administration and management of National Sea Grant Office (NSGO) follows this letter. The Committee Report is hereby accepted by the National Sea Grant Review Panel Executive Committee for the Panel, as authorized at the April 2002 panel meeting. The Executive Committee was also authorized to provide these final comments, and to pursue publication and appropriate dissemination of the report.

The National Sea Grant Review Panel, which commissioned the report, wishes to express its sincere appreciation to Dr. Robert Duce, Committee Chair, and to the Committee for the extensive and thorough effort expended. The report is an assessment of the NSGO operations today, and contains thoughtful and useful recommendations for the future.

Notable from the report is the vast advancement of the National Sea Grant College program since inception of the current NSGO directorship of Dr. Ronald Baird. This Panel compliments Dr. Baird's strong leadership and efforts in improving Sea Grant in recent years. It is hoped that the report will assist him, the NOAA, and the Department of Commerce in continuing to expand the important role of the National Sea Grant Program.

Among the many high points of the report are several recommendations for Sea Grant to become increasingly more involved, integrated, and engaged in operations within the broad span of the NOAA. These include strategic planning, raising public awareness, and having expanded roles in joint projects.

The National Sea Grant College program benefits from the requirement of matching funds for most of its projects. The requirement also can be restrictive in Sea Grant's ability to interact with other programs that do not need to obtain matching funds. A recommendation involving future combination of Sea Grant with the Coastal Ocean Program would be subject to this funding difference, and yet the benefits to both programs for a close alignment would be significant.

There is a growing awareness that in the future Congress will require the Sea Grant program to allocate funding increases on a nationally competitive and merit-based system. The report makes recommendations on dividing the current budget group of Nationally Strategic Initiatives (NSI). Within this grouping is a limited, specially defined set of nationally competitive programs (so-called "true NSIs"), in whose selection the Sea Grant Colleges and the Sea Grant Association are strongly involved. Currently, the NSI budget category also includes all types of nationally competitive programs (including Congressionally mandated programs and other national competitions).

This Panel supports NSIs in all forms, but is also mindful of the suggestion to establish a separate category for most nationally competitive programs.

Lastly, the report explores various funding issues, particularly those that may hinder the National Sea Grant Office in its day-to-day operations and management. Sea Grant funds have been unable to meet the needs of its College programs that are responding to growing national priorities, and has had to seriously limit the funding of newly initiated programs. The issues include the need for significant funding increase, as well a more favorable way of allocating administrative cost burdens.

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**The National Sea Grant Office Review Committee
of the National Sea Grant Review Panel**

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Acronyms Used in the Report

COP	Coastal Ocean Program, NOAA
CORE	Consortium on Oceanographic Research and Education
DOC	U.S. Department of Commerce
IPA	Intergovernmental Personnel Act.
NASULGC	National Association of State Universities and Land Grant Colleges
NCP	National Competitive Programs
NMFS	National Marine Fisheries Service
NMRP	National Media Relations Project
NOAA	National Oceanic and Atmospheric Administration
NOS	National Ocean Service
NRC	National Research Council
NSF	National Science Foundation
NSGCP	National Sea Grant College Program
NSGL	National Sea Grant Library
NSGO	National Sea Grant Office
NSGRP	National Sea Grant Review Panel
NSI	National Strategic Investment
OAR	Oceanic and Atmospheric Research, NOAA
PAT	Program Assessment Teams
RMRP	Regional Marine Research Program
SGA	Sea Grant Association
STC	Science and Technology Committee of the NSGCP

Preface

The National Sea Grant Office (NSGO) Review Committee was appointed in early 2001 by Dr. Geraldine Knatz, Chair of the National Sea Grant Review Panel. The Committee was asked to review and analyze the organization, administration, and management of the NSGO. The review was to be forward-looking, strategic in nature, and broad-ranging in scope. Dr. Knatz' letter is presented in Appendix A, and the names and brief biographies of Committee members are given in Appendix B.

The Committee carried out its responsibilities over the following year by seeking the input of a broad group of individuals who have had extensive experience working and interacting with Sea Grant. During this time the Committee met in person four times, and had several conference call meetings. The times and locations of these meetings are given in Appendix C¹. Individual Review Committee members met with Sea Grant College directors formally on two occasions and informally with individual directors on many occasions. We carried out a series of personal and telephone interviews with individuals in the Washington, DC area twice, and the names and affiliations of those individuals are given in Appendix D. They included members of the NSGO staff; Congressional staff; OAR and other NOAA and DOC personnel, including the Acting Administrator of NOAA, two former NOAA Administrators, and a future NOAA Administrator; staff and leadership from other federal agencies; and representatives from several Non-governmental Organizations. The Review Committee sought input from the individual Sea Grant College Programs through letters and other communications sent to Sea Grant directors, Assembly of Sea Grant Extension Program Leaders, Sea Grant Communications Network, and Sea Grant Educators Network. These groups provided a wealth of information for the Review Committee. We also reviewed a wide range of documents relevant to the various issues being addressed. These documents are listed in Appendix E. All of the meetings and deliberations of the Review Committee were carried out in private, and this report is a product of the Committee alone.

As the deliberations and discussions of the Review Committee developed, it became clear that there were six major issue areas that required in-depth evaluation. These six areas subsequently became the major sections of this report: strategic planning, national strategic investments, partnerships, communications and marketing, funding, and internal office structure and operations. The report provides an in-depth analysis of several issues within each of these areas, followed by recommendations for future action. The Committee recognizes the significant progress that has taken place in a number of these areas, in particular in the leadership of the National Sea Grant College Program.

The Review Committee sincerely thanks all the many individuals and groups who have so generously contributed their time, thoughts, and effort to helping us complete this review. Without their involvement, this report would not have been possible. We particularly thank Linda Kupfer, Victor Omelczenko, and Jonathan Eigen from the National Sea Grant Office for their excellent logistical support throughout this process.

—The National Sea Grant Office Review Committee, April 2002

¹This and subsequent appendices will be found on the NSGO Review Report CD-ROM attached to this report.

Executive Summary

Background

The founders of the National Sea Grant College Program (NSGCP) had remarkable vision in the mid-1960s when they proposed this unique cooperative effort to promote sustainable use of coastal resources through research, education, and outreach. This vision has been retained in large part over the past 35 years. The necessary and distinct features that they envisioned for Sea Grant still are appropriate and in place today and are perhaps even more relevant than they were 35 years ago. These central features included the development of broadly based marine and coastal programs involving many scientific and social disciplines and emphasizing the relationship between science and societal needs. Their vision also included empowering the university-based programs with significant authority and leadership; recognizing the critical importance of outreach activities, including education and extension; understanding the necessity for a wide variety of partnerships among local, state, and federal entities as well as the private sector; and identifying the importance of a matching requirement for funding. This vision was reflected in its initial formation as part of the National Science Foundation, and was expanded upon and enhanced when Sea Grant moved to NOAA in 1970.

The wise and effective administration of such a complex and broad-reaching effort as Sea Grant is critical to its success, but it is clearly a major organizational challenge. This challenge rests largely with the National Sea Grant Office (NSGO), which includes such diverse responsibilities as planning and coordination, allocation and oversight of resources, information and communication, representation, marketing, capacity building, managing specific competitions, and providing broad support and services to NOAA and the Department of Commerce. The NSGO is a high performing organization. Its staff has received a significant range and number of awards, and its Director received the Presidential Rank Award for very high administrative performance. This report summarizes some of the recent accomplishments of the NSGO, such as development and

implementation of a new funding allocation system and a new Program evaluation system that is making a real difference in the performance of the NSGCP.

Since its formation in 1966, there have been several reviews of various aspects and activities of the NSGO. The National Sea Grant Office Review Committee was appointed by the National Sea Grant Review Panel (NSGRP) to conduct a comprehensive review of the NSGO and how it serves its many stakeholders, including its university partners, NOAA, the Department of Commerce, and other federal agencies. The Review Committee was asked to address the questions below in the context of a strategic, in-depth review:

- Is the NSGO currently organized to maximize its effectiveness with regard to its management responsibilities as prescribed by law?
- Is the NSGO adequately fulfilling its overall national leadership responsibilities to foster the marine sciences, and how might those responsibilities change in the future to enhance the overall effectiveness of the NSGCP?
- How can the NSGO be more effective in enabling the NSGCP to better engage NOAA and other federal agencies?
- Is the current administrative construct and position of the NSGO in the agency hierarchy sufficient to ensure performance and growth of the NSGCP, given future needs and opportunities in America's coasts that face the agency?
- Is the financial and human resource base adequate to allow the NSGO to efficiently and effectively fulfill its current and anticipated future responsibilities? How does Sea Grant funding and staffing compare with other federal science programs?

During the many discussions and interviews carried out to address its charge, the Review Committee identified six major areas that required extensive consideration and recommendations for the future. Those areas and the associated recommendations are presented below and are discussed in detail in the report that follows. Implementation of these recommendations will enable the NSGO to continue and accelerate its move toward excellence.

Setting Priorities and Strategic Planning

Setting priorities and future directions is essential for any successful organization. "Coastal and Marine Resources for a Sustainable Economy and Environment. Sea Grant Network Plan, 1995-2005," by the National Sea Grant College Program, sets forth a rather broad vision for Sea Grant, and

the individual Sea Grant Colleges have developed their own strategic plans. While these materials provide some valuable long-term guidance, they are of limited use in setting priorities and in providing strategic future direction for the National Sea Grant College Program. The development of a national agenda is required – one that will be an essential tool for developing strategic goals, setting priorities and providing leadership for Sea Grant.

The NSGO should continue to exercise a leadership role in developing a comprehensive strategic plan in partnership with NOAA, NSGRP, and SGA. Particular emphasis should be placed on utilizing the strategic plans of the state programs and Theme Team documents to create a comprehensive and coherent national Sea Grant agenda. Theme Teams are designed to address major program elements of Sea Grant and include members from the National Sea Grant Review Panel and the state programs.

This new national agenda for Sea Grant should be communicated widely, and there must be a cohesive and inclusive strategy to obtain the financial and organizational resources necessary to achieve the strategic goals. Of particular importance is the promotion of Sea Grant to Congress and the Administration. Such activities in the past have not been successful in raising sufficient funding for Sea Grant to realize its potential for contributing to the wise use and conservation of our marine and coastal resources. This will require a more cohesive and coherent strategic approach than has been followed to date. Thus **the NSGO, in partnership with NSGRP, SGA and NOAA, should continue to develop a cohesive, coherent strategy to raise the awareness and deepen the appreciation of Sea Grant by Congress and the Administration.**

Creating National Opportunities

The 1998 reauthorization of Sea Grant defined as a specified program element “any national strategic investments in fields relating to ocean, coastal, and Great Lakes resources developed with the approval of the Review Panel, the Sea Grant Colleges, and the Sea Grant institutes.” Programs developed under this definition have been designated National Strategic Investments (NSIs).

These programs have proven to be a significant challenge for both the NSGO and the individual Sea Grant state programs, partly because a number of different types of programs have been categorized as NSIs, including Congressionally mandated national competitions, “true” NSIs created at the NSGO, along with national competitions such as Knauss Sea Grant Marine Policy Fellowships. In addition, the individual state

programs believe they have not fully participated in the development of NSIs. These programs impose significant administrative burdens on the state programs and the NSGO staff because there are so many projects that are too narrow in scope and too limited in size. In the future, NSIs should have a clear definition, and they should be national in scope, strategic in nature, a clear investment for the future, awarded by national competition, and administered by an agreed-upon process. A 1998 NSI policy paper outlined a detailed process for handling NSIs, but it has not yet been fully implemented. **The NSGO, in consultation with the SGA and the NSGRP, should fully implement NSI policy as described in the 1998 policy paper, and if changes are required, a formal review process should be used.**

A significant proportion of Sea Grant funds will continue to be allocated on the basis of national competitions. **The NSGO should define a new class of national competitions, National Competitive Programs (NCPs), which will be strictly limited in number and scope.** NCPs would include non-strategic programs and projects mandated by Congress, those of a highly specialized limited scope, or those embodying limited partnership arrangements. They would be awarded by a national competition but would not have the characteristics of a true NSI.

Enhancing Partnerships

One of the challenges in Sea Grant is the development of more, and more effective, partnerships at the national and regional levels. There is already a strong base for this development, with many state programs conducting partnership activities with NOAA units and other federal agencies. Indeed, Sea Grant is by nature a partnership activity, since the requirement for matching funds necessarily leads to a number of partnership interactions at the state level. In developing new partnerships there are two major considerations:

- New national and regional activities should not replace or reduce the importance of existing programs, which are the core of Sea Grant.
- Not all partnerships should need additional matching funds, so provisions should be made for some activities on a non-matching basis.

It is important that **the NSGO, in consultation with the SGA, continue to develop joint national initiatives with the NOAA Line Offices that will focus expanded university efforts on critical marine issues central to NOAA’s current and future needs. The NSGO should also seek opportunities to develop joint initiatives with**

other federal agencies with strong marine science missions.

The need for regional programs and regionally based management approaches is generally recognized. This need is driven by both substantive concerns and by a widespread perception that NOAA could take better advantage of Sea Grant capabilities and bring its other activities together better in a regional mode. A particular opportunity is to learn lessons from the Congressionally mandated plans developed by the Regional Marine Research Program (RMRP) in the early 1990s. The RMRP planning experience was quite productive, and many of the individual plans have become the basis for other efforts. In addition, the 2000 report entitled “Special Reports on Regional and Multi-Program Activities” by the state programs, and a NRC report issued in 2000 entitled “Bridging Boundaries Through Regional Marine Research” provide valuable information and suggestions. **The NSGO should consider the potential for major regional initiatives by synthesizing the principal results from the recent reports and plans in this area and developing a strategy for new funding resources.** Facilitating region-wide interactions among Sea Grant programs, NOAA laboratories and centers, and other appropriate NOAA units will be particularly crucial. These regional initiatives should build upon and amplify the institutional capabilities of the Sea Grant network rather than building separate structures.

To further streamline and embrace NOAA’s regional programming, NOAA is urged to integrate the Coastal Ocean Program with Sea Grant. These two activities together can significantly strengthen each other, and Sea Grant’s extension capability and close ties to stakeholders would increase COP’s impact. A Sea Grant/COP partnership would facilitate regional activities for a broad cross-section of NOAA activities. It does not make sense to have these two programs separated. **The Coastal Ocean Program should be integrated with Sea Grant to expand regional capabilities, utilizing current successes as a model.**

A particularly important aspect of Sea Grant is its extension, communications, education, and technology transfer capability. NOAA needs to promote a credible, grassroots-oriented, science-based, accessible source of extension programming and outreach. Sea Grant has this capability, and it reaches across the entire coastal environment of the nation. As environment/resource concerns become ever greater, this capability will be even more valuable. The NSGO can address this opportunity, working carefully with the state programs to ensure that appropriate activities with high potential for impact are identified and implemented. Following the spirit of the 2001 report entitled “A Mandate to

Engage Coastal Users” by the National Sea Grant Extension Review Panel, **the NSGO should work with NOAA leadership to ensure that Sea Grant is the marine and Great Lakes extension and education arm of NOAA.**

Strengthening Communication and Public Awareness

Communicating the importance of Sea Grant is central to the future health, effectiveness, and sustained growth of Sea Grant. While Sea Grant is ideally positioned to address many of the critical issues and challenges facing our coastal environment, relatively few know about the national impact of Sea Grant’s research, education, and outreach efforts. Of particular importance is enhancing the understanding and support of Congress. For Sea Grant to meet its Congressionally mandated expectations, it is necessary for Sea Grant to expand this base support in Congress, the Administration, other interest groups, and a larger fraction of the general public. Sea Grant must become more widely recognized as a national network that funds important research, educates the citizenry, addresses real world problems, and pays for itself in tangible economic benefits. **The NSGO should continue to take an active leadership role, with the SGA and the NSGP Communicators, in the development and aggressive implementation of a comprehensive communications and marketing strategy for promoting the NSGCP.**

Sea Grant is fortunate to have a reservoir of significant research results, outreach contributions, and educational accomplishments that can be used as a basis for enhanced communications. But this wealth of information has never been mined and packaged in an accessible and informative format. Mining the data, however, will not be sufficient. The need for a comprehensive, multi-dimensional and easily accessible information system for the NSGCP and the NSGO is compelling. Such an information system could be used for cataloging and tracking technical information, accomplishments, and general information about Sea Grant investments in research, outreach, and education. **The NSGO, in partnership with the Sea Grant network, should provide leadership and support for the development and utilization of a network-wide data and information system for cataloging and tracking technical information, accomplishments, and general information about Sea Grant investments in research, outreach, and education.** The system should be simple, searchable and straightforward to use, and it should minimize workload increases at the state programs.

Approximately 80 percent of Americans depend on the news media for their environmental information, and growing numbers are turning to the World Wide Web. The Internet has made communication both within and outside of an organization easy and affordable. Taking full advantage of this tool is essential for enhanced awareness of Sea Grant. The present Sea Grant web site must be redesigned to have a more engaging interface and an architecture that conveys the message that Sea Grant is a dynamic, aggressive, highly relevant organization that is much greater than the sum of its parts. **The NSGO, in partnership with the state programs, should provide leadership in developing and maintaining a web site that is attractive, easily navigable, readily accessible, up to date and highly informative about the NSGCP.**

Funding for Success

Funding for the NSGO has been a matter of some concern in the past. An appropriately supported, funded, and effective NSGO is vital to the success of the NSGCP. The recent funding history of the NSGO has been influenced by an administrative cap imposed by Congress in 1991 and which now is set at 5 percent of the Congressional Sea Grant appropriation. This cap was initiated in reaction to concern that Sea Grant's administrative costs were increasing more rapidly than the annual appropriation. The availability of administrative funds for the NSGO has been complicated by increased overhead costs imposed by OAR and other intra-agency taxes. These increased taxes, combined with increased costs for the new assessment procedures, increased non-reimbursed pass-through projects, and other non-reimbursed services, have had a major impact on administrative funds within the NSGO. These combined costs have increased 140 percent since FY96. **The NSGO and OAR should review the taxes imposed by OAR on the NSGO to ensure that the taxes are justified by the value of the services being rendered by OAR. The total intra-NOAA taxes and overhead on the NSGO should not exceed 20 percent of the administrative cap. OAR should reimburse the NSGO for the time the Director spends performing his duties as Associate Director for OAR and for other NSGO staff costs associated with OAR duties.**

Pass-through projects administered by the NSGO add greatly to administrative costs that are not associated with the cap. These costs must be directly covered by the pass-through funds. **The NSGO should recover, through a NOAA-endorsed policy, administrative costs incurred**

from handling pass-through funds or requests from NOAA and Congress. The rate of recovery should be set at 5 percent of the total project costs.

The timely processing of grants has long plagued Sea Grant. Recently the NOAA Grants Office publicly stated its commitment to provide timely processing of grants. However, chronic understaffing has hindered their efforts. From 1989 to 2001 the number of grant staff decreased from 14 to 8 while the number of grants to be processed increased nearly 40 percent. Most Sea Grant proposals are processed from late November to mid-March. In recent years the Grants Office has co-located a specialist in the NSGO during this period. It is critical that **the NOAA Grants Office continue their recent practice of dedicating sufficient grants personnel to Sea Grant during November to March to ensure that all grants are processed within 45 days of receipt at the Grants Office.**

Not all of the difficulties relating to the timely processing of grants can be laid at the feet of the NOAA Grants Office; several of the problems reside within the NSGCP, including the NSGO. The NSGO has no specific, designated source to receive grant proposals. The lack of a central submission and tracking point opens up the potential for proposals to be misrouted or mishandled. The NSGO also lacks a unified grants management system. **The NSGO should continue to make development of an efficient and effective grant management process one of its highest priorities.**

Organizing for Effectiveness

For years there has been discussion about whether Sea Grant is properly positioned within the federal government to most effectively carry out its Congressionally mandated responsibilities. The question of placement has two aspects: (1) Should Sea Grant be in NOAA? If the answer is "Yes", then (2) Where in NOAA? Much of the discussion has focused on a possible move to NSF. Arguments in favor of such a move include easing the grant process for researchers and the very high esteem in which Congress and the research community hold NSF. Opponents of this proposal note that NSF supports basic research whereas Sea Grant generally funds more applied research. One of Sea Grant's greatest strengths is its outreach capability, conveying the results of its research to the economic and social benefit of our coastal communities and informing researchers about important questions and issues identified by their constituents. NSF has no such formal outreach capability. In addition, the match requirement for

Sea Grant funding ensures the important “buy in” of local institutions and industry. NSF has no mechanism to require matching funds. NSF is clearly not a good match for Sea Grant’s strengths.

If Sea Grant remains in NOAA, should it stay in OAR? During the past few years OAR leadership has become increasingly cognizant of the importance of Sea Grant. OAR has long recognized the value of Sea Grant’s research and is becoming much more aware of the benefits of Sea Grant’s outreach and education efforts. OAR leadership has worked diligently to include Sea Grant’s budget, with increases, in the DOC budget sent to Congress and in the final approved budget. These actions demonstrate the value OAR places on Sea Grant. In the budget process, an organization that is part of a supportive line office has advantages over those organizations without line office support. For these reasons **Sea Grant should remain within NOAA/OAR, and NOAA should specifically charge OAR with broad responsibility for education and extension activities.** Supporting this recommendation is the realization that Sea Grant is the largest extramural marine research program within NOAA, and it logically falls more within the interests of OAR than other more operational or regulatory units of NOAA

With the reorganization of OAR in 1999, the Director of the NSGCP assumed the additional responsibilities of Associate Director for Oceans in OAR. Sea Grant is now assured of having a significant voice in decisions and policies affecting the “wet” side of OAR, and this elevates the visibility of Sea Grant. However, it is critical that the base position remain at its core a Sea Grant position. The demands placed on the OAR Associate Director reduce the time he has available to lead and manage Sea Grant. This is compounded by the absence of a senior level Deputy Director for Sea Grant. Several years ago the position of Deputy Director was eliminated due to budget reductions. The Deputy had primary responsibility for daily office management and was critical in maintaining overall continuity of the office. Because of his senior rank, he often represented the Director at the very highest levels. **The Director of Sea Grant should continue to serve as Associate Director for Oceans in OAR. This dual responsibility should be accompanied by having a Deputy Director for Sea Grant at the SES level. Succession of the Director/Associate Director should be based on a national search, giving due consideration to the needs of Sea Grant, and with the base position remaining at its core a SES Sea Grant position.**

The creation of an organization and management plan for the NSGO would do much to clarify responsibilities and expectations within the

office. The responsibility for personnel administration in the NSGO and the expectation of the staff are confusing to many. A number of professional staff members spend considerable time on non-essential administrative duties to the detriment of their program responsibilities simply because the personnel who should be doing these administrative duties are not available.

Professional staff have two primary responsibilities: each monitors several state programs and each has responsibilities for specific programmatic areas. There is a wide divergence in the fraction of time staff members devote to these responsibilities, primarily because there are no guidelines. It is vital that **an Organization and Management Manual for the effective and efficient internal management of the NSGO should be developed, implemented and updated on a regular basis. The manual would integrate, enhance and codify existing personnel documents.**

For many years the NSGO maintained “The Green Book” as a compendium of all important and current program policy and procedure documents that serve as management guidance for the state programs, including requirements for plans and proposals, review procedures, evaluation guidelines, the NSI policy paper, and other pertinent items. This resource also contained an annual schedule of important dates for the coming year that both the NSGO and the state programs could use in planning activities, thus serving as a living document with frequent updates. However, this important resource is now quite dated. **The NSGO should update The Green Book with all pertinent policy and procedures documents and provide regular updates thereafter.**

Combining Sea Grant’s strong extension, research, and education efforts with the tremendous breadth of expertise found in the nation’s academic community can be very productive. The interaction of the NSGCP Director with senior university officials should lead to significantly enhanced use of the expertise of universities to solve marine-related issues on a regional to national level. This interaction with university administrators also would strengthen the NSGCP and be of great benefit to NOAA. **The Director of the NSGCP, working with the individual Sea Grant Programs, is encouraged to engage in regular contact with senior university executives to develop increasing support and visibility for Sea Grant.**

Conclusions

The NSGO Review Committee has examined most aspects of the NSGO performance in

fulfilling its statutory duties as outlined in the enabling legislation and also those duties arising from the expectations of Sea Grant stakeholders. The 21 recommendations summarized above are offered to improve the already high performance of the NSGO, and to position it for grasping the important opportunities that lie ahead.

These recommendations cover a very broad range of issues, but they can be reduced to a few elemental points. The NSGO must do the following:

- Lead in developing a comprehensive strategic plan for NSGCP and a national Sea Grant agenda.
- Provide leadership in communicating the national Sea Grant agenda, the achievements, and the opportunities of Sea Grant to Congress, the Administration, and the public.
- Streamline and better manage the myriad administrative details essential to the operation of the NSGCP.
- Have an SES level Deputy Director in order to effectively manage and fulfill the broad duties of the NSGO that range well beyond Sea Grant itself.
- Continue to seek adequate funding to effectively carry out the functions of the National Sea Grant Office utilizing the findings of this report.

If the recommendations in this report are to be carried out successfully, a number of significant changes will be required – changes not just in administrative structure or in the ways that tasks are carried out, and not just in the operations of the National Sea Grant Office. Perhaps most importantly this will require changes and improvements in the overall approach within the entire National Sea Grant College Program and the individuals who comprise it. The satisfactory implementation of these recommendations requires that all the essential partners in Sea Grant - the National Office personnel, the critical science, education, communications, and extension personnel at the state programs, the National Sea Grant Review Panel, and the administrators and staff within NOAA and DOC work together in a cooperative and proactive manner with a common goal. This should be possible, since all of these groups have a common goal on which to focus – making the National Sea Grant College Program the premier effort in the nation addressing the critical economic, social, and environmental demands facing our coastal marine and Great Lakes environments.

I. The National Sea Grant College Program

The National Sea Grant College Program is designed by statute to address marine and coastal issues of concern to the nation through the network of Sea Grant colleges and institutions. It has a broad reach that has significantly expanded the capabilities and scope of the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Commerce (DOC).

As stated in the 1994 review of Sea Grant by the National Research Council (NRC, "A Review of NOAA National Sea Grant College Program," pg. 9):

"Through Sea Grant, NOAA takes part in a variety of marine and Great Lakes research, education, and outreach activities. Sea Grant has been virtually the only source of funding in the United States for activities in marine policy, and has been a major contributor for the fields of marine aquaculture, coastal and estuarine research, marine fisheries management, seafood safety, marine biotechnology, marine engineering, and marine technology development. Sea Grant combines research, education, and advisory services into coherent, horizontally and vertically integrated approaches for the solution of coastal environmental and commercial problems. It has supported students at all levels of the educational system and has been a major factor in educating a significant portion of marine and Great Lakes scientists who now hold research and policy positions across the United States. Sea Grant supports a unique mechanism for assessing user needs through its local Marine Advisory Service (Note: now generally referred to as the "Extension Network").

This statement could be updated to include such areas as aquatic nuisance species, biodiversity, shellfish disease, coastal hazards, and marine products. Indeed, Sea Grant's purview includes a substantial portfolio that examines the opportunities for new marine technologies and the

questions that inevitably arise when marine resource and environmental issues are addressed in light of human needs and institutions.

The 1994 NRC Report and a subsequent report of a retreat in 2000 that included NSGO, NSGRP and SGA personnel (Sea Grant in the 21st Century: A Vision for Success) (see Appendices F² and G) made a number of significant recommendations about the future of the NSGCP (hereafter also referred to as Sea Grant). Those recommendations went to the heart of the program and its strengths and weaknesses, and this report will address many of the same issues. NOAA and Sea Grant have responded to the 1994 NRC report and have addressed essentially all of the recommendations in a very proactive manner, resulting in a significantly stronger and more effective Sea Grant. For example, the management structure of Sea Grant has been simplified and decentralized, with delegation of more responsibility for project planning to the university partners. The National Sea Grant Office (NSGO) requires a uniform rigorous process of planning, solicitation, and peer review of research projects, and the NSGO has combined this with a performance-based evaluation system for individual programs that is tied to a merit-based allocation scheme. The number of staff in the NSGO has been reduced by 25 percent over the past several years, and the time required to process proposals has begun to improve. Important factors in this improvement include outstanding leadership of the NSGCP, and a renewed commitment on the part of both the NSGO and the individual Sea Grant colleges and institutions (hereafter referred to inclusively as state programs) to work together to make Sea Grant excellent.

Sea Grant is a very competitive program. For example, during the 2000/2001 biennium, 2,249 proposals were submitted to Sea Grant competitions. Following a rigorous review process, 520 of these were selected for funding, a success rate of only 22 percent. This compares with a success rate at NSF in Fiscal Year 2001 of 31 percent. New blood is constantly being brought into the program as well. Of the 452 principal investigators for Sea Grant research projects in FY 2001, only 135 had been principal investigators in FY 1998, representing a healthy turnover of 70 percent. Sea Grant projects have involved investigators from more than 300 different institutions since 1995.

Both by law and as the result of more than three decades of experience, principal responsibility for the direct management of research, education, technology transfer, and extension activities is placed with the state programs. Currently, there are 30 programs, involving many times that number of institutions throughout the nation. The state

²All of the appendices subsequent to Appendix B will be found on the NSGO Review Report CD-ROM attached to this report.

programs are located in coastal and Great Lakes states and territories of the United States. This framework was established during the years when Sea Grant was administered by the National Science Foundation (NSF) and has continued since 1970, when Sea Grant was transferred to the newly formed NOAA. The recommendations of the National Research Council in 1994 and the subsequent reauthorization by Congress in 1998 (Public Law 105-160) further refined this framework.

