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***NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION***

*Administrative Improvements in the
National Sea Grant College Program
Should Accompany Program Changes*

Inspection Report No. IPE-10150 / July 1998

Office of Inspections and Program Evaluations



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EXECUTIVE SUMMARY

The National Sea Grant College Program, modeled after the Land Grant College System, was created by the National Sea Grant College Program Act of 1966 to link research, education, and outreach to further the development and preservation of marine resources. The program was established in the National Science Foundation in 1967 and moved to the National Oceanic and Atmospheric Administration (NOAA) in 1970. Sea Grant is designed to address marine and coastal issues and practical problems by applying both the natural and social sciences and by transferring technology. The program has concentrated on marine policy, aquaculture, coastal research, fisheries management, marine biotechnology, and seafood safety. The program provides annual umbrella “omnibus” grants to 29 approved primary member colleges, which in turn manage projects at more than 300 public and private colleges, universities, and institutions.

The Sea Grant program is administered by a 17-person National Sea Grant Office (NSGO), made up mostly of marine and ocean scientists, in NOAA’s Office of Oceanic and Atmospheric Research. A 15-member Sea Grant Review Panel, appointed by the Secretary of Commerce, serves in a broad advisory role over the program. The Sea Grant program received \$53.3 million in federal funds in fiscal year 1996 and \$54.3 million in fiscal year 1997. Sea Grant appropriations are used to fund NSGO, nationwide research competitions, and grants to 29 sea grant university programs. Awards made to sea grant universities require, at a minimum, a nonfederal match equaling 33 a percent, or more, of the total cost of the sea grant program or project involved.

After initiating our review of the Sea Grant program, we found that widespread changes are underway, as NSGO implements a number of recommendations from a comprehensive 1994 National Research Council (NRC) study. Hence, we reduced the scope of our review and have focused on certain administrative issues. As appropriate, we may revisit the Sea Grant program after the major changes have been implemented. Our observations from the abbreviated review include the following:

- **National Sea Grant College Program is making progress in implementing National Research Council recommendations.** By most accounts, the NRC study was comprehensive, had insightful findings, and offered some important and useful recommendations. We found that NOAA is implementing five of six major recommendations of the NRC study. NOAA did not concur with the recommendation to move the National Sea Grant College Program out of a line office to the Office of Under Secretary of Oceans and Atmosphere. The most important recommendation, in our opinion, is the significant change in the roles and responsibilities of NSGO and the university-based sea grant programs. In accordance with this recommendation, sea grant universities will take responsibility for peer-reviewed project selection. NSGO is establishing guidelines and will oversee and evaluate the sea grant university project

selection process but will no longer perform reviews on projects selected by sea grant universities. NSGO will now concentrate on overall program oversight through a comprehensive, results-oriented program review linked to enhancement of funding. Beginning in 1998, these reviews of sea grant universities will involve high-level assessment teams on a four-year cycle, topical area reviews, and performance reporting. To further program coherence, NSGO and Directors of the sea grant universities have developed a single 10-year strategic plan that articulates a shared vision and also reflects NOAA's strategic plan. The sea grant strategic plan places new emphasis on closer work with marine industries. The national program intends to devote about 20 percent of the Sea Grant program budget to NSGO determined and legislatively mandated priorities.

Given the aforementioned changes in the program, we have two general concerns: First, we question whether NSGO will be able to effectively fulfill its oversight responsibilities given the congressionally mandated five-percent cap on NSGO administrative expenditures. To help stay within the cap, NSGO will undergo staffing reductions of at least 26 percent from its 1990 staffing level. NSGO staff must continue to evaluate, monitor, and synthesize the results of 29 sea grant universities and coordinate the overall sea grant efforts within NOAA. The adequacy of NSGO staffing should be revisited once the new evaluation process is in place.

Second, with less oversight of sea grant university funding decisions, we question whether the shift in accountability for project selection to the sea grant universities might lead to a diminished role of NSGO and to less coherence and direction for the program. It is important that NSGO not abdicate its responsibility to ensure that sea grant funds are directed to NOAA's overall objectives as well as NSGO's legislatively mandated research topics and that the funds are spent appropriately. We believe that a continued strong focus on the national dimension of the program is needed to ensure that the entire program is more than simply the sum of its constituent sea grant universities. NSGO must exert leadership, identify best practices, and use its new evaluation process to help encourage further improvements in performance, and oversee the best use of funds (see page 6).

- **Marine Extension Program should benefit from the new results-oriented program review process.** The Marine Extension Program (MEP), made up of coastal extension specialists and agents, is supposed to serve as a link between university researchers and a wide variety of coastal resource managers, marine businesses, and citizens to address real life problems and issues. Despite the importance of the extension role, neither NSGO nor the NRC has conducted a comparative review of sea grant university extension programs. The NSGO evaluation process now underway intends to look at "best practices" across all the sea grant universities. NSGO should also ensure that the review focuses on the effectiveness of marine extension services, and recommends improvements in those

extension programs whose organizational arrangements and techniques are generally not associated with the most productive, integrated, and dynamic MEP programs. Programmatic attention to the MEP is long overdue (see page 11).

- **Improved coordination between the Sea Grant program and other line offices must become a NOAA priority.** Sea Grant needs to be more deeply involved in bringing scientific talent from the universities to bear on management problems of the nation's coastal areas and adjacent oceans. Sea Grant, located in the Oceanic and Atmospheric Administration (OAR), is one of the few major NOAA marine science programs that has not been drawn into the National Ocean Service's (NOS) newly established Office of Coastal Ocean Science. As a result, more effective coordination is still needed between Sea Grant and those line offices devoted to resource management--the NOS and the National Marine Fisheries Service (NMFS). A good start toward such collaboration has been made at the project level through the creation of Sea Grant/NOAA Partnership competitions, but more needs to be done regionally and at the agency level. Regular meetings between the Assistant Administrators and pertinent staff from OAR, NOS, and NMFS should be conducted to ensure coordination between the line offices, to foster cooperative activities of their respective partners at the local and state level, and to better utilize National Sea Grant College Program resources, such as the marine extension networks and scientific expertise, to accomplish their common marine and coastal goals (see page 14).
- **Grant processing workload can be better managed.** All 29 sea grant awards are awarded on February 1 or March 1. As a result, NOAA's Grants Management Division (GMD) and NSGO must process all sea grant university proposals from November through February, with a considerable portion of GMD's work having to be completed during the December/New Year holiday season. The grant process is now very compressed and stressful. In order to improve the process, the proposals should be received by NSGO on time, properly reviewed, and forwarded to GMD on a staggered basis. In addition, NSGO program specialists must be available to answer questions during the GMD review period. Finally, multiple amendments for the same grant should be grouped together to reduce the paperwork and time spent processing amendments (see page 17).
- **Oversight role of the Grants Management Division needs to be strengthened.** Each sea grant award is a four-year grant that covers numerous university projects, is often amended to include new projects, and draws on multiple funding sources (e.g., Sea Grant, nonfederal matching, and funding from other NOAA programs and federal agencies that are "passed-through" NSGO to the sea grant university). As a result, it is difficult for NSGO and GMD to track the obligation of funds from the multiple sources as they relate to the individual projects and activities. NSGO must ensure that the sea grant universities

are spending Sea Grant and pass-through funds appropriately by issuing pass-through funds as separate grants, collecting information from the sea grant university on the breakdown of federal spending, or independently assessing the sea grant universities' accounting systems. In addition, relevant interagency agreements or Memoranda of Understanding should be included with the pass-through proposals when they are submitted by NSGO to GMD (see page 19).

- **Policy on grantee matching funds needs to be clarified.** Sea Grant is a cost-sharing program, with the sea grant universities contributing 33 a percent nonfederal matching funds of the total cost of the project or program. Funds from other NOAA line offices or federal agencies, passed through NSGO to the sea grant university, do not need to be matched. However, for sea grant appropriations, a sea grant university proposal, for either an entire program or a project, must identify how its nonfederal share will be met. Amendments for pass-through funds or for new projects are typically added during the life of a conventional four-year grant. The unwritten policy is to apply the cumulative match in the grant against the cumulative amount of sea grant federal funds. However, it is difficult to determine whether match requirements are being properly met because there is no convenient summary in the files providing cumulative matching information. To ensure a more accurate and traceable recording and accounting for nonfederal matching funds, NSGO should issue written policy guidance which clarifies its matching policy. In addition, all award proposals forwarded to GMD should include a record of (1) the exact amount of pass-through funds used that are not subject to the cost sharing requirements of the sea grant federal funds and (2) the amount of Sea Grant federal funds involved and the status of the match, per NSGO policy (see page 23).

On page 25, we offer recommendations that address our concerns.



In responding to a draft of this report, NOAA's Deputy Chief Financial Officer/Chief Administrative Officer agreed with the report observations and all but two of our recommendations. NOAA has informed us that it has either taken steps that satisfy the intent of a majority of the recommendations or will implement changes in the near future. However, NOAA did not agree with one section of recommendation 4 and, at least for the present, recommendation 5. In addition, NOAA, while agreeing with recommendation 6, suggested a different approach for complying with the recommendation.

With regard to recommendation 4, NOAA concurs with our suggestions to expedite the processing of sea grant awards. NOAA will move forward, by two weeks, the submission date for grants with a March 1 start date, to alleviate the end-of-calendar year leave problems. NOAA will also study methods to ensure that the grants will be delivered to GMD in a complete and

satisfactory manner. We believe that steps can be taken to forward the incoming grant proposals as they come in, once they have been thoroughly reviewed by NSGO. NOAA does not agree, however, that amendments should be grouped together and sent to GMD on a quarterly basis, citing that the advance time needed to do so decreases program flexibility. While we agree that a quarterly basis might be inadequate, another schedule, such as six or eight times a year could be implemented. In any case, we feel it is not an efficient use of GMD's time to have amendments arrive on an irregular basis and ask that NOAA reconsider its position (see page 18).