The state programs are responsible for identifying needs and opportunities in the marine environment and among marine and coastal clientele; for providing plans for the management of science and education activities; for recruiting investigators and staff; for soliciting, reviewing, and selecting projects; for implementing program activities at the institutional and community levels; for obtaining statutorily required non-federal matching funds equal to at least 50 percent of the federal investment; and for facilitating the institutional relationships necessary for managing a multi-institutional, multidisciplinary, integrated program involving many components. In addition, state programs are responsible for representing the institutions that participate in Sea Grant. The operating philosophy of the NSGCP has been to place the main body of program management responsibility close to the problems and opportunities and close to the people around the country who are carrying out the many activities in which Sea Grant is involved. In managing these activities, the state programs are accountable under policies and procedures established by Congress and NOAA. For most activities, the state programs are effectively the operational arm of Sea Grant, although due to both expertise and the intent of the authorizing legislation, they have clear input into policy decisions.

II. The National Sea Grant Office

A. The Roles of the National Sea Grant Office

The National Sea Grant Office serves as the central, or headquarters, office of this largely decentralized national activity – the National Sea Grant College Program. The NSGO has a set of vital leadership responsibilities that are essential to the effective functioning of the national network of state programs. Although much of the hands-on management is carried out elsewhere, there are a number of functions that require and depend upon a smooth-running national office. The NSGO is responsible for activities that require a broad national overview, for establishing guidelines, and for managing central information and other duties that cannot be handled effectively by smaller distributed units. It also is responsible for the coordination, synthesis, and base-building functions that ensure an effective national activity. Some of these responsibilities are established by statute, while others are the customary functions of central offices, influenced in some instances by economies of scale. Key responsibilities of the NSGO include these:

- *Planning and Coordination.* The NSGO has a principal leadership responsibility, albeit with extensive consultation, for setting broad national goals and priorities. It is within this context that the identification of the grassroots needs and management of the state programs can be successful. Careful networking and coordination, as well as crosscutting activities that bring diverse program elements together, ensure that the decentralized Sea Grant network performs as a national program. The NSGO is also responsible for identifying gaps in programmatic coverage and stimulating efforts to close those gaps.
- *Allocation and Oversight.* The NSGO establishes the guidelines and allocates funds among state programs. It also determines the capabilities and competitive merit of these programs. It provides guidelines and procedures for responsible management by the state programs. It is responsible for state program oversight and accountability, including performance evaluation of both management and results.

- *Information and Communication.* The NSGO is responsible for gathering, synthesizing, and disseminating both management and programmatic information. This information must be presented in a variety of forms to a variety of audiences, including the state programs and program participants, a broad range of scientific and educational interests, NOAA/DOC, other federal agencies, Congress, the media, and a wide range of other external clientele.
- *Representation.* The NSGO is the principal representative of Sea Grant within the federal government. It is also the central “port of call” for people outside the government who wish to learn more about Sea Grant, its activities, and its results.
- *Marketing.* The NSGO must actively promote Sea Grant. This is a key ingredient for ensuring the long-term viability of Sea Grant while also providing a necessary feedback mechanism. Coordination with the individual state programs is essential to meet this responsibility.
- *Capacity Building.* The NSGO must be continuously concerned with the vitality of the Sea Grant enterprise. In some cases this involves identifying problems at a state program level and assisting in remedial efforts. More often it is the sharing of best management practices and providing workshops and training in areas of program-wide need. The NSGO must be constantly focused on building the capabilities of the network as a whole as well as each component within it.
- *Managing Specific Competitions.* The NSGO is responsible for managing several different national research and extension competitions within the Sea Grant network. Also, on occasion, it manages some competitions for NOAA, DOC and other federal agencies; some of these have Sea Grant connotations.
- *Broad Support and Service to NOAA and DOC.* The NSGO has a broad support and service function for its line office in NOAA, Oceanic and Atmospheric Research (OAR), as well as for NOAA and the Department of Commerce. At a modest level, this service is both appropriate and healthy for the NSGO and for its personnel. It also is a function that can be easily misused.

All of the above responsibilities are intrinsic to the role of the NSGO or any similar organization. Emphases will differ over time for a variety of reasons, including limitations on the time of the people available and on financial resources. Over the past six years primary emphasis has been placed on *Allocation and Oversight*. Substantial, increasing emphasis has also been placed on

providing *Broad Support and Service to NOAA and DOC* on ocean, coastal, and Great Lakes issues, as well as *Managing Specific Competitions*. Much of this activity has been in response to the recommendations of the 1994 NRC review of the NSGCP.

Since that time, allocation procedures have been developed and implemented that establish core funding levels for each state program. The primary responsibility for allocating funds within a state program rests within that program, subject to new guidelines for basic aspects of management. These guidelines include, among others, the establishment of uniform peer review and project decision procedures. Core funding is modified within limits that preserve funding adequate for a viable state program, but is based on regular merit determinations. Allocation of the substantial portion of available funds not applied to core funding is on the basis of specific national competitions, including National Strategic Investments (NSIs), among all state programs. Managing specific competitions uses a significant part of NSGO staff time, and also imposes burdens on the state programs.

The new allocation system necessitated a rigorous process for evaluation of state program performance in order to satisfy the NSGO's oversight responsibilities. Development and implementation of the state program evaluation system is in part a response to the 1994 NRC report, but also to specific requirements in the reauthorization legislation. The evaluation criteria and procedures were developed over a two-year period, and 30 program evaluations took place over the following four years. These advances in state program management and evaluation greatly improved the accountability and accomplishments of the individual state programs and the entire NSGCP. Though financially expensive, this is a significant accomplishment of both the NSGO and the state programs. An extensive recent review of this evaluation process has been concluded, "Review and Recommendations: Sea Grant Program Evaluation Process," 2001.

The provision of *Broad Support and Services to NOAA and DOC* has received new and substantial emphasis. This activity is instrumental in strengthening relations with the NOAA line organization and in developing partnership opportunities. The part-time assignment of the Sea Grant Director as OAR Associate Director for Oceans has been beneficial to Sea Grant, OAR and NOAA. However, there has been a cost because of the dilution of the Director's attention to Sea Grant. This can be compensated as discussed in a later section of this report.

B. The Review of the National Sea Grant Office

Since its formation in 1966, there have been several reviews of various aspects and activities of the NSGO. The National Sea Grant Office Review Committee was appointed by the NSGRP to conduct a comprehensive review of the NSGO and how it serves its many stakeholders, including its university partners, NOAA, and the Department of Commerce. The Review Committee was asked to address the questions below in the context of a strategic, in-depth review:

- Is the NSGO currently organized to maximize its effectiveness with regard to its management responsibilities as prescribed by law?
- Is the NSGO adequately fulfilling its overall national leadership responsibilities to foster the marine sciences and how might those responsibilities change in the future to enhance the overall effectiveness of the NSGCP?
- How can the NSGO be more effective in enabling the NSGCP to better engage NOAA and other federal agencies?
- Is the current administrative construct and position of the NSGO in the agency hierarchy sufficient to ensure performance and growth of the NSGCP, given future needs and opportunities in America's coasts?
- Is the financial and human resource base adequate to allow the NSGO to efficiently and effectively fulfill its current and anticipated future responsibilities? How does Sea Grant funding and staffing compare with other federal science programs?

Following numerous interviews and discussions, the Review Committee identified six major areas central to answering these questions and to the future successful operations of the NSGO. These areas include strategic planning; National Strategic Investments; partnerships, both in and out of NOAA; communications and marketing; funding; and the internal structure and operations of the NSGO. Subsequent sections of this report present an analysis of issues within each of these six areas and make recommendations for future action. A series of Appendices provided in the accompanying CD-ROM gives additional information and analyses of relevant issues.

III. Setting Priorities and Strategic Planning

A. Planning within Sea Grant

Strategic planning has been discussed extensively within Sea Grant over the last decade. Detailed background information on strategic planning within Sea Grant and a summary of the results of interviews on this subject by the Review Committee are presented in Appendix H. The NSGRP has consistently advised that strategic planning be undertaken to set priorities and directions. The 1994 NRC review recommended the development of a single strategic plan articulating a shared vision and strategies. In conjunction with NOAA's strategic planning efforts, Sea Grant did develop a "Sea Grant Network Plan, 1995-2005" that sets forth a broad vision for that decade. However, more effective application and use of strategic planning is needed. The NOAA strategic plan for 1995 to 2005 continues to be used as a budget organizing principle. Difficulties arose from the beginning because the NOAA plan did not include all the activities undertaken by Sea Grant. At the same time, the Sea Grant budget had to fit within the NOAA plan. In operational terms this dissonance appears to have had minimal affect on Sea Grant, but it has had substantial budgetary impacts and has made interactions with NOAA units more difficult. Strategic planning also was required of the individual state programs as part of the protocols laid down for resource allocation and program assessment. Each state program is required to produce a strategic plan that is considered and weighed as part of its evaluation. The NSGO, NSGRP and SGA report "Sea Grant in the 21st Century: A Vision for Success" also provides some valuable information and insights on building a vision for Sea Grant.

The latest planning effort utilizes the concept of "Theme Teams," which include members from the NSGO, the NSGRP, and the state programs. The Theme Teams are designed to address major program elements of Sea Grant (see Appendix I). Each team is co-chaired by a NSGO staff member and a state program representative. These teams have been very active and have produced a number of two-page summaries of their theme areas. Each

summary provides a mission statement for the topic, background information, selected accomplishments, proposals for future action, and the expected benefits of work in the theme area. These are excellent summaries, but most are communication documents and not strategic plans. As such, they are of limited use in setting priorities and in providing future direction for the overall program.

Another important part of strategy is the continuing effort to obtain increased funding for Sea Grant. The Sea Grant Association (SGA) has been active in promoting the program in Congress, and the NSGO has acted similarly within NOAA and other parts of the Administration. The two organizations have worked together to develop plans for specific initiatives designed to seek additional funding for specific areas. A notable example is the successful initiative for biotechnology. Other initiatives currently are being considered as part of a strategy for increased funding. However, no overarching, cohesive plan has yet been developed to achieve the desired funding goals.

B. Developing a National Sea Grant Agenda

The central issue is institutionalizing strategic thinking as an essential tool for setting priorities and providing leadership for the National Sea Grant College Program. Although progress has been made, as discussed in Appendix H, there does not now exist a single, cohesive, integrated strategic plan as recommended by the 1994 NRC report. One of the problems is that the strategic goals of Sea Grant become inextricably intertwined with the effort to attract additional financial resources to the program. These activities are indeed related, but greater clarity and effectiveness would be achieved by (a) setting goals in a new strategic plan and (b) developing a cohesive and inclusive strategy for obtaining the financial and organizational resources necessary to achieve these goals.

The need for strategic thinking does not seem to be fully acknowledged by the state programs or the NSGO, but it is recognized by a number of key people outside the Sea Grant community. What is recognized internally is the need to "sell" Sea Grant in order to attract additional resources, and the need to develop initiatives for funding in a specific defined area. It also is recognized internally that there must be a generally accepted Sea Grant mission that includes broad areas of research and outreach activities.

Taken together, the numerous planning and review documents provide some valuable long-

term guidance. For example, the “Sea Grant Network Plan, 1995-2005” was an effort to develop a broad strategy, but it suffers because it empowers almost any activity and does not effectively set priorities and strategic goals. The state program strategic plans do not provide an overall view of Sea Grant, its priorities, or its directions. Generally, they do not set hard priorities or provide significant program focus. However, they do contain a wealth of material that would be of great value in formulating an overall strategic plan for Sea Grant. The Theme Team papers provide a statement of mission and opportunities in specific fields, and they propose future action. “Sea Grant in the 21st Century: A Vision for Success” is a very useful first step in long-term planning.

What is lacking from these documents is use of this information in a more global analysis to create a comprehensive strategic plan: a national agenda that can be the agent for setting priorities and directions. This would enable the complexity that is Sea Grant to be better focused within NOAA, and Sea Grant’s potential would be more clearly visible.

Recommendation 1

- The NSGO should continue to exercise a leadership role in developing a comprehensive strategic plan in partnership with NOAA, NSGRP, and SGA. Particular emphasis should be placed on utilizing the strategic plans of the state programs and Theme Team documents to create a comprehensive and coherent national Sea Grant agenda.

C. Enhancing Congressional Awareness and Funding

Setting a national agenda is only the first step; there must be a cohesive strategy to obtain the resources required to achieve the goals laid down in the national agenda. Currently, multiple, but not-well-coordinated, strategies to accomplish this are underway, including the following:

- The SGA is working to educate Congress about its accomplishments and opportunities.
- The NSGO and the SGA have developed Theme Team documents that are valuable in educating both Congress and the Administration.
- The SGA and the NSGO have coordinated efforts to develop special program initiatives worthy of specific funding.
- A closer relationship has been developed between the NSGO and various NOAA line organizations in order to be responsive to NOAA-wide issues, increase the visibility of

Sea Grant and its capabilities, and carry out cooperative activities.

- The NSGO is involved in various cross-cutting scientific planning and development activities of the federal government.

The issue of adequate funding was recognized in the 1994 NRC report, which stated that the “NSGCP needs additional funding to fulfill its potential.” The NRC also stated that new funding should be tied to the strategic planning process, and that some of the new resources should be dedicated to new initiatives. What NRC failed to do is outline an effective process for seeking and obtaining funding. Within the context of the NRC recommendations, the NSGO and the SGA have been very responsive.

The efforts outlined above have been successful in developing some support in both the Congress and the Administration, but they have not been successful in raising funding to the level necessary to realize Sea Grant’s great potential to contribute to the wise use and conservation of marine and coastal resources. This will require a more cohesive and coherent strategic approach than is now being followed. It is not that all the current efforts cited above are not worthy. It is simply that they are not effectively coordinated in a clear strategy that is understood, supported and accepted by Congress and the Administration.

Interactions and communications with Congress clearly are critical in this process. Interviews with Congressional staff suggest that Sea Grant is not as well known on the Hill as many believe it is. Congressional advocacy for Sea Grant apparently is limited to a few influential members, mainly from coastal states, who have constituencies which benefit from Sea Grant. Congressional staff view Sea Grant as having instituted no change in its program, and as being part of NOAA, but thinking and acting independently of the agency. Those few Congressional staff who are reasonably familiar with Sea Grant rarely think of it as their primary source of information about coastal and marine issues. While they may go to an individual whom they know within Sea Grant, they do not go to the institution of Sea Grant. With a few notable exceptions, the staff expressed little knowledge of what Sea Grant actually does, or of the expertise that Sea Grant provides. Some associated Sea Grant principally with education, others with outreach, and still others with research. The majority did not associate Sea Grant with all three. This lack of awareness and understanding of Sea Grant is a critical factor relative to any Administration initiative that may seek to change the funding, construct, or institutional setting of Sea Grant.

Despite this lack of in-depth understanding of

Sea Grant, Congressional support remains good among members representing the coastal community and those who are familiar with the program. Although this could be taken as an indication that the Sea Grant budget is secure, it is not necessarily an indication of support for increased funding. On the other hand, there are members who have Sea Grant activities in their districts but have little awareness of Sea Grant. Several members do not recognize a Sea Grant product, service, or activity that is of benefit to their Congressional district. There is even less appreciation of Sea Grant among members from non-coastal states. Sea Grant clearly needs to enhance its visibility on the Hill. Congressional members should be visited routinely by a team composed of SGA, NSGRP, and the NSGO representatives with knowledge of the broad mandate and diverse accomplishments of the program. These visits should focus on the merits of the program rather than the budget. Moreover, Congressional members should be provided information routinely about Sea Grant initiatives, activities, accomplishments, and constituents while in their home states. This approach will help Sea Grant attain the funding needed to achieve its potential.

Recommendation 2

- The NSGO, in partnership with NSGRP, SGA, and NOAA, should continue to develop a cohesive, coherent strategy to raise the awareness and deepen the appreciation of Sea Grant by Congress and the Administration.

IV. Creating National Opportunities — National Investments (NSIs)

A. NSIs – Concerns and Conflicting Philosophies

The 1998 reauthorization of the NSGCP defined as a specified program element “any national strategic investments in fields relating to ocean, coastal, and Great Lakes resources developed with the approval of the panel, the sea grant colleges, and the sea grant institutes.” Program elements developed subsequently under this definition have been designated National Strategic Investments. The detailed background and history of the development and management of NSIs, as well as a summary of the Review Committee’s interviews pertaining to them, are presented in Appendix J.

The development of the NSI concept and of formal guidelines for its implementation were assigned in 1997 to a NSGP Science and Technology Task Force. The Task Force proposed an NSI policy and an implementation plan in a January, 1998 policy paper entitled “National Strategic Investments, Policy and Implementation” (see Appendix K). Subsequent comments and recommendations concerning NSIs were presented in a SGA paper published in July, 2001 (See Appendix L). The rationale for NSIs, as stated in the 1998 paper, is the following:

“There are critical national (and regional) issues that call for a higher level of intensity, broader resources, and sharper focus than is generally practical through the locally-distributed network. National Strategic Investments (NSIs), established in the 1998 Sea Grant reauthorization, enable Sea Grant to address its mandates more effectively on a national basis through a system of national competitions, involving all institutional programs, to carry out larger-scale, focused programs, either alone or in partnership with other funding sources.”

NSI concepts can be derived from Congressional mandates, issues identified in NOAA or other government agencies, proposals by

the SGA and its members, and the work of the Science and Technology Committee (STC). The STC, with members from the NSGRP, NOAA, the SGA, and the scientific community, has been charged with identifying and prioritizing these concepts. The NSGO would then develop RFPs for the chosen concepts and administer the proposal and awards process. The Director initiated the program for FY98 with three RFPs for NSIs in addition to those specified by Congressional action. These were Marine Biotechnology, a Sea Grant/NOAA Partnership, and National Outreach. The Congressionally mandated NSIs at present are Alien Nuisance Species (a continuation of the Zebra Mussel program), Oyster Disease Research, and Gulf Oyster Research. For FY01 they constitute 56.6 percent of total NSI expenditures. The funding history of NSIs is given in Table 1.

The funding record shows a continuing strategic effort directed toward marine biotechnology, alien nuisance species, oyster disease research, Gulf oyster research, and technology development. A new important area, fish habitat, was introduced in FY00 with money reprogrammed from the initial attempts of earlier years that have been zeroed out. The fish habitat initiative was recommended by the Science and Technology Committee in view of the acknowledged threat to fisheries of habitat degradation and of the provisions of the Sustainable Fisheries Act. The Technology Development area, with extensive work on mariculture, had its genesis in the old NCRI program that was folded directly into Sea Grant in FY98. The funding history of NSIs also includes a number of items (such as Industrial Fellows) that may involve national competitions, but are not “true” NSIs (see below). These are grouped together under the title, “Others.” Funding for Knauss Fellows and the SBIR set-aside are not included, but these are also considered budgetarily as NSIs.

Regardless of its source (i.e., Congress, the Science and Technology Committee, etc.) the 1998 NSI policy document indicated that the criteria for a true NSI are that it:

1. Addresses a problem of national importance
2. Clearly identifies the specific area to be addressed with the resources and talent available and explains why that focus area will make a significant contribution to solving the problem
3. Contains specific, measurable research and technology transfer goals and milestones
4. Clearly identifies the specific benefits to the nation expected to result from the investment
5. Should lead to significant progress that can be

Table 1. Funding History for NSIs (thousands)

NSI TOPIC	FY98	FY99	FY00	FY01
Marine Biotechnology	\$2,387	\$1,981	\$1,492	\$1,458
Alien Nuisance Species	1,110	2,375	2,088	2,725
Oyster Disease Research	1,645	1,495	1,342	2,002
Gulf Oyster Research	976	976	743	1,128
Fish Habitat	0	0	1,400	1,398
Technology Development	950	1,646	788	1,100
SG/NOAA Partnership	540	545	0	0
National Outreach	515	560	0	0
SG/COP HAB	<u>0</u>	<u>563</u>	<u>0</u>	<u>0</u>
Total	\$8,123	\$10,141	\$7,853	\$9,811
Others	<u>1,119</u>	<u>682</u>	<u>945</u>	<u>537</u>
Grand Total	\$9,242	\$10,823	\$8,798	\$10,348
SEA GRANT APPROPRIATION	\$56,000	\$57,500	\$58,600	\$61,100

accomplished in the problem area in three to five years and within the resource limitations of the investment fund. Each individual NSI will be a major program investment.

- Should have a management structure that permits tracking of progress toward specific goals, undertaking course corrections as needed, and evaluating the ultimate success of the program

During these initial stages of the NSI program, it has been challenging for the NSGO to apply these criteria. Consequently, a broad array of NSIs has been developed. For true NSIs, the first criterion above has been addressed very well. The second criterion has been partially met by the identification of areas of focus, but, generally, these have been too broad to provide sharp focus. In particular, the implementation of work in these broad areas has not focused activity sharply on discrete projects of clear impact. Since the NSI concept is a relatively new one, it is not yet possible to demonstrate the significant progress expected of a major focused investment in an NSI as specified in criteria four and five. Details of the management structure for accomplishing continual evaluation of progress still are being considered. The net result has been a multiplicity of relatively small projects within the broadly defined areas with insufficient resources to achieve the kind of significant impact desired.

In FY01, almost 17 percent of the Sea Grant federal funds was categorized as NSIs, and about 10 percent was for Congressionally mandated programs. Overall there seems to be more and smaller projects with less individual impact than was foreseen at the program's

inception. These smaller programs have contributed significantly to some of the administrative burdens of both the NSGO and the state programs. In addition, Congressionally mandated competitive programs such as Gulf Oyster Research and Zebra Mussel Research are labeled as true NSIs, but do not get any special NSI treatment. The true NSIs that are not Congressionally mandated become national competitions in broad areas, and they use funds which otherwise might go directly to the core state programs. In practice, there seems to be little difference in how these two are handled.

The concept of NSIs, in the sense of their being "national," "strategic," and "investments," with grants awarded on a competitive basis, is solidly backed at all levels of management in the Administration. Because these funds are allocated by national competitions conducted by the NSGO, the management of this program takes a significant share of the available staff time. The NSGO itself feels greatly burdened by this administrative load and sees the need to improve management of the program, both administratively and strategically. NSIs also impose administrative burdens on the state programs. The NSI program has led to differences of opinion between the state programs that advocate the allocation of essentially all funds to the core state programs, and various parts of the federal establishment that strongly advocate allocation by a national competitive process. In part these differences come about because the state programs believe that they have not participated fully in the selection and development of NSIs, and that

NSIs diminish the level of core funding for individual state programs.

True NSIs are a major opportunity, still in development, for Sea Grant to augment its mandates more effectively on a national basis by adding larger-scale, focused projects to existing program activities. Currently, however, the variety of types of research projects budgeted as NSIs results in confusion. The following questions should be addressed: Do clearly articulated strategies guide the true NSIs? Where do Theme Teams, priority setting, and strategic planning fit into the picture? Are NSIs to continue being a collection of small or modest-sized, roughly related activities, or will it be possible to have a program of cohesive, focused, high-impact projects? How do Congressionally mandated national competitions, NSIs created at the NSGO, and national competitions such as Knauss and Industrial Fellowships, all of which currently fall under the NSI budget, fit into the NSI concept?

B. NSIs in the Future

The NSI program has too many projects that are too narrow in scope and too limited in size. This creates a heavy administrative burden. The cure is not to add more manpower, but to reduce the amount of work. The opportunity exists to greatly reduce the workload and simultaneously improve the performance of Sea Grant and the true NSIs.

The NSI program and its promise should be communicated within all levels of the NSGCP. The NSGO should redouble efforts to obtain the acceptance and cooperation of the SGA and state program directors by addressing their concerns. True NSIs should meet a clear definition and be administered by an agreed-upon process. An NSI could then be identified as national in scope, strategic in nature, and a clear investment for the future. It is expected that awards would be made by national competitions. The 1998 NSI policy paper outlined a detailed process for the development of true NSIs, and it should be fully implemented. Many of the issues that have arisen about the NSI program could be addressed by adhering more closely to this process. If experience has indicated that changes are necessary, these changes should be formally examined and adopted.

Recommendation 3

- The NSGO, in consultation with the SGA and the NSGRP, should fully implement NSI policy as described in the 1998 policy paper, and if changes are required, a formal review process should be used.

Implementation of this recommendation will increase the focus of the NSI program, reduce the

total number of competitions and projects, and reduce the administrative burden for both the NSGO and the state programs.

C. National Competitive Programs

It is clear that a significant portion of Sea Grant funds will continue to be allocated on the basis of national competitions. Competition is generally imbedded in the Sea Grant legislation and specifically established for certain areas in the authorization language. Important elements of the federal government continue to press for more competition in the allocation of funds. The NSGO should make every effort to obtain acceptance and cooperation from the state programs in the exercise of national competitions.

Competitions not meeting true NSI criteria should be accepted as national competitions. It is proposed that in the case of a Congressionally mandated program there should be a clear distinction as to whether it is or is not a true NSI. There should be created a new class of non-core program, National Competitive Programs (NCPs). These NCPs should be awarded on the basis of national competitions, but they would not meet the criteria of a true NSI. NCPs would include non-strategic programs and projects mandated by Congress, those of a highly specialized limited scope (e.g., Knauss Fellows), or those embodying limited partnership arrangements. The NSGO, in consultation with the SGA and NSGRP, should develop and apply specific criteria and procedures for the designation of a NCP.

Recommendation 4

- The NSGO should define a new class of national competitions, National Competitive Programs (NCPs), which will be strictly limited in number and scope.

V. Enhancing Partnerships

A. Challenges and Cautions

As noted previously, the 1994 NRC review observed that Sea Grant provides a number of unique capabilities to NOAA and urged NOAA to take greater advantage of these capabilities. While it did not refer to other federal agencies, much of the NRC position applies to other federal marine science agencies as well. One of the challenges facing the Sea Grant community during the coming decade will be the development of more, and more-effective, partnerships at the national and regional levels. There already is a strong base for this development, with proven examples of the concept in action. Indeed, Sea Grant is by nature a partnership activity, in that the requirement for matching funds necessarily leads to a number of partnership interactions at the state level. In addition, many state programs have partnerships with NOAA units and other federal agencies. Further enhancement of such activities should offer considerable growth potential for Sea Grant, while also allowing NOAA and other agencies better access to capabilities that they need.

Two primary considerations must be kept in mind as the NSGO addresses partnership opportunities.

- New national and regional activities should not replace or reduce the importance of the core state programs of Sea Grant, which provide continuity and stability. The state programs are a primary focus of the enabling legislation, and they make Sea Grant unique among marine programs. Their health must continue to be a major focus of the NSGO. As new partnerships are implemented, they should be designed to enhance the development of the state programs. In addition, the full management capabilities of the state programs should be utilized and fully reimbursed wherever possible. The NOAA Coastal Ocean Program (COP) has used several state programs to manage some of its activities, and this model could be employed more often.
- Sea Grant is one of the few marine science and education programs that require significant non-federal matching funds. These matching funds come from a variety of places: industry, other agencies, state and local government, and the universities. They are available for use in a variety of ways, requiring only common

agreement. However, available matching funds are heavily subscribed, and they are not readily available for every national, NOAA, or regional concept that is proposed. Sea Grant can participate in a number of activities beneficial at the national and regional levels, but it should not be expected that all of these activities would generate additional matching funds. There is significant evidence that the matching fund requirement sometimes has been an impediment to the development of partnerships. Provisions should be made for some activities on a non-matching basis.

B. Opportunities for Joint Initiatives

The best partnering opportunities usually are developed in areas of mutual interest. The NSGO already has taken some steps to develop joint activities between Sea Grant and several NOAA marine programs. These have been modest to date, and they have used existing funds for the most part. This approach can be expanded to develop new initiatives within NOAA and with other federal agencies to address larger problems and bring in new resources. NOAA should encourage these initiatives and ensure a budgetary process that makes their development and implementation possible. There is considerable potential in several areas, including, among others, marine biotechnology, where Sea Grant capabilities support the interests and needs of various science offices and agencies. For these efforts to be effective the state programs must be engaged fully in the development process. Of particular importance, these initiatives should expand interactions and partnerships among line offices and Sea Grant institutions. As these initiatives are developed and shepherded through the budget process, the question of match should be addressed. A process should be developed and presented to Congress that defines how the matching requirement for an individual initiative can be waived under certain conditions, e.g., partnering with a federal agency.

Recommendation 5

- The NSGO, in consultation with the SGA, should continue to develop joint national initiatives with the NOAA Line Offices that will focus expanded university efforts on critical marine issues central to NOAA's current and future needs. The NSGO should also seek opportunities to develop joint initiatives

Recommendation 6

- The NSGO also should seek opportunities to develop joint initiatives with other federal agencies, professional scientific organizations, and foundations with strong marine science missions.

C. Developing Regional Programs

The need for regional programs and regionally based management approaches is recognized generally. This need is driven by both substantive concerns and by a widespread perception that NOAA could take better advantage of Sea Grant capabilities and bring its other activities together more effectively in a regional mode. At all times in this report, “region” should be interpreted broadly to include multi-program approaches in common theme areas (e.g., subtropical ecosystems). The NSGCP has had regional structures and programs since the early 1970s. Funding for these activities was one of the early casualties of the deep budget cuts in Sea Grant that began in the early 1980s. These cuts never have been fully restored, although some regional and multi-program efforts have continued. These have been most effective in the outreach area, although there have been some multi-Program research efforts as well.

Two interesting experiments in the 1990s provide a body of planning, experience, and programming that could become the foundation for enhanced regional activity, both within the Sea Grant network and between Sea Grant and other entities. The first was the Congressionally mandated Regional Marine Research Program (RMRP) in the early part of the 1990s, in which nine program directors chaired regional boards of academic, state, and federal representatives. These boards developed plans for regional research and education activities aimed at providing better information for the understanding and management of complex regional ecosystems. All of the programs produced plans that ultimately were approved by NOAA, and one region (the Gulf of Maine) received startup funding for the implementation of its plan. The RMRP ultimately foundered, largely due to lack of support within NOAA and some differences and jurisdictional issues that surfaced in Congress. Nevertheless, the planning experience itself was productive. Several of the plans became a base for other efforts, and all have some continuing viability. A NRC report issued in 2000, entitled “Bridging Boundaries Through Regional Marine Research,” examined the Gulf of Maine project and the Coastal Ocean Program and suggested that there are lessons to be learned from experiences to date, and that the concept of regional programs remains viable.

In 1997 the NSGCP director set aside a “merit

pool” to be allocated as the result of performance reviews of the state programs. He directed that the merit pool be used for regional and multi-program activities for a three-year period while the merit evaluation process was being implemented. This pool of funds spawned a wide variety of cooperative efforts. In 2000, all state programs were required to file a “Special Report on Regional and Multi-Program Activities” that detailed the use of these funds and the accomplishments that had resulted. These reports provide a foundation for future regional initiatives, and they should be fully synthesized. Facilitating region-wide interactions among Sea Grant programs, NOAA laboratories and centers, other appropriate NOAA units, and other federal agencies will be crucial to this effort, as will enhancement of the existing institutional capabilities of the Sea Grant network. Following this synthesis effort, the NSGO should work with the state programs, NOAA, and Congress to develop funding initiatives for regional activities.

Recommendation 7

- The NSGO should consider the potential for major regional initiatives by:
- Synthesizing the principal results from the recent reports and plans in this area; and
 - Developing a strategy for new funding resources.

To further streamline and enhance NOAA’s regional programming, NOAA is urged to integrate the Coastal Ocean Program with Sea Grant. These two activities together can significantly strengthen each other, and Sea Grant’s extension capability and close ties to stakeholders would improve COP’s impact. There are several examples of successful interactions between Sea Grant and COP that could serve as a basis for future program efforts, but the institutional barriers of the past need to be withdrawn. The proposed COP change will facilitate regional activities representing a broad cross-section of NOAA capabilities. Moreover, the combination of COP with Sea Grant should provide opportunities to allocate funds for regional initiatives that do not require matching funds. While the matching requirement is a strength of the Sea Grant model, the opportunity to expand the reach of regional initiatives by combining some non-matching funds with customary Sea Grant matched funds may provide the means to address regional challenges. However, there are other opportunities that the NSGO, OAR, and other NOAA line offices should examine. For example, the NSGO, in cooperation with the SGA and the state programs, should consider the potential for region-wide cooperative agreements between state programs and regional NOAA units, including OAR laboratories, National Marine

Fisheries Service (NMFS) Centers, and National Ocean Service (NOS) program activities. In some cases individual state programs or groups of programs could develop such agreements with a single NOAA line office. In other cases, a more comprehensive multi-unit approach may be warranted. It may be useful to experiment with different approaches, rather than starting with one overarching design. There may be other ways to facilitate common activities. Further streamlining of the grant system, discussed in Section VII, would help, as might a more creative and less onerous procedure for pass-throughs.

Recommendation 8

- The Coastal Ocean Program should be integrated with Sea Grant to expand regional capabilities, utilizing current successes as a model.

This could be done either by placing the Coastal Ocean Program within the NSGP or by placing it under the same Associate Director of NOAA. The Committee favors the former because we believe the benefits are greater.

D. Expanding Extension Opportunities

Many of the suggested partnership initiatives rely on Sea Grant's ability to identify significant problems and opportunities, to manage interdisciplinary research, and to reach into the universities and research institutions to engage capabilities that NOAA does not have in-house. However, Sea Grant's unique qualities may be its extension, communications, education, and technology transfer capabilities. The moment is ripe for the NSGO to take a leadership role in addressing this opportunity, working carefully with the state programs to ensure that appropriate activities with high potential for impact are identified and implemented.

On November 13-14, 2001, the NOAA Science Advisory Board and the National Association of State Universities and Land Grant Colleges (NASULGC) jointly sponsored an intensive workshop on "NOAA and Academia: Partnership Building." More than 100 participants, half from NOAA and half from universities, and representing a full cross-section of NOAA's mission, met to identify needs and opportunities for partnerships. This group repeatedly noted the need for a broader educational reach by NOAA to the general public and to a range of clientele. It specifically noted Sea Grant's extension capabilities and urged NOAA to adopt and implement the recommendations of the 2001 report entitled "A Mandate to Engage Coastal Users," developed by a committee chaired by John Byrne, former administrator of NOAA. This report made both structural and programmatic suggestions about

Sea Grant's ability to deliver badly needed extension and outreach programming that address marine community needs that are important to NOAA and the clientele it serves. The 1994 NRC report also strongly urged that NOAA avail itself more fully of the NSGCP's capabilities in the partnership and extension areas.

At various times NOAA has recognized the need for extension capabilities if it is to fulfill its science and service missions and its responsibilities to the public. Some attempts have been made to build internal capabilities, as university-based extension programs are not the sole answer to all of NOAA's external relations needs. NOAA should have its own public relations capabilities and its own ability to explain regulations, management requirements, and the like. These are not appropriate university functions. However, in dealing with diverse and often conflicting groups on difficult issues, NOAA needs to promote a credible, grassroots-oriented, science-based, accessible source of extension programming, outreach, and technology transfer. Sea Grant has this capability, and it reaches across the entire coastal area of the nation and its island territories. As environmental and resource concerns grow, this capability will be even more critical. One example among many can be singled out: NMFS is besieged by lawsuits from conflicting resource and environmental groups, often with several suits at once on the same issue. In several instances, Sea Grant has forestalled such suits by developing programs that bring together the conflicting interests in a problem-solving mode. Sea Grant's independence and credibility and its role as an information source, not a regulator, have been central to the success of these processes. This capability should be utilized to a much greater extent. Other appropriate efforts might include an extension and education partnership with the regional climate activities of the Office of Global Programs — an effort that would naturally fit with Sea Grant's emphasis on the intersection of resource, environmental, and human concerns. During the Review Committee's interviews, some Congressional staffers expressed the belief that Sea Grant could play a very important role by serving as an honest broker between individuals and groups who frequently hold diverse and sometimes conflicting views about problems, policy issues, and proposed solutions. In this role, Sea Grant would make a significant contribution to the nation.

Recommendation 9

- The NSGO should work with NOAA leadership to ensure that Sea Grant is *the* marine and Great Lakes extension and education arm of NOAA.

VI. Strengthening Communications and Public Awareness

A. Promoting Sea Grant

The coastal areas of America face many critical issues and challenges that increasingly attract the attention of local, state, and national constituencies, including the mass media. Sea Grant is ideally positioned to address many of these issues and challenges, but for a variety of reasons, too few people know about Sea Grant's research, education, and outreach programs. Many are aware that the industrial product WD-40 resulted from research funded by NASA, but how many are aware of the important role that Sea Grant played in the reduction of by-catch, or even what by-catch is? Or the pioneer work that Sea Grant played in biotechnology, or in aquaculture, or understanding the zebra mussels? There are many success stories that are the product of Sea Grant's research, education, or outreach. Each is important, but few are known generally. These stories need to be told.

Communicating the importance of Sea Grant is central and critical to the future health and sustained growth of the program. For much of the past two decades, Congressional support has been instrumental in the survival and limited growth of the NSGCP. For Sea Grant to meet its Congressionally mandated expectations, it must expand this base of support in Congress, the Administration, various interest groups, and a larger percentage of the general public. This will be possible only if the role that Sea Grant plays in promoting the understanding and wise utilization of America's coasts and its resources is clearly understood. Sea Grant must become more widely recognized as a national network that funds important research, educates the citizenry, addresses real-world problems, and pays for itself in tangible economic benefits.

Several successful communications initiatives have addressed part of what is needed. The Sea Grant Communications Network recently involved a number of Sea Grant communications professionals in a major initiative to update the vision of the role of communications in Sea Grant.

This effort has resulted in a communications plan entitled "The Sea Grant National Communications Network Strategic Plan 2001-2005" (see Appendix M). This plan clearly points out the communications-related considerations that impact Sea Grant:

"High-quality, effective communication is the responsibility of everyone in Sea Grant - including directors, outreach specialists, researchers and national office personnel. Directors lead efforts to establish program goals and priorities and to provide the resources necessary to reach those goals. Sea Grant researchers, administrators, extension specialists, educators and other staff members develop and transfer the information base. Communicators ensure that information delivery is properly planned, packaged and channeled to various audiences."

Some of the activities of the Sea Grant Communications Network are outlined in Appendix N, and Appendix O lists some of the Sea Grant web sites that are of value in communicating Sea Grant's efforts.

Another significant effort is the Sea Grant National Media Relations Project (NMRP), instituted in 1994. The project is designed to focus and coordinate the Sea Grant presence in the national media and at events of strategic importance to Sea Grant. It has assisted the individual state programs in developing media contacts and gaining placements in national media. In conjunction with the Sea Grant Communications Network, the NMRP has conducted national media forums that generate not only sustained national media interest, but also improve the image of Sea Grant among Congressional staff and government agencies in the Washington, D.C. area.

As a companion to these successful and highly visible projects, Sea Grant for years has produced excellent publications, sponsored targeted media activities, and engaged local Congressional representatives. As laudable as all of these efforts have been, now is the time to rethink the way Sea Grant gets its message to a broader spectrum of the public, the Administration, and Congress. An exhaustive array of opportunities and challenges must be examined so as to enhance the awareness of Sea Grant and its potential for making a major impact on our understanding of environmental issues.

The task of building upon past successes and expanding the visibility of the program generally is the responsibility of the NSGO. Other initiatives, however, will require the active involvement of all parts of the NSGCP. Recognition by the entire Sea Grant program of the role and importance of

communications can result in the incorporation of communications considerations at every level of the NSGO and state program activities and initiatives. This can be achieved best through a comprehensive communications strategy involving the entire NSGCP. This strategy should build upon “The Sea Grant National Communications Network Strategic Plan 2001-2005” and the efforts of the Sea Grant Communications Network.

Recommendation 10

- The NSGO should continue to take an active leadership role, with the SGA and the NSGP Communicators, in the development and aggressive implementation of a comprehensive communications and marketing strategy for promoting the NSGCP.

B. Generating an Information System

Sea Grant is fortunate to have a wealth of significant research results, outreach contributions, and educational accomplishments that can be used as a basis for enhanced communications. The National Sea Grant Library (NSGL) houses the only complete collection (including 28,000 titles and a total of 84,000 documents) of Sea Grant-funded work, and it provides easy access to the wealth of information that is generated by Sea Grant. The NSGL maintains a 33,000 record bibliographic database that is searchable from its website. Citations and abstracts of Sea Grant publications, and in many cases a full text copy of a publication, are available on the NSGL website. NSGL documents address a wide variety of subjects, including oceanography, marine education, aquaculture, fisheries, limnology, coastal zone management, marine recreation, and law. While this library and the Sea Grant Abstracts provide much of this information, the NSGO would play a valuable role for both Sea Grant and NOAA by mining this wealth of information and packaging it in an accessible and informative format for different audiences. While this is no trivial task, there are several other sources of data already available that would help to provide some of this valuable information. For example, the individual state program reviews prepared for the Program Assessment Teams (PATs) provide a significant step forward in assembling this information. However, the information from these individual reviews has never been “mined” or synthesized across the NSGRP. With such an overall synthesis effort, the intrinsic value of Sea Grant will be much more apparent, and a very compelling argument can be made that Sea Grant

clearly is greater than the sum of its parts. Furthermore, the information generated from this effort will be of tremendous value in briefing Congress, encouraging other agencies and industry to enter into partnerships, and generating greater public awareness. However, mining all these data is not sufficient. The need for a comprehensive, multi-dimensional and easily accessible information system for the NSGCP and the NSGO is a recurring theme that is frequently and strongly expressed.

The information system should be simple, searchable, and straightforward to use, and it should provide efficiencies with respect to workload demands at the state programs. It should increase management capabilities without adding significantly to administrative personnel and costs. The NSGO should immediately initiate a survey of the needs and options for such an information system. To be most effective, the information system should be part of the overall communications and marketing strategy discussed above.

Several state programs already have developed or are developing excellent comprehensive information systems. There is some uneasiness about this because as the individual programs proceed with their own information system initiatives, the software, design, and structures incorporated are often separate and distinct. This poses obvious complications regarding the efficiency and coordination of a future network-wide information system. Thus, the development of such a network-wide information system should begin as soon as possible and should involve the careful evaluation of the efforts being undertaken by the state programs. In addition, the NSGCP information system should be designed for transfer of information to and from the systems developed by the state programs.

Recommendation 11

- The NSGO, in partnership with the Sea Grant network, should provide leadership and support for the development and utilization of a network-wide data and information system for cataloging and tracking technical information, accomplishments, and general information about Sea Grant investments in research, outreach, and education.

C. Enhancing the Sea Grant Web Site

According to the Foundation for American Communications, approximately 80 percent of Americans depend on the news media for their

environmental information, and growing numbers are turning to the World Wide Web. The Internet has made communication both within and outside of an organization easy and affordable. Taking full advantage of this tool is essential for enhanced awareness of Sea Grant. It is crucial that the Internet gateway to Sea Grant be easily accessible, interesting, easy to navigate, and informative. Significant improvements must be made in accessibility to and within the NSGO web site.

Access to the National Sea Grant web site from the NOAA web site is difficult, with no clear path for accessing the Sea Grant web site. Once the National Sea Grant web site is found, there is only a brief description of Sea Grant and a series of links to several Sea Grant subject areas. Navigating these links provides a very unbalanced picture. Some subject area links are cleverly constructed, while others are austere. The National Sea Grant web site also is somewhat weak in terms of promoting Sea Grant or making a case for the program. It gives the impression of a disaggregate organization, and it is only through navigating the subject area links that one first begins to get a sense of the many ways in which Sea Grant serves the coastal community and the nation. Sea Grant would be much better served if the National Sea Grant web site presented an image of a dynamically diverse but coordinated organization aggressively promoting the welfare of our nation through critical research, education, outreach, and public awareness. The present National Sea Grant web site does not convey a message that Sea Grant is a dynamic, aggressive, highly relevant organization that is much greater than the sum of its parts.

Recommendation 12

- The NSGO, in partnership with the state programs, should provide leadership in developing and maintaining a web site that is attractive, easily navigable, readily accessible, up to date and highly informative about the NSGCP.

VII. Funding for Success

A. Administrative Costs

Funding for the NSGO continues to be a matter of concern. An appropriately supported, funded, and effective NSGO is vital to the success of the NSGCP. Recent funding of the NSGO has been influenced greatly by an administrative cap imposed by Congress in 1991. This cap subsequently became a fixed amount with an annual escalation: \$2.6 million in FY92, increasing by \$100,000 in each subsequent year. In 1998, Congress set the administrative cap at 5 percent of the Congressional Sea Grant Appropriation, to take effect in FY99 and to apply to all future appropriations. Congress implemented the administrative cap in reaction to concerns from SGA that Sea Grant's administrative costs were increasing more rapidly than the annual appropriation. When adjusted for inflation over the life of this administrative cap (FY91 to FY01), there has been a net increase in the purchasing power of the Sea Grant appropriation of \$3.3 million, from \$31.4 in FY91 to \$34.7 million in FY01 (Table 2).

A more thorough analysis of the funding history of the NSGO indicates that for the first three years shown, FY91 through FY93, NSGO administrative expenditures exceeded the administrative cap

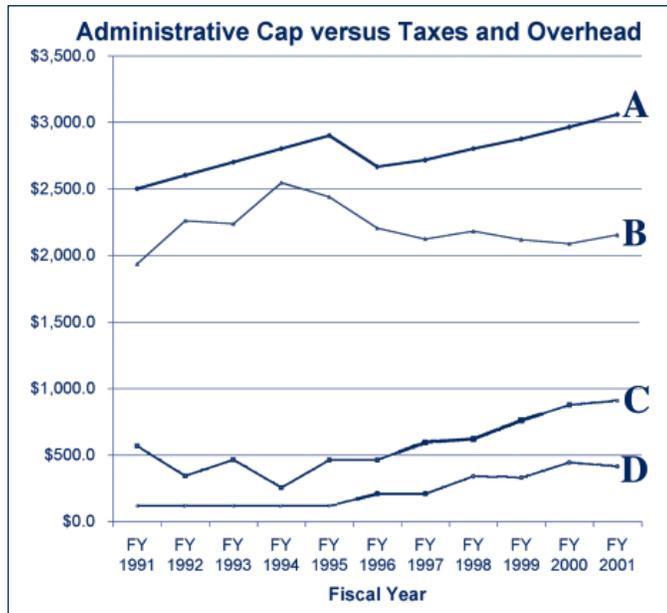


Fig. 1. Administrative Cap Versus Taxes and Overhead.
A: Available funds under administrative cap; B: NSGO funds available after taxes and overhead; C: Total Overhead Costs; D: OAR Overhead and Service

(Table 3). For the following five years, FY94 through FY98, the NSGO was able to operate within the budgetary cap. In FY94, NSGO staffing began to be reduced. These personnel reductions account for the NSGO keeping its spending within the administrative cap during this time. In FY99 and FY00, administrative spending of the NSGO slightly exceeded the administrative cap.

As shown in Table 3, increases in Congressional allocations translate into increased funding available for the NSGO administrative budget because of the fixed 5 percent cap. However, Table

Table 2. History of Sea Grant Appropriations Since Introduction of the Administrative Cap

Fiscal Year	Sea Grant Appropriation	Inflation Adjustment (1982 NSG Constant Dollars)	Difference Year-to-Year
1991	43.6	31.4	-0.4
1992	45.0	31.6	0.2
1993	44.1	30.1	-1.5
1994	49.0	32.7	2.6
1995	54.3	35.4	2.7
1996	53.3	33.9	-1.5
1997	54.3	33.9	0.0
1998	56.0	34.3	0.4
1999	57.5	34.1	-0.2
2000	58.6	34.4	0.3
2001	61.1	34.7	0.3
		Since FY91 – first cap year	3.3
		Since FY99 – first 5% cap	0.6
		Average difference/year since FY97	0.3
		Average difference/year since FY91	0.33

Table 3. NSGO Overhead and Taxes in Relation to Allocation and Administrative Cap (thousands of dollars)

	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
Appropriation	\$43,600.0	\$45,000.0	\$44,100.0	\$49,000.0	\$54,300.0	\$53,300.0	\$54,300.0	\$56,000.0	\$57,500.0	\$58,620.0	\$61,113.0
Administrative Cap ***	\$2,500.0	\$2,600.0	\$2,700.0	\$2,800.0	\$2,900.0	\$2,665.0	\$2,715.0	\$2,800.0	\$2,875.0	\$2,962.5	\$3,059.1
Actual Administrative Costs ****	\$3,018.0	\$2,780.2	\$2,862.4	\$2,285.0	\$2,439.5	\$2,153.0	\$2,384.0	\$2,714.0	\$2,964.0	\$3,022.5	\$3,082.9
Total Overhead Costs	\$566.0	\$340.3	\$463.3	\$254.2	\$461.5	\$461.7	\$593.0	\$620.5	\$758.3	\$875.6	\$907.1
Percent of Administrative Cap	22.6	13.1	17.2	9.1	15.9	17.3	21.8	22.2	26.4	29.6	29.7
GSA Rent	\$235.3	\$227.7	\$276.4	\$5.3	\$70.7	\$0.0	\$187.0	\$9.7	\$177.4	\$214.0	\$224.0
GSA Rent Percent Administrative CAP	9.4	8.8	10.2	0.2	2.4	0.0	6.9	0.3	6.2	7.2	7.3
NOAA Overheads and Services	\$450.0	\$224.3	\$347.3	\$138.2	\$345.5	\$253.2	\$197.5	\$272.8	\$252.5	\$218.6	\$269.3
NOAA Percent of Administrative Cap	18.0	8.6	12.9	4.9	11.9	9.5	7.3	9.7	8.8	7.4	8.8
OAR Overhead and Services	\$116.0	\$116.0	\$116.0	\$116.0	\$116.0	\$208.5	\$208.5	\$338.0	\$328.4	\$443.0	\$413.8
OAR Percent of Administrative Cap	4.6	4.5	4.3	4.1	4.0	7.8	7.7	12.1	11.4	15.0	13.5
NSGO Funds Available	\$1,934.0	\$2,259.7	\$2,236.7	\$2,545.8	\$2,438.5	\$2,203.3	\$2,122.0	\$2,179.5	\$2,116.7	\$2,086.9	\$2,152.0

***Congressionally mandated administrative cut in FY 2001 reduced the cost cap

****1992 -1993 Sea Grant received administrative funds to manage other NOAA programs (COP, NCRI)

****1991 was first year of the Sea Grant Administrative cap – with no time to reduce staff Sea Grant was over the cap but did receive some offsetting funds from COP and NCRI

3 and Figure 1 also show that since FY94 the NSGO has experienced a decline in funds actually available for NSGO administration. This decline coincides with increased overhead costs imposed by OAR and other intra-agency taxes. From FY97 to FY98, the costs that OAR charged for overhead and services increased by \$130,000. Two years later these costs were increased an additional \$105,000. OAR's take of the administrative cap increased by 8.3 percent, from 7.7 percent to 15 percent of the total. An increase of well over \$200,000 in taxes over this four-year period has greatly impacted the ability of the NSGO to live within its administrative cost ceiling.

Unquestionably the NSGO is receiving services from OAR, but the NSGO Review Committee questions whether the services rendered by OAR are consistent with the dollar amount OAR charges the NSGO.

Related to the OAR overhead charges are the non-reimbursed services that the NSGO provides to OAR for the Director's time. With OAR's recent reorganization, the Director of the NSGCP has assumed the additional duties of Associate Director for Oceans within OAR. The NSGCP Director spends 20 to 25 percent of his time

performing the duties of the OAR Associate Director. While he is provided some administrative support from OAR, the NSGO covers the Director's salary from its administrative funds. Sea Grant obviously benefits from the Sea Grant Director serving as Associate Director of OAR, but so does OAR. To ensure that the NSGO can carry out its management responsibilities, OAR should reimburse the NSGO for the time the Director spends performing his duties as Associate Director of OAR and for other staff costs associated with OAR duties.

Recommendation 13

■ The NSGO and OAR should review the taxes imposed by OAR on the NSGO to ensure that the taxes are justified by the value of the services being rendered by OAR. The total intra-NOAA taxes and overhead on the NSGO should not exceed 20 percent of the administrative cap. OAR should reimburse the NSGO for the time the Director spends performing his duties as Associate Director for OAR and for other NSGO staff costs associated with OAR duties.

Table 4. Non Sea Grant Initiatives Managed by the NSGO

Year	Number of Sea Grant Funded Projects	Funds Awarded (in millions)	Number of Pass-through Projects	Funds Awarded (in millions)	Total number of Projects
1995	714	\$52.6	134	\$9.1	848
1996	661	\$51.3	92	\$8.2	753
1997	716	\$52.1	95	\$10.3	811
1998	707	\$53.0	87	\$12.0	794
1999	745	\$55.3	65	\$8.3	810
2000	718	\$55.0	85	\$9.6	803
2001	717	\$57.5	135	\$18.1	852

Project		FY 2001 Aprop.	OAR for AADF	Portion of AADF Program Manager has Received for Approved Activities	Actual Administrative Costs Sea Grant Is Permitted to Charge	Estimated Actual Administrative Costs in FY2001 (thousands)	FY 2000 Aprop.
NOAA Minority Serving Inst. Program	Schuler	\$3,300.0				\$44.9	-
Long Island Lobster Initiative	Anderson	\$2,880.0	\$0.0	\$0.0	\$3.0	\$13.5	-
Open Ocean Aquaculture	Mcvey	\$2,400.0	\$120.0	\$0.0		\$29.7	\$2,098.5
Mariculture	Mcvey	\$2,600.0	\$78.0	\$60.0	\$105.0	\$105.0	\$2,000.0
Core Mariculture	Mcvey	\$3,000.0	\$150.0	\$0.0		See Mariculture	-
Ballast Water	Cammen	\$850.0	\$42.5	\$13.0	\$5.0	\$37.0	\$847.8
National Invasive Species	Cammen	\$800.0	\$0.0	\$0.0	\$50.0	\$87.0	\$798.0
Lake Champlain	Cammen	\$100.0	\$5.0	\$0.0		\$2.5	\$95.8
Tropical Fish Mariculture	Mcvey	\$450.0	\$22.5	\$0.0	\$0.0	\$2.5	\$250.0
U.S. Asia	Mcvey	\$252.2	\$0.0	\$0.0	\$0.0	\$2.5	\$268.0
Hypoxia	Cammen	\$500.0	\$15.0	\$6.0	\$0.0	\$2.5	-
Gulf of Maine							\$450.0
Additional pass-throughs		\$1,000.0				\$5.0	
Total		\$18,132.2	\$433.0	\$79.0	\$160.0	\$437.0	\$6,810.8

Administrative Costs charged are used to offset Sea Grant Administrative CAP

AADF funds are removed from appropriated funds to be used for the Assistant Administrators Discretionary Fund

AADF Funds returned are AADF funds that have been returned to Sea Grant to offset related AADF fund activities

Compounding the situation described above is the fact that the NSGO administers several external projects for which it receives little or no compensation. These projects include special pass-through funds from various parts of NOAA, including OAR; competitions for DOC and other agencies; and special tasks imposed by either NOAA or OAR. Examples include supporting extracurricular programs, initiatives, and activities that originate in OAR, NMFS, NOS, or NOAA headquarters. These projects are outside the direct program focus of the NSGO, and they consume and utilize NSGO and NSGCP human and

financial resources, which in turn diminishes the focus and discipline of the NSGO in addressing the direct needs of Sea Grant.

The number of pass-through projects that Sea Grant administers and the total appropriations for these pass-through funds from FY95 to FY99 ranged from a low of 65 projects to a high of 134, and from \$8.2 million to \$12.0 million (Table 4). While these projects clearly add an administrative burden to the NSGO, that burden has not changed substantially over the past five to six years. The number of projects is probably a better indicator of administrative burden than the total dollar value.

To help offset the loss of funds to cover administrative expenses, the NSGO should charge a reasonable amount to process these pass-through actions. Charging a fixed percentage of the total dollar amount is a practice that other agencies, including the NSF, adopted long ago. For this to be effective, however, NOAA must endorse and support a policy that the NSGO should recover its costs incurred for these pass-through projects.

The situation is exacerbated by Congressionally mandated studies (e.g., oyster disease, aquatic nuisance species), which are exempted by Congress from administrative costs. The aggregated value of these studies over the past several years has been in excess of \$6 million, all of which are managed by the NSGO. Relief from this exemption should be sought aggressively, with support from NOAA.

Recommendation 14

- The NSGO should recover, through a NOAA-endorsed policy, administrative costs incurred from handling pass-through funds or requests from NOAA and Congress. The rate of recovery should be set at 5 percent of the total project costs.

During the same period that the NSGO administrative budget was absorbing the increase in OAR's overhead charges, providing salary support for OAR's Associate Director, and handling pass through projects and Congressionally mandated studies with no allowable administrative costs, the costs of support for the National Sea Grant Review Panel also increased somewhat. From FY98 to FY01 the normalized annual operating costs for the NSGRP increased from ~\$119,200 to ~\$206,800. This increase was due in large part to the introduction of Program Assessment Teams (PATs) during that time, as well as an increased involvement of the Review Panel in other Sea Grant activities. The PATs are extensive programmatic reviews of all of the state programs on a rotating four-year cycle. Review Panel members participate extensively in PATs, which have added an important element to competition for funds among the college programs.

As indicated in the tables and the discussion above, the funding available for administrative expenses of the NSGO has decreased since FY94. This does not consider the erosion of purchasing power due to inflation nor the various recommendations that are made in other sections of this review that may require additional personnel and costs. To cover the current and anticipated costs, the NSGO should attempt to find funding through implementing the previous two recommendations. In addition, a systematic effort

should be made by the NSGO to increase the efficiency and effectiveness with which it administers all its programs. This will require a clearer definition of duties and responsibilities for each position, tracking to ensure accountability, and better overall management of the office. We believe the successful and sustained improvement in operational efficiency and effectiveness requires the appointment of a Deputy Director (see Section VIII B).

If all of these efforts to limit overhead costs, increase efficiency, and recover administrative costs on all projects fail to achieve the appropriate level of management performance, then perhaps the NSGO should seek from Congress an increase in the 5 percent cap. This step should not be taken lightly.

B. Grant Handling and Management

The issue of timely processing of grants has long plagued Sea Grant. The leadership of the NOAA Grants Office has publicly stated its commitment to provide timely processing of grants, but efforts to improve have been hindered by chronic understaffing of the Grants Office. Despite 20 years of complaints about the time required to process grants, NOAA has done little to ensure that sufficient qualified staff is available. In fact, from 1989 to 2001, the number of grant staff has decreased from 14 to 8 while the number of grants to be processed has increased almost 40 percent. In interviews, officials in the Grants Office indicate that they are in the process of hiring four additional specialists. This will bring the number of specialists close to the historic high for grant specialists, but still will not be adequate to meet existing needs.

Most Sea Grant proposals are processed between late November and mid-March. In recent years, the Grants Office has co-located a specialist in the Sea Grant office for this period to process Sea Grant proposals. The Grants Office assured the Review Committee that this practice would continue, and that during the upcoming grant cycle they would place two specialists in the NSGO for this purpose. This will be consistent with the stated goal of the Grants Office to have all grants processed within 45 days of receipt.

Recommendation 15

- The NOAA Grants Office should continue their recent practice of dedicating sufficient grants personnel to Sea Grant during November to March to ensure that all grants are processed within 45 days of receipt at the Grants Office.