In recommendation 5, NOAA did not agree to issue separate grants for pass-through funds or to require the sea grant universities to submit a financial form with a breakout of spending by funding type "at the present time." NOAA states that "undertaking further analysis of the problems and recommended solutions" is required. We are requesting that NOAA provide us with the results of the analysis it intends to conduct (see page 21).

In recommendation 6, NOAA, while agreeing that GMD should help assess and improve sea grant university administrative procedures and processes, does not agree that the current program evaluations should be expanded to encompass administrative procedures and processes. NOAA instead believes that topical assessment teams will provide opportunities for on-site administrative reviews. While that may be true, we believe such opportunities will be limited because the assessments will be conducted on an as needed basis and only when, in the case of grant management, administrative deficiencies are identified. Therefore, we suggest that if topical assessments are going to be the primary mechanism for an on-site review, GMD should be given the opportunity to join the assessment team or initiate an assessment, if warranted (see page 22).

NOAA's response is synopsisized after each chapter and its complete response is included as an appendix to this report.

INTRODUCTION

Pursuant to the Inspector General Act of 1978, as amended, the Office of Inspector General evaluated the National Sea Grant College Program. Program evaluations are special reviews that the OIG undertakes to provide agency managers with information about operational issues. One of the main goals of an evaluation is to eliminate waste in government by encouraging effective, efficient, and economical operations. By highlighting areas for operational improvement, the OIG hopes to help managers avoid problems in the future and move quickly to address the issues identified during the evaluation. This evaluation was conducted in accordance with the *Quality Standards for Inspections* issued by the President's Council on Integrity and Efficiency. Our field work was conducted during the period August through October 1997. During our evaluation and upon its conclusion, we discussed our observations with the Assistant Administrator for Oceanic and Atmospheric Research, as well as with the Director, National Sea Grant College Program, and other senior program officials.

PURPOSE AND SCOPE

The purpose of this evaluation was to determine whether the National Sea Grant College Program, which is administered by NOAA's Office of Oceanic and Atmospheric Research (OAR), is achieving its goals as determined by the National Sea Grant College Program Act of 1966.

During our review, we analyzed relevant documents, legislation, data, prior studies, and earlier OIG reviews. We held extensive discussions with representatives from NOAA, the Ocean Studies Board of the National Research Council (NRC), and the executive director, president, and president-elect of the Sea Grant Association. To gain insight into the scope and operations of the programs at the university level, we visited sea grant programs in Maryland and Wisconsin and conducted phone interviews with sea grant university directors, officials, and staff, marine professionals and customers from the sea grant programs in Alaska, Delaware, Florida, Georgia, Louisiana, Maine/New Hampshire, Mississippi/Alabama, North Carolina, Ohio, Oregon, and Texas. On August 10 - 13, 1997, we attended the semiannual Sea Grant Conference held in Madison, Wisconsin, where we spoke with sea grant university personnel and members of the Sea Grant Review Panel. We also spoke to representatives of the Department of Agriculture (USDA) Cooperative Extension Service, and academic experts in maritime and coastal research.

In response to a request by Commerce's Under Secretary for Oceans and Atmosphere in 1994, the NRC conducted a review of the Sea Grant program to determine whether the program could be improved. NOAA accepted five of six major recommendations of the NRC report and the Sea Grant program is working to implement them. As a result, the program is undergoing a major transition. Therefore, we scaled back the scope of this review because we did not wish to evaluate programmatic areas undergoing significant changes. The recommendations of this

review, therefore, primarily concern administrative rather than programmatic issues. We intend to revisit the Sea Grant program in about two years, after the major changes have been fully implemented.

BACKGROUND

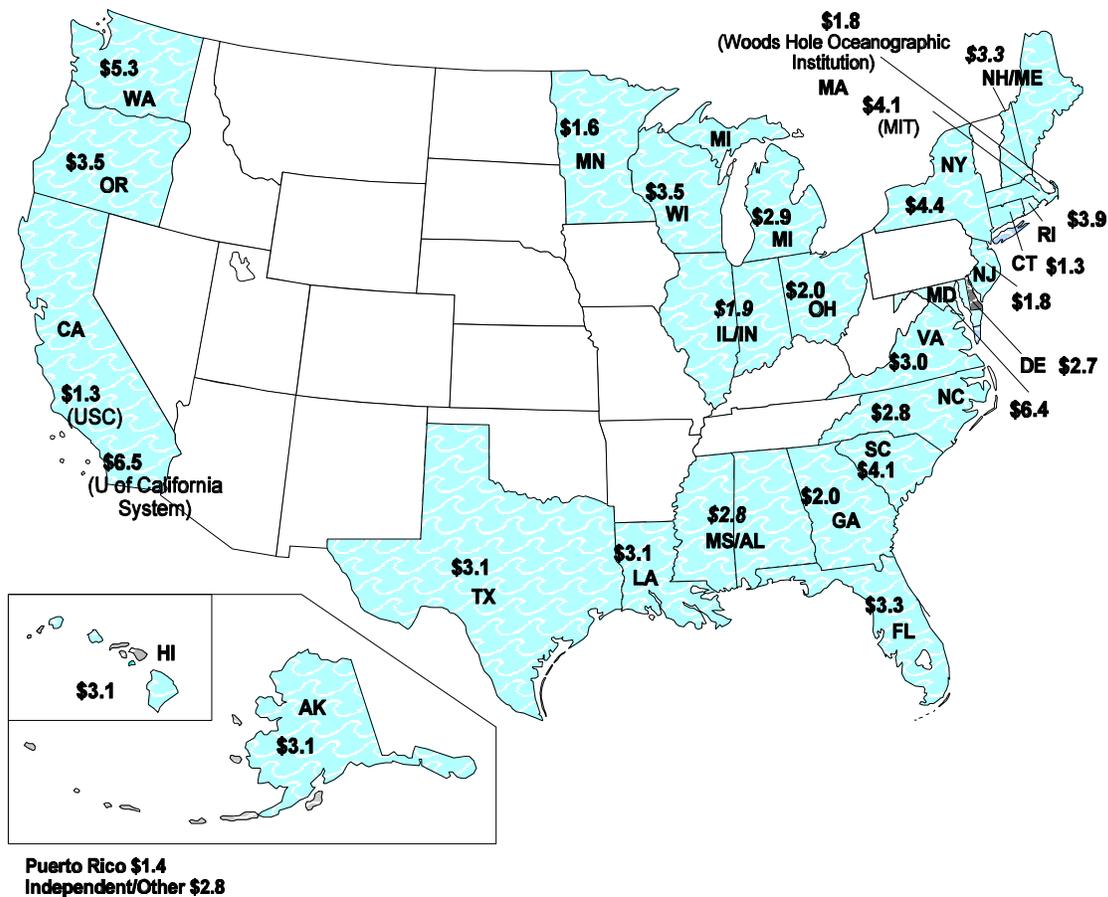
The National Sea Grant College Program, modeled on the Land Grant College System, was created by the National Sea Grant College Program Act of 1966. Both programs are university-centered efforts to link research, education, and outreach to further the development and preservation of either agricultural resources (in the case of Land Grant) or marine resources (in the case of Sea Grant). Sea Grant, established in the National Science Foundation, awarded its initial grants in 1968. In 1970 Sea Grant was incorporated into the newly created NOAA, along with other programs focused on the ocean and coastal zone. The mission of the Sea Grant program, as set forth in 33 U.S.C. §1121(b), “is to increase the understanding, assessment, development, utilization, and conservation of the Nation’s ocean and coastal resources by providing assistance to promote a strong educational base, responsive research and training activities, and broad and prompt dissemination of knowledge and techniques.”

Sea Grant, therefore, goes beyond basic ocean science research. It is a broad networked program designed to address issues and solve problems by combining both the natural and social sciences, and employing the transfer of knowledge and technology. Since its inception, support for the program has varied. Every year, from 1983 to 1990, the program was eliminated from the President’s budget, but had its funding restored each time through strong congressional support.

NOAA, through the National Sea Grant Office (NSGO), provides annual grants to 29 primary member universities. The majority of federal Sea Grant funding requires a 50-percent nonfederal match. In other words, of the total funding, two-thirds is provided by NOAA and one-third by the sea grant university programs. The match may include both in-kind contributions and nonfederal funds. Additional funding from other NOAA line offices or federal agencies, referred to as “pass-throughs,” does not require a match. During fiscal year 1997, the sea grant universities received \$52 million in federal sea grant funding, provided \$32 million in matching funds (exceeding the match requirement), and accepted an additional \$10 million in pass-through funds. Figure 1 shows participating states with the total amount of funding (federal sea grant, grantee match, and pass-through) received by the sea grant university in fiscal year 1997. California and Massachusetts have more than one designated sea grant program in their states, while three pairs of states--Illinois and Indiana, Maine and New Hampshire, and Alabama and Mississippi--are joint sea grant programs.