Not all the difficulties relating to timely grants processing can be laid at the feet of the NOAA Grants Office. Several of the problems exist within the NSGCP, including the NSGO. For example, the NSGO has no specific person designated to receive grant proposals. The lack of a central submission and tracking point creates the potential for proposals to be misrouted or mishandled. Also, the NSGO lacks a unified grants management system—the pass-through and Knauss grants are handled separately from other institutional grants. Further, the NSGO has no penalties for late, incomplete, or incorrect proposal submissions. There are several examples in which poorly prepared proposals prompted either the Grants Office or the NSGO to request resubmission. This practice impacts both the state program submitting the flawed grant proposal and the other state programs which have proposals awaiting processing. This produces additional work for an already overtaxed work force.

The NSGO is encouraged to address these problems by:

- Increasing training at both the NSGO and the state program level to reduce errors;
- Establishing a system to track grant administration, management and monitoring;
- Consolidating all grants processing, including pass-through and Knauss grants, into one processing system;
- Designating one individual to receive and track all proposals;
- Setting consequences for late, incomplete, or incorrect grant paperwork;
- Integrating Sea Grant grant processing with NOAA grant offices; and
- Working to reduce the number of grants resulting from managed competitions, thus reducing the costs of administration.

Recommendation 16

- The NSGO should continue to make development of an efficient and effective grant management process one of its highest priorities.

Some of the problems the NSGO faces in properly monitoring, tracking, and processing grant proposals probably are due to the number of employees available to work on proposals. Compared with similar programs, the NSGO has a smaller number of FTEs (when normalized for

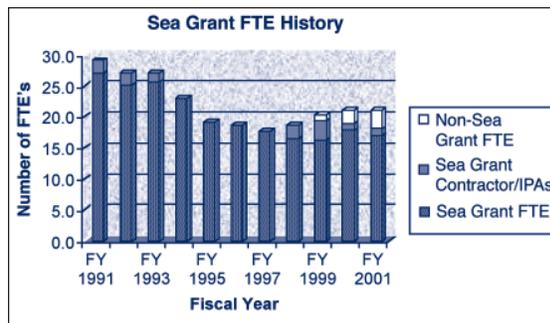


Fig. 2. Sea Grant FTE History

appropriations and administrative costs). For example, both NOAA's Office of Global Programs and its Ocean and Coastal Resources Management have similar sized appropriations and administrative costs. However, each has approximately one more FTE devoted to processing grant proposals than the NSGO (when normalized for the number of FTEs in relation to the administrative costs as a percentage of the total appropriation). NOAA Coastal Oceans Program spends 10 percent on administrative costs versus Sea Grant's 5 percent, but hires more than three times as many FTEs to process proposals when normalized, 6.9 versus 1.8.

The NSGO has experienced a decrease of 10 FTEs, from 27 to 17, in the last decade (Figure 2). In FY99, FY00, and FY01, however, there were more employees funded by non-Sea Grant funds than in previous years. The number of non-Sea Grant funded employees in the NSGO during these years varied between 3.3 and 4 FTEs. For example, one employee received a varying percentage of his/her wages from NOS, NMFS, and Sea Grant. The presence in the NSGO of employees who are funded by other sources reflects Sea Grant's value as viewed by other parts of NOAA and other organizations, and it promotes increased partnership between the NSGO and other NOAA offices. It is a very positive step and should be encouraged. Even with the addition of non-NSGO employees, the total number of employees available to the NSGO is eight fewer than in FY91. New technology has changed the way some tasks are being accomplished, thus decreasing the need for certain types of employees. But as this review has shown, there are several areas the NSGO needs to address that require additional personnel. An option for increasing the work force is to use more non-Sea Grant NOAA personnel.

VIII. Organizing for Effectiveness

The previous sections of this review have described the NSGO's many areas of responsibility and have suggested changes in the external relationships between the NSGO and its stakeholders. This final section addresses the internal structure and organization of the NSGO itself. Resolving both external and internal issues will enable the NSGO to carry out its responsibilities more successfully and allow it to address the other recommendations more effectively.

A. The Placement of the NSGCP

The question of whether Sea Grant is properly positioned within the federal government to most effectively carry out its Congressionally mandated responsibilities has been discussed for years. This question has two parts: (1) Should Sea Grant be in NOAA? If the answer is "Yes", then (2) Where in NOAA? Three recent studies recommended that Sea Grant remain in NOAA, but that it should report directly to the Office of the Administrator. These reports are the 1994 NRC review, the 2000 report entitled "A Mandate to Engage Coastal Users", and the 1993 NASULGC Board on Oceans and Atmospheres' white paper entitled "The National Sea Grant College Program".

The suggestion frequently has been made to move Sea Grant to another government agency, although this was not recommended by any of the above studies. The Departments of Energy, Agriculture, and Interior have been mentioned. More frequently, however, it has been suggested that Sea Grant be moved back to the National Science Foundation. In fact, the Administration very recently announced its intention to do so. Arguments can be made for or against each of these suggestions. The Review Committee sought the opinion of a broad cross section of the community regarding where Sea Grant would best function. Some supported a move to NSF, but the large majority advocated that Sea Grant remain in NOAA. Several recommended Sea Grant report directly to the Administrator.

The Review Committee first considered recommending that Sea Grant move to the National Science Foundation. Sea Grant was originally located within NSF and remained there until

NOAA was formed in 1970. Arguments for a move to NSF include easing of the grant process for researchers and the very high esteem in which NSF is held by both Congress and the research community. Opponents of such a move, however, note that NSF supports basic research, whereas Sea Grant generally funds more applied research. Distinctions between basic and applied research have blurred in recent years and in all probability will blur even more in the future, so the basic vs. applied argument may be a weak one. However, there are more compelling arguments against moving Sea Grant to NSF. One of the greatest strengths of Sea Grant is its ability to convey its research to the economic and social benefit of our coastal communities and businesses. NSF has no such formal outreach capability, and if it were lost, Sea Grant would be just another scientific granting program. Within NOAA, Sea Grant's outreach efforts extend far beyond its own research. For example, NMFS often utilizes Sea Grant's Advisory Service in working with the marine fishery community. Sea Grant has been effective in melding information from NMFS, industry, and academia in addressing several different by-catch problems with NMFS. Similarly, NOAA's National Ocean Service, Office of Ocean and Atmospheric Research, and National Weather Service frequently rely on Sea Grant to facilitate cooperative programs with coastal groups and communities. A transfer to NSF would put these very successful cooperative programs at risk, if not eliminate them completely.

The match requirement for Sea Grant funding ensures the important "buy in" of the local institutions and industry that benefit from the Sea Grant Programs. The matching component also is the part of Sea Grant that is very attractive to the Administration and to Congress. Past funding success has been influenced in part by this match requirement. NSF does not have a mechanism to require matching funds. Whereas, arguably, there are some advantages of moving to NSF, the Review Committee believes that the disadvantages far outweigh the advantages.

The second part of the question "Where in NOAA should Sea Grant reside?" is more difficult. The major consideration is that Sea Grant should be in a position to most effectively carry out its mandate to serve its many stakeholders. As mentioned, many believe that Sea Grant should report directly to the Office of the Administrator. They have reasoned that Sea Grant's location within a line office, which focuses on research, inhibits Sea Grant's advisory and education activities and makes it difficult for the program to function across line office boundaries. To some degree this is true. However, during the past few

years OAR leadership has become increasingly cognizant of the importance of Sea Grant. OAR has long recognized the value of Sea Grant's research and is becoming more aware of the benefits of its outreach and education efforts. In addition, the OAR leadership has worked diligently to include Sea Grant's budget, with increases, in the DOC budget sent to Congress and in the final approved budget. These actions demonstrate the value OAR places in Sea Grant.

Probably the overriding reason for Sea Grant to remain in OAR is the budget process itself. The Review Committee questioned how well Sea Grant would fare in the NOAA and Department of Commerce budgets if it were not in OAR. Small organizations, without the championing of a line office, historically have not been able to sustain long-term growth. This is especially true during times of tight funding and when very difficult funding decisions must be made. For these reasons the Committee decided that Sea Grant is best located within OAR. Supporting this recommendation is the realization that Sea Grant is the largest extramural marine research program within NOAA, and therefore falls more within the interests of OAR than the other more operational or regulatory parts of NOAA.

For Sea Grant to best achieve its goals and to reach its full potential some changes in the relationships among Sea Grant, OAR, and NOAA are in order. Some of these have been discussed previously in this review. Sea Grant must:

- Be able to work effectively across line offices within the NOAA structure and interface closely with other NOAA marine programs, thus encouraging these organizations to develop a self-motivating interest in the future of Sea Grant;
- Have broad exposure at NOAA headquarters and at DOC, with continuing regular and open access to the NOAA Administrator;
- Be in a position to work effectively and on an equal footing with other government organizations and agencies that have common concerns and interests in the coastal marine environment;
- Be integrally involved in setting the research agenda for the "wet" side of NOAA;
- Be a vehicle for consolidating NOAA's external support in the marine sciences and serving as the marine extension branch of NOAA;
- Have a voice during OAR and NOAA budget discussions;
- Work effectively and cooperatively with the Sea Grant Association, the Consortium on Oceanographic Research and Education (CORE), the National Association of State Universities and Land Grant Colleges, and

directly with the university community to:

- Strengthen and solidify support for both NOAA/OAR and the Sea Grant Program within Congress; and
- Enhance the image and effectiveness of Sea Grant and its products.

If it can address programmatic, education, outreach, and funding issues at all levels of NOAA, Sea Grant will be better able to reach its full potential in benefiting NOAA, the Department of Commerce, and the nation.

Recommendation 17

- Sea Grant should remain within NOAA/OAR, and NOAA should specifically charge OAR with broad responsibility for education and extension activities.

B. The Role of the Director of the NSGCP

With the reorganization of OAR in 1999, the Director of the NSGCP assumed the additional responsibilities of Associate Director for Oceans in OAR, as described in Section VII. This has been very positive for NOAA and in many ways positive for Sea Grant. With this new organization, Sea Grant is assured of having a significant voice in decisions and policies affecting the wet side of OAR. It also elevates the visibility of Sea Grant. However, there is one significant downside - the time demands placed on the Associate Director that in turn reduce his time available to lead and manage Sea Grant.

These management difficulties are compounded by the absence of a senior level Deputy Director for Sea Grant. For much of its history there were up to four senior executive level positions within Sea Grant in addition to the Director. Over the past decade, however, as part of budget reductions and reorganizations all of these positions except the Director were eliminated, including a SES-level Deputy Director. The Deputy Director had not only primary responsibility for administrative functions, but, because of his senior rank, he often represented the Director at the very highest levels. This is especially critical in light of the Director's added responsibilities as Associate Director for Oceans within OAR. The very nature of Sea Grant requires that the Director be out of the office frequently. These absences range from day trips to brief Congress to more extensive absences visiting the state programs. Since the elimination of the Deputy position, Sea Grant has felt the loss of this key senior position, and the efficiency of the office and probably Sea Grant's visibility have suffered. Furthermore, due to significant NSGO staff reductions, the NSGO Executive Director position

cannot adequately fill the tangible gap left by the loss of the Deputy position. With the Director also carrying the added OAR responsibilities, it is even more important to restore the position of Deputy Director at the SES level.

The reorganization that “double hatted” the Director of Sea Grant as Associate Director of OAR also raises the long-term consideration of succession. Dr. Ron Baird’s appointment as Director of the NSGCP followed an intensive search and selection process. A major factor in his selection was his demonstrated knowledge of Sea Grant and understanding and appreciation of the delicate balance between the NSGO and the state programs. He has proven to be an excellent choice as Director of Sea Grant. The experience and skills that serve Sea Grant so well equally serve OAR — his contribution to the position of Associate Director of OAR is well recognized.

While Dr. Baird was hired as Director of Sea Grant due largely to his experience with the Program, his knowledge of ocean issues and his management skills also equip him very well for the OAR Associate Director duties. Although the reverse also should be true, i.e., that the skills needed for the OAR Associate Director are the same as those for the Sea Grant Director, this is not a given. When Dr. Baird leaves NOAA, the selection of a successor must be based first on the qualifications needed for the Sea Grant Director. In other words, follow what is now in place — the candidate should be selected based first on the needs of Sea Grant and second on the requirements of the OAR Associate Director position. The Director of Sea Grant should also continue to fill a Sea Grant SES position.

Recommendation 18

■ The Director of Sea Grant should continue to serve as Associate Director for Oceans in OAR. This dual responsibility should be accompanied by having a Deputy Director for Sea Grant at the SES level. Succession of the Director/ Associate Director should be based on a national search, giving due consideration to the needs of Sea Grant, and with the base position remaining at its core a SES Sea Grant position.

C. An Organization and Management Plan for the National Office

The creation of an organization and management plan for the NSGO would do much to clarify responsibilities and expectations within the office. The responsibility for personnel

administration in the NSGO and the expectations of the staff are confusing to many, both inside and outside of the NSGO. Adequate clarification of job responsibilities and the training needed to effectively carry them out are needed.

Position descriptions for the professional staff in the NSGO were reviewed and found to be distinct and coherent. While no obvious gaps in overall NSGO program responsibility were identified, there was clear evidence that a number of individuals are spending considerable time doing jobs and addressing issues that detract from their primary responsibilities. In particular, many professional staff members spend considerable time on non cost-efficient administrative duties to the detriment of their program responsibilities because the personnel who should be doing these administrative tasks are not available. Professional staff have two primary responsibilities: (1) They each are program officers for several state programs and; (2) They are responsible for specific programmatic areas, such as biotechnology, aquaculture, extension, etc. The fraction of time staff members devote to these responsibilities varies widely, primarily because no guidelines exist regarding this. Given staff turnover, programmatic evolution, and the range of duties for the NSGO, it is essential that the staff be focused toward those areas that will have the greatest impacts for the entire program.

A difficulty in the NSGO personnel administration area is the lack of a coherent briefing on NSGO operations for new staff members. Over the years, a series of new appointees and rotators have expressed concern about this and their feelings of being “at sea” for the first few months on the job. The problem of understaffing has worsened in recent years because of budget inadequacies and, in particular, the administrative cap, as discussed in Section VII. This problem of insufficient personnel would be alleviated in part by streamlined office operations allowing the most efficient use of each person’s time, and the investment of time on activities directly within Sea Grant’s focus and for which it receives compensation.

Clearly, all these issues require serious attention, and they could be addressed best by an overall strategic study of the internal operations of the NSGO, and reflected in a “living” Organization and Management Manual. Such a manual is an essential management tool for an organization as diverse as the NSGO. In the absence of such a document, staff members are spending considerable time trying to find answers to administrative questions whose answers should be readily available.

Recommendation 19

■ An Organization and Management Manual for the effective and efficient internal management of the NSGO should be developed, implemented and updated on a regular basis. The manual would integrate, enhance and codify existing personnel documents.

This manual should include the following:

- The organizational responsibilities and needs of the NSGO
- Redesigned job descriptions for professional staff that reflect organizational responsibilities
- The expectations of professional staff relative to their responsibilities as science officers, program officers, training officers, etc.
- The required experience, responsibilities, and expectations of the NSGO support staff
- A process for determining priorities and assessing the effectiveness of time utilization by the NSGO staff
- A process for briefing new staff members concerning NSGO operations

D. The Green Book

In recent years, because of the numerous changes in the NSGCP, the NSGO has issued several policy and procedure documents as guidance for the state programs. These documents have not been brought together in easily accessible form, and efforts to update them sometimes have led to confusion.

For many years, the NSGO maintained “The Green Book” as a compendium of all important program documents, but this important resource is now dated. The Green Book should be updated to include all current policy and procedure documents that provide management guidance for the state programs, including requirements for plans and proposals, review procedures, evaluation guidelines, the NSI policy paper, and other pertinent items. It should be viewed as a living document with frequent updates.

The Green Book also should provide an annual schedule of important dates for the coming year that both the NSGO and the state programs can use for planning. Finally, we urge that the NSGO consider archiving all previous reports on the national program and related topics, probably in CD-ROM format and on the Sea Grant web site, so that they might be readily available to program participants and other interested parties.

Recommendation 20

■ The NSGO should update The Green Book with all pertinent policy and procedures documents and provide regular updates thereafter.

E. Interactions with Senior University Executives

A strength of Sea Grant is its close relationship with the coastal states and territories and their universities through the directors of the individual state programs. The formation of the Sea Grant Association has facilitated this productive relationship greatly. The SGA provides a forum for frank, constructive discussion and has been the vehicle for defusing various volatile issues arising from different philosophies and external pressures. The state programs are very sensitive to the needs of their state and local communities. In turn, the NSGO must be responsive to the requirements of the Administration and Congress. At times these priorities are compatible, but frequently they are in conflict. The improvement in this relationship over the past few years is the product of open discussion between the two groups. Future discussions should have a goal of developing a common strategy to increase the strength of Sea Grant. The Review Committee believes that these discussions and relationships can be improved by including senior members of universities’ upper administrations (e.g., deans, provosts, vice presidents for research, etc.). Combining Sea Grant’s strong extension, research, and education efforts with the tremendous breadth of expertise found in the nation’s academic community would be very productive. The interaction of the NSGCP Director with local Sea Grant Directors and senior university officials would lead to significantly enhanced use of the expertise of universities to solve issues on a regional to national level. This interaction with university administrators also would strengthen the NSGCP and be of great benefit to NOAA, where many of these administrators have other significant relationships.

A way should be found to ensure that the NSGCP Director has easy access to at least one senior administrator at each Sea Grant institution and that they interact regularly. This relationship could provide the primary focal point for OAR-university or NOAA-university relations. The parties would not necessarily meet as a group, but the university administrators would be available for discussions with the NSGCP Director and state program directors. They would interact on a regular basis by phone and through campus visits by the NSGCP Director.

Recommendation 21

■ The Director of the NSGCP, working with the individual Sea Grant Programs, is encouraged to engage in regular contact with senior university executives to develop increasing support and visibility for Sea Grant.

F. The Knauss Fellows Program

The Dean John Knauss Sea Grant Marine Policy Fellowship was initiated in 1979 and given statutory authority in the 1987 Congressional reauthorization of Sea Grant. The large number of graduates of this program now working in government, industry, and universities has greatly increased Sea Grant's impact and visibility. As such, this program has become one of Sea Grant's "crown jewels."

The Knauss Fellowship provides a year-long introduction to either Congressional or executive level marine policy activities for graduate students in the marine, natural, or policy sciences. Program alumni constitute a significant portion of the national ocean-related work force. A NSGO survey of 412 alumni from 1979 through 2000 indicates that 152 currently hold positions in the federal government, including the Administration and Congress, 22 in state government, 50 in university positions, 13 completing advanced degrees, and the remaining 175 in various private sector jobs. Noteworthy is the level of responsibility that these alumni hold. Many are in positions to make major policy decisions regarding use and protection of the marine and Great Lakes coastal areas.

In 1998-1999 the Sea Grant Association conducted an extensive review of the Knauss Fellows Program, resulting in the 1999 report entitled "Comprehensive Review of the Dean John A. Knauss Marine Policy Fellowship Program." Former Fellows and a broad cross-section of stakeholders in the Knauss Fellows Program were interviewed, and recommendations were developed for continuing and strengthening the program. The report was presented to and accepted by the National Sea Grant Review Panel; subsequently, the NSGO hired a former Fellow to manage the Program and implement a range of the report's recommendations.

The NSGO Review Committee has examined the Knauss Fellows Program and strongly urges that the NSGO continue to treat it as a priority program element. Efforts to enhance the activity and improve its cost-effective administration should be implemented as needed.

IX. Summary Remarks

The NSGO Review Committee has examined most aspects of the NSGO's performance in fulfilling its statutory duties as outlined in the enabling legislation as well as duties arising from the expectations of Sea Grant stakeholders. The 19 recommendations are offered to improve the already high performance of the NSGO and to position it for grasping the important opportunities that lie ahead.

These recommendations cover a very broad range of issues, but they can be reduced to a few elemental points. The NSGO must:

- Lead in developing a comprehensive strategic plan and a national Sea Grant agenda.
- Provide leadership in communicating the national Sea Grant agenda, the achievements, and the opportunities of Sea Grant to Congress, the Administration, and the public.
- Streamline and better manage the myriad administrative details essential to the operation of the NSGCP.
- Have an SES level Deputy Director in order to effectively manage and fulfill the broad duties of the NSGO that range well beyond Sea Grant itself.
- Continue to seek adequate funding to effectively carry out the functions of the National Sea Grant Office utilizing the findings of this report.

The NSGO is a high performing organization. Its staff has received a significant range and number of awards and its Director received the Presidential Rank Award for very high administrative performance. This report summarizes some of the NSGO's recent accomplishments, such as development and implementation of a new funding allocation system, and a new program evaluation system that is making a real difference in the performance of the NSGCP.

If the recommendations of this report are to be carried out successfully, several significant changes are needed — not simply in administrative structure or the ways tasks are carried out, and not only in the operations of the National Sea Grant Office. Perhaps most importantly this will require changes and improvements in the overall approach within the entire National Sea Grant College Program and the individuals who comprise it. The satisfactory implementation of these recommendations requires that all the essential partners in Sea Grant, NOAA and DOC work together in a cooperative and proactive manner with a common goal. This should be possible, since these groups have a common goal on which to focus — making the National Sea Grant College Program the premier effort in the nation addressing the critical economic, social, and environmental demands facing our coastal marine and Great Lakes environment.

APPENDIX A

Charge Letter to the Review Committee

March 12, 2001

Dr. Robert A. Duce, Professor of Oceanography
Department of Oceanography
Texas A & M University
College Station, Texas 77843

SUBJECT: Letter to Appointment to National Sea Grant Office Review Committee

Dear Bob:

As Chair of the National Sea Grant Review Panel, you have agreed to chair a committee of the National Sea Grant Review Panel that has been established to conduct an independent assessment of the National Sea Grant Office. The members of your committee include two National Review Panel members, Mr. Jeff Stephan and Ms. Robin Alden. In addition, you have four outside members that have agreed to serve on your committee: Dr. Jerry Schubel, Mr. Marne Dubs, Mr. Louie Echols and RADM Will Stubblefield. The purpose of this NSGO Review Committee is to conduct a review and analysis of the organization, administration and management of the National office. The result of this review should be recommendations and strategic guidance that will position this office for the challenges it faces in the future. Note that this review is a broad basis review but should not be considered an operations audit. A draft report of your findings should be submitted to the National Review Panel for consideration and adoption.

In order to facilitate your analysis, the National Office has assigned three staff members to assist you. Their role is to provide documents and resource materials as well as assist in logistics of setting up your meetings. It is anticipated that during your meetings, there will be opportunities for you to meet in "closed session" without any of the office staff present. The report that you produce should represent the findings of your independent review and analysis and should, in no way, be influenced by any member of the National Office staff. If any difficulties arise during your review or you need any additional resources from outside the National office, please contact me so we can make any necessary changes or arrangements to ensure the integrity of the process.

Sincerely,

Geraldine Knatz, Ph.D.
Chair, National Review Panel

GK:pkg

cc: Dr. Frank Kudrna, Jr.
Dr. Peter Bell
Jeffrey Stephan
Dr. Ronald Baird
Dr. Francis Schuler

APPENDIX B

Brief Biographies of the NSGO Review Committee Members

Marne A. Dubs received a B.E. in chemical engineering from Johns Hopkins University in 1943. He retired in 1987 from consulting on the evaluation and management of technology and new ventures in oil, chemical, mineral, and industrial products industries. He managed industrial research and engineering in the fields of cryogenic, industrial gasses, mining technology, and deep ocean mining. He is a past member of the former National Advisory Committee on Oceans and Atmosphere and the National Sea Grant Review Panel. He also is on the advisory council for marine programs and oceanography at the University of Rhode Island.

Robert A. Duce is Professor of Oceanography and Atmospheric Sciences at Texas A&M University, where he was Dean of the College of Geosciences from 1991 to 1997. From 1987 to 1991 he was Dean of the Graduate School of Oceanography at the University of Rhode Island. He completed a Ph.D. in nuclear chemistry at MIT in 1964 and served on the faculty at the Universities of Rhode Island and Hawaii. He is President of SCOR, Chairman of the UN Group of Experts on the Scientific Aspects of Marine Environmental Protection, and a member of the NAS/NRC Ocean Studies Board and the National Sea Grant Review Panel. He was recently President of the International Association of Meteorology and Atmospheric Sciences and President of The Oceanography Society.

Louie Echols is Director of the Washington Sea Grant Program and Affiliate Professor of Marine Affairs at the University of Washington. A native of Florida, he has undergraduate and law degrees from Oxford University, where he was a Rhodes Scholar. After service at Fordham University and in private industry, he held a number of administrative positions at the University of Wisconsin before joining the University of Washington. He has held a number of leadership positions in the Sea Grant Association and the Board on Oceans and Atmosphere of the National Association of State Universities and Land Grant Colleges. He was also Chair of the Pacific Northwest Regional Marine Research Program.

Fred E. Hutchinson retired as President of the University of Maine in 1997 and now is Professor Emeritus at the University of Maine in Orono. He received a Ph.D in agronomy in 1966 from Penn State University. Through

his career at the University of Maine and Ohio State University, he served in a variety of academic positions, as faculty member and academic administrator at the department, college, and university levels. Dr. Hutchinson is a past recipient of the National Sea Grant Award and served on the Kellogg Commission on the Future of State and Land-Grant Universities. He is a member of the National Sea Grant Review Panel. He resides in Lamoine, Maine.

Jerry R. Schubel is President Emeritus of the New England Aquarium and Professor Emeritus of the State University of New York at Stony Brook. He received his Ph.D. from Johns Hopkins University. He was Associate Director of the Chesapeake Bay Institute from 1972 to 1974, Dean and Director of Stony Brook's Marine Sciences Research Center from 1974-1994, and President of the New England Aquarium from 1994 to 2001. He chaired the National Research Council's Marine Board and was a member of the Commission on Engineering and Technical Systems. He is a member of the National Sea Grant Review Panel and is now Visiting Professor at Washington College.

Jeffrey R. Stephan is Manager of the United Fishermen's Marketing Association, Inc. He is a member of the National Sea Grant Review Panel, having served as Review Panel Chair. He is a past Voting Member of the North Pacific Fishery Management Council and a current member of its Advisory Panel. He served as Chair of the Steering Committee of the Department of Commerce Marine Fisheries Advisory Committee, advisor to the Department of State International North Pacific Fisheries Commission, Vice-Chair of the Alaska Seafood Marketing Institute, and member of the Department of Interior Outer Continental Shelf Advisory Board. Mr. Stephan has a B.A. in Economics from the State University of New York at Plattsburgh.

Rear Admiral William Stubblefield retired in 1999 with over 35 years of government service, both with the Navy and the National Oceanic and Atmospheric Administration. At the time of his retirement, he was Director of the NOAA Commissioned Corps and NOAA's Ship and Aircraft Operations. In 1980, he received a PhD in Geology (emphasis in Geological

APPENDIX C

NSGO Review Committee Meetings and Activities

Full Committee Meetings

April 26-27, 2001– Silver Spring, Maryland, Sea Grant Headquarters
June 19-20, 2001 - Silver Spring, Maryland, Sea Grant Headquarters
October 13-15, 2001 – Silver Spring, Maryland, Holiday Inn, Silver Spring
January 29-31, 2002 – Seattle, Washington, Crowne Plaza Hotel

Timeline

January 11-12, 2001 – National Sea Grant Review Panel Meeting – Chair of the NSGO Review Team announced
February 9, 2001 – Charge Letter from Ronald Baird to the NSGO Review Committee
February 12, 2001 – Letter from the NSGO Review Committee Chair to Committee with enclosures
February 28, 2001 – First Review Committee Conference Call
March 12, 2001 – Charge Letter from Geraldine Knatz to the NSGO Review Committee
March 20, 2001 – Letter from Review Committee Chair regarding Conflict of Interest
March 26, 2001 – Sea Grant Week, Hilton Head, SC (Afternoon Workshop on the NSGO Review, Meetings with Sea Grant Directors, staff)
April 12, 2001 – Second Review Committee Conference Call
April 25, 2001 – SGA Meeting, Silver Springs, MD – Louie Echols Presents to Sea Grant Directors
April 26-27, 2001 – First Review Committee Meeting, Sea Grant Office, Silver Spring, MD
May 21, 2001 – Third Review Committee Conference Call
June 19-21, 2002 – Second Review Committee Meeting, Sea Grant Office, Silver Spring, MD
September 17, 2001 – Fourth Review Committee Conference Call
September 20, 2001 – Fred Hutchinson phone conference with the NSGO
October 13-15, 2001 – Third Review Committee Meeting, Holiday Inn, Silver Spring, MD
November 14-15, 2001 – SGA Meeting, Silver Spring, MD, Louie Echols Presents to Sea Grant Directors
November 19, 2001 – Fifth Review Committee Conference call
January 29-31, 2002 – Fourth Review Committee Meeting, Crowne Plaza Hotel, Seattle, WA
February, 2002 – Final Report Due

APPENDIX D

Individuals Interviewed Formally by the NSGO Review Committee

The individuals below were interviewed either in person or by telephone by one or more Review Committee members.