Figure 1

National Sea Grant College Program: Fiscal Year 1997 Total Funds (in millions) per Sea Grant University



While other marine granting organizations support basic research, Sea Grant is charged with research, education, and outreach. The 29 sea grant university programs use the federal and matching funds to support these activities. The 1994 NRC study found that the average distribution of funds per sea grant university, from 1983 to 1990, was 44 percent to support research at more than 300 public and private colleges, universities, and institutions; 32 percent to support salaries, travel, and materials for advisory services; 17 percent for administration and program development; and 7 percent for education. Education is loosely defined as support for undergraduate and graduate students, materials for the general public or for students in primary or secondary grades, and training for teachers or other members of the labor force in marine

industries. The actual sea grant university support of education is most likely greater because, for accounting purposes, many institutions place graduate student support under research.

Sea Grant has been a source of funding for such areas as marine policy development and research, aquaculture, coastal research, fisheries management, marine biotechnology, environmental technology, and seafood safety. The 29 sea grant universities are responsible for requesting proposals, conducting peer reviews, selecting awardees (who are sub-grantees known as “principal investigators”), and administering the funds in accordance with the federal, state, and college, university, or institution guidelines. In 1997, 729 subgrants were awarded to principal investigators, with an average award of about \$77,000 (this figure does not include the nonfederal matching share).

The extension service that links research to the users in the community is the component of the Sea Grant program that makes it a unique marine granting program. The Sea Grant Marine Extension Program (MEP), formerly known as the Marine Advisory Service, is modeled after the Land Grant system. Each program supports salaries, travel, and materials for five to 10 marine extension agents and outreach specialists. The extension personnel are located around the state, often co-located with the county agriculture cooperative extension agents.

At the federal level, the Sea Grant program is currently administered by the 17-person NSGO made up of marine and ocean scientists and support staff. Most of NSGO professional staff are marine and ocean scientists of various academic specialties who monitor approximately four sea grant universities each. The Sea Grant Review Panel, whose 15 members are appointed by the Secretary of Commerce, serves in a broad advisory role to the Secretary, NOAA’s Under Secretary for Oceans and Atmosphere, and to NSGO director.

Sea Grant awards run for four years. The initial award is based on a two-year “omnibus” proposal that includes institutional support and individual research. Funding, however, is provided for only one year, with a tentative commitment to fund at a specified level for the second year, as covered in the omnibus proposal. Over the four-year period, amendments to the grant are made that may include fellowship awards; projects that originate at the national level, generally referred to as National Strategic Investments (NSI); pass-through funding for projects from other NOAA line offices or federal agencies; and omnibus proposals covering the third and fourth year of the grant. An example of a grant and the amendments to the award is outlined in Figure 2 on the following page. The figure lists the grant actions that have occurred from January 1995 through September 1997 for the Delaware sea grant university program.

Figure 2

<u>Grant actions</u>	<u>Date</u>	<u>Pass-through/ non-matching funds</u>	<u>Sea Grant funds</u>	<u>Non-federal match</u>
Initial award- First year funding of 2-year omnibus proposal	1/31/95	\$25,039	\$1,072,000	\$1,251,394
Amendments				
1- NSI (marine biotechnology)	2/15/95		75,000	7,609
2- Post doc fellow	5/18/95	52,600	56,700	0
3- Competitive increase	7/20/95		338,500	126,319
4- NSI (oyster disease)	9/6/95		165,069	14,949
5- Fisheries projects & services	1/26/96	9,000	250,000	312,241
6- Second year omnibus funding	3/12/96		777,000	936,724
7- NSI (marine biotechnology); competitive increase	7/18/96	716,734	75,000	235,594
8- NSI (oyster disease)	9/25/96		109,934	16,058
9- HBCU aquaculture project	9/25/96		50,000	25,462
10- First year funding of new 2-year omnibus proposal	1/31/97		1,259,999	1,221,261
11- Multi-agency near shore water level project	5/30/97		18,000	0
12- Estuarine water research	7/19/97	40,000	0	0
13- NSI (oyster disease)	9/19/97		116,859	11,756
14- HBCU aquaculture project	9/23/97		50,000	35,583

OBSERVATIONS AND CONCLUSIONS

I. National Sea Grant College Program Is Making Progress in Implementing National Research Council Recommendations

In 1994, NRC's Ocean Studies Board conducted a review of the Sea Grant program, focusing primarily on the research component of the program's mission. As a result of the NRC study, NSGO is shifting its efforts away from a *project* selection role to a more results-oriented *program* review of the sea grant university programs. The current NSGO director, hired in 1996, was a former member of the Sea Grant Review Panel. We were told that because of his prior involvement with the program, he was able to "hit the ground running" and actively begin implementing all but the first of the six NRC study recommendations, which proposed moving the Sea Grant program directly under the NOAA Under Secretary for Oceans and Atmosphere. We concur with NOAA's decision, however, that the Sea Grant program should remain in a line office. The remaining NRC recommendations and NOAA's implementing actions follow:

Strategic Planning. The NRC recommended that the directors of the sea grant universities and NSGO develop a single strategic plan articulating a shared vision that reflects NOAA's strategic plan. Such a plan was developed over a period of 20 months in conjunction with the Sea Grant Review Panel and NOAA line office managers. Furthermore, each sea grant university either is working on, or has completed, a strategic plan for its program. The combined national and sea grant university strategic plans will be updated, at least, every four years. All of the plans will incorporate the NOAA strategic plan initiatives. One sea grant director stated that developing the strategic plan was a valuable exercise in defining his program's "niche." In addition to a strategic plan, the sea grant universities will submit a two-year implementation plan with their omnibus proposals.

Clarifying Roles and Responsibilities. The NRC recommended that the NOAA Under Secretary clarify the roles of the sea grant universities, the Sea Grant Review Panel, and NSGO. As a result of this recommendation, the roles and responsibilities of NSGO and the sea grant university programs have significantly changed. NSGO will, as the NRC study suggested, concentrate on overall program monitoring, while the sea grant universities will be responsible for administering peer reviews and conducting selection panels to choose individual projects for sea grant funding.

Another recommendation went into more detail about the future roles of NSGO and the sea grant universities with regard to proposal review and program evaluation. Specifically, the NRC suggested that (1) NSGO project-level (subgrantee) review process be eliminated; (2) the sea grant university be responsible and accountable for a valid, peer

review project-level selection process; (3) NSGO conduct a four-year program evaluation; and (4) the Sea Grant Review Panel evaluate NSGO on the same cycle.

NSGO focus has shifted toward an overall program review approach to managing the Sea Grant program. In 1998 NSGO will no longer review the individual research proposals selected by the sea grant universities. Instead, NSGO is establishing guidelines for, and will evaluate sea grant universities on, their project selection processes. The guidelines require mail peer reviews and a panel, consisting of experts, to evaluate and prioritize the projects to be funded. NSGO staff attend, as “ex officio,” non-voting members, the project selection panel for the sea grant universities they are responsible for monitoring. Their presence on the technical panel is intended to ensure that the review is properly conducted and to question the rationale for selections, where appropriate. In addition, peer review training, based on the training of National Science Foundation officers, is going to be made available to the sea grant universities. The training will cover conflicts of interest, grants and contract law, signature authority, and other “best practice” techniques.

These changes are further supported by the National Sea Grant College Program Reauthorization Act of 1998 which states that the NSGO director shall “evaluate the programs of sea grant colleges and sea grant institutes, using the priorities, guidelines, and qualifications established by the Secretary” and that sea grant institutions shall “conduct a merit review of all proposals for grants and contracts to be awarded [with sea grant appropriations].”

NSGO is developing an evaluation program in which all 29 sea grant universities will be visited within a four-year cycle. The composition of the evaluation teams will consist of leaders in the marine field, at least one member with experience in university administration, and Sea Grant Review Panel members. The evaluation team will assess (1) the overall productivity and accomplishments of each sea grant university relative to the program’s strategic plan and level of support, (2) the program’s overall scientific strength, (3) the quality and effectiveness of the outreach and educational activities, (4) the effectiveness of planning and the achievement of stated goals and objectives, (5) the link between research, education, and outreach, (6) the program’s position and role in its academic setting, (7) affiliations with other sea grant university programs, state and regional academic institutions, state and federal agencies, and the private sector, (8) industrial and user group relations, and (9) based on the above, the program’s potential for growth. The first round of evaluations are scheduled to begin in the spring of 1998. In addition to the formal four-year evaluation, the new strategy is intended to strengthen annual performance reporting; provide for yearly reviews, as-needed, of specified areas or topics (e.g., a new biotechnology initiative on diseases in aquatic

organisms); and emphasize continuous dialogue between the NSGO program officers and the sea grant universities they are responsible for monitoring.¹

Interactions with Industry. NRC also called for NSGO and the sea grant universities to greatly increase their interactions with the marine industry in terms of program policy guidance, expanded outreach, joint research projects, and increased industrial financial support. To speed up the rate of technology transfer, for instance, NRC said that “[s]tate programs should consider funding joint industry-university research projects aimed at industry-identified constraints to growth and competitiveness.” Sea grant universities will be evaluated on their links to industry and user groups. Implementation of this recommendation is emphasized by the top priority Sea Grant’s 10-year strategic plan gives to developing advanced commercial marine biotechnologies and environmental technologies, research and education in seafood production, and coastal economic development.

Funding. The final NRC recommendation suggested that any funds above the Sea Grant program base appropriation go towards a (1) merit-based enhancement of the sea grant universities and (2) small number of larger grants awarded on nationally competed research topics. In response to meritorious enhancement, NSGO will, as part of the four-year evaluation cycle, give a merit-based “bonus” to programs that rate very high on the evaluation criteria. In response to national research competitions, NSGO will issue “requests for proposals,” conduct peer reviews, and convene panels to make decisions on nationally competed research priorities. Currently, these research competitions account for about 20 percent of the funds given to the sea grant universities. National strategic investments include funds earmarked for specific programmatic areas (e.g., oyster disease research, non-indigenous species research) and NSGO priorities, such as the NOAA/Sea Grant partnership grants.

We recognize that NSGO and its sea grant university partners are undergoing a major transition as they implement the NRC recommendations. Because of the numerous changes anticipated and currently underway, we believe that a full-scale OIG review of the Sea Grant program would be more valuable about two years from now.

However, we do have some issues. We are concerned that the 26 percent reduction in staff, driven primarily by a congressionally mandated administrative cap, will hamper NSGO’s ability to fulfill its oversight responsibilities. Since 1991, NSGO staffing has declined from 28 to 17, although three new people will be joining the office soon. The professional staff has been reduced from 14 to 7, although the new hires will increase that number to 10. The reductions are

¹B. Griswold, B. J. Copeland, and C. Fetteroff, Memorandum to the National Sea Grant College Program, July 30, 1997, page 12-14. See also F. Graham, “Policy Document on the Implementation of Program Evaluation in the NSGCP,” Draft, October 3, 1997.

primarily a result of the legislative caps placed on the Sea Grant program's administrative funding. NSGO staff said that former method of individually assessing and reviewing all proposed research projects would be impossible to do given current staff size. Thus, both the NRC recommendations and reduced staffing have compelled NSGO to redefine its oversight responsibilities. NSGO must continue to monitor the performance of the sea grant universities, synthesize the results of 29 programs in a way that adds value, and coordinate Sea Grant within NOAA and other federal departments and agencies. The adequacy of NSGO staffing should be revisited once the new evaluation process is in place.

Second, with less oversight of sea grant university funding decisions, we are concerned that the shift in accountability for project selection to the sea grant university programs might lead to a diminished role of NSGO and to less coherence and direction for the overall program. The decision has been made to shift the accountability for project selection entirely to the sea grant university programs. As a consequence, spending decisions on about 80 percent of the Sea Grant budget are now made almost entirely by the sea grant universities. Unfortunately, some sea grant university directors continue to express a narrow self-interest, preferring small increases to the university program base rather than competing nationally for larger amounts, as evidenced by the opposition towards non-earmarked, nationally decided competitions voiced during Sea Grant Week.

We also heard from NSGO staff that sea grant universities often resist comparison with one another and tend to be adverse to general standards. However, Sea Grant can resist "one-size-fits-all" standards and still generate and adopt comparative best practices for sea grant universities with, for example, large versus small budgets or staff. The national office can aid the sea grant universities in adopting best practices, thus providing the necessary national leadership to strengthen the program's effectiveness.

Even though the sea grant universities have been given increased latitude to determine projects and the shape of their programs, we recommend that NSGO not abdicate its overall responsibility to ensure that sea grant funds are directed to NOAA's overall objectives as well as NSGO's legislatively mandated research topics. NSGO must also ensure that the funds are spent appropriately. We believe that a continued focus on building a national Sea Grant program is needed to ensure that the entire program is more than simply the sum of its constituent sea grant universities. Finally, NSGO needs to exert leadership, identify best practices, and use its new evaluation process to help encourage further improvements in performance and oversee the best use of funds.



In responding to our draft report, NOAA agreed with this recommendation. It stated that as a result of adopting new procedures, in response to the changes required by the 1998 reauthorization bill, it will have a clear presence and leadership role in several key program areas such as the oversight of the peer review process, the conduct of the merit-based program evaluation, the allocation of resources to the Sea Grant program, the management of national strategic investments, the determination of best management practices, and involvement in the strategic planning at NOAA and the Sea Grant network level. These actions meet the intent of the recommendation.

II. Marine Extension Program Should Benefit from the New Evaluation Process

The NRC review focused on, for the most part, the roles and responsibilities of the NSGO. It did not include a thorough review of sea grant university activities, including the Marine Extension Program. The distinctiveness of Sea Grant, compared with other marine granting programs, is its linkage of research to education and outreach. While other government agencies, such as the Office of Naval Research and the National Science Foundation, support marine-related research, Sea Grant is the only broad marine-related grants program that links the above functions, following the time-tested land grant model.

MEP, formerly known as the Marine Advisory Service, was funded at \$8,722,351, with an additional \$6,091,444 in nonfederal matching, in fiscal year 1996. MEP's mission is to facilitate the wise use, conservation, and development of coastal and marine resources by acting as a conduit between university researchers and a wide variety of citizens. This conduit works in two directions (1) conveying the needs of marine and coastal communities to scientific researchers and (2) transferring information, research results, and technology to ocean and coastal resource managers, coastal business owners, and other resource users at the local level. Extension is accomplished through applied research projects, workshops and training seminars, and consultation. The extension staff use the publications, video tapes, and other media produced by sea grant communications specialists in their outreach efforts.

During our review, we spoke with extension program directors or representatives from the Alaska, Delaware, Florida, Georgia, Louisiana, Maine/New Hampshire, Mississippi/Alabama, North Carolina, Ohio, Oregon, and Texas sea grant universities and three resource managers in NOAA and one in USDA who works with the various sea grant entities. We also spoke to eight MEP customers, all but one of whom strongly supported the work of the MEP. We found that MEP engages in a range of activities such as the following:

- An Alaska sea grant MEP agent was on the scene within hours of the Exxon oil spill in Prince William Sound to help mobilize fishermen and women and equipment to protect some of the world's most productive salmon hatcheries.
- Sea grant researchers and MEP staff were early leaders in aquaculture to help boost this fastest growing sector of U.S. agriculture. Texas sea grant pioneered the redfish and shrimp cultivation techniques used today and Louisiana sea grant developed land-based water circulation systems for the soft-shelled crab.
- A Georgia sea grant MEP helped shrimp boat owners overcome their initial resistance to comply with the requirement to install Turtle Excluder Devices. The MEP determined which device design reduced the shrimp catch loss and then trained the boat captains to install and use the device.

- Great Lakes sea grant extension staff work with boaters and anglers to slow the spread of quick-reproducing, non-native Zebra mussels. These highly destructive mussels are responsible for clogging the intake pipes of treatment plants and power generating stations.
- A South Carolina MEP surveyed homes destroyed in the wake of Hurricane Hugo and recommended better building techniques and code enforcement to help reduce damage from future hurricanes or floods.

One common theme that we heard from customers, MEP Directors, and NSGO staff is that Sea Grant, because of its university base and scientific basis, functions as an impartial voice of reason. Among marine and business communities, where environmental issues and government regulations can be contentious, the extension service is seen as an unbiased source of expert information.

We found considerable variation among the extension programs. The number of extension agents and specialists in the programs ranged from five to 18. There appeared to be little correlation between the size of the coastal area and the number of extension staff. Six of the 11 extension programs sampled were situated at Land Grant universities and thus collocated with the USDA-supported Cooperative Extension Service. Programs collocated with the Cooperative Extension Service tend to have larger staffs and, following the land grant model, more involvement at county and local levels. We also discovered that some marine extension staff at the collocated programs report to the university's dean of agriculture rather than the university's sea grant director. We have been told that in many cases where this occurs, the sea grant director has little or no direct control over the extension personnel in the program. Finally, the variation in the type and use of local outreach advisory efforts was significant. Some sea grant programs had a separate extension advisory committee that assisted with identifying coastal and marine outreach priorities. Other sea grant programs had a proliferation of local advisory committees for each agent or geographic location and still others were guided by the overall sea grant university advisory committee. We did not determine which arrangement best meets local and regional needs.

Even though the extension function makes the Sea Grant program unique, MEP programs, until recently, have been evaluated only within the context of their sea grant universities. According to the memorandum accompanying the *Report on Evaluations of Sea Grant College Programs*, the new evaluation process will "identify and stimulate best-management practices for improvements in performance of the Sea Grant Network as a whole."² Taking note of the variation in size, history, organization, and program of the extension services at each sea grant

²B. Griswold, B. J. Copeland, and C. Fetteroff, page 2.

university, the evaluation will assess performance and identify the “best practices” of the most productive, integrated, and dynamic marine extension programs. While the specific state and local context has to be taken into account, the identification and sharing of best practices across programs can serve to speed up the sharing of ideas for systematically improving programs. For instance, MEP staff have to reach out to various public and private interests in the community to promote and improve such areas as seafood safety, coastal and environment water quality, sustainable marine industries, preparation for coastal hazards, and coastal recreation and tourism. MEP programs can be compared and evaluated according to their ability to flexibly field a wide range of initiatives and techniques to address changing priorities and problems.

Despite the fact that a comparative review of the extension function across sea grant universities is overdue, we decided not to undertake a full review of MEP while a comprehensive new Sea Grant evaluation process is being developed. However, given the importance of the extension service to Sea Grant, and the fact that it has not been evaluated across programs until now, we are concerned that this function may be overshadowed by research. We also are concerned about MEP’s dual lines of reporting to both the sea grant directors and the Cooperative Extension Service. The chain of command should facilitate, not hinder, the operations of MEP and its links to the overall Sea Grant program. We believe increased programmatic attention to MEP is long overdue. Therefore, we recommend that NSGO ensure that the new Sea Grant evaluation process focuses on the effectiveness of marine extension services, and recommends improvements in those extension programs whose organizational arrangements and techniques are generally not associated with the most productive, integrated, and dynamic MEP programs.



In its response to our draft report, NOAA agrees with the recommendation and states that the new evaluation procedures “call for the review of outreach and extension activities by Program Assessment Teams” and that the review “will determine how well the outreach program is integrated into the Sea Grant program and how effective it is in meeting the Sea Grant and NOAA strategic plan goals.” NOAA also said that outreach leaders will attend nationally conducted leadership training workshops “to facilitate the adoption of best management practices” and that it will formulate protocols for the development and review of outreach and extension proposals. If completed, these actions meet the intent of our recommendation.