Names (Last/First/Middle)	Job Title	Place of Employment
Bailenson, Stephanie	Majority Staff	Senate Committee on Commerce, Science and Transportation
Baird, Ronald	Director	National Sea Grant College Program, NOAA Research, NOAA
Baker, James	Former Administrator	National Oceanic Atmospheric Administration (NOAA)
Beeton, Al	Chairman	Science Advisory Board, NOAA
Bernard, Eddie	Director	Pacific Marine Environmental Research, NOAA Research, NOAA
Bolognese, Kerry	Program Officer	National Association of State Universities and Land-Grant Colleges (NASULGC)
Brandt, Steve	Director	Great Lakes Environmental Research Lab, NOAA Research, NOAA
Brown, Joe	Staff	National Office, National Sea Grant College Program, NOAA Research , NOAA
Buff, Steven	Program Officer	IG Office, Department Of Commerce
Callender, Russell	Director	Office of Scientific Support, NOAA Research, NOAA
Cammen, Leon	Research Director	National Office, National Sea Grant College Program, NOAA Research, NOAA
Chadbourne, Sally	Minority Staff	House Committee on Appropriations
Chavis, Paula, Keener	Director/President	National Marine Educators Association
Chrisey, Linda	Program Officer	Office of Naval Research (ONR)
Colwell, Rita	Director	National Science Foundation, NSF
Dash, Julius	Director	Space Grant, National Aeronautic Space Administration, NASA
Davidson, Margaret	Assistant Administrator	National Ocean Service (NOS), NOAA
Day, Elizabeth	Program Officer	National Office, National Sea Grant College Program, NOAA Research, NOAA
Eigen, Jonathan	Budget Analyst	National Office, National Sea Grant College Program, NOAA Research, NOAA

Eppi, Rene	Director	International Activities, NOAA Research, NOAA
Evans, David	Assistant Administrator	NOAA, Research, NOAA Research, NOAA
Friday, Joe	Director	Board of Atmospheric Sciences and Climate National Academy of Sciences
Garber, Nikola	Knauss Fellow Manager	National Office, National Sea Grant College Program, NOAA Research, NOAA
Gopnik, Morgan	Director	Ocean Studies Board, National Research Council,
Gudes, Scott	Administrator, Acting	National Oceanic Atmospheric Administration (NOAA)
Hall, Mike	Director	Office of Global Program (OGP), NOAA
Henkart, Maryanna	Division Director/Chair	Division of Molecular and Cellular Bio-sciences. National Science Foundation (NSF)
Hicks, Bruce	Director	Air Resources Lab (ARL), NOAA Research, NOAA
Hogarth, Bill	Assistant Administrator	National Marine Fisheries Service, NOAA
Johnson, David	Director	Office of Coastal Ocean Program, NOS, NOAA
Katsouros, Mary Hope	Senior Fellow and Senior Vice President	H. John Heinz III Center for Science, Economics and the Environment
Kelly, Michael	Program Officer	Ocean Exploration, NOAA
Knauss, John	Former NOAA Administrator	Retired, National Oceanic and Atmospheric Administration
Kupfer, Linda	Program Officer	National Office, National Sea Grant College Program, NOAA Research, NOAA
Langlais, Mary	Deputy Director	NOAA Research, NOAA
Lautenbacher, Conrad	Vice-Admiral/President	Consortium for Oceanographic Research and Education
Leinen, Margaret	Assistant Director	Directorate of Geosciences, National Science Foundation (NSF)
Liogys, Rimas, T.	Grants' Staff	NOAA Grants, Office of Finance and Administration, NOAA
Mayer, Garry	Deputy Director	Office of Habitat Conservation, National Marine Fisheries Service, NOAA
McVey, James	Program Officer	National Office, National Sea Grant College Program , NOAA Research, NOAA
Moore, Barbara	Director	National Undersea Research Program , NOAA
Murray, James	SG Outreach Leader	National Office, National Sea Grant College Program, NOAA Research,

Nachbar, Luke	Majority Staff	NOAA Senate Appropriations Commerce, Justice State and the Judiciary
Nurse, Carol	Outreach Staff	Inspector General's Office, Department of Commerce
Omelczenko, Victor	Program Officer	National Office, National Sea Grant College Program, NOAA Research, NOAA
Panchang, Vijay	Program Officer	National Office, National Sea Grant College Program, NOAA Research, NOAA
Rappoport, Sloan	Republican Counsel	Senate Committee on Commerce, Science and Transportation
Rayfield, John, C.	Legislative Staff	House Committee on Resources Subcommittee on Fisheries Conservation, Wildlife and Oceans
Rhodes, Ed	Staff	Office of Sustainable Fisheries Aquaculture Partner, NMFS, NOAA
Roberts, Susan	Program Officer	Ocean Studies Board , National Research Council, National Academy of Sciences
Schmitt, Rollie	Staff	National Marine Fisheries Service, NOAA
Schneider, Randall	Program Officer/NOS Liaison	National Office, National Sea Grant College Program, NOAA Research, NOAA
Schuler, Fritz	Executive Director	National Office, National Sea Grant College Program, NOAA Research, NOAA
Spring, Margaret	Democratic Senior Counsel	Ocean and Fisheries Subcommittee Senate Committee on Commerce Science and Transportation
Stauffer, Gary	Director	Resource Assessment and Conservation Engineering Division/Alaska Fisheries Science Center (NMFS/NOAA)
Wuchte, Erin	Program Officer	Budget Office, Department of Commerce National Research Council, NAS

APPENDIX E

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APPENDIX F

Recommendations taken from the 1994 National Research Council Report, "A Review of NOAA National Sea Grant College Program"

Following are the six primary recommendations from the 1994 NRC review of the NSGCP.

Recommendation 1: The Administrator must ensure that the National Sea Grant College Program (NSGCP) has appropriate responsibility and capability for research, education, and outreach across NOAA. NSGCP should be relocated within NOAA to report directly to the Office of the Administrator.

Recommendation 2: State Sea Grant Directors and the Director of the National Sea Grant Office (NSGO) must cooperate to develop a single strategic plan articulating a shared vision and strategies which must be fully integrated into, and reflective of, NOAA's strategic plan. Unified Sea Grant strategic planning should begin immediately so that its results can be incorporated in the FY1997 NOAA budget.

Recommendation 3: The roles and responsibilities of the state Sea Grant Directors, NSGO, and the National Sea Grant Review Panel (NSGRP) must be clarified. The resultant roles and responsibilities of NSGO and NSGRP should be clarified by the NOAA Administrator prior to the 1995 reauthorization.

Recommendation 4: The review process for research proposals should be decoupled from the NSGO evaluation of state programs prior to the 1995 reauthorization. Standard scientific and peer review procedures should be implemented for all state Sea Grant programs. The review process and all aspects of program implementation, including administration, should be streamlined prior to FY1996. NSGO should evaluate the success of each state program on a four-year cycle, using, in part, retrospective information on recent achievements, based on measures for each of the three areas of research, education, and outreach. SGRP should evaluate the performance of NSGO on the same timetable.

Recommendation 5: NSGO and the state Sea Grant programs must increase their interactions with marine industry to include program policy guidance, expanded outreach and marine advisory services, joint research projects, and substantial industry financial support of the Sea Grant program. Action to address this recommendation should form part of the examination of the performance of each state program. These actions should be identified in the Sea Grant strategic plan.

Recommendation 6: The committee agreed that NSGCP needs additional funding to fulfill its potential. In the last decade, the purchasing power of the average research grant has declined by about one-half. A steady increase in funding is necessary if the program's potential contributions to the nation's economic and environmental health are to be realized. Any additional funds appropriated to NSGCP should be split between enhancement of meritorious state programs and support of new initiatives.

APPENDIX G

Vision Statement from the Sea Grant Association Retreat, 2000

Landsdowne Conference Center
Leeburgh, VA
July 18-20, 2000

Sea Grant in the 21st Century: A Vision for Success

Executive Summary

Concentration of population along the coast; increasing dependence on coastal waters for food, employment and recreation; and a host of other socio-economic changes make the National Sea Grant College Program's charge to advance understanding and sustainable use of coastal resources more critical every day. Recognizing this, the Sea Grant Association held a strategic planning retreat July 18-20, 2000, in Leesburg, VA to develop a common vision for future growth of the Program, and specific action steps to make that vision a reality. Retreat participants included Sea Grant Association members, staff from the National Sea Grant Office, and members of the Sea Grant National Review Panel.

The Vision

- Sea Grant will become NOAA's primary university based research, education, training and technical assistance program in support of coastal resource use, management and conservation.
- Sea Grant will play a strong leadership role in helping the nation address such critical issues as protecting water quality and coastal habitat, responding to coastal hazards, ensuring seafood safety, and developing coastal economies and communities.
- Sea Grant will provide a strong federal/state/local network that integrates research, outreach and technical assistance to generate practical solutions to real problems and strengthen the nation's over-all capacity to deal with coastal problems.
- Resources to support the Sea Grant College Program will double to \$120 million over the next five years to respond to major coastal challenges and opportunities.

The Agenda

The Sea Grant College Program will adopt a growth strategy that strengthens over-all capacity and keeps the Program problem focused and results based. Sea Grant will seek a stronger leadership position within NOAA and on coastal issues generally, and continue to build partnerships with other federal and state agencies with common goals. Sea Grant will strengthen outreach to all of its constituencies and enhance its capacity for responsiveness and flexibility in the face of changing national and state priorities. Specific actions that will be taken over the near-term include the following.

- Develop a compelling message to carry to the new administration regarding the contributions and potential of the National Sea Grant College Program.
- Develop a strategy for reaching out to the new Congress to demonstrate why Sea Grant should be their "go to" organization on coastal issues.
- Develop a strategy for educating state agencies and elected officials about Sea Grant's strengths and potential, to facilitate raising matching funds for an expanded program.
- Devise policies and criteria for allocating new Sea Grant dollars, taking into account core program needs and national priorities.
- Propose steps to strengthen the state of Sea Grant and university-based coastal research programs within NOAA.
- Develop a rapid response capability that keeps all parts of the Sea Grant organization informed and involved, allocates decision-making authority, and produces timely decisions.

Introduction

The Sea Grant Association held a strategic planning retreat July 18-20, 2000 at the Landsdowne Conference Center in Leesburg, Virginia. Participants included Sea Grant Association members, staff from the National Sea Grant Office, and members of the Sea Grant National Review Panel. The purpose of the retreat was to develop a common vision for the future of the Sea Grant Program, and to identify ways to capitalize on the opportunities created by the election of a new administration and Congress in 2000 and the reauthorization of the Sea Grant Program in 2003.

The agenda for the retreat was divided into three major sections: building a vision for the future; identifying challenges and ways to meet them; and agreeing on a near-term action agenda. Discussion took place in plenary sessions and small groups. The following is a summary of the discussions and agreements reached over the course of the three-day retreat.

I. Building the Vision

Prior to the retreat, the three organizations participating had prepared papers and presentations on a future vision for the Sea Grant Program. Drawing on ideas contained in this material, participants discussed the following topics related to building a comprehensive vision for the program:

- external trends and conditions;
- major strengths of the Sea Grant Program;
- Sea Grant products, programs and markets; and
- Sea Grant institutional structure.

After considering each of these topics, participants agreed on a vision for expanding the program over the next five years.

1. External Trends and Conditions

Concentration of population along the coast; increasing dependence on coastal waters for food, employment and recreation; and a host of other socio-economic changes are making Sea Grant's role in advancing understanding and sustainable use of coastal resources more critical every day. Today 54% of the U.S. population lives along the coast. In twenty-five years, that number will grow to 75%. This will have tremendous economic and environmental impacts on the coastal environment.

The nature of the coastal economy is changing. Development pressures are increasing and we lack adequate models to promote sustainable economic development in coastal communities. Recreational fishing has grown dramatically in relation to commercial fishing. The gentrification of coastal communities is making water access difficult for some water-dependent businesses, such as marinas, fishing and aquaculture.

Managing coastal resources is becoming increasingly complex. It requires more effective communication among all stakeholders. We need a more informed public and a workforce prepared to help us manage these complex and inter-related problems and resources.

2. Major Strengths of the National Sea Grant College Program

The Sea Grant Program is uniquely designed to address challenges in the coastal environment as they intensify. Sea Grant is a national network embedded in the best research universities in the country. This gives it a strong science base, and allows Sea Grant to harness unparalleled intellectual capital to address problems. Use of university management infrastructure also increases the cost effectiveness of the Program.

Sea Grant offers an integrated program of research, outreach and technical assistance that allows it to link the high quality science-based information it develops with local management structures to provide real solutions to real problems. It has long standing relationships with a broad spectrum of constituents and stakeholders in every coastal state. The combination of a university based program with a fully developed extension component means Sea Grant can identify issues as they emerge at the local level and bring the best scientific minds to bear on these problems.

Sea Grant Programs touch a broad spectrum of the population from kindergarten students, to marine-related businesses, to elder hostel participants. The Program has a comprehensive network of partners, and extensive experience interpreting applied research and scientific information to a broad public. Because Sea Grant is non-regulatory, and focuses on understanding the science of coastal resources, it serves as an "honest broker" among a wide range of constituencies.

The stability of the Sea Grant Program over the past thirty-years has enabled it to make long-term commitments to coastal problems and programs, and to develop a highly skilled workforce, capable of dealing with a wide range of issues related to the use and protection of coastal resources. Sea Grant is multi-disciplinary and can bring many different kinds of expertise to bear on specific problems.

Rapid rates of change in the growth and development of coastal areas will create enormous demand for environmental literacy and trained human resources. Sea Grant is a national leader in providing educational opportunities for marine oriented graduate students. Environmental knowledge and understanding, rapid synthesis of science-based information, and modeling of environmental processes are all major Sea Grant strengths that can help this country respond to the challenges of our changing coastal environment.

3. Sea Grant Products, Programs and Markets

One of Sea Grant's major products is research that can be provided on a rapid response schedule to address priority problems identified by NOAA, state government and others. Recent examples of this include Sea Grant assistance with the *Pfiesteria* and coral reef crises. Sea Grant's extensive state/local network provides NOAA valuable access to grassroots constituencies and a way to get programs and solutions out to those who need them. Sea Grant can also use this network to help broker conversations between local interests and researchers to see that the most pressing applied research questions are addressed.

Sea Grant has many markets and constituents, from state governments, to coastal environmental managers, to local fishing industries. Sea Grant serves as a clearinghouse for the latest research results related to Great Lakes and marine sciences, and serves as a neutral broker on marine and Great Lakes related issues. Sea Grant's wide range of programs ensures that all constituencies have access to this information to help make policy and business decisions. Sea Grant provides educational briefings and seminars for federal and state policy-makers, as well as for the public at large. It helps local government officials, planners and developers integrate scientific information into practical decision-making in ways that promote sound land use and sustainable development. Sea Grant's extension programs provide technical assistance to the full spectrum of coastal dependent industries—aquaculture, marinas, commercial and recreational fishing—to help them with product and market development.

As a consequence of the size and reach of the Program, Sea Grant has become a training ground for skilled researchers and outreach workers in the Great Lakes and marine science disciplines. Sea Grant recruits, trains and employs graduate students, post doctoral students, and senior researchers and professionals, helping to build a national "brain trust" for dealing with economic and environmental challenges and opportunities in the coastal arena.

Retreat participants believe the Sea Grant Program needs to continue to identify the major markets for its services, adjust to meet demand, and be as objective as possible in evaluating past products and programs to identify ways in which these products and programs need to be changed.

4. Sea Grant Institutional Structure

The Sea Grant Program is both NOAA and university based, giving it strong national and state/local foundations. This provides the Program with an opportunity to seek additional resources at the national, state, and university levels. There is considerable variety in the state/university location of Sea Grant Programs, with some programs located in an individual institution and some designed as true consortiums. Given the growing importance of coastal resources, a number of retreat participants argued strongly for trying to elevate Sea Grant Programs to the same stature and level of support as the university based land-grant programs that spawned tremendous progress in American agriculture over the past century.

The Sea Grant Program gains strength from serving a diverse set of masters, but it is a challenge to bring the interests and priorities of these national, state and local entities into alignment. The strong state/local connection of the individual Sea Grant Programs has in the past led NOAA to feel they have less influence over Sea Grant than some of their other programs. The challenge is to show NOAA the ways in which this strong state/local network can serve and strengthen NOAA's priorities and effectiveness.

Sea Grant allows for and encourages collaboration across its individual programs. There are geographic regional initiatives among programs, as well as "intellectual" regional initiatives on issues like aquaculture, where interest, not geographic location, is the common bond. This collaborative work is highly valued, but there is some concern about extra bureaucratic layers if this is institutionalized into a formal regional structure within the national program.

The Vision

Keeping all of these context issues in mind, participants agreed on the following vision to guide the Sea Grant Program over the next five years.

- Sea Grant will become NOAA's primary university based research, education, training and technical assistance/transfer program in support of coastal, marine, and Great Lakes resource use, management and conservation.
- Sea Grant will play a strong leadership role in helping the nation address such critical issues as protecting water quality and coastal habitat, developing coastal economies and communities, protecting and enhancing coastal and Great Lakes fisheries, developing aquaculture industries, responding to coastal

hazards, ensuring seafood safety, and maximizing the benefits from emerging coastal technologies.

- Sea Grant will provide:
 - a strong federal/state/local infrastructure that integrates research, outreach and technical assistance to generate practical solutions to real problems;
 - essential links between environmental protection and economic development and ideas on how to develop coastal economies and communities in sustainable ways;
 - major assistance in setting national priorities for addressing coastal problems and opportunities;
 - a flexible organizational structure able to respond to national and state needs and priorities when they emerge and identify and communicate important issues as they arise at the local level;
 - a first class, experienced workforce with university based intellectual talent and strong local presence and partnerships;
 - high quality education and training on coastal issues at all levels: national, state, local;
 - capacity as a credible and objective broker/consensus builder among competing interests in the coastal arena; and
 - sustained attention to critical problems over time.
- Resources to support the Sea Grant College Program will double to \$120 million over the next five years.

II. Rising to the Challenge

Having agreed on this vision, participants identified challenges to making the vision a reality, and ways to rise to these challenges. They identified four major areas of challenge:

- articulating a specific growth strategy for the Sea Grant Program;
- strengthening Sea Grant's position in NOAA and in partnerships with states and other federal agencies;
- improving communication, marketing and visibility with all Sea Grant constituencies;
- maximizing structure and functioning within the Sea Grant organization, and strengthening decision-making across all components.

For each of these, they elaborated on the nature of the challenge and identified ways to respond to it.

1. Articulating a Growth Strategy for Sea Grant

The Challenge. To achieve a doubling of resources over the next five years, The Sea Grant Program needs a clearly articulated growth strategy that sets forth how the program needs to grow and what the benefits of that growth will be to all Sea Grant constituents and the nation as a whole. Sea Grant needs to clarify the ways in which it is distinctive from other national coastal programs, and the unique contributions it can make to increased understanding and effective management of coastal resources. In developing a growth strategy, Sea Grant needs to identify what priority issues it will address; the role of theme teams and COMPASS in developing and implementing the growth strategy; and how the Program intends to allocate resources between core programs and national initiatives to maximize responsiveness and effectiveness.

The Response. Participants said the Sea Grant growth strategy should be problem focused and results based. It should strengthen the organization's capacity for quick response and flexibility in the face of changing national and state priorities. Specific recommendations for formulating the growth strategy include the following.

- Build on the work of the Theme Teams and COMPASS to select strategic issue priorities like aquaculture, coastal hazards, seafood safety and marine biotechnology, revisiting these periodically.
- Demonstrate capability to use cutting edge strategies and technologies to tackle these issues and capture new opportunities.
- Link Sea Grant priorities directly to public concerns regarding clean water, clean beaches, healthy fish, etc.
- Create an internal process for rapid response so the organization can be more opportunistic as new issues emerge.
- Establish strategic initiative funds at both the national and state levels to respond to crises and rapidly emerging needs and issues.
- Develop a specific method for allocating new resources between core programs and national initiatives to maximize continuity and flexibility in the program.
- Work to bring NOAA and Sea Grant priorities closer together to maximize potential for synergy within the agency.

2. Strengthening Sea Grant's Position in NOAA and Other Partnerships

The Challenge. It has been recognized since the 1994 National Research Council Report that the Sea Grant College Program is not properly positioned within NOAA to fulfill the objectives and potential of the Program. Sea

Grant needs to work toward a stronger position within NOAA, where it can have meaningful input to setting NOAA priorities and be in a position to respond more quickly and effectively to these priorities. The Sea Grant Program needs to reduce its focus on internal issues and think “outside the box” in ways that will strengthen its alliances with other coastal programs within NOAA, and with other federal agencies outside NOAA. The size and effectiveness of Sea Grant Programs varies from state to state, depending on the resources provided and the Program’s location within the university structure. It is important to maximize the effectiveness of the Program in every coastal and Great Lakes state.

The Response. Participants believe strongly that Sea Grant should seek to become the primary, university-based, research, outreach and technical training program for coastal, Great Lakes and marine resources within NOAA. Consolidating university-based coastal research and outreach programs under Sea Grant will provide the kind of leadership needed in this increasingly complex area in an efficient and cost effective way. Retreat participants also believe there are opportunities to strengthen many other partnerships at the federal and state levels. Specific recommendations for enhancing Sea Grant’s leadership role and strengthening partnerships include the following.

- Combine all NOAA university-based coastal programs under one Assistant Administrator and designate Sea Grant as the lead agency.
- Use this consolidated approach to provide increased support for all existing programs—Sea Grant, COP, NURP, NOAA research labs—and capture the opportunity this provides to increase the pool of competitive funds available for coastal related research and outreach.
- Seek a stronger role in priority-setting within NOAA, building on grassroots information and theme team work, enlisting the help of the scientific community, and working with individual Congressional representatives and entities like the National Oceans and Hazards Caucuses.
- Resolve issues related to federal-state match requirements to open the door to additional federal funding opportunities.
- Pursue partnerships for joint funding with other federal agencies where interests and priorities overlap, exploring consortium-like opportunities between NOAA, Sea Grant, EPA, USGS, and others, and include representatives of the state Sea Grant Programs, the National Office, and the Review Panel on task forces established to pursue these partnerships.
- Re-examine relationships between individual Sea Grant Programs and their own states and universities, to be sure those partnerships are maximized.

3. Improving Communication, Visibility and Marketing with all Constituents

The Challenge. The Sea Grant Program has a broad spectrum of constituents, from the federal administration and Congress, to state decision-makers and university leaders, to a host of local businesses, governments and interest groups. At this time, Sea Grant has no formal plan or strategy for communicating effectively with these different constituencies. It lacks a clear message that captures the rich nature of the program. Sea Grant needs to find ways to increase its visibility and capture the imagination of the public about the challenges and opportunities we face in coastal America. While the commonly used logo is a step in the right direction, Sea Grant needs to give greater attention to “branding” the work it does, and creating slogans and marketing materials that capture the major success stories of the last 30 years.

The Response. Sea Grant needs to reformulate its message in a clear and concise way that will resonate with policy-makers and the public. In reaching out to constituents, Sea Grant need to think big, and be sure it is addressing top tier environmental issues, which concern citizens in all 50 states. Sea Grant also needs to develop a marketing and public relations strategy designed to reach all major constituencies: Congress, the Executive Branch, coastal industries and interests, and the public at large. There must be coordinated implementation of this strategy throughout all parts of the Sea Grant organization. Specific recommendations for how to move forward in this area include the following.

- Create a work group to develop a core message about Sea Grant that is concise, targeted, and useful for all audiences.
- In creating the message, emphasize the unique nature of Sea Grant: science based, solution focused, and non-regulatory, with a presence at the national, state and local levels.
- Make success stories and return on investment a central part of the message, using the Program Assessment Team process as the initial source of these success stories.
- Adopt one or more slogans that will carry the Sea Grant message: “ science serving coastal America,” “farming the ocean,” etc., and use these as part of a branding strategy that will make Sea Grant more widely known and understood.
- Consider renaming “Theme Teams” with a more dynamic label like “National Opportunity Teams,” or “Priority Response Teams”.

- Appoint a work group to develop common website strategies—with both internal and publicly oriented sections—to be used across the Sea Grant Program to improve internal communication, capture public attention and provide educational assistance.
- Appoint task groups to mobilize specific constituencies and identify champions to lead the charge for increased resources, looking particularly to rising leaders at the national and state levels.

4. Maximizing Effectiveness within the Sea Grant Organization

The Challenge. Sea Grant lacks consistent, effective internal decision-making processes that have the confidence of all of the parties involved. These are essential for developing new priorities and initiatives, working with the new administration and Congress, and allocating new resources. Part of this involves determining the right division of responsibility between the states, the National Office and the Review Panel, an ongoing challenge for the program. Sea Grant also needs ways to maximize the benefits from the competitive aspects of the program.

The Response. The Sea Grant Program needs to develop effective internal decision-making processes that involve clearly designated decision-making groups and individuals, and incorporate communication and opportunities for input across all parts of the organization. This will enable Sea Grant to be flexible and decisive, be prepared to capture new opportunities as they arise in the national and state arenas, and provide a unified front in seeking major new funding. Specific recommendations for how to move forward with this include the following.

- Revisit the roles and responsibilities of the state programs and the National Office to address “log-jams” in decision-making processes at the federal and state levels.
- Create a process for rapid-response decision-making to seize opportunities created by National Strategic Initiatives and other new funding.
- Create processes that bring in all parts of the Sea Grant network to determine how to implement new initiatives.
- Develop strategies for moving Theme Team work forward.
- Clarify the roles of program monitors and provide a greater degree of consistency in how this role is implemented.
- Establish a working group to resolve, before the fall election, how new funds will be allocated between core programs and new initiatives in ways that provide strong core support, respond to national priorities, and capitalize on the benefits of competitive distribution.
- Address how the organization will handle regional issues and opportunities.
- Develop a specific strategy for selling the Sea Grant vision and growth strategy in a unified fashion to the new administration and Congress.

III. Near-Term Action Agenda

After reviewing their vision and challenges, retreat participants agreed there are four areas that require immediate action. These four areas are:

- getting the message developed and out to key decision-makers;
- developing policies and criteria for seeking and allocating new resources;
- developing a strategy for strengthening the status of Sea Grant in NOAA;
- developing a rapid-response decision-making process for the organization.

For each of these areas, participants identified specific actions, responsibilities and timetables for moving forward that will position the organization to pursue greatly expanded resources and responsibilities under the incoming administration and Congress.

1. Getting the Message Developed and Out

Action #1. Develop a message to carry to the transition teams for the new administration, including a strong slogan or theme that captures the essence of the National Sea Grant College Program and recommendations for the future of NOAA. This will provide the foundation for a major growth initiative for Sea Grant. Elements of the message carried forward need to be:

- the growing importance of coastal areas and economies;
- the ability of Sea Grant to foster both economic development and environmental sustainability in coastal regions;
- the capabilities of Sea Grant’s broad network;
- the high priority issues already receiving attention from Sea Grant’s Theme Teams;
- recognition of the organizational problems that exist in NOAA, and Sea Grant’s ability to help resolve these;
- recommendations that a single AA be put in charge of the “wet” programs in NOAA;
- Sea Grant’s ability to help a new administration advance its priorities and fulfill campaign promises; and

- the need for a substantial increase in resources to fulfill Sea Grant’s potential.

Implementation. The Sea Grant Leadership Group, composed of the leaders of SGA, NOSG, and the Panel, will identify informed and well-positioned representatives of the Sea Grant network to contact transition teams and develop a strategy for promoting this message throughout the fall and the transition period, and making recommendations on the selection of future NOAA leadership. Sea Grant needs to work with both political parties leading up to the election so it is prepared to move forward regardless of the election outcome.

Action #2. Develop a message and strategy for reaching out to the new Congress to demonstrate why Sea Grant should be their “go to” organization on coastal issues. This will require effective communication throughout the Sea Grant network so everyone is sending the new Congress the same message, and development of a “suite” of champions in Congress. The message being sent needs to include the following elements:

- effective programs and partnerships already underway that will continue;
- new priorities and initiatives being proposed;
- Sea Grant’s ability to bring diverse constituencies together;
- the need for substantial additional resources to fulfill the Program’s potential; and
- the ability for a stronger and better-funded Sea Grant Program to increase the accomplishments and cost-effectiveness of coastal programs in this country.

Implementation. Sea Grant already has an effective Congressional outreach structure in place and will maximize use of grassroots strengths and key constituencies, including mobilizing constituencies in specific Congressional districts.

Action #3. Develop a strategy for educating state agencies and elected officials about the contributions and potential of Sea Grant. This will be essential to raising the matching funds needed for any substantial increase in federal funding.

Implementation. The Sea Grant Leadership Group will take responsibility for seeing that a strategy is developed to carry this out, once the transition is complete to a new administration and Congress at the national level.

Developing Policies and Criteria for Seeking and Allocating New Resources

Action #1. Devise policies and criteria for seeking and allocating new dollars for Sea Grant programs and initiatives, starting with the ideas set forth in the concept paper “Network-wide Response Funding” by Malouf and Andren, June 2000. Addressing this issue is critical for the entire Sea Grant organization to be able to approach the new administration and Congress with a united front. Discussions need to include consideration of the following:

- increase in merit pool funding, building on the pilot project underway;
- increase in core funding to keep pace with inflation;
- a national rapid response pool of funding;
- increase in funding for National Strategic Initiatives and adding a component of outreach funding to all NSIs;
- how funds will be allocated between core programs and national initiatives;
- whether changes are needed in the current allocation formula in distributing new money;
- whether all new money except that designated for inflation and rapid response should be distributed on a competitive rather than a formula basis.

Implementation. A six person Ad Hoc Task Force will be established with two representatives from each of the following: The Sea Grant Association, the National Sea Grant Office, and the National Review Panel. Each group will select its own two representatives. The group will be established immediately, and their work will be completed by November 1, 2000. The report and recommendations of the task force will be passed on to the Sea Grant Leadership Group for consideration and action at their Fall 2000 meeting.

Strengthening the Status of Sea Grant and University-based Coastal Research Programs within NOAA

Action #1. As a first step, conduct informal reconnaissance within NOAA about any structural changes being proposed currently and offer ideas and assistance in this process.

Implementation. This will occur immediately following the retreat and be led by National Sea Grant Office and Sea Grant Association leadership, with assistance from others as requested.