III. Improved Coordination Between the Sea Grant College Program and Other Line Offices Must Become a NOAA Priority

Sea Grant and other elements of NOAA face the ongoing challenge of effectively linking and applying science to the management of resources of the coastal zone and coastal ocean.³ The extent of this challenge has been noted in NOAA and NRC reviews, and in a recent OIG review of NOAA's Coastal Zone Management Program (CZMP).⁴ It is an essential role of NSGO to help frame and identify NOAA priorities; to address problems identified by CZMP, the National Marine Fisheries Service (NMFS), and other resource management programs within the National Ocean Service (NOS); and to encourage and direct sea grant universities to work on these problems. Sea grant university scientists often prefer to do basic research and to explore fundamental or far-reaching questions, but they should also do more to focus their scientific knowledge and methods on questions of resource management.⁵

To help ensure that NOAA's statutory mandates for coastal management and resource protection are properly implemented, the Under Secretary for Oceans and Atmosphere acted upon the recommendations of the Coastal Stewardship Task Force in July 1997. As a result, a number of NOAA science offices were consolidated into a new Office of Coastal Ocean Science within NOS. This office is made up of existing NOS monitoring, assessment, technical assistance, and oceanographic survey programs, as well as the formerly stand-alone Coastal Ocean Program and the Great Lakes Environmental Research Laboratory program, which was recently transferred from OAR.

The Under Secretary and NSGO director discussed the possible move of Sea Grant to NOS, but this has not happened, in part due to the opposition of the sea grant program directors, the Sea Grant Association, and the Sea Grant Review Panel. While there may be valid reasons not to move Sea Grant out of OAR, the problem of systematic coordination within NOAA, particularly between OAR, NOS, and NMFS, must be resolved. For example, the NOS Office of Coastal

³Within NOAA, only the National Marine Fisheries Service and the National Ocean Service are primarily devoted to resource management. Other line offices and programs have far greater proportions of their budgets devoted to science, prediction, and assessment.

⁴U.S. Department of Commerce, Office of Inspector General, *Coastal Zone Management and National Estuarine Research Reserve System Programs Require Management Attention to Increase Effectiveness*, Report No. IPE-9044, December 1997, pp 9-12. See also National Research Council, *Science, Policy, and the Coast*, National Academy Press, Washington DC, 1995; NOAA *Coastal Stewardship Task Force Report*, July 1996; National Ocean Service, *Healthy Coastal Ecosystems and the Role of Integrated Coastal Management*, February 1995.

⁵See Science and Information Management Issues Report of the Interagency Ecosystem Management Task Force, November 1995. *The Ecosystem Approach: Healthy Ecosystems and Sustainable Economies*, Volume II, November 1985, pp. 47-68.

Resource Management, through CZMP, holds the congressional mandate to coordinate all federal activities in the coastal region. Therefore, the coordination of NOS with Sea Grant, one of the main mobilizers of university talent for NOAA, is especially important. CZMP and NMFS both need the Sea Grant program to focus more of its attention on management-oriented coastal science, so that resource managers are able to learn what strategies, methodologies and, treatments work best on a host of complex problems, such as aquatic diseases, water quality, coastal hazards, beach and shoreline erosion, and habitat restoration and protection.

Some coordination efforts have already been made. To strengthen Sea Grant's academic linkage to other parts of NOAA, NSGO set aside \$500,000 for an initial round of competitive NOAA/Sea Grant partnership grants. The objectives of the partnership-funded projects are to both increase the leverage of Sea Grant resources and focus university capabilities on issues of strategic importance to both Sea Grant and other NOAA line organizations. The projects will be funded by the Sea Grant program, with the sea grant university nonfederal match, and either in-kind contributions or funds equal to the sea grant amount provided by the NOAA line office.

The response to the first round of solicitations was enthusiastic. For the available \$1 million of funding (\$500,000 for two years), NSGO received 63 proposals requesting a total of \$7.3 million. Funding was available for 11 awards, five which are in collaboration with NOS, four with NMFS and two with OAR. NSGO is promoting a number of the highly rated, unfunded projects to the line offices for consideration of further support. Another on-going activity is the cooperative efforts between state coastal zone management programs and the sea grant university programs. NRC reported that "In many states, sea grant personnel have formed strong ties with local coastal management personnel and with local and regional NOAA personnel." The work of sea grant extension staff, we learned, often complements the work of NOAA or state CZMP field personnel who have regulatory responsibilities. Unfortunately, we also learned that cooperation is often uneven and personality-driven.

While these partnerships create excellent opportunities for collaboration at the project level, overall coordination is still needed between NSGO, NMFS, and the NOS. One method of enhancing collaboration is by detailing employees to NSGO. Until recently, a NOAA Corps officer was detailed to NSGO, an arrangement that NSGO said facilitated communication about Corps activities. Currently, plans are underway to locate an NMFS employee in NSGO. NMFS will pay for the salary that NSGO is unable to, due to the administrative cap, while NSGO will provide the full-time equivalent slot for the employee. Arrangements such as this could be made with other NOAA offices.

OAR, where Sea Grant resides, should reach out to NMFS and NOS to clarify and prioritize Sea Grant national initiatives. OAR and NSGO should be coordinating with other NOAA line offices to identify potential issues to be addressed, reinforce national strategic investments, and avoid duplication. Sea Grant should also play a greater role in setting NOAA priorities. Sea

Grant's well-developed marine extension network is ideally situated to gather and disseminate information about needs and priorities. Because all offices are busy, unless such coordination is a priority, it will likely not get done. Therefore, a formal avenue for fostering coordination is necessary. We recommend that NOAA ensure that regularly scheduled meetings between the Assistant Administrators and relevant staff of OAR, NOS, and NMFS are held to discuss current and future research priorities, foster partnership activities of their respective partners at the local and state level, and to better utilize Sea Grant program resources to help accomplish NOAA's numerous marine and coastal goals.



NOAA agreed with this recommendation in its response to our draft report, and has already taken actions to fully implement the recommendation. A Science and Technology Task Group within Sea Grant, whose members include senior administrators from OAR, NOS, NMFS, and the NOAA Chief Scientist, will meet biannually to advise the Sea Grant Director on strategic research and technology development issues. In addition, the Sea Grant Director and OAR Assistant Administrator are formulating a plan that establishes a formal mechanism among the various elements of NOAA, for the purpose of improving the outreach and the more efficient utilization of the university-based capabilities in the department. We would appreciate receiving a copy of the plan for review when it is available.

IV. Grant Processing Workload Can Be Better Managed

The timely processing of awards is both a goal of the Grants Management Division (GMD) and an expectation of NSGO and the sea grant university programs. Until this year, sea grant proposals were submitted throughout the year on a staggered basis. This was changed to facilitate joint reviews, where all sea grant university grantees receive funding at the same time, and to accommodate GMD's need to reduce the number of fourth quarter grant actions. It was decided that all awards would be made, in part to take advantage of GMD's slower period, by either February 1 or March 1. Since GMD requires two months to complete its award processing, NSGO must submit the proposals by the first of December or January. Therefore, GMD's processing of all sea grant university proposals takes place during December through February, with a considerable portion of GMD's work having to be completed during the December/New Year holiday season. According to OMB regulations,⁶ prior to the notification of an award, recipient organizations may incur obligations and expenditures at their own risk for up to 90 days to cover costs. While this provision takes some of the pressure off GMD staff, tardiness of any award, especially the omnibus proposal, creates uncertainty and anxiety among program recipients and principal investigators and some disruption to their plans.

There can be several impediments to the timely awarding of a grant. Late submission of the proposals to NSGO by the sea grant university program is the first possible impediment. NSGO waits until several proposals are ready before dropping them off to GMD. The enormous workload that is created when award proposals arrive at the same time is another problem. Because GMD needs to review multiple voluminous sea grant university proposals that each include 10-25 separate research projects and applicable budgets, it is easier if the university proposals are submitted on a staggered basis, rather than grouped together. When a number of grant packages arrive at once, the heavy workload strains GMD, particularly since that staff has been reduced from 14 to 8 full-time grants specialists with little or no reduction in the grants processing workload.

Finally, GMD staff must direct numerous technical and administrative follow-up questions to the NSGO program specialists who oversee specific grantees. Yet, both the personnel at the sea grant universities and NSGO staff are often on leave during the holiday period and unavailable to answer questions. This brings the grant review process to a temporary halt, making it difficult for GMD staff to finish processing all grants by the target dates. To reduce this logjam, we recommend that NSGO make every effort to get the proposals to GMD by mid-November and, to assist with the staggering of the workload, forward the proposals as they come in. In addition, NSGO should conduct a thorough review of the proposals, including the budgets, and be available during a portion of the GMD review period to answer any follow-up questions.

⁶OMB Circular A-110, *Uniform Administrative Requirements for Grants and Agreements With Institutions of Higher Education, and Other Non-Profit Organizations*, November 19, 1993 (revised).

Some improvements can also be made to better manage the review process for sea grant amendments. Amendments submitted by the sea grant universities proposing additional new projects or fellowships, or enabling the flow of pass-through funds, are often not grouped together. Rather, they come into GMD on an irregular basis throughout the year. This can cause delays when multiple amendments for a given university are not submitted together. Either the paperwork on the first amendment is pulled back to include the subsequent amendment, resulting in the need to recalculate the figures and prepare new paperwork, or two separate amendments are issued, often doubling the amount of time and paperwork. We believe that it would be much more efficient if the numerous sea grant amendments were grouped together and submitted to GMD on a quarterly or other regular basis. Implementation of this recommendation would expedite issuing the awards and save time for GMD, NSGO, and the grantees.