Action #2. Based on the results of this reconnaissance, develop and prioritize new models for the re-organization of university-based coastal research programs and a stronger position for Sea Grant within NOAA, including integration of outreach as well as research activities.

Implementation. The Sea Grant Leadership Group will take the lead in developing alternative models, consulting with all interested parties and stakeholders in the process.

Action #3. Determine when to begin the process of building support among university officials, scientific

organizations, and other key constituencies for the consolidation of university-based coastal research organizations within NOAA.

Implementation. The Sea Grant Association's External Relations Committee will carry this out, with guidance from the Sea Grant Leadership Group.

Action #4. Once organizational changes are agreed to, get the changes codified in the 2003 Sea Grant reauthorization language.

Implementation. The Sea Grant Leadership Group will take the lead on this as part of the broader reauthorization process.

Rapid Response Capability

Action #1. Develop a rapid response capability that keeps all parts of the Sea Grant organization informed, provides opportunities for input, and clearly allocates decision-making authority. This should involve the following steps and components.

- The Sea Grant Association should develop an organizational infrastructure that can respond quickly and keep all participants fully informed when issues and opportunities arise at the national level that it needs to comment on.
- The National Sea Grant Office should notify both the SGA leadership and Theme Team co-chairs about decisions that need to be made so that a timely decision-making process can be activated.
- Both geographic and intellectual regions should be built into the decision-making process in appropriate ways, with clearly designated leadership contacts.
- Different models for responding should be used as appropriate in different situations, but in all cases all parts of the organization should be alerted and kept informed.
- The organization should make extensive use of e-mail to notify all parts of the network that a decision is being considered and who will make the decision so people can comment if they choose to.
- Comments should be constructive and provide sample language or specific ideas wherever possible.
- Once a rapid response structure has been developed and leadership contacts designated, these should be formally adopted by all parties within the Sea Grant organization.
- Once a decision has been made according to the agreed upon procedures, all parts of the organization should support it.

Implementation. The Sea Grant Leadership Group will be responsible for seeing that a rapid response process is developed and will bring it to the Fall 2000 meeting.

APPENDIX H

Information developed by this committee during its discussion of strategic planning

Strategic Planning in Sea Grant

Background Information

Legislation (1998)

The 1998 reauthorization of Sea Grant requires: “The Secretary, in consultation with the panel, the sea grant colleges, and sea grant institutes, shall develop a long-range strategic plan which establishes priorities for the national sea grant college program and which provides an appropriately balanced response to local, regional, and national needs.” The Director of the National Sea Grant College Program has the duty to “facilitate and coordinate the development of a long-range strategic plan....” The legislation also requires state programs to be consistent with the priorities established by the Secretary. The NSGRP has the duty to advise the Secretary and the Director concerning the formulation of planning guidelines and priorities. Thus, the legislation is quite clear in establishing responsibility for long-range strategic planning and the setting of priorities in the NSGO. The duty of the NSGRP is to advise. The requirement for the state programs is to be consistent with the priorities established by the NSGO. The fundamental question is how well this responsibility is being discharged by the NSGO.

NOAA Strategic Plan

The 1995-2005 NOAA Strategic Plan was a Herculean effort to provide overall direction to NOAA’s activities. Two broad missions were defined: one “Environmental Assessment and Prediction,” the other “Environmental Stewardship.” These missions and the strategic goals under them did not define organization or specific activity. No specific Sea Grant strategy is defined and in the context of this document Sea Grant is merely a part of a national capability and infrastructure. In general, programs undertaken by Sea Grant fell under the category of “Environmental Stewardship,” and in particular the subheadings of “Build Sustainable Fisheries” and “Sustain Healthy Coastal Ecosystems.” There do not appear to be any serious bars to undertaking anything in Sea Grant’s portfolio. The disaffection with the NOAA plan seems to be based primarily on the lack of obvious recognition of Sea Grant as an organization and a discrete activity. There is no mention of Sea Grant in the Executive Summary, and Sea Grant seemed to be swallowed up in NOAA.

The “FY 2002 NOAA Budget Summary” is an updated version of the strategic plan in summary form. As a budget document it categorizes proposed expenditures both by strategic plan element and by activity. Sea Grant falls under OAR, but appears as a separate line item in OAR’s budget. It is perhaps instructive to note that the total NOAA proposed budget is \$3,152,300,000 and the OAR program is \$327,470,000. The Oceans and Great Lakes budget is proposed at \$122,306,000, of which \$62,113,000 is Sea Grant. Nevertheless, Sea Grant is much more prominent than in the original strategic plan. The Sea Grant program is characterized mission-wise as follows:

Build Sustainable Fisheries	
Core program	\$20,766,000
Gulf Oyster	998,000
Oyster disease	1,996,000
Sustain Healthy Coasts	
Core program	\$35,360,000
Aquatic nuisance species	2,993,000
Total	\$62,113,000

This then is NOAA’s current view of Sea Grant’s strategic direction at the major goal level.

Sea Grant Network Plan 1995-2005

A team of Sea Grant directors and NSGO staff, incorporating comments from all interested parties, produced the Sea Grant Network plan. The broad areas defined by this plan differ from those of the NOAA plan, and this difference probably is the source of the difficulty in marrying the two plans together. Three areas are identified: Economic Leadership, Coastal Ecosystem Health and Public Safety, and Education and Human Resources.

The foci under Economic Leadership are technology for commercial products and processes, seafood production, and coastal economic development. The subtopics cover fisheries and aquaculture, biotechnology, environmental

technology, coastal business and community development, and marine infrastructure. This is a very broad collection and the rationale for this grouping is not clear. There is little sense of priority setting and almost any project could be justified.

The foci under Coastal Ecosystem Health and Public Safety are coastal ecosystem health and public safety. These seem to be totally different topics and their strategic connection is not clear. This also is a very broad collection with little sense of priorities.

Education and Human Resources is essentially about education in the university and precollege environment. In addition, education of the public is included. This section is more coherent than the first two.

Overall the Network Plan appears to be more an effort to be certain that any conceivable Sea Grant activity is covered and to provide a document to help sell increased funding for Sea Grant. It does not appear very useful in providing strategic direction and in setting priorities as required under the Sea Grant Act. In general, the same topics are touched on in the NOAA plan as currently updated, but their organization is different from that in the Network Plan.

Sea Grant Colleges Strategic Plans

Each of the Sea Grant Colleges has been required by the NSGO to develop a strategic plan for their own program. These plans are taken into account in their program assessment and the adequacy of their plan is part of the evaluation score. A cursory examination of all the plans completed by Spring 2001 showed a wide variation among the plans with regard to the planning approach taken. A detailed look at nine of the plans confirmed this impression. As a general rule the plans were organized in conformance with the Network Plan. In a number of instances the plans used the concept of “thematic areas,” but did not directly reference the work of the theme teams.

Most of the plans did concentrate on their local region, but did not foreclose activity on a broader geographic scale. The overwhelming character of the plans was the unwillingness to set firm priorities. One plan said, “While it is useful to prioritize the issues identified in this plan, prioritization might lead to the exclusion of innovative, high-risk, high-potential research. As a result, the strategic plan for each of the subject areas is not stated in terms of a strict prioritization, but rather includes a comprehensive list of projects that are relevant to current needs.” This is the basic approach of essentially all plans. At least one plan did attempt to assign priorities to broad categories, but within each broad category the lists remain comprehensive.

Considerable work has gone into developing these plans, and they contain much valuable information and insights. Nevertheless, there is no evidence that the NSGO has made much effort to either utilize these plans or to provide feedback about them to the programs. No doubt this has been useful in causing programs to consider formally where they are going, but at the same time there is little evidence that the plans have affected what is being done. These plans should be a valuable tool for the NSGO in their task of setting priorities and providing overall leadership for Sea Grant.

Theme Teams

Theme Teams now appear to be the favored approach to planning. A series of one-page (two sides) summaries of the Theme Teams’ work have been produced. Each summary provides a mission statement for the topic, background information to set the scene, some accomplishments, proposals for future action, and expected benefits of work in the theme area. These are well done summaries. However, they basically are communication documents for selling Sea Grant and not strategic plans. They appear of limited use in setting priorities and in providing real direction to the program. Each of them, with little exaggeration, could be the basis of a major program costing millions of dollars.

The theme paper on marine biotechnology can be used as an example of the Theme Team product. The front page of this paper is designed to sell why biotechnology should be worked on by listing “challenges” (really opportunities) and a number of program accomplishments. The reverse page comes closest to setting priorities by saying the key investments for the future are in marine natural products, marine environmental technology (emphasis on biosensors and remediation of polluted sites), new tools for marine resource management, and seafood safety and processing. The mission statement for the team “is to identify and catalyze research applying new marine biotechnologies to improve and protect human and environmental health in coastal America, and create economic benefits nationwide by fostering the development of novel industrial processes and products.”

July 2000 Strategic Planning Retreat

The Sea Grant Association held a strategic planning retreat in July 2000. In preparation for that the NSGO prepared a rational analysis and business plan for Sea Grant. This is a concept paper that sketches a classical, business model approach to strategic planning. It raises strategic questions on many levels, but does not end up as a strategic plan and was not designed to do so. It is not a bad start for a fundamental, more insightful approach to planning.

The planning retreat focused primarily on vision and challenges (opportunities) and ended with four action areas:

getting a message developed and out to key decision makers, developing policies and criteria for seeking and allocating new resources, developing a strategy for strengthening Sea Grant in NOAA, and developing a rapid response decision-making process for the organization. Looking at the details, this is mostly an action plan for seeking more financial resources. Its vision statement is mostly a restatement of Sea Grant as the premier university-based program with a leadership role in the classical Sea Grant areas of interest. It is not a priority setting statement.

Observations of Interviewees

Most of the interviewees did not view strategic planning and the setting of priorities to be an important issue. The program directors currently appear to have concluded that the best approach to planning is the Theme Team concept. They believe that the Theme Teams have basically written the next five-year plan and that the NSGO needs to rewrite its five-year plan incorporating the Theme Team material. Some believe the Theme Teams are taking too long to get going and are concerned that there is no plan for utilizing this work in a strategy for the next five years. There does not appear to be very much interest or concern for either the network or NOAA plan – “If you cannot fit a program into these plans, you have no imagination.” Although all the directors created a strategic plan for their own programs, there does not seem to be much interest in their use – except for the failure of the NSGO to “mine” useful material from them. In summary, “Theme Team” is the planning concept of the day for the program directors.

The NSGO staff does not raise strategic planning and priority-setting as important elements in their work. The plans developed by the programs have not been analyzed and do not appear to be used in their work. They recognize Theme Teams as an important planning element and for providing some focus in an area. NSGO staff members are co-chairs of Theme Teams and play an active role in developing the theme papers. It is obvious that the Director of Sea Grant puts emphasis on strategic planning and also sees the Theme Team concept a useful tool in establishing priorities.

Several people of some stature outside the direct Sea Grant community provided a significant perspective on the issues of planning and priority setting. Some of their comments were:

- Mystification over who sets Sea Grant policy and direction.
- Need to think through priorities and direction.
- Need for better focus and clear strategic goals. Not even on the radar screen with respect to national priorities.
- Strategic planning of paramount importance – especially setting priorities of both the NSGO and the state programs.
- Need for strategies to participate in new areas of national interest, where there is momentum for significant activity.

APPENDIX I

White Paper on Theme Areas

Prepared by
Anders Andren, Director, Wisconsin Sea Grant Program
March 1, 1999

Background

As we move into the 21st century, we are embarking upon a period of great scientific, technological, environmental and governmental change. There is no doubt that the technology-driven information revolution now in its early stages will continue to change the way in which we all will carry out our missions, the way we interact with our constituents, how we shape our research and development programs, and the way we interact with each other. As NOAA keeps refining its mission and goals, as it seeks to focus on its unique strengths, so must the National Sea Grant College Program strive to optimize the way it does business.

With this realization in mind, it was at the September 1998 Sea Grant Association Meeting, held in Fairbanks, Alaska, that SGA members voted to support a document that set forth the principles and definitions of Initiatives and Investments.

It was also recognized that we must establish a procedure for developing new Initiatives and Investment efforts. To that end, the SGA membership voted to support the concept of Thematic Areas and Theme Teams. These teams would be responsible for the development of a number of products that could enhance the way in which the entire Sea Grant College Program operates. A thematic area approach also offers the following benefits:

- Helps organize all Sea Grant activities under common areas of interest.
- Serves as a method for synthesizing thematic area efforts on a national scale. All programs will have to be more results-oriented in the “New Procedures” and GPRA era. Individual programs must intensify their efforts on writing and synthesizing research and outreach results using a thematic area approach. A national scale synthesis of these results could therefore elevate the visibility the entire Sea Grant network.
- Creates opportunities and new directions for initiatives and investments.
- Catalyzes cooperative efforts among Sea Grant College Programs, individual programs and the NSGCPO, Sea Grant and NOAA, and Sea Grant and DOC.
- Provides opportunities for cooperative ventures with other agencies.
- Focuses the flow of funds to high impact areas.
- Provides a forum to organize Communications, MAS, education and research efforts on a national scale.
- Provides a mechanism to further solidify Sea Grant’s local, regional and national identity.
- Accommodates an interdisciplinary approach.
- Provides a strategically useful method for providing information to policymakers.
- Provides information for strategic planning.

The SGA membership also voted at the Fairbanks meeting to develop a framework that would set forth the operational principles of Theme Teams. This paper sets forth these operating principles.

Thematic Area Concept

A **Thematic Area** is a **core area** of emphasis and expertise in Sea Grant’s purview. Ideas for themes could come from anywhere within the Sea Grant enterprise, but should be conveyed to the Program Mission Committee (PMC). The PMC will then coordinate this information for eventual presentation to the Board of Directors. After discussion with the SGA membership, the Board of Directors would then work with the National Sea Grant College Program Office to establish priorities for thematic areas.

Proposed List of Thematic Areas

The following list of thematic areas was agreed upon in principle at the Fairbanks meeting. Some minor modifications were made during a Sea Grant leadership retreat in Seattle, October 28 and 29, 1998 (Dearborn, Moll, D’Elia, Andren, Echols, Stevens, Baird, Schuler, Stephan, and Kudrna).

- Aquaculture
- Coastal Hazards
- Coastal Communities and Economies
- Education and Human Resources

- Fisheries
- Ecosystems and Habitats
- Ocean and Coastal Technologies
- Urban Coast
- Seafood Science and Safety

Responsibilities of Thematic Area Teams

Basically, the team would be responsible for the entire product. The team would develop a position paper with initial justification, background and synthesis of the scientific issue. The final product(s) would ideally include: (1) A fairly detailed state-of-the-art review of the science and recommendations for research priorities; (2) Short one-pagers; (3) Brochures; and (4) Workshops or Conferences.

To accomplish these tasks, it is anticipated that the Thematic Team members would convene a workshop of experts for the development of synthesis and priorities. This would hopefully be done with funds from the national office. A synthesis effort might also be encouraged via a yearly national competition.

Each Thematic Area Team would ensure that the product (or products) is (are) developed within an agreed upon time frame, with a date-certain for a product. The Thematic Area Teams would be appointed (selected) for an indefinite time period.

Procedure for Appointing Thematic Area Teams

- SGA membership, via Board of Directors, would select the SGA representative. This Sea Grant Director would serve as a co-chair.
- The National Sea Grant College Program Office, via the Director, would appoint one or two additional members. One person from the NSGCPO would serve as co-chair.
- The National Review Panel would appoint a liaison to each Thematic Area Team.

Definitions of Investments and Initiatives

1. "National Strategic Investments"

- Can be former "national initiatives" that have occurred but have been incorporated into the core appropriation, and are based on reallocation and refocusing of existing funding resources.
- Managed and competed at the local level with national coordination.
- Are national, not geographically limited, in scope, addressing issues of national importance.
- Developed when Sea Grant support can make a definable impact and demonstrate Sea Grant's unique approach.
- Extend beyond the usual purview of the separate programs, either because of scale of multi-program effort needed or because the activity itself is at a stage in development where a "pulsing" of the activity is likely to yield significant benefits appropriate for the expenditure of existing funds, rather than development as a separate new initiative or as a multi-agency partnership.
- May get possible NSGO match of exceptional local activities, particularly for regional collaborations and for outreach components, but the amount of funding held back by the NSGO should be minimal.
- Based on a concept that has scientific pith as well as real world potential.
- Represent an undertaking with the potential to involve investigators from a substantial number of our institutions.
- Have some grounding in existing program activities and are of sufficiently high priority in the future to be absorbed in the regular programs, OR that can be developed still further as a national initiative.
- Should only reallocate resources to programs after PAT review for their effectiveness in participating in and developing these initiatives.
- Should be managed by thematic teams established in the network.
- Examples: Marine Biotechnology Initiative (after the initial "new" resources were added), Essential Fish Habitat

2. "National Initiatives"

- Add funding resources to program, typically by special Congressionally mandated line items.
- Managed through the national office, but with as much local and regional activity (peer review, etc.) as possible.
- Combined under the umbrella of a single national competition.
- Leverage funding resources by partnering with other federal agencies, such as NSF.
- Examples: Non-indigenous Species, Oyster Disease Research, Aquaculture.

3. "Regional Initiatives"

- Are those activities limited to regional and interprogram alliances.
- Get funding resources from a variety of mechanisms: state and local funding, private sources, inter-program pooling of funding, etc.
- Are managed by a mechanism selected by programs involved, but consistent with national principles for openness, conflict of interest, etc.
- Examples: MERP, CBEEC, New England groundfish.

APPENDIX J

Information developed by this committee during its discussion of NSIs **National Strategic Investments in Sea Grant**

Background Information

Legislation (1998)

The 1998 reauthorization of Sea Grant included as a specified program element “any national strategic investments in fields relating to ocean, coastal, and Great Lakes resources developed with the approval of the panel, the sea grant colleges, and the sea grant institutes.”

There also is a general requirement to allocate funding so as to “promote healthy competition among sea grant colleges and institutions.” Grants for national strategic investments are, in accordance with this objective, made competitively. The core funding grants meet other specified requirements that include “encourage successful implementation of sea grant programs,” and “to the maximum extent consistent with other provisions of this act provide a stable base of funding for sea grant colleges and institutes.”

The legislation authorizes a yearly basic appropriation to be allocated under broad guidelines. In addition yearly appropriations are authorized that are designated specifically for research on zebra mussels and nonindigenous aquatic nuisance species, oyster diseases, and harmful alga blooms. Grants under these latter appropriations must be made competitively. These areas also are designated as national strategic investments by the NSGO.

Establishment of the National Strategic Investment Concept

The NSGCP Director established the concept of National Strategic Investments (NSIs) in a memorandum dated December 19, 1996 entitled “Procedures and Funding Allocation Policies for FY 1998 and Beyond.” This memorandum defines the procedures for resource allocation and program evaluation still being followed today. It was anticipated that approximately \$10 million in NSI funds would be distributed on the basis of open competition among individual programs. NSIs would be determined through several pathways, namely: Congress, the Administration, NOAA, and a national issues panel. Proposals for NSIs would be submitted to the NSGO in response to RFPs developed at the national level. The Director initiated the program for FY98 with three RFPs for NSIs in addition to those specified by Congressional action. These were Marine Biotechnology, a Sea Grant/NOAA Partnership, and National Outreach.

The further development of the NSI concept and of formal guidelines for its implementation was assigned in 1997 to a Science and Technology Task Force. The Task Force proposed an NSI policy and its implementation in a January, 1998 paper entitled “National Strategic Investments, Policy and Implementation.” The rationale for NSIs taken from this paper is:

“There are critical national (and regional) issues that call for a higher level of intensity, broader resources, and sharper focus than is generally practical through the locally-distributed network. National Strategic Investments (NSIs), established in the 1998 Sea Grant reauthorization, enable Sea Grant to address its mandates more effectively on a national basis through a system of national competitions, involving all institutional programs, to carry out larger-scale, focused programs, either alone or in partnership with other funding sources.”

The report was approved by the Review Panel and became the formal basis for the NSI system.

NSI Funding History

The funding history includes a number of items as NSIs (such as Industrial Fellows) that may involve national competitions, but are not strictly NSIs. These are grouped together under the title, “Others.” Funding for Knauss Fellows and the SBIR set-aside are not included, but these are also sometimes considered strategic investments. The funding history in thousands of dollars is shown in the accompanying table.

The Congressionally directed NSIs are Alien Nuisance Species (a continuation of the Zebra Mussel program), Oyster Disease Research, and Gulf Oyster Research. For FY01 they constitute 56.6 percent of total NSI expenditures. The funding record shows a continuing strategic effort directed toward marine biotechnology, alien nuisance species, oyster disease research, Gulf oyster research, and technology development. A new important area, fish habitat, was introduced in FY00 with money reprogrammed from the initial attempts of earlier years that have been zeroed out. The fish habitat initiative was recommended by the Science and Technology Subcommittee of the NSGRP in view of the acknowledged threat to fisheries of habitat degradation and of the provisions of the

TOPIC	FY98	FY99	FY00	FY01
Marine Biotechnology	\$2387	\$1981	\$1492	\$1458
Alien Nuisance Species	1110	2375	2088	2725
Oyster Disease Research	1645	1495	1342	2002
Gulf Oyster Research	976	976	743	1128
Fish Habitat	0	0	1400	1398
Technology Development	950	1646	788	1100
SG/NOAA Partnership	540	545	0	0
National Outreach	515	560	0	0
SG/COP HAB	0	563	0	0
Total	\$8123	\$10141	\$7853	\$9811
Others	<u>1119</u>	<u>682</u>	<u>945</u>	<u>537</u>
Grand Total	\$9242	\$10823	\$8798	\$10348

comments and suggestions. The directors have expressed many concerns about NSIs, their handling and their future. There are several main themes running through their comments. These include:

- NSIs have resulted in substantial administrative burdens at both the state program and the NSGO levels that have seriously interfered with the administration of the NSGCP as a whole.
- NSIs have not been undertaken with the advice and guidance of the university-based Sea Grant partners – even though the law so specifies.
- NSIs are too small and fragmented without clear and focused objectives related to the Programs.
- NSIs, having differing schedules and detail requirements and not being coordinated with the omnibus proposals, have made it difficult to develop Program responses.
- NSIs weaken Sea Grant as a whole and a way should be found to accommodate NSIs as an integral part of the state programs.

It was also apparent that many program directors were unaware of the policy and implementation guidelines that had been adopted for NSIs, which, if followed, would solve many of their concerns. There appear to be large communication gaps concerning this program. Nevertheless, some program directors believed NSIs could benefit the program and the nation if undertaken wisely and managed efficiently. NSIs could catalyze activities, develop national capability, and strengthen local abilities to address locally relevant programs.

The NSGO – Director and Staff

The NSGO understands well the concerns and criticisms of the program directors and is conscious of the need to improve the process and the management of the program. The NSGO remains committed to the NSI concept and the requirement for open national competitions in a significant portion of Sea Grant. National programs are seen as a means of increasing accomplishments and selling Sea Grant. NSIs will be an important part of the future, but the program needs to be better managed.

The NSGO has come to define NSIs in the broad sense of “national competitions”, including Congressional earmarks, continuing programs (e.g. Knauss Fellowships), and the *real* NSIs. Some believe all of Sea Grant’s funds should be awarded based on national competitions; the NSGO does not, since maintaining stable program funding is a basic part of the Sea Grant concept. The NSGO is committed to the NSI concept, but sees the need to manage NSIs differently and more effectively. Most of the program directors’ complaints about NSIs are considered reasonable. The NSGO also believes there are too many small competitions. They would like to see small grants coalesced, but feel they may not be able to do so.

The biggest issue for NSIs is how to decide what to do. It is difficult to find the time to create and organize opportunities. NSIs need to be focused more strategically. Perhaps Theme Teams can be an important element, but strategic plans and Theme Team activities have not been utilized in developing RFPs for NSIs. The main themes of the NSGO are that NSIs and national competitions will continue; the staff is overextended in carrying out these competitions; the programs have not been helpful players, yet their complaints are justified; it has been difficult to focus NSIs; Congressional schedules make it difficult to coordinate NSIs with the omnibus; and more efficient management of NSIs must be achieved.

OAR, NOAA, Congressional Staff, and Others

This group of interviewees includes OAR and NOAA management, OAR and NOAA staff, past OAR and NOAA management people, NGOs, Sea Grant collaborators, and Congressional staff. The most interesting aspect of these 67 interviews is that NSIs are generally neither well known nor well understood by these people. Their comments were

comments and suggestions. The directors have expressed many concerns about NSIs, their handling and their future. There are several main themes running through their comments. These include:

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The biggest issue for NSIs is how to decide what to do. It is difficult to find the time to create and organize opportunities. NSIs need to be focused more strategically. Perhaps Theme Teams can be an important element, but strategic plans and Theme Team activities have not been utilized in developing RFPs for NSIs. The main themes of the NSGO are that NSIs and national competitions will continue; the staff is overextended in carrying out these competitions; the programs have not been helpful players, yet their complaints are justified; it has been difficult to focus NSIs; Congressional schedules make it difficult to coordinate NSIs with the omnibus; and more efficient management of NSIs must be achieved.

OAR, NOAA, Congressional Staff, and Others

This group of interviewees includes OAR and NOAA management, OAR and NOAA staff, past OAR and NOAA management people, NGOs, Sea Grant collaborators, and Congressional staff. The most interesting aspect of these interviews is that NSIs are generally neither well known nor well understood by these people. Their comments were very general with almost no suggestions. They believed that the NSGO should have a strong role in setting the national agenda and endorsed the NSI concept. They also noted that a balance must be kept between national guidance and academic-based programming, but Sea Grant must have a national presence. The central conclusion from these discussions is that NSIs are not really understood, but the NSI concept is appealing because of its national orientation and its strategic nature. The need for a national presence and the demonstration of significant impact is strongly emphasized.

APPENDIX K

NSI POLICY STATEMENT, June, 1998

(Developed by the National Sea Grant Program's Science and Technology Task Force and presented to the National Sea Grant Review Panel and the Theme Team directors)

NATIONAL SEA GRANT COLLEGE PROGRAM NATIONAL STRATEGIC INVESTMENTS POLICY AND IMPLEMENTATION

I. Why Sea Grant National Strategic Investments?

The National Sea Grant College Program has a legislative mandate to “increase the understanding, assessment, development, utilization, and conservation of the nation’s ocean and coastal resources.” Sea Grant carries out that mission largely through a network of 29 Sea Grant Colleges and Institutions. Recognizing that long-term continuity and the presence of a locally-managed, university-based infrastructure greatly enhance “value” through performance and responsiveness to local issues, state Sea Grant programs have been given more autonomy and more responsibility for addressing Sea Grant’s mandate in their own states and region. National Strategic Investments (NSI) will enable Sea Grant to more effectively address its mandates on a national basis.

There are critical national (and regional) issues that call for a higher level of intensity, broader resources, and sharper focus than is generally practical through the locally-distributed network. National Strategic Investments (NSIs), established in the 1998 Sea Grant reauthorization, enable Sea Grant to address its mandates more effectively on a national basis through a system of national competitions, involving all institutional programs, to carry out larger-scale, focused programs, either alone or in partnership with other funding sources. NSIs will enable the institutional programs to accomplish the following:

- They allow Sea Grant to focus significant funds on high-impact, national issues.
- They provide a flexible mechanism for Sea Grant to respond to high priority issues and opportunities within NOAA and the Administration without disruption of the strategic objectives of individual programs.
- They promote research meritocracy, healthy competition throughout the network, and participation by the best investigators throughout the Sea Grant institutional universe.
- They provide a basis for demonstrating the utility of the Sea Grant model in enrolling the capability of the university community to address issues of importance to key national constituencies.
- They provide a highly visible platform of accomplishment from which to attract additional funding and promote research results.
- They provide the potential to enhance network-wide capabilities (e.g. research and development, education, MAS, and communications), generally not possible through the investment activity of individual institutional programs.
- They enable Sea Grant to participate in multi-agency programs addressing critical national issues, enhancing both the Sea Grant NSI and these multi agency programs.

At any one time Sea Grant will fund, primarily through peer reviewed competition, a portfolio of investments in finding solutions to major issues. As with any successful investment strategy, the key points are to emphasize the things the organization does well and to maintain a diversity of investments. Sea Grant’s primary role should be research with a demonstrable application or focus on its mission objectives which are directed to the wise use and conservation of the nation’s coastal resource problems. It is important to be sure the expertise is available to address the particular issues chosen for NSIs, the resources necessary to solve the problem are not beyond the capabilities of the Sea Grant program, the proposed research takes into account the ongoing programs of other organizations, and that the investment can make a significant impact on our current state of knowledge.

II. The Successful NSI program

A National Strategic Investment is, then, primarily an investment in research focused on a specific set of problems for a designated period of time. Proposed NSIs should have the following specific attributes:

- The NSI addresses a problem of national importance.
- The NSI clearly identifies the specific area of focus to be addressed with the resources and research talent available and explains why that focus area will make a **significant** contribution to solving the problem.
- The NSI contains specific, measurable research and technology transfer goals and milestones.
- The NSI clearly identifies the specific benefits to the nation expected to result from the investment.

- Significant progress can be accomplished in the problem area in three to five years and within the resource limitations of the investment fund. Each individual NSI will be a major program investment.
- A management structure that permits tracking of progress towards specific goals, undertaking course corrections as needed, and evaluating the ultimate success of the program.

III. Identification of Possible NSI Programs

The generation of ideas for national competitions will be an open process with periodic calls for NSI concept papers from the Sea Grant network and other sources. Casting a wide net will ensure that all constituencies have an opportunity for input and that the most important national issues will be included in the process. Specific input will be sought from the Sea Grant Association (SGA) and its relevant subcommittees, individual Sea Grant programs, the National Sea Grant Office (NSGO), NOAA line and program offices, other federal agencies, and members of the ocean community. A concept paper (5 pages) will be developed for potential NSIs that will include problem definition, rationale, and importance to the national interest and Sea Grant mission (Appendix A).

Commitments to currently funded NSI projects end in FY 1999 or FY 2000. Thus there will be an opportunity for refocusing the activities of these NSIs in line with the approach proposed in this white paper. Concept papers to extend and refocus existing NSIs as well as to initiate new programs will be encouraged.

IV. The Selection Process

The focal point for evaluation of ideas/concepts will be the Science and Technology Task Group. The S&T Task Group is a subcommittee of the National Sea Grant Review Panel and is comprised of representatives of the SGA, NOAA line and program offices, and other eminent marine science professionals. Specifically the Task Group's charge includes the following:

- Recommend new NSIs for implementation by Sea Grant.
- Evaluate the effectiveness and quality of the portfolio of national strategic investments and make recommendations on changes in allocation to address new opportunities.
- Provide advice on other matters of science and technology as requested by the Director of the National Sea Grant Office or the Chair, National Sea Grant Review Panel.

In order to accomplish its responsibility for selecting which of the NSIs will be recommended for implementation by the Sea Grant network, the Task Group will review and rate the proposed investments based on the following criteria plus consideration of the overall NSI portfolio:

- The importance of the problem or issue to the nation.
- The impact of the proposed research agenda on the problem or issue and the benefits to the nation.
- The capacity of the Sea Grant community to address the problem.
- Balance and impact of the overall portfolio of investments in the competitive pool in relation to potential benefits from new opportunities.
- The potential for leveraging the scope and resources of the proposed NSI through involvement of other NOAA units, federal agencies, or other partners in the private and non-profit sectors.

After careful review of the existing portfolio and potential new NSIs taking into account ongoing programs within the Federal research establishment, the Task Group will make recommendations to the Director, NSGO concerning the addition of new investments and the possible discontinuance or refocusing of existing programs.

V. The NSI Program Development Plan

Once the NSI concepts are selected for further development, a steering committee will be appointed by the NSGO from the Sea Grant community and appropriate partners. The steering committee will develop a plan for implementing the NSI, including appropriate processes for management and evaluation. One or more workshops involving the research community may be necessary as part of the program development plan (PDP) process leading to a request for proposals. Information transfer and integration/synthesis of the results should be an integral part of the program design. (An outline of a PDP process is specified in Appendix B). An important aspect of the program development plan will be the organization of the research program. The organizational approach proposed should be in keeping with the scope and complexity of the proposed effort.

A NSI steering committee should take the approach that will best allow it to achieve the specific goals of the initiative. How the research is to be organized will dictate not only the scientific and management approach but also the process of proposal solicitation, review, and funding.

VI. NSI Proposal Solicitation, Review, and Funding

Once the detailed objectives of the NSI are developed, the NSGO in cooperation with the steering committee will develop a specific call for proposals. The process of proposal solicitation, review, and funding should be one that is

seen to be open and free of conflict of interest. Procedures exist for operation of the proposal process in Sea Grant Institutional programs. Similar guidelines will be developed for NSI proposal process. The primary responsibility for process lies with the NSGO, working closely with individual steering committees. The NSGO may choose to delegate the responsibility for implementing the proposal solicitation and review process to a steering committee or a subset of the committee if appropriate and feasible. However the NSGO retains ultimate responsibility for the integrity of the process. All funding will be through the Sea Grant network.

VII. NSI Management

Each NSI will have a defined management structure appropriate to the specific activity. A basic concept will be to keep management/coordination at the lowest level necessary with the active participation of researchers and outreach personnel. The management organization should consider how the NSI will involve stakeholders in the project, the coordination of research among investigators, the evaluation of progress, the synthesis results, and the transfer of findings to users.

Each NSI shall have a NSGO program officer assigned to assist the management team in its operation. It is expected that the program officer or a member of the steering committee will be asked to brief the S&T Task Group, NSGRP on the progress of the NSI program.

VIII. Evaluation

Evaluation of an NSI must be an ongoing process, not only during the life of the investment, but in the years following completion of the research program. While some impacts from the successful completion of the program may be apparent immediately, other impacts may well follow years later. The evaluation procedure must be capable of capturing these later impacts as well. Directors of Sea Grant Institutional programs would be expected to capture these later impacts as part of the evaluation process for their overall program. The procedures for NSI evaluations will build on the recently established procedures for the evaluation of Sea Grant Institutional programs.

A. Internal Evaluation

The program officer, working with the steering committee, will have primary responsibility for the evaluation of the progress of the NSI towards its defined goals. The committee, working with the researchers, that will track progress towards milestones, recommend changes and corrections in the research program, and generally insure that the program is moving in the desired direction.

B. End of Project Evaluation

After the completion of the research portion of a NSI or at periodic intervals the program officer will undertake an evaluation of the program to determine:

- If the NSI has met its programmatic goals and what will be the likely impact?
- If the organization and management of the program could have been better? If so, how?
- If the NSI was not fully successful, what lessons have been learned about NSI topic selection and program organization that can be applied to future NSIs?

C. Ongoing Evaluation

Because it may take a period of time for the results of a successful research program to be widely adopted in practice, it is essential that a follow up tracking system be developed to capture future applications. In addition, a small evaluation team might revisit each NSI some years after completion to assess long-term impacts.

IX. Summary

While focused research programs with their attendant management requirements are a common approach in federal laboratories and in industry, their application to university-based research requires a recognition of the unique environment of the university. Focused, organized research programs are possible in universities as Sea Grant, NSF, ONR, NOAA's Coastal Ocean Program, and others have demonstrated. However their successful implementation requires recognition that university faculty must have a major voice in the planning and conduct of the program. Sea Grant first undertook a series of successful major focused research programs 20 years ago. The talent and experience exists in the Sea Grant network to enable these programs to be successful again in 2000 and beyond.

Appendix A

National Strategic Investment Concept Paper Format

(5 pages)

- I. What is the national problem or issue?
- II. What specific research and technology transfer program is proposed?
- III. What will be the benefits and impacts from successful completion of the program?
- IV. Why is Sea Grant best able undertake the program?
- V. How does the proposed program relate to other proposed or ongoing research efforts addressing this issue?
- VI. Why can this proposed program be completed in five years or less?

Appendix B

Suggested Program Development Plan Outline

- I. The Issue/Problem
 - What is the issue/problem being addressed?
 - What is the urgency of the issue/problem? Why does it need to be done now?
- II. What must be done
 - What is the current base of knowledge?
 - What must be added to the knowledge base to achieve the desired impact?
 - What other research programs are addressing the issue? How does this program relate to those?
- III. The Impact on the Issue/Problem
 - What impact will the proposed research and technology transfer program have on the issue/problem?
- IV. Program Description
 - A. Program Goals and Objectives
 - What are the overall goals and objectives of the NSI?
 - B. The Research Program
 - What are the goals of the research program?
 - How will the research be organized and carried out?
 - C. Synthesis and Integration Activities
 - How will the research findings be synthesized and integrated into the existing body of knowledge to achieve the program's goals?
 - D. Outreach and Technology Transfer
 - How will the information generated by the research and synthesis efforts be transmitted to users to achieve the desired impact on the issue/problem
 - E. Program Management
 - How will the NSI be managed to achieve its goals and objectives?
 - How will progress towards program goals and objectives be evaluated?
 - What performance measures and milestones will be used?
- V. Readiness
 - Who are the research and outreach communities that would be expected to have an interest in the NSI and thus would respond to an RFP?
- VI. Cost and Time
 - How long will it take to complete this NSI and at what annual cost?

Appendix C

Sea Grant Science and Technology Task Group Members, 1998

Chair: Marne A. Dubs Member, National Sea Grant Review Panel	Alfred M. Beeton Acting Chief Scientist, NOAA (Retired)
Roger W. Hanson Member, National Sea Grant Review Panel	David L. Evans Deputy Director, National Marine Fisheries Service, NOAA
Jerry R. Schubel Director, New England Aquarium	Donald Scavia Director, Coastal Ocean Program, National Ocean Service, NOAA
G. Ross Heath Dean Emeritus, College Of Fisheries and Oceanography, and Professor of Oceanography, University of Washington	John A. Calder Deputy Director, Environmental Research Laboratories, Oceanic and Atmospheric Research, NOAA
James J. Sullivan Director, California Sea Grant College System	Leon M. Cammen: National Sea Grant Office Liaison Research Team Leader, NSGO, NOAA
Anders W. Andren Director, Wisconsin Sea Grant College Program	

Appendix D

Schedule for Initial Implementation of NSI Process

In order to have an NSI process in place by the year 2000 the following schedule is proposed:

1. A working draft of this policy paper will be submitted to the January 7-8, 1998 NSGRP meeting for information and comment. Based on feedback from the NSGRP, the working draft will be revised as necessary.
2. Policy paper reviewed and revised following S&T Task Group meeting in late January or early February, 1998
3. Revised paper reviewed at NSGRP executive committee meeting March 9, 1998 and SGA meeting March 10-11, 1998.
4. NSGO issues call for NSI concept papers in June, 1998
5. NSGRP approves policy paper as a Panel Position Paper in summer, 1998
6. S&T Task Group reviews investment portfolio and concept papers received. Makes recommendations for NSI portfolio changes and additions in September, 1998
7. RFP for NSI developed by the NSGO in late November 1998 (budget permitting) for distribution by individual Sea Grant programs.
8. First NSI awards made effective February or March 2000.

The first NSIs will likely be programs which are currently well along in conceptual development and for which a PDP can be prepared quickly. NSIs that need more time to go from the concept to the developed PDP can be scheduled for consideration for future year startups.

APPENDIX L

Sea Grant Association's Comments and Recommendations Regarding National Strategic Initiatives (NSIs)

Prepared of behalf of the SGA by
Robert Stickney, Director
Texas Sea Grant College Program
July 2, 2001

At the Sea Grant Association (SGA) meeting held in Silver Spring, Maryland on April 24 and 25, 2001, SGA president Rick DeVoe asked me to poll the members for comments on the National Strategic Investment (NSI) process with which Sea Grant has been involved for the past few years. I issued an e-mail call for comments on April 30, 2001 and received input from eight programs.

During the comment period, the deadline for submission of the Gulf Oyster Industry and Oyster Disease NSIs was rapidly approaching. Concerns over that particular activity led to a flurry of additional e-mails from a number of programs. The opinions on those NSIs were summarized by Bill Rickards (Virginia Sea Grant) and sent to me; a compilation of the responses developed from Rickards' submission is included as an appendix to this report. A few e-mails were received subsequent to the preparation of Bill's summary and pertinent comments were incorporated.

The material that appears below is my summary of all the input received to date on this topic, including additional input provided by the SGA Board. I have attempted to synthesize comments that were similar in nature into general statements. Explanations are also provided so as to give an indication of the rationale for the synthesis statements. Further, I have attempted to capture the overall feelings of those who responded into one overarching summary statement. Finally, suggestions for improving the NSI process are provided.

SUMMARY STATEMENT: *The SGA and the National Sea Grant Office (NSGO) need to work together toward the resolution of the issues that have arisen with respect to the development, solicitation, and management of NSIs.*

There was broad agreement that the generation of topics for and issuance of NSIs is intended to be a joint decision-making function of the SGA and the NSGO, yet there is a clear feeling among respondents that SGA has not been fully involved. This partnership is actually mandated by the Sea Grant reauthorization legislation of 1998. A few examples of concern include the view that the number of NSIs should be limited, the funding levels should be increased, the peer review process should be handled in a different manner, and that the proliferation of NSIs has reduced the ability of the NSGO and university Sea Grant Program staff to perform other necessary functions. Several of the statements below expand upon these concerns and include others.

1. NSIs undermine the basic tenet under which Sea Grant operates.

Situation: Sea Grant was established as a university-based program of research, education, and outreach. NSIs are open to agency and industry researchers, thereby changing the character of the program and detracting from the Sea Grant mission. Placing funding in NSIs rather than distributing the money to core results in erosion of the local Sea Grant programs where core funding increases have not kept up with inflation and the basic increases in the costs of doing modern science.

Recommendation: Expanded funding should be used, to the extent possible, to reduce the erosion that is taking place in the core budgets of the 30 Sea Grant programs. New NSIs should be developed using the rationale outlined under item 2 (below).

2. NSIs should be developed collaboratively.

Situation: While the NSGO is actively developing NSIs, SGA (in partnership with NSGO and the National Review Panel) has formed nine theme teams that are developing research initiatives (one of which, marine aquaculture, is also an NSI). Several of the NSIs were developed by necessity in response to congressional mandates, and others to political expediency. Thus, NSIs seem to be created for a number of different reasons or in response to different mandates. Further, there are no standardized procedures on how NSIs are selected or conducted. As a result, the process seems to be somewhat chaotic. The specific roles of the National Review Panel, the SGA, and the NSGO in the NSI process are unclear.

Recommendation: SGA recommends that non-mandated NSIs only be initiated with full collaboration between the NSGO and the SGA (as required in the Sea Grant reauthorization legislation of 1998). New NSIs should, in most instances, arise from the Theme Teams that continue to work collaboratively with NSGO in assembling research and outreach strategies that, in turn, reflect the strength of the Sea Grant community. NSGO and SGA should develop policies that ensure collaboration and the development of a process that has the support of all involved.

3. There are too many NSIs and they are not sufficiently funded.

Situation: The number of NSIs has led to a proliferation of Requests for Proposals (RFPs) for relatively small amounts of money. As a corollary the RFPs come out at different times throughout the year, and the guidelines and rules governing NSI solicitations are not consistent. Thus, researchers must be mobilized to write proposals on several occasions, and the local Sea Grant Programs are constantly attempting to keep up with their normal workloads while being asked to respond to the many, varying deadlines imposed by the NSGO. NSIs add significantly to the workload of those Sea Grant programs that become involved in the process.

Recommendation: Congressional mandates require the NSGO to issue RFPs for certain national competitions. The SGA recommends that these be announced in one comprehensive *Federal Register* and RFP announcement, incorporating a standardized proposal process and timeline. For “discretionary” NSIs, the SGA recommends that the NSGO, after deliberations with the SGA and the National Review Panel, select one or two *well-funded* NSIs for competition in any one year, and provide for multiyear funding.

4. NSGO time spent on NSIs takes away from other important NSGO activities.

Situation: Writing *Federal Register* notices, along with conducting panel meetings and administering the NSIs, has increased the administrative burden on the NSGO, and perhaps reduced the effectiveness of the national office in its interactions with the local Sea Grant programs and NOAA.

Recommendation: Some amelioration of the problem might be achieved if the NSIs were all incorporated into one national call for proposals each year. This would potentially reduce the total number of proposals received, however, it would allow researchers to concentrate their activities on one NSI call rather than responding to several issued at different times throughout the year.

5. The selection of Proposal Review Panel members should be determined as a joint effort between NSGO and the local Sea Grant programs.

Situation: Currently, the makeup of the preproposal and proposal Review Panels is at the discretion of the NSGO staff person who is responsible for each NSI. The composition of each panel can have a major impact on the decision-making philosophy behind which proposals are ultimately funded.

Recommendation: To ensure a fair and open process, members of the local Sea Grant programs with expertise in each NSI should be involved in the process of identifying suitable candidates to serve on Review Panels. Every effort should be made to avoid conflicts of interest.³

6. Feedback from the NSGO on NSI decisions and proposal selection is inadequate.

Situation: This statement reflects at least two issues. First, substantive comments received by Sea Grant Directors from Review Panels that review preproposals and full proposals are often cryptic and either offensive or useless to the program or the prospective PI. Second, the NSGO should be forthcoming in providing information requested by individual Sea Grant programs with regard to the titles of projects selected for funding and the progress that is being made with respect toward finalization of the contracts associated with those projects. There has apparently been some lack of response to queries of that nature.

Recommendation: Feedback, both for approved and unapproved preproposals and proposals, should be substantive and provide the reader with a clear explanation of the decision.

7. The time frame provided for funded NSI projects/programs is insufficient to address the issues comprehensively and to involve an outreach component.

Situation: While an outreach component is often encouraged in NSI solicitations, funding may be terminated before sufficient information has been generated to make the incorporation of an outreach component necessary or even possible.

Recommendation: The duration of NSIs, and their funding levels, should be sufficient to accommodate a strong extension/outreach component prior to the termination of the funding. Participation in each NSI by extension personnel should be encouraged from the onset of funding and should be a major component during the last one or

³It is virtually impossible to convene a Review Panel in which one or more individuals do not have a relationship that could be construed as representing a conflict of interest (having published with or served on a graduate committee of a PI, being part of a program that funds or has funded a PI are examples). In those cases, the involved Panel member is excused from any part in the discussion. Panel members are not allowed to be listed as PIs on any preproposals or proposal that is submitted.

two years of the NSI. Planning for these components can be facilitated if each NSI has a scheduled termination date (contingent, as always, on continuation of funding for the planned period of the NSI).

8. The management of NSIs should not be a function of the theme teams.

Situation: Theme teams were developed for the purpose of fleshing out research and outreach agendas on particular topics. The original charge to theme teams has been to develop white papers, generate a one or two page summary sheet for distribution, and develop a booklet that provides more detail on how increased funding into the theme area would be utilized to address the research and outreach needs that exist.

Recommendation: Additional responsibilities of the theme teams should only be mandated after full discussion, and agreement, among all involved components within Sea Grant.

9. PIs have two options on proposal submission.

Situation: Allowing prospective PIs to approach NSGO directly in response to RFPs undermines the effectiveness of the local Sea Grant programs by complicating their role as having the ultimate responsibility for project/program and fiscal management.

Recommendation: All preproposals and full proposals should be submitted through a state Sea Grant program.

Appendix

Summary of ODRP/GOIP NSI Options

The discussion of how best to proceed with obtaining reviews of the Gulf Oyster Industry Program and the Oyster Disease research Program NSI gave rise to the following options that might be considered by the SGA in conjunction with future calls of this nature.

- Local Sea Grant programs would not be expected to conduct reviews. NSGO would collect the proposals and conduct the entire review process (mail and panel) without input from the state programs.
- Directors receiving proposals should forward them to the NSGO along with the names of potential reviewers. NSGO would conduct the entire review process (mail and panel).
- SGA should enter into deliberations with NSGO to resolve problems with the NSI review process before any further NSI solicitations are issued.
- Directors could use reviewers who are knowledgeable about the subject area in general, but who may not be specifically involved with the particular area of research being reviewed. (This would expand the pool of potential reviewers, which is very small given the broad response to the RFP and limited number of experts in the fields covered by the NSIs)
- Reduce the number of reviews sought for each proposal.
- Alert NSGO that the directors will attempt to obtain the requisite number of reviews, but because of the limited pool of potential reviewers, a shortfall may occur.
- Conduct a centrally coordinated review process through one of the state programs. (There seems to be little or no support for this option.)

APPENDIX M

The Sea Grant National Communications Network Strategic Plan 2001-2005

(Revised 2/1/02)

This evolving document was prepared by a national network of Sea Grant Communicators, with leadership from the network steering committee. The network bylaws provide additional background.

Executive Summary

Sea Grant must effectively communicate its vital national role in providing the scientific knowledge and technology transfer necessary for long-term, sustainable use and development of the nation's coastal, ocean and Great Lakes resources. Such efforts are especially timely in light of heightened public interest in marine resources, growing population pressures, rapid advances in technology and increasing global interaction. Sea Grant must embrace and enhance a coordinated national communications strategy, creating greater awareness of Sea Grant and its benefits among federal officials, resource users and managers, the media and the public.

This plan recommends a wide range of short- and long-term actions to increase effectiveness of national Sea Grant communications. Implementation will result in greater recognition of — and support for — Sea Grant on a national scale, thereby affirming the program's requests for funding from federal, state and industry sources. The plan has six goals.

1. Strengthen the national network identity.
2. Increase national visibility for the network.
3. Foster collaborations and partnerships to leverage resources and results.
4. Increase national availability and access to Sea Grant information.
5. Enhance internal and external communication and collaboration to strengthen the Sea Grant Network.
6. Chronicle communication advances through technical assessment practices.

Achieving these goals will require a significant commitment of personnel and funds by each university program in the network, as well as the National Sea Grant College Program. It also requires a philosophical commitment by each program to make its own identity and communications efforts supportive of — and complementary to — those of the network as a whole.

A key mechanism for meeting these goals is network participation in and support of the national media relations project to focus and coordinate the Sea Grant presence in the national media and at events of strategic importance to project goals. Network support involves stable funding for the project and its various functions, as well as interaction and information sharing from each of the 30 Sea Grant programs.

This plan is an update and revision of the Strategic National Sea Grant Communications Plan of October 1993, accepted by the Sea Grant Association. Updating this plan was a goal established by the National Communicators Steering Committee in early 1997. Revisions were considered in various meetings, including August 1997 in Wisconsin, October 1997 in Arizona, and October 2000 in Alaska. In 2001, communicators reviewed the draft at Sea Grant Week and sought input from all program directors. Nearly every Sea Grant program was represented at one or more of these meetings.

Background

The national need for and relevance of the Sea Grant program continues to grow. Sea Grant clearly demonstrates its strong national value by:

- Serving as a primary source of information about ocean and Great Lakes resources;
- Supporting responsible stewardship and sustainable economic development of those resources;
- Providing new knowledge in the form of cutting-edge, innovative research; and
- Educating a cadre of marine and Great Lakes scientists, resource managers and entrepreneurs who are now moving into leadership positions.

The entire nation values and enjoys coastal resources, from abundant seafood to major seaports to memorable vacation vistas. Sea Grant thus serves the entire nation, but has particular audiences within the growing majority of

the U.S. population living within 50 miles of a coastline. Major client groups include: (1) resource users, including fishing communities, coastal entrepreneurs and residents, seafood consumers, marine-related industry and businesses, recreationalists, etc; (2) decision makers, including federal, state and local officials as well as private industry and interest groups; (3) information users, including academia, news media, environmental organizations, citizen activists, K-12 educators, informal educators and interpreters at parks, museums, etc.; (4) the research and outreach communities, including Sea Grant staff members and related agencies and partners.

The Sea Grant network's primary strengths include quality research and effective outreach components, including extension, communications and education projects. Over the past 35 years, Sea Grant has earned a reputation among user groups and local media as a neutral and non-advocating source of sound, scientific information. Organizationally, the program is cost-effective, flexible and continues to evolve. At the state level, most programs have strong local recognition for being in touch with real people and meeting real needs, which engenders support from coastal state and federal legislators. Technology transfer and science education programs such as Sea Grant have been viewed favorably by many federal and state officials.

Since the first communications strategic plan was implemented in 1993, the network has strengthened Sea Grant's ability to communicate with impact. An award-winning national identity program was developed and now has been voluntarily adopted by the various individual programs. This graphic identity — used on everything from slide presentations, publications and letterhead to pins, shirts, posters and mouse pads — has become the single visual image that unites the network as a national entity.

Instituted in 1994, our national media relations project has assisted individual programs with developing media contacts and placements at the national level. A national Media Relations Advisory Committee established a structure for operation and hired a coordinator to plan the project's activities. With the assistance of this project, the communications network has conducted national media forums that not only generate sustained media interest but also improve Sea Grant's image among congressional staff and government agencies in the D.C. vicinity.

Network communicators have collaborated on national projects, including a series of Sea Grant "briefs," a national brochure and various reports, and a coordinated national presence on the World Wide Web. More recently, communicators have played an important role in preparing documents for the National Sea Grant theme team initiatives.

To help improve internal communications and to encourage program collaboration and talent sharing, *The Communicator* newsletter, originally a newsletter for communicators only, was expanded to include all components of Sea Grant, including extension leaders and agents, researchers, educators, directors, review panel members and the national office. A Web site was added to complement the newsletter. In March 2001, the entire network was surveyed to provide updated information on the newsletter's role as an internal communications tool. Following a discussion at Sea Grant Week 2001, the communicators network determined the current *Communicator* should not continue. The network is awaiting an update from the national office regarding potential national Sea Grant newsletters options that could serve a variety of audiences. In the meantime, communicators will continue to seek informal methods, including Web-based opportunities, to maintain internal communications and encourage collaboration.

Introduction

Sea Grant faces many challenges in the years ahead — challenges that communication efforts can help address. The trend toward coastal population growth is expected to continue, causing increasing pressures on coastal ecosystems and resources. Critical issues include deteriorating water quality, habitat losses and the depletion of fisheries and others. Already we are seeing media attention to land use and water rights conflicts, nonpoint source pollution, public access, erosion and the impacts of exotic species.

Addressing any of these problems requires investment of time and money — and the ability to compete for often limited funds. Sea Grant will continue to look to its national office for core funding, but we must consider other sources if we want to expand our reach, implement new activities, improve existing projects, or strengthen the network through cooperative efforts. We must diversify funding sources, look for cost recovery from our products, and develop partnerships for particular products or projects.

We can make the best use of funds for communication activities by focusing on the areas where we can have the greatest impact. Research has indicated repeatedly a high public interest in science news, but still many Americans do not feel well informed about science. In a survey published by the National Science Board in 1996, only "one in nine Americans thinks that he or she is very well informed about science and technology." According to the Foundation for American Communications, 81 percent of Americans depend on the news media for their environmental information. And growing numbers are turning to the Web, where they need to be assured the information is reliable. Sea Grant's communications activities not only provide science-based information to the news media, but also to numerous targeted audiences through publications,

events, networking and participation in formal and informal educational programs.

To be competitive and to have real impact, Sea Grant must become more widely recognized as a national network that funds important research, educates the citizenry, addresses real world problems, and pays for itself in tangible economic benefits. These values are emphasized both in NOAA's strategic plan *A Vision for 2005*, Sea Grant's network plan and the *National Sea Grant College Program Biennial Report, 1998-1999*, issued in March 2000. In this new century, Sea Grant can rely on more than 30 years of success as it steps to the forefront of the marine science information business. The goals outlined in the plan strengthen Sea Grant's position in marine science and marine resource information, and support the overall Sea Grant mission.

As we move ahead, the communicators' network has the opportunity to coordinate national projects with the National Sea Grant priorities, goals and objectives, along and with the goals of other federal agencies with interests in coastal and Great Lakes science and policy. In addition, the Sea Grant Association has a particular interest in strategic communications. At the individual program level, communications should be integral pieces to the program's strategic plan and planning process. Communications professionals will ensure that goals at each level support the others — and that all are based on sound communications theory and methodology. To be successful, this requires inter- and intraprogram cooperation and information sharing, and the willingness to work together toward common national goals. When new projects are completed, we should apply emerging evaluation techniques. Such results allow us to continuously improve our approach.

The Present Communication Process

High-quality, effective communication is the responsibility of everyone in Sea Grant — including directors, outreach specialists, researchers and national office personnel. Directors lead efforts to establish program goals and priorities, and to provide the resources necessary to reach those goals. Sea Grant researchers, administrators, extension specialists, educators and other staff members develop and transfer the information base. Communicators ensure that information delivery is properly planned, packaged and channeled to various audiences.

Effective communication requires ongoing audience research and interactive communication with target audiences by all members of the Sea Grant family. Most individual programs do well at the state and local levels, but in many programs, communications staffs are small. Thus each program is selective in channeling energy and resources, often focusing on local/regional media relations, events and publications. Sometimes overburdened individual programs cannot assist in research and communication efforts at the national level.

Communicators have skills to strengthen and focus the Sea Grant network. Communicators should be encouraged to investigate and develop innovative new communications technology and capabilities such as the Web and video conferencing. They will be called upon to share this technology with other members of the Sea Grant family. In aggregate, a wealth of communications skills exist within the network. Yet, communication professionals and opportunities are not always used to full potential, due to various administrative, financial and geographic constraints. Past difficulties have included insufficient marketing research, and/or inadequate staff and funding.

On the other hand, sustained national efforts, such as the National Sea Grant Library and *Sea Grant Abstracts* are successful when they are focused efforts with distinct funding. Also, high-quality national reports — *Marine Biotechnology* (1988), *Economic Competitiveness & the Coastal Environment* (1993) and *Marine Aquaculture: Economic Opportunities for the 21st Century* (1999) — resulted from a clearly focused, cooperative effort under the direction of one program with funding from the Sea Grant Association or the National Sea Grant Office. The same was true for two national media forums — “Can America Save its Fisheries?” (1995) and “Marine Biotechnology” (1997) — coordinated by communicators, with support of the entire network and funding from the national office.

Sea Grant communicators have established a track record of success within a variety of arenas. Each project demonstrates network cooperation and productivity:

- Network World Wide Web cooperation: Communicators led development of sites for individual Sea Grant programs and regional Sea Grant gateways. Program communicators also have helped the national program and national office understand the role the Web can play in internal, as well as external communication, by pioneering on-line grant proposal systems and accountability databases. Current challenges include federal accessibility requirements and the need to provide mentors for smaller programs with limited Web experience.
- Design and network-wide use of the national display: Housed and maintained by the national office, this display is used at conferences and events all over the nation. It carries the national message of marine research, education and outreach, and can be adjusted for local, regional or topical needs. A Web site allows staff members to view the display for planning purposes.
- Improved working relationship with extension: The communicators' network and extension assembly have established liaisons and collaborated on projects. Recent meetings include a joint session during October 2000 meetings in Alaska, and a joint executive committee meeting at Sea Grant Week 2001. A joint professional development session on assessment and evaluation of projects is planned for March 2002. Communicators and

extension leaders collaborated for several of the proposals submitted for the 1997 Outreach Investment competition. They work together on specific projects, such as MarinaNet, HazNet, a coastal ecosystem restoration pilot project and the Marine Science Careers Website. Also, in many Sea Grant programs, there is a coordinated effort to select program priorities when preparing omnibus proposals.