NOAA concurs with parts of our recommendation to expedite the processing of sea grant awards. The submission date for grants with a March 1 start date will be moved forward two weeks, a change that should alleviate the end-of-calendar year leave problems. NOAA will also study methods to ensure that the grants will be delivered to GMD in a complete and satisfactory manner. We accept that the current arrangement of a March start date should stay the same; however, we believe that steps can be taken to forward the incoming grant proposals as they come in, once they have been thoroughly reviewed by NSGO. Historically GMD receives several proposals at once rather than spread out over a week or two. We request that NOAA, in its action plan, describe what mechanisms it will put in place to ensure that the proposals arrive in the grants office in a timely and complete manner.

We also ask that NOAA reconsider its position on forwarding grant amendments to GMD. NOAA does not agree that amendments should be grouped together and sent to GMD on a quarterly basis, citing that the advance time needed to do so decreases program flexibility. While we agree that a quarterly basis might be inadequate, another schedule, such as six or eight times a year could be implemented. In the past, the sea grant universities submitted proposals to NSGO six times a year on the first day of October, December, February, April, May, and August. While this particular schedule may have flaws, an alternative schedule could be developed. We feel it is not an efficient use of GMD's time to have amendments arrive on an irregular basis. Therefore, we request that NOAA reconsider and develop a schedule for submission of amendments, unless it can be documented that there will be a significant decrease in the number amendments due to other actions, such as the processing of pass-through funds as separate grants.

V. Oversight Role of Grants Management Division Needs to Be Strengthened

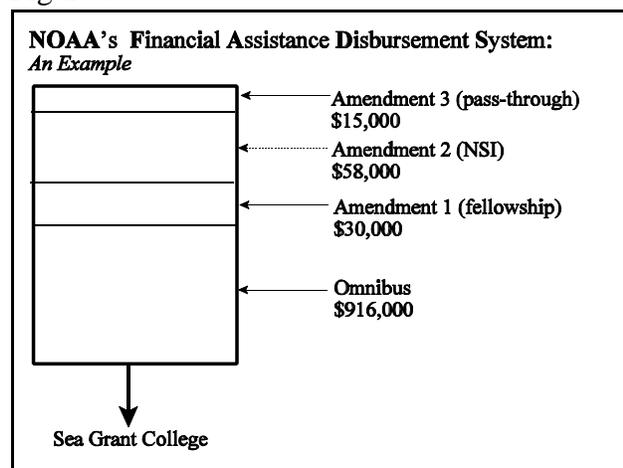
Financial oversight of the sea grant awards is conducted by GMD, not NSGO. GMD is responsible for supporting NOAA program offices by reviewing award proposals, processing applications, negotiating awards, managing the administrative and financial aspects of awards, monitoring progress against expenditures, resolving audit problems, and closing out the grant when its projects have been completed. During fiscal year 1997, GMD processed over 1,000 NOAA awards totaling \$357 million for about 300 recipients, including the 29 sea grant universities.

While GMD is responsible for providing effective control over, and accountability for, the outlay of federal funds, its oversight is hampered by some of the grants' unique characteristics. The sea grant award does not fit the standard departmental grant through which money is provided, usually for a single objective, from a limited number of sources. Instead, sea grants are long-term, multi-project awards with multiple amendments from many sources (Sea Grant appropriations, nonfederal matching funds, and pass-through funds from other agencies and from NOAA).

A major oversight problem for GMD is its inability to monitor progress against funds drawn down by the sea grant universities. Specifically, GMD is unable to track the obligation of funds from the multiple sources as they relate to the individual projects and activities. The information cannot be tracked within NOAA's financial assistance disbursement system (FADS), nor does the standard financial form, usually submitted by the university or institution the sea grant program resides in, provide a breakout of federal expenditures (i.e., Sea Grant versus other NOAA line office or federal agency funds).

FADS is unable to differentiate between the types of federal funds within a grant. Currently, the system operates under a first-in first-out system of payment. The example in Figure 3 illustrates how funds withdrawn by the sea grant university are initially credited to the omnibus project accounting code. Only after \$916,000 has been withdrawn will the next project accounting code, in this case fellowship funds, be credited against. Under 33 USC §1131(e), unobligated amounts of Sea Grant appropriations revert to the program, whereas pass-through funds are returned to the U.S. Treasury. While it happens

Figure 3



infrequently, there is a recent example where funds from the Environmental Protection Agency (EPA) reverted back to the treasury even though the EPA funds had been spent and the work completed. In fiscal year 1993, NSGO received \$15,120 from EPA to fund a project at the Illinois/Indiana sea grant program. This project was added to the grant. When the grant was closed, \$12,000 was remaining after all work under the award was completed. Since the EPA task was the last to be drawn down, the funds remaining in the grant were considered EPA funds and, unlike Sea Grant appropriations which are returned to the National Sea Grant College Program, given to the U.S. Treasury. To avoid such problems, FADS is implementing a pro-rata formula that will proportionally draw down all existing project funds in a grant. While this may solve the deobligation problem, it still will not allow NSGO or GMD to monitor progress against expenditures.

We also found that the interagency agreements or memoranda of understanding associated with pass-through funds from other federal agencies are not included in the proposals forwarded to GMD by NSGO. While the National Sea Grant College Program Act contains specific authority for another federal agency to transfer funds to NOAA, without such appropriate documentation in the grantee file the funding obligation and the scope of work cannot be readily determined by GMD, the Office of General Counsel, or the OIG. To correct this problem, we recommend that copies of the applicable memorandums of understanding, for pass-through funds from other federal agencies, are included with the proposals that are submitted to NSGO to GMD.

There is also a problem with tracking matching funds, which are required for most awards made with sea grant appropriations, but not for awards made with pass-through funds. The standard financial form, usually submitted by the institution the sea grant program resides in, does not provide a breakout of federal expenditures (i.e., Sea Grant versus other NOAA line office or federal agency funds). Thus, while the sea grant programs are required to spend sea grant funds at the same rate as matching funds, it cannot be tracked under the current reporting system.

There is no simple solution to these problems. One solution, albeit perhaps not a cost-effective one, is to issue separate grants for pass-through funds. This would isolate all pass-through funds from sea grant appropriations and the required nonfederal match. Financial forms would be issued for each grant, thus the two types of federal funds, sea grant appropriations and pass-through funds, would no longer be grouped together. Consequently, GMD would be able to monitor the obligation rate of nonfederal contributions versus sea grant appropriations. In addition, the deobligation problem would disappear because pass-through funds would no longer be combined with sea grant funds under the same grant in FADS. Another solution is for NSGO to require the sea grant university programs to submit a financial form with a breakout of nonfederal match, sea grant, and pass-through funding. This action would have to comply with the provisions of the Paperwork Reduction Act. A final option is to have GMD conduct an evaluation of NSGO and sea grant university grants management systems. Under OMB Circular A-110, the sea grant universities are required to keep effective control over and provide

accountability for all funds, property, and other assets. In addition, the NOAA *Grants and Cooperative Agreements Policy Manual* states that NOAA may review an applicant's or recipient's records at any time to determine the adequacy of its financial systems and require any needed corrective actions to bring the organization into compliance with NOAA requirements. Therefore, we recommend that GMD select and implement one of these options we have presented to ensure itself that National Sea Grant funds are adequately monitored.

Finally, we believe that a GMD-led review of grants management procedures would be beneficial. There is precedence for such reviews. GMD has recently begun a review of OAR's Joint Institutes program. That review, which covers the nine universities that have formal collaborative research agreements with NOAA's Environmental Research Laboratories, consists of a pre-review and an on-site review. The pre-review examines whether (1) grant amendments represent severable work in each case and if they are being used properly for changes in budget, statement of work, time extensions, etc.; (2) financial reports are timely and acceptable; (3) the federal program officer is satisfied with progress reports; (4) the official file is in order and contains all required documents; and (5) there are any outstanding OIG or other audit problems. The on-site review by GMD staff is conducted with the Joint Institute program officials and the university office responsible for oversight of that program to discuss problems and explore solutions. We recommend that GMD, in conjunction with the sea grant evaluation process, perform a similar review to address the various grant administration issues and benefit the entire Sea Grant program.



In its response to our draft report, NOAA did not agree "at the present time" with the recommendation to issue separate grants for pass-through funds or to require the sea grant universities to submit a financial form with a breakout of spending by funding type. NOAA states that "undertaking further analysis of the problems and recommended solutions" is required. NOAA states that it will work with the sea grant universities and GMD to "analyze the risks and scale of the problem raised." We ask that NOAA carefully consider the potential options set forth in the above section. In addition, we would like to be provided a summary of NOAA's actions with regards to this recommendation.

NOAA also agreed that GMD should help assess and improve sea grant university administrative procedures and processes. However, it suggests that conducting an administrative assessment during a Program Assessment Team evaluation is not the appropriate time to do so because the focus of the review will be on programmatic performance. We agree that an administrative review would most likely take a backseat during a program assessment. Nonetheless, we believe that an on-site review, conducted by GMD, is as important as the three areas (grant application review, fiscal officer training, and program officer training) NOAA lists as the "primary vehicle for improvement for the future." According to NOAA, topical assessment teams will provide

opportunities for administrative on-site reviews. While that may be true, we believe such opportunities will be limited because the assessments will be conducted on an as-needed basis and only when, in the case of grant management, administrative deficiencies are identified.

Thus, if topical assessments are going to be the primary mechanism for an on-site review, then (1) GMD should be given the opportunity to join the team or comment on the administrative procedures prior to the team's visit, so that there can be follow up by each topical assessment review team, and (2) GMD should be able to initiate a topical assessment, if warranted.

Finally, with regard to providing a copy of the memorandums of understanding to GMD for oversight purposes, NOAA agrees to submit the MOU or other related funds document in the package forwarded to GMD. These actions meet the intent of the recommendation.

VI. Policy on Grantee Matching Funds Needs to Be Clarified

Sea Grant is a cost-sharing program, except for specific cases, such as pass-through funds. Legislation requires that the NOAA funding for an approved Sea Grant program (or project) not exceed two-thirds of the total cost.

NSGO has no written policy or guidance on its requirements for grantees' nonfederal matching funds. We have been informed that the individual amendments do not have to meet the match requirement as long as the total nonfederal contribution meets or exceeds the one-third share requirement for the entire grant. As amendments are added to the grant, running totals of the Sea Grant, nonfederal matching, and pass-through funds are calculated independently by NSGO and GMD. According to NSGO, it only requires that the total nonfederal contributions meet the total match requirement. As a result, individual amendments often appear to be very over- or under-matched.

We found it difficult to determine whether the match requirements were properly being met because of the lack of a written policy and summary information in the grant files. Given that all federal funds in a sea grant university award do not require a match, it is only by going through each amendment (in voluminous files) that it can be determined whether the one-third share has been met or exceeded. Staff from GMD and the Department's Office of General Counsel have experienced similar difficulties. Questions raised have been whether the cumulative match applies to the entire life of the award or on an annual basis and whether all omnibus proposals must meet the nonfederal one-third share requirement. We believe NSGO should provide a summary of the sea grant appropriations, nonfederal matching dollars, and the pass-through funds with each proposed amendment that is forwarded to GMD.

We found one grant where a nonfederal matching contribution was made for a pass-through amendment, even though it was not required. It is unclear whether those funds will be included in the match total. If so, we question whether pass-through matching funds for a project which may not be a high sea grant priority and/or may not have gone through a rigorous peer review process, should be included in the match calculated for subsequent sea grant award competitions. We believe that by doing so, the match provided for a Sea Grant program initiative will likely be reduced. This raises a question of equity and consistency between the sea grant universities and how they are applying the one-third share requirement. Therefore, we recommend that NSGO issue written guidance outlining its nonfederal match policy and the appropriate grantee reporting requirements to show compliance with that policy.

In addition, NSGO needs to clarify its policy on nonfederal matching contributions to ensure consistent application among the sea grant universities. To achieve this result, we recommend that, all proposals forwarded to GMD should include a record of (1) the exact amount of pass-through funds not subject to the cost sharing requirements of the Sea Grant program funds, and

(2) the amount of Sea Grant funds and the status of the match, in accordance with NSGO policy. This would ensure a more accurate and traceable recording and accounting for nonfederal matching funds.



In response to our draft report, NOAA stated that it will begin writing a matching funds policy. A matching fund tracking sheet will also be included in all award proposals. NOAA's planned actions fully meet the intent of the recommendation. NOAA should provide the OIG with a copy of its matching funds policy when it is available.

RECOMMENDATIONS

We recommend that the Under Secretary for Oceans and Atmosphere direct the appropriate officials to take the following actions:

1. Ensure that sea grant funds are directed to NOAA's overall objectives as well as the National Sea Grant Office's legislatively mandated research topics, and that the entire program is more than simply the sum of its constituent sea grant universities. NSGO should exert leadership, identify best practices, and use its new evaluation process to help encourage further improvements in performance and oversee the best use of funds.
2. Ensure that the sea grant evaluation process currently being implemented also focuses on the effectiveness of marine outreach and extension services, and recommends improvements in those sea grant university extension programs whose organizational arrangements and techniques are generally not associated with the most productive, integrated, and dynamic programs.
3. Establish and formalize regular meetings between the Assistant Administrators and pertinent staff from the Office of Oceanic and Atmospheric Research, the National Ocean Service, and the National Marine Fisheries Service. The purpose of the meetings should be to ensure coordination between the line offices, foster partnership activities of their respective partners at the local and state level, and better utilize National Sea Grant College Program resources, such as the marine extension network and scientific expertise, to accomplish NOAA's numerous marine and coastal goals.
4. Expedite the processing of Sea Grant awards by having the National Sea Grant Office:
(a) time the submission of omnibus proposals to GMD to take into consideration end-of-calendar-year leave for staff of both GMD and NSGO; (b) schedule the submission of the omnibus awards over a longer period of time, if necessary, to reduce the clustering of the workload; and (c) group multiple amendments for the same grant together, such as on a quarterly basis, to reduce paperwork and time spent processing amendments.
5. Ensure that the obligation of National Sea Grant funds can be adequately monitored by the Grants Management Division. This could be done by issuing separate grants for pass-through funds or requiring the sea grant university programs to submit a financial form with a breakout of nonfederal match, sea grant, and pass-through funding.
6. The NSGO director should ask the director of GMD to participate in the forthcoming formal evaluations of the sea grant university programs to help assess and improve grant administrative procedures and processes.

7. Include a copy of the applicable memorandums of understanding, for pass-through funds from other federal agencies, with the proposals that are submitted by NSGO to GMD so that proper oversight can be exercised.

8. Issue written policy and guidance on the requirements for sea grant university nonfederal matching funds, and ensure a more accurate recording and accounting for such funds. In addition, all proposals forwarded by NSGO to GMD should include a record of (a) the exact amount of pass-through funds not subject to the cost sharing requirements of the sea grant appropriations and (b) the amount of sea grant appropriations subject to the cost sharing and the status of the match, per the NSGO policy.

APPENDIX-AGENCY COMMENTS



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
CHIEF FINANCIAL OFFICER/CHIEF ADMINISTRATIVE OFFICER

JUN 8 1998

MEMORANDUM FOR: Jill Gross
Acting Assistant Inspector General
for Inspections and Program Evaluations

FROM: Andrew Moxam 
Deputy

SUBJECT: Draft Report: Administrative Improvements in
the National Sea Grant College Program Should
Accompany Program Changes (IPE-10150)

Thank you for the opportunity to review and comment on the draft inspection report concerning the Office of Oceanic and Atmospheric Research's (OAR) National Sea Grant College Program. In general, we were impressed by the thoroughness of the review. The inspection team's efforts in conducting extensive discussions with a broad segment of Sea Grant's constituencies and with the National Sea Grant Office (NSGO) are noteworthy.

Concerning the recommendations and observations, National Oceanic and Atmospheric Administration (NOAA) is in basic agreement with their tenets and has undertaken a series of actions in response to them. As pointed out in the draft report, the issue involving the monitoring of the obligation of National Sea Grant funds is a very complex one. NOAA appreciates the suggestions made in the report to address this matter and will explore them further to determine their feasibility. However, because further analysis is necessary to ascertain the risks, benefits, and impacts of these and perhaps other measures, NOAA cannot concur with the specific recommendation at this time.

Again, we thank the various members of the Office of Inspector General for their courtesy and thorough work. Our comments on all recommendations are attached.

Attachment



Recommendation No. 1: Ensure that sea grant funds are directed to NOAA's overall objectives as well as the National Sea Grant Office's (NSGO) legislatively mandated research topics, and that the entire program is more than simply the sum of its constituent sea grant universities. NSGO should exert leadership, identify best practices, and use its new evaluation process to help encourage further improvements in performance and oversee the best use of funds.

OAR Response: OAR concurs with the recommendation. The NSGO and the university Sea Grant programs have spent a significant amount of time over the past 2 years defining the new processes and operating procedures needed to implement the National Research Council's (NRC) Ocean Studies Board recommendations. The recently signed "National Sea Grant College Program Reauthorization Act of 1998" codifies many of the NRC's recommendations. Over the next year, the NSGO will publish regulations and guidelines through a Federal Register process. We fully agree that a full-scale OIG review of the Sea Grant program would be more valuable after Sea Grant has been fully operating under its new procedures for 2 or more years.

As recognized in the OIG report, NOAA's oversight responsibilities are carried out under a legislatively mandated "cap" which limits funds authorized for the administration of the program by NSGO to 5 percent of Sea Grant's appropriation. The "cap" is a substantial constraint on NSGO as evidenced by the reduced size of the current NSGO staff. However, NSGO is in the process of hiring several technical staff members and seeking joint positions with other NOAA line offices (see Recommendation No. 3 below). This will give the NSGO staff the time needed to monitor and evaluate the performance of Sea Grant programs and the opportunity to play a more prominent role in NOAA's science and outreach mission. OAR will continue to assess the adequacy of NSGO staffing as the new procedures are implemented.

With respect to the overall program direction and oversight, we do not anticipate a diminished role for the NSGO as a result of adopting new procedures that delegate some decision making to the Sea Grant university programs. The NSGO will have a very clear presence and leadership role in several key program areas: the oversight of peer review, the conduct of merit-based program evaluation, the allocation of resources to Sea Grant programs, the management of national strategic investments, the determination of best management practices, and the involvement in strategic planning at NOAA and the Sea Grant network level. From the perspective of these identified NSGO functions, and with the commitment of the National Sea Grant Review Panel and the Sea

Grant programs, the NSGO has a real opportunity to shape direction and improve the overall performance of the National Sea Grant College Program.

Recommendation No. 2: Ensure that the sea grant evaluation process currently being implemented also focuses on the effectiveness of marine outreach and extension services, and recommends improvements in those sea grant university extension programs whose organizational arrangements and techniques are generally not associated with the most productive, integrated, and dynamic programs.