The national office has encouraged more national and regional cooperation. Current efforts, such as the theme team concept, are more inclusive, seeking input from various components of the overall Sea Grant program in setting priorities in targeted areas. Despite such progress, some issues defined in the 1993 strategic plan remain. For example, the overall network needs a clear infrastructure, funding mechanism or point person to focus, plan and direct strategic efforts — including internal communications, national Web presence and potential national marketing efforts — on a continuing basis. The communicators' network is eager to work with all Sea Grant colleagues to address these and other issues as we move into this new century. In particular, we highlight six goals and provide particular steps toward achieving these goals.

The Goals and Objectives of the Sea Grant National Communications Network Strategic Plan 2001-2005

Sea Grant Communications has numerous strengths, along with a unique combination of rapid response capability, programmatic flexibility, cost-effectiveness, and a national network allowing for both “top down and bottom up” organizational strength. These represent significant competitive and operational advantages over most other federal programs — and provide considerable potential for niche definition and resource growth in future federal coastal and ocean agendas. For example, Sea Grant communications offers:

- More than three decades of successful experience in collaborative efforts.
- A program that gets things done, has a track record for relevance, and is known for quality in products/services.
- A reputation for objectivity and credibility in information transfer, which is especially important in light of the abundance of information which has instant accessibility on the Web.
- Highly motivated and competent network of more than 400 experienced extension, communications, and education professionals nationwide.
- Access to expertise, facilities, and constituencies not always readily available to other organizations.

In updating the Communications strategic plan through 2005, communicators took considerable time reviewing and reconsidering the goals and pertinent objectives and implementation strategies outlined in the 1993 strategic plan. While there has been significant progress, the goals themselves are still important to the network's communications. In addition, this 2001 document considers recent changes in the program evaluation process and other updates to the national Sea Grant efforts. A discussion of each goal follows, with objectives and action steps for the five-year period.

GOAL 1: Strengthen the Sea Grant National Identity

As Sea Grant positions itself as the national leader in coastal science, we must strive to reinforce the program's identity across the country. Sea Grant should be known for its results that benefit not only coastal residents but the entire nation. Individual Sea Grant programs are known for strong track records in coastal research, education and outreach. In particular, each program has identified and responded to many marine and coastal issues on the state and local levels. Sea Grant should build upon that success — and recognition — as more regional and national issues are addressed. The “image” of Sea Grant is reflected in our reputation — and reinforced through a shared graphic identity program that is already in place.

Objective 1: Determine and assess current perceptions of Sea Grant.

- Mine the PAT reports to identify valuable insight into the perceptions of Sea Grant by various user groups.
- Evaluate potential survey formats to determine the perception of Sea Grant among various audiences on the national level and provide recommendations to the National Office and the Sea Grant Association on the most cost-effective survey options.

Objective 2: Work in concert with the Sea Grant Association to clearly define the Sea Grant identity.

- Provide our professional communications skills and knowledge of the Sea Grant programs to present cohesive messages from the national and individual programs.
- In particular, work on the concise “elevator message” that describes Sea Grant.

Objective 3: Encourage full acceptance and more effective use of the National Sea Grant Graphic Identity Program.

- Update a Sea Grant ftp site to include all possible uses of logos, offering versions compatible with most popular graphics programs. The site is currently housed on the Alaska Sea Grant site, but that does not limit this effort to the Alaska Sea Grant program.
- Link the logo ftp site with National Sea Grant site.
- Advertise ftp site to ALL Sea Grant folks for easy access when logos must be shared with partner agencies, etc.

Objective 4: Encourage network-wide acceptance and effective use of common Sea Grant descriptors/identifiers online.

- Continue placement and updates of Sea Grant Regional Web pages online. Uniform regional pages can link to diverse individual program pages.
- Encourage and assist the national office, SGA and other program components in developing sites that include common identifying elements that reinforce the Sea Grant “branding.”

GOAL 2: Increase National Visibility for the Network

In addition to the Internet, Sea Grant must continue information delivery via more traditional methods — developing and maintaining relationships with news media and distributing printed publications at special events. Biennial Reports serve the National Sea Grant Office and the Sea Grant Association; along with a Sea Grant general brochure completed in 2000. These documents should be updated on a regular basis, with information and visual content supplied by communicators. They should be placed on the Web for ready access by the network and the public.

Sea Grant visibility and credibility at the national level depend largely on the continued success of the National Media Relations Project. Issue forums, press briefings, news tip sheets, Sea Grant’s *Guide to Coastal Science Experts*, and responsiveness of the National Media Relations Office make Sea Grant an important resource for news reporters and other interested audiences such as environmental groups, legislative staff, lobbyists and industry representatives. The mass media remain the main source of environmental science information for most Americans. Thus, the National Media Relations Project is vital to fulfilling Sea Grant’s mission of contributing to the scientific literacy of the general public.

Objective 1: Determine the need, purpose and message for national Sea Grant information products.

- Draw upon the professional expertise of Sea Grant communicators to effectively deliver information and enhance Sea Grant’s identity among key audiences. The CSC’s Publications Task Group should be involved in the conceptualization, implementation and delivery of National Sea Grant communications products.
- Consider the variety of formats, including emerging options, needed for each product.

Objective 2: Maintain and support the goals and objectives of the National Media Relations Project.

- Raise collective visibility in the news media, thus contributing to the understanding of scientific issues by the reporters, editors and producers, thereby meeting the network’s strategic goal of “assuring an environmentally and scientifically informed citizenry.” Communicators in each program provide the critical link for connecting national media, via the National Media Relations Office, with research and outreach experts throughout the coastal and Great Lakes states. The media relations project will consider highlighting different Sea Grant topics each year in order to provide cohesive packages that demonstrate the strength of the local and national programs.
- Expand and update the Sea Grant Media Center Web site with substantive content. This requires a commitment of resources by the Sea Grant Network, and particularly a ready supply of information and specific links from Sea Grant communicators. The National Media Relations Project is directed by an Advisory Committee (NMRAC), which includes representatives of the Sea Grant Association, the National Sea Grant Office, the Sea Grant Extension Assembly, the National Sea Grant Communications Network, the National Sea Grant Review Panel, as well as an outside communications professional. The national media relations coordinator also participates as an ex-officio member of the Communicators Steering Committee (CSC) and communicates regularly with the Sea Grant Communicators Network.
- Assess needs and opportunities in the greater Sea Grant Network for the potential development of communications outreach. The national media relations coordinator and the CSC can lead this effort. For special events or publications, the national media relations coordinator may work with standing task groups to enhance and support program efforts.

Objective 3: Enhance Sea Grant's visibility and position among relevant professional peer and constituency groups.

- Effectively deliver Sea Grant science through a presence in various science and professional arenas. To raise Sea Grant visibility among specific target audiences, attend professional association or interest group meetings, network with participants, and exhibit Sea Grant publications and activities. The National Media Relations Project identifies and attends such meetings regularly to provide the greatest exposure to media interested in marine and coastal science issues. As a network, communicators should coordinate attendance and encourage presentation of Sea Grant research and products at national meetings, specialized briefings, including legislative hearings, and events to increase Sea Grant's national visibility.
- Utilize the National Sea Grant display as another tool to achieve this objective. It is managed by the National Sea Grant Office and should be reviewed and updated periodically.
- Attend and actively participate in events or recruit others from the network, such as researchers and Extension advisors, as appropriate. These events may be selected through interaction/ cooperation with the national media relations coordinator, the National Sea Grant Office efforts and the CSC Subcommittee on Conferences, Exhibits and Special Events. All could suggest target events where Sea Grant participation would have the greatest impact on national visibility.

GOAL 3: Foster Partnerships to Leverage Resources and Results

If Sea Grant is to grow, it must look outward to sources that can augment core funding from the national office. We must enhance, diversify, and leverage our communication resources with those groups that most identify with the Sea Grant mission.

Sea Grant has a great opportunity to build new partnerships and forge new alliances to realize the vision of the National Sea Grant College Program. We can expand our collaborative communications efforts with partners who support Sea Grant research and outreach. Communicators have worked in the national sphere to develop high-quality products that underscore our successes and represent Sea Grant as a smart investment in the future of our nation's coasts.

There are special concerns related to funding development. In forging new partnerships we must ensure that new alliances are compatible with national and individual program priorities. By reducing its focus on internal issues, Sea Grant can begin thinking "outside the box" for opportunities to strengthen its alliances with coastal programs within NOAA and other agencies. Thus, we should consider the particular opportunities presented for each program within its own institutional structure.

Objective 1: Pursue partnerships for funding and shared effort with other groups whose interests and priorities overlap; explore opportunities among federal, state, and local organizations while maintaining the integrity of the Sea Grant mission.

- Leverage efforts and resources to increase effectiveness. This does not always mean specifically seeking funding. Sea Grant has earned the trust and credibility that attracts potential partners and collaborators. Sea Grant best presents its capabilities and strengths in pilot projects that encourage others to seek us out. In any new partnership or collaborative effort, we must make sure that Sea Grant maintains a leadership role in a process that ensures Sea Grant does not lose sight of primary national and programmatic priorities.
- Maintain productive relationships and forge new collaborations by direct contact through phone conversations, talking to people at meetings, and connecting with prospects one-on-one. "Prospects" might include state environmental resource agencies; nonprofit organization leaders in science, education, citizen volunteers and activist groups; media; and others. This means actively seeking regular opportunities to present Sea Grant, "sell" the Sea Grant concept and its past accomplishments, and foster recognition that Sea Grant's motives match those of the new collaborators and partners. It is also important to be cautious about turning into simply a "job shop" for other groups and agencies.
- Offer enthusiasm — it is contagious and effective when backed up by consistent performance. Personal connections are key. Encourage staff in their connections with potential partners, provide the resources and backup, and keep all promises and agreements.

Objective 2: Actively participate in National Strategic Investment and Initiative opportunities through participation on theme teams.

- Join Theme Teams, the wave of the future for Sea Grant. They define the program's top priorities and the way that Sea Grant will "do business." Sea Grant's evolving mission will increase emphasis on the Theme Team concept — a format in which communicators play active roles in concert with colleagues from all aspects of the Sea Grant program.

- Work with the Sea Grant Association via the theme teams. Together, we may identify funding sources that meet national goals, with an emphasis on communications and relationship-building activities.

Objective 3: Identify and pursue grant opportunities from nontraditional sources.

Traditionally, Sea Grant has relied almost entirely on its federal and state funding. In the past, these funds have been leveraged by state programs using traditional methods such as joint projects and additional agency grants. However, in many cases this has only provided a static funding base without much growth. There are resources to tap — agencies and groups that have much in common with Sea Grant. State and federal government agencies, as well as foundations, interest groups, and other non-governmental organizations, are concerned with environmental quality, sustainability, science, and environmental education. These are the same areas where Sea Grant has a credible and laudable track record. One obstacle to seeking such funds is simply tracking down sources, an often time-consuming and painstaking task. Sea Grant — and especially the communications network — needs to be proactive and innovative in building the funding base by employing new techniques and going after nontraditional collaborations. Such actions not only will raise the attractiveness of Sea Grant and its mission, but also will encourage others to join — and contribute funding towards — our efforts.

- Host professional development sessions at Sea Grant Week that provide assistance in pursuing nontraditional grants and effective grant-writing techniques.
- Hone development skills among all in Sea Grant communications through talent sharing and education in ongoing internal communication and dialogue.
- Explore options for a central resource, such as a Web site, that aggregates information about funding and partnership opportunities. This will include “case studies” of various proposals and results — both positive and negative.
- Tap university and institutional offices, such as research, publications, and public relations departments.

GOAL 4: Increase National Availability and Access to Sea Grant Information

Increasing access to and availability of Sea Grant information is central to the program’s mission. This information should be disseminated through all appropriate means including video, radio, print, special events/exhibits and the World Wide Web. We can leverage our communication efforts through links with NOAA and partnerships with the public and private sectors.

Objective 1: Increase visibility of the Sea Grant Library, which currently houses a centralized database of Sea Grant-funded documents and products. It is key to increasing accessibility and availability of Sea Grant information.

- Continue efforts to digitize the Sea Grant collection, including training and support for individual programs to provide products in .pdf format that is searchable rather than simply scanned as a large graphic.
- Increase marketing of services.
- Ensure that the library is linked to the proposals that a searchable project database be developed on the national level.

Objective 2: Web sites must be made accessible to people with disabilities by conforming to state and federal requirements.

- Investigate current regulations and monitor changes.
- Keep network alerted to ongoing requirement changes through listserv discussions, workshops and updates of the Sea Grant web guidance document.
- Encourage the state and national network leaders to build time and funds into budgets for staff training and implementation of these requirements.

Objective 3: The utility and method of distribution of the Sea Grant Abstracts should be examined.

- Participate in ongoing discussions within the greater Sea Grant network regarding the role of Sea Grant Abstracts and how it fits with the national library services.

Objective 4: Many Sea Grant products could be better marketed through a national operation with a centralized office and warehouse for accepting orders.

- Investigate appropriate agencies and explore funding for such a project.
- Engage the Sea Grant Association and National Office regarding product marketing discussions.

Objective 5: Develop partnerships to reach larger audiences through methods such as listservs.

- Build stronger bonds with extension and educators through joint planning meetings.
- Increase collaboration with the national media relations specialist.
- Investigate being added to partners' listserv.

Objective 6: Ensure widespread circulation of theme team materials.

- Provide updated materials to Congressional offices and various agencies with the federal government, especially as leadership changes occur.
- Provide materials to other partners on the national, state and local levels.
- Consider Web opportunities to provide more immediate updates of theme team information; develop a template and format for consistent presentation of Sea Grant theme team information on the Web.

Objective 7: Web policy should change as technology evolves.

- Seek annual reviews of Web policy by the electronic task force within the communications network steering committee.
- Ask the task force to suggest professional development regarding the Web and related arenas to be provided during regional and national Sea Grant meetings, and encourage attendance by all who focus on Web activities.
- Encourage programs to send Webmasters to technical training workshops to develop skills.

GOAL 5: Improve Internal and External Communication and Collaboration to Strengthen the Sea Grant Network

The National Sea Grant College Program (NSGCP) consists of various entities, including: The National Sea Grant Office in NOAA's Office of Oceanic and Atmospheric Research (OAR), the National Sea Grant Review Panel (NSGRP) of presidential appointees, and the Sea Grant Association, which includes delegates from each of the 30 university-based Sea Grant Programs. The programs support research and provide outreach through extension, education and communication projects. Extension leaders have a national assembly, communication leaders have a national network, and education leaders have a national committee. Planning and working together, these groups can accomplish a great deal.

Internal and external communication and collaboration are essential if the overall Sea Grant network is to continue growing at a pace commensurate with the nation's need for marine-related information. However, internal communication and collaboration is a continuing challenge for Sea Grant because of the program's complex structure and varied operating arrangements at the local, regional and national levels.

External communication and collaboration are also essential elements of this effectiveness because Sea Grant's mission and mandate far outstrip the public resources allocated to them. Initiating appropriate alliances with other agencies, organizations and institutions and responding appropriately to others' initiatives can produce great progress and public benefit. The potential for alliances exists within NOAA, the Department of Commerce, other federal agencies and programs, as well as stakeholder organizations, educational institutions, and not-for-profit groups.

This strategic goal seeks to improve Sea Grant's effectiveness through internal and external communications and collaboration by focusing energy on practical actions based on the belief that unity is strength and that communication is a partnership effort, a two-way street.

Objective 1: The National Sea Grant College Program will enhance internal communications and collaboration.

- Communicators will be represented in each of the Theme Teams and will be active in the team process.
- The communications network will offer to sponsor joint professional development programs with other components of Sea Grant's overall network. In addition, we will provide liaisons to each of these groups, and seek their input.
- Members of all Sea Grant groupings can subscribe and post messages to the e-mail list serves of the other components.
- The communications network encourages development of a user-friendly Intranet site, which would feature, among other things, policy statements, RFPs and funding procedures, including standard grant forms, proposal summaries, products in development, Web site guidelines, minutes of the various entities (SGA, SGRP, Extension Assembly, communicators' network, educators committee, etc.) theme team developments, the Making a Difference database, and other items designed to facilitate communication. Location of the site could be determined in concert with the SGA and the national office.

- Assist the national office in developing a communications center that would include products necessary to rapidly respond to requests for information. The center could include hard copies as well as a virtual library.

GOAL 6: Chronicle Communication Advances Through Technical Assessment Practices

All Sea Grant Communication offices will work to actively assess and update systems of evaluating their program efforts. These systems will be founded on principles and standards of evaluation developed by the Sea Grant Communications Network. Individual Sea Grant programs will apply those principles/standards with the goal that evaluations be widely understandable, comparable between and among programs, fair and credible. Through the documentation and presentation of credible evaluation, Sea Grant Communication programs can demonstrate their accountability and substantial value to both internal and external interests/stakeholders.

Effective evaluation practices explicitly tie communication projects to desired objectives and outcomes with target audiences. By assessing the outcomes of activities, programs discover their value to others and may thereby improve performance. Ultimately, the ability to credibly portray the effectiveness and appropriateness of communication efforts figures into rigorous review of each program, which influences future program direction and funding. External interests, including constituents, legislators and the public as a whole, have legitimate concerns in knowing that public funds have been expended wisely.

Objective 1: Improve documentation of results/outcomes of projects.

- Provide professional development programs on evaluations.
- Share productive evaluations with other Sea Grant programs.
- Regularly survey and report on existing communications evaluation methods and procedures for all Sea Grant programs;
- Follow trends in methodologies and procedures, such as tracking databases;
- Describe opportunities to assess qualitative vs. quantitative evaluations;

Sea Grant communicators are integral players in the overall Sea Grant mission of sharing science-based approaches to resolving pressing coastal issues. We recognize that in order to obtain these goals and objectives, we must work with other aspects of the Sea Grant network, on the national and state levels.

APPENDIX N

Compiled from the Sea Grant Communications Network (reflects information as of 1/1/02)

Committees and Activities of the Sea Grant Communications Network

1. **The National Sea Grant Communications Network Steering Committee:** This Steering Committee acts as the Communications Network's Executive Committee, serves as a link to the National Sea Grant Office, SGA, Extension Assembly, etc., and meets several times a year via conference call, or in person. Committee membership includes Marilyn Barrett-O'Leary, Chair, (LA Communicator); Barbara Branca, Chair-Elect (NY Communicator); Katie Mosher, Past-Chair (NC Communicator); Mac Rawson, (GA SG Director, SGA representative); Ben Sherman (Director, SG National Media Relations Project); Victor Omelczenko (NSGO Communications Director); Jeff Stephan (Communications Liaison, National Sea Grant Review Panel); Jay Rassmussen (OR SG Extension, Liaison, Sea Grant Extension Assembly); elected representatives from each Sea Grant region (Northeast, Mid-Atlantic, Southeast/Gulf, Great Lakes and Pacific); and representatives of various Sea Grant committees, task forces and other entities.
2. **National Media Relations Steering Committee:** The Sea Grant National Media Relations Project is supported by a grant from South Carolina Sea Grant, promotes Sea Grant activities and accomplishments in various topical areas, executes a national media strategy, and coordinates closely with the NSGO and individual communications programs in executing these and other Project objectives. Ben Sherman, National Media Relations Coordinator, administers the Project from the National Media Relations Office in Washington, D.C. (located in the National Press Building). The National Media Relations Steering Committee provides advice and guidance to this project with respect to Project objectives. Steering Committee membership includes Judy McDowell (WHOI SG Director, completing her term as Chair); Mac Rawson (GA SG Director); Jim Cato (FL SG Director), Rick Devoe (SC SG Director); Jeffrey Stephan (Communications Liaison, National Sea Grant Review Panel); Bob Bacon (Past Chair, SG Extension Assembly; SC Extension); Katie Mosher (Past-Chair of the Sea Grant Communications Steering Committee; NC Communicator); Ron Baird, (Director, National Sea Grant College Program; one of two representatives from the NSGO); Victor Omelczenko (NSGO Communications Director; one of the two representatives from the NSGO); Shelly Lauzon, (WHOI; the outside media relations advisor); and three SG Communicators (and PIs for this project): Jack Greer (MD Communicator), Marsha Gear (CA Communicator), and Linda Blackwell (SC Communicator)
3. **Geographic Regional Communications Committees:** These regional committees (Northeast, Mid-Atlantic, Southeast/Gulf, Great Lakes and Pacific) meet via conference call and at national meetings (Sea Grant Week and the off-year meetings). Some regional committees also coordinate meetings with the regional Extension groups (i.e.: Great Lakes met in September, 2001; Mid-Atlantic met in October, 2001.). These regional committees collaborate on topics where they can combine resources to create products of a regional nature. Examples include aquatic nuisance species items in the Great Lakes and Gulf, and information on *Pfiesteria* produced by the Mid-Atlantic group. Regional Representatives include Sheri DeRosa (WHOI), Northeast; Sally Mills (VA), Mid-Atlantic; Tim Reid (MS/AL), Southeast/Gulf; Marie Zhuikov (MN), Great Lakes; and Phyllis Griffman (USC), Pacific.
4. **Virtual Learning Task Force:** This is a joint task force of the Sea Grant Communications Network and Extension Leaders, and addresses the exploration and development of opportunities and resources for the imaginative and productive applications of electronics in achieving Sea Grant outreach and education objectives (i.e.: video conferencing, etc.), and the development of a pilot education project. This Task Force includes four persons representing the Communications Network, four persons representing the Extension Leaders Assembly, many with web experience, and includes participation from the Chair and Chair-Elect of the Sea Grant Communications Network. Co-Chairs of this Task Force are Paul Focazio (NY) representing the Communications Network, and Judy Lemus (USC) representing the Extension Assembly.
5. **Sea Grant Message Task Force:** This task force addresses the continuing need to promote the visibility of Sea Grant. This includes the investigation of opportunities that expand the use, impact and effectiveness of the existing Sea Grant slogan, "Science Serving America's Coast." The Sea Grant Message Task Force is considering a complete package of Sea Grant descriptions, messages and slogans that promote and represent Sea Grant on a variety of levels, including such use in media presentations, and with respect to several specific Sea Grant topical and theme areas. Task Force membership includes Marie Zhuikov, Chair (MN); Steve Wittman (WI); Tim Reid (MS/AL); Angela Correa (VA); Ben Sherman

(National Media Relations Director); Jeff Stephan (National Sea Grant Review Panel); Victor Omelczenko (NSGO Communications Director); Jay Rasmussen (OR; Liaison, Sea Grant Extension Assembly); and the Chair and Chair-Elect of the Sea Grant Communications Network.

6. **Theme Teams Committee:** This Committee provides support and coordination to the individual program Communicators who serve on the nine Sea Grant National Theme Teams, and is also responsible for coordinating the production of national Theme Team publications, such as the “two-pagers” that are used to describe the Theme Teams. The Theme Team Committee meets during national sessions, and conducts conference calls as needed. Committee membership includes, Steve Wittman, Chair (WI) — Ecosystems and Habitat Theme Team; James Hiney (TX) — Aquaculture; Peg Van Patten (CT) — Coastal Communities & Economies; Linda Blackwell (SC) — Coastal Natural Hazards; Timothy Reid (MS/Al) and Tracey Bryant (DE) — Education & Human Resources; Kurt Byers (AK) – Fisheries; Andrea Cohen (MIT) — Ocean & Coastal Technologies; Katie Mosher (NC) and Marilyn Barrett-O’Leary (LA) — Urban Coasts; Marsha Gear (CA) — Seafood Science & Technology; member pending – Biotechnology.
7. **Electronic Task Force:** This Task Force addresses the development of protocols and guidelines for Sea Grant Web sites on the World Wide Web. The Task Force provides technical and professional guidance to Web personnel in individual programs regarding Web design, audience needs and other technical issues that face Sea Grant Webmasters and Communicators as they work to enhance the role and identity of Sea Grant on the Web. The Webmasters List Serve provides an avenue for programs to support each other, and a format for the discussion of resources, database and other Web-related technical issues. The Electronic Task Force organizes professional development sessions during various Sea Grant meetings, including the National Sea Grant Communications Network conference, Sea Grant Week, etc. Susan Cook (WA), and Dan Jacobs (MD) are Task Force Co-Chairs.
8. **Publications and Identity Task Force:** This task force works with the NSGO with respect to the coordination of national publications (i.e., Biennial Reports, special brochures, etc.). Linda Blackwell (SC) is the Task Force Chair.
9. **Video Task Force:** This task force meets as needed to support Sea Grant activities and projects that include video. The Video and Radio Task Forces work together to develop and coordinate professional development sessions, and other special activities such as “Video Night” at Sea Grant Week. Joe Cone (OR) is the Task Force Chair.
10. **The Radio Task Force:** This task force meets as needed to support Sea Grant activities and projects that include radio. The Video and Radio Task Forces work together to develop and coordinate professional development sessions, and other special activities such as “Video Night” at Sea Grant Week. Rich Hoops (WI) is the Task Force Chair.
11. **Exhibits and Events Committee:** This committee collaborates with the National Media Relations Steering Committee and the NSGO to identify special events and conferences at which Sea Grant’s activities and accomplishments can be presented, such as the Congressional Oceans Day, or the annual/biennial meetings of the American Association for the Advancement of Science, Coastal Zone Management, and the Society of Environmental Journalists. This committee is also charged with the creative development, design, production and staging of exhibits that are used to promote Sea Grant at these and other events nationwide. Malia Schwartz (RI) is the Committee Chair.
12. **Sea Grant Communications Fellowship Task Force:** This task force is developing a project to provide communications fellowships to graduate students from a science or humanities discipline to obtain professional science writing experience. Because science writing is an integral part of Sea Grant’s success, such an experience will be of direct and indirect benefit to Sea Grant goals by increasing the science writing skills of those involved in research with respect to marine and coastal environments. Priscilla Billig (HI) is the Task Force Chair.

APPENDIX O

Sea Grant Web Sites of Communications Significance

(A Selected List)

1. The Sea Grant National Communications Network Strategic Plan 2001-2005 (revised 12/10/91)

< http://www.scseagrant.org/events/events_sgweek_homework.htm>

< http://www.scseagrant.org/events/events_homework_commdraft.htm> (html version)

< <http://www.scseagrant.org/homework/SGcommplan.doc>> (MS Word version)

2. Suggestions and Recommendations of the Sea Grant Communicators; Sea Grant Week 2001, Hilton Head, SC - March 28, 2001

< http://www.scseagrant.org/events/events_followup_comm.htm>

3. "Getting the Sea Grant Message Developed and Out: A Strategy"

What are Sea Grant's strengths in terms of internal and external communications? What areas need clearer focus? Can Sea Grant develop core messages useful for a variety of audiences? In recent years, various elements of the Sea Grant network have pondered the program's overall message and image. These excerpts reflect common efforts to enhance Sea Grant's visibility and solidify the program's identity.

< http://www.scseagrant.org/events/events_sgweek_homework.htm>

< http://www.scseagrant.org/events/events_homework_message.htm> (html version)

< http://www.scseagrant.org/homework/message_handout.doc> (MS Word version)

4. Sea Grant News Media Center

< <http://www.seagrantnews.org/>>

The Sea Grant Media Center is operated by the Sea Grant National Media Relations Office, and is funded by the Sea Grant National Media Relations Project. This site provides access to the world of marine research and resources available through the National Sea Grant College Program, and links to state Sea Grant program websites, as well as to other environmental and marine science resource sites. This site provides resources for members of the news media, researchers, educators and the public.

5. National Sea Grant Library

< <http://nsgd.gso.uri.edu/>>

The National Sea Grant Library (NSGL) houses the only complete collection (including 28,000 titles and a total of 84,000 documents) of Sea Grant funded work, and provides easy access to the wealth of information that is generated by Sea Grant. The NSGL maintains a 33,000 record bibliographic database that is searchable from this website. Citations and abstracts of Sea Grant publications, and in many cases a full text copy of a publication, are available on the NSGL website. NSGL documents cover a wide variety of subjects, including oceanography, marine education, aquaculture, fisheries, limnology, coastal zone management, marine recreation and law.

6. National Sea Grant College Program Office

< <http://www.nsgo.seagrant.org/>>

7. Sea Grant Theme Teams Home Page

< http://www.seagrant.wisc.edu/communications/national/theme_teams.html>

8. The 30 Sea Grant Programs

(The Sea Grant Programs Grouped By Region)

< <http://www.nsgo.seagrant.org/NationalSeaGrant.html>>

9. Sea Grant: Science Serving America's Coasts; A Message to the Bush/Cheney Transition Team from the Sea Grant Network; January 2001; National Sea Grant Review Panel and The Sea Grant Association.

< http://www.scseagrant.org/events/events_sgweek_homework.htm>
< http://www.scseagrant.org/events/events_homework_transdoc.htm> (html version)
< <http://www.scseagrant.org/homework/SeaGrantTransition.doc>> (MS Word version)

10. Sea Grant Association Retreat 2000; "Sea Grant in the 21st Century: A Vision for Success"

Landsdowne Conference Center, Leesburg, VA, July 18-20, 2000
< http://www.scseagrant.org/events/events_sgweek_homework.htm>
< http://www.scseagrant.org/events/events_homework_retreatsum.htm> (html version)
< <http://www.scseagrant.org/homework/RetreatSummaryFinal.doc>> (MS Word version)

11. Byrne Report Executive Summary: "A Mandate to Engage Coastal Users; A Review of the National Sea Grant College Extension Program and A Call for Greater National Commitment to Engagement"; November 2000; The National Sea Grant Extension Review Panel

< http://www.scseagrant.org/events/events_sgweek_homework.htm>
< http://www.scseagrant.org/events/events_homework_byrne1.htm> (html version)
< <http://www.scseagrant.org/homework/ByrneReportExecSumm.doc>> (MS Word version)

12. Sea Grant Association

< <http://www.sga.seagrant.org/index.html>>