OAR Response: OAR concurs with this recommendation that the Sea Grant evaluation process should focus on the effectiveness of the marine outreach and extension services. One characteristic of an effective outreach and extension program is how well it coheres to the priorities of the overall state sea grant program. The new evaluation procedures require outreach and extension services to have a strategic plan consistent with both the Sea Grant network and NOAA strategic plans.

The new evaluation procedures also call for the review of outreach and extension activities by Program Assessment Teams (PATs). One team member at each review will be assigned principal responsibilities for assessing the outreach program's organizational arrangements and productivity. The evaluation process will determine how well the outreach program is integrated into the Sea Grant program and how effective it is in meeting the Sea Grant and NOAA strategic plan goals.

To facilitate the adoption of best management practices throughout the Sea Grant network, leadership training workshops will be conducted at the national level and attended by outreach leaders. In order to improve the evaluation process, the NSGO will formulate new protocols for the development and review of outreach and extension proposals.

Recommendation No. 3: Establish and formalize regular meetings between the Assistant Administrators and pertinent staff from the Office of Oceanic and Atmospheric Research, the National Ocean Service, and the National Marine Fisheries Service. The purpose of the meetings should be to ensure coordination between the line offices, foster partnership activities of their respective partners at the local and state level, and better utilize National Sea Grant College program resources, such as the marine extension network and scientific expertise, to accomplish NOAA's numerous marine and coastal goals.

OAR Response: We concur with this recommendation. The development and coordination of NOAA science and research as well as the better utilization of university-based assets through Sea Grant is a complex issue. The NSGO has, however, undertaken

several specific actions with respect to Recommendation Number 3. The NSGO Director has conducted informal meetings with NOAA's Assistant Administrators concerning better interaction and coordination between Sea Grant and the line offices in the Agency. There has also been established a Science and Technology Task Group within Sea Grant whose charge is to advise the NSGO Director in matters of strategic research and technology development. That Task Group includes senior administrators from OAR, NOS, NMFS and the NOAA Acting Chief Scientist. The Task Group has met, and will meet biannually. One principal purpose of the Task Group is to ensure coordination with other line offices particularly in the matter of overall NOAA science objectives. NMFS has also created a senior scientists position assigned to the NSGO with the express purpose of fostering partnership activities among NMFS, NSGO, and State and local levels through the Sea Grant network.

As indicated in the Draft Report, Sea Grant has established a competitive NOAA partnership program specifically to better focus university assets on NOAA coastal science issues. That successful program will continue into FY 1999. Furthermore, the new procedures for individual Sea Grant programs establish a local advisory process that encourages involvement of other coastal related NOAA entities.

There remain, however, the issues of better coordination and utilization of university-based assets within NOAA as well as the role of Sea Grant in helping to set NOAA research priorities. To help address the coordination issue, the NSGO Director and OAR Assistant Administrator will formulate a plan for submission to NOAA management that establishes a formal mechanism for improved coordination among various elements of NOAA concerning research, outreach and the more efficient utilization of university-based capabilities by the Agency. Finally, the NSGO Director will explore with the NOS Assistant Administrator the possibility of locating a NOS employee in the NSGO in order to improve the interaction between Sea Grant and the newly reorganized NOS.

Recommendation No. 4: Expedite the processing of Sea Grant awards by having the National Sea Grant Office: (a) time the submission of omnibus proposals to GMD to take into consideration end-of-calendar-year leave for staff of both GMD and NSGO; (b) schedule the submission of the omnibus awards over a long period of time, if necessary, to reduce the clustering of the workload; and (c) group multiple amendments for the same grant together, such as on a quarterly basis, to reduce paperwork and time spent processing amendments.

OAR Response: OAR concurs with parts of this recommendation. The NSGO will move up the deadline for submitting proposals by 2 weeks for Sea Grant programs whose grants are scheduled to begin on March 1. This will allow the NSGO to forward the March 1st

grants to the GMD by the first week in December, or more than 75 days prior to the grant start date. It is not practical for Sea Grant to move start dates forward any earlier because NOAA often does not receive its appropriation until after the start of the fiscal year. The addition of two weeks should alleviate the problem with the end-of-calendar-year leave.

Several years ago, Sea Grant moved the start dates for half of its programs from August/September to March in an effort to put less strain on the GMD in the fourth quarter of the fiscal year. The GMD management clearly prefers the current arrangement, which helps smooth out their year-round workload. While neither OAR nor GMD supports changing the present schedule for Sea Grant awards, the NSGO is studying methods to ensure that grants will be delivered to GMD in a complete and satisfactory manner. Training has also proven to be a significant help in facilitating the processing of grants. The NSGO will continue to work through GMD to provide training for all of its program officers and to encourage Sea Grant managers and university fiscal officers to attend GMD sponsored workshops for grant recipients.

OAR does not concur with the recommendation to group amendments for same grant quarterly. In order for the NSGO to accomplish this, lead times for grant submissions would have to increase substantially which will decrease the flexibility of the program. However, NSGO will continue to try to anticipate and consolidate multiple grant actions into as few amendments as possible.

Recommendation No. 5: Ensure that the obligation of National Sea Grant funds can be adequately monitored by the Grants Management Division. This could be done by issuing separate grants for pass-through funds or requiring the sea grant university programs to submit a financial form with a breakout of nonfederal match, sea grant, and pass-through funding.

OAR Response: OAR cannot concur with this recommendation at the present time without undertaking further analysis of the problems and recommended solutions cited in the OIG report. Of the two options recommended, the second - "requiring the sea grant university programs to submit a financial form with a breakout of nonfederal match, sea grant, and pass-through funding" - does not appear practical. According to GMD, this type of required tracking of expenditures is beyond GMD's capability, especially with their reduced staff levels. Furthermore, NOAA cannot require additional detail on financial reports from Sea Grant programs without going through an Office of Management and Budget approval process under the provisions of the Paperwork Reduction Act. The approval process would require, at a minimum, information about the burden placed on universities in complying

with a new financial reporting scheme for Sea Grant awards. At present, the NSGO would not be able to state what that burden would be without further analysis.

The first option - "issuing separate grants for pass-through funds" - is more feasible. Here again, however, we do not have the information on what the impact of this change would be on the Sea Grant universities in going from consolidated grant awards to separate grants for each pass-through award. The NSGO will work with the Sea Grant programs and GMD to analyze the risks and scale of the problems raised in the OIG report. This also needs to be done in light of changes made recently to NOAA's financial assistance disbursement system (FADS), which implements a pro-rata formula that will proportionally draw down all existing project funds in a grant.

Recommendation No. 6: The NSGO director should ask the director of GMD to participate in the forthcoming formal evaluations of the sea grant university programs to help assess and improve grant administrative procedures and processes.

OAR Response: OAR concurs with the recommendation to have the GMD help assess and improve grant administrative procedures and processes. However, we suggest that participation on Program Assessment Teams (PATs) is not the best way to accomplish this. The PATs will focus on programmatic performance, not administrative issues per se.

The NSGO will work with the GMD to define the areas where GMD's involvement can make the best contribution to NOAA's oversight responsibilities for grants management. First and foremost will be the GMD review of grant applications submitted by the Sea Grant programs. The GMD grant review process provides the best understanding we have of deficiencies among the university programs relative to their grant administrative procedures. It also provides information to NSGO on systemic problems that require network-wide attention or where best management practices should be adapted. Second, the GMD has undertaken a very successful education program for all of NOAA's grant recipients. Most of the university fiscal officers of Sea Grant programs have participated in these workshops, which are offered annually at several regional locations. GMD has received praise for the quality of their forums. Third, GMD provides training for all Program Officers in the NSGO.

OAR believes that GMD's grant review procedures and its training efforts have contributed significantly to improvements in the administration of grants and will continue to be the primary

vehicle for improvement in the future. However, NSGO will encourage the participation of GMD on special topical assessment teams. Topical assessment teams provide NSGO the opportunity to conduct evaluations, on an as-needed basis, of specific program elements using a small team of experts. Such teams may be used occasionally to review the grant administrative procedures at programs where significant deficiencies have been identified.

Recommendation No. 7: Include a copy of the application memorandums of understanding, for pass-through funds from other federal agencies, with the proposals that are submitted by NSGO to GMD so that proper oversight can be exercised.

OAR Response: OAR concurs with this recommendation, with clarification. Under the Sea Grant authorizing legislation (title 33 United States Code, section 1123), the Secretary of Commerce is authorized to "accept funds from other Federal departments and agencies, including agencies within the Administration, to pay for and add to grants made and contracts entered into by the Secretary". In some cases the transfer of funds is done with a Memorandum of Understanding. However, other transfer instruments are often used, such as Military Interdepartmental Purchase Requests, letters of authority, and inter-agency agreements. The grant proposal itself provides the basis for the agreements. The NSGO will begin including a copy of the associated funds transfer document in the grant proposal package forwarded to GMD.

Recommendation No.8: Issue written policy and guidance on the requirements for sea grant university nonfederal matching funds, and ensure a more accurate recording and accounting for such funds. In addition, all proposals forwarded by NSGO to GMD should include a record of (a) the exact amount of pass-through funds not subject to the cost sharing requirements of the sea grant appropriations and (b) the amount of sea grant appropriations subject to the cost sharing and the status of the match, per the NSGO policy.

OAR Response: OAR concurs with this recommendation and the NSGO will begin work on a written policy regarding matching funds requirements. The NSGO will begin including a matching fund tracking sheet in all awards.