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***NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION***

*Coastal Zone Management and National
Estuarine Research Reserve System Programs
Require Management Attention to
Increase Effectiveness*

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EXECUTIVE SUMMARY

With the passage of the Coastal Zone Management Act of 1972, the Congress made clear its desire to preserve, protect, develop, and, where possible, restore and enhance the land and water resources of the nation's coastal zone for this and future generations. The Act created two programs to implement the intent of the Act: the Coastal Zone Management (CZM) and the National Estuarine Research Reserve System (NERRS) programs. Both programs are structured as federal/state partnerships, where the federal government has the role of assisting the states in effectively exercising their responsibilities in the coastal zone and adjoining estuaries, and the states have the role of actually taking action to protect and promote the wise use of land and water resources in the coastal zone. Further, the federal government is responsible for preserving the national interest in managing coastal resources and uses because, as the Act recognized, state boundaries are artificial when it comes to coastal resource management.

Currently, 31 of the 35 coastal states, including those of the Great Lakes and U.S. territories, have CZM programs that have been approved by NOAA. Three additional state programs are in various stages of development and, just recently, officials in the one remaining state have expressed an interest in participating in the program. The addition of each new state or territory has added strength and depth to the federal CZM program. Therefore, the long-term goal of linking coastal states and territories, to intelligently manage the development, use, and protection of the coastal resources, is close to being realized.

Responsibility for the administration of the CZM and NERRS programs is currently placed in the National Oceanic and Atmospheric Administration (NOAA), specifically in the National Ocean Service's Office of Ocean and Coastal Resource Management (OCRM). In reviewing the effectiveness and efficiency of the two programs, we found that while NOAA was successful in getting the programs off the ground in the 1970s, the next decade was a difficult one, particularly for the CZM program. During the 1980's, several attempts to dismantle the CZM program were made by the Executive Branch, but support and continued funding from the Congress and the coastal states kept the program intact.

However, during the 1990's, the CZM program has made a strong comeback with support from the current administration, Congress and states. Its service to and relationships with the state CZM managers and staffs have improved dramatically, and collaborative outreach was extended to other offices both within the National Ocean Service and NOAA, and to other federal agencies who have responsibilities in the coastal zone. We are pleased to note that interviewees from all sectors -- state CZM program managers, academic specialists of the coast and ocean, officials at other federal agencies, and OCRM managers and staff -- confirm significant improvement in the vitality and management of both the CZM and NERRS programs.

Despite the marked improvement in the management and operation of the CZM and NERRS programs, we found several issues and concerns that warrant NOAA management's attention:

- **NOAA coordination to aid coastal management is deficient.** The challenge of the CZM program has always been coordinating the numerous overlapping and cross-cutting mandates in the coastal zone where critical actions are taken and decisions are made daily that affect coastal land and water resources. These actions and decisions should be made using objective science and evaluative techniques of the sort that NOAA can provide. Yet, NOAA has not been able to effectively provide this information to the decision makers, nor has it effectively coordinated, either internally or with other federal agencies involved in coastal matters, to ensure that its coastal stewardship efforts are maximized. In addition, OCRM and the newly created Coastal Services Center, intended to be a one-stop clearinghouse for information, products, and services for the coastal community, need to work more closely together to improve service to the important coastal constituency (see page 8).
- **Administration of CZM cooperative agreements warrants attention.** We found several cooperative agreement administration areas that offer opportunities for streamlining, thereby permitting a greater amount of cooperative agreement funds to be spent on programmatic rather than administrative duties. Streamlining opportunities include: (1) using multi-year cooperative agreements, instead of the current annual awards; (2) permitting administrative oversight costs to overlap award periods; and (3) improving the processing time on requests for no-cost extensions of time on awards. In addition, we found that OCRM and NOAA's Grants Management Division are often not communicating a consistent message on cooperative agreement policies and procedures to the CZM awardees causing much confusion and additional effort spent correcting the resulting problems (see page 18).
- **Current coastal nonpoint source pollution provisions are unworkable.** In 1990, a new section was added to the Coastal Zone Management Act to address the impacts of nonpoint source pollution on the water quality of the coast. From the outset, this new section was fraught with controversy. The legislation was clearly ambitious in both its scope and time frame, which has caused much of the controversy. In addition, federal funding provided to the states to develop program submissions was limited and no additional funding is being provided to help implement the actual programs. Despite the controversy, all states required to submit a program for review and approval have done so. However, none of the state program submissions will receive final approval because the submissions do not fully comply with the statute. This inability of the states to obtain full approval indicates that the coastal states are having fundamental problems developing coastal nonpoint pollution programs under this new statute. The limited amount of resources that the states had to work with, the aggressive time frames for meeting the terms of the legislation, and the challenge involved in getting the necessary legislative changes passed at the state level, all contributed to the inability of the states to submit programs that fully complied with the statute. Despite the problems, some benefits have accrued as a result of the coastal states' review of nonpoint source pollution provisions and this progress should be preserved. However, as it currently exists, the requirements of the statute are not workable without improvements, such as changing the time frames for program implementation (see page 26).

- **The effectiveness of the Coastal Zone Management program has not been measured.** To date, OCRM has only been able to offer anecdotal evidence, collected through its on-going monitoring of the state programs and on-site performance reviews, to demonstrate the accomplishments of the CZM program. OCRM and the states have been unable to measure or evaluate “on-the-ground” outcomes of the CZM program because the data necessary to make this assessment has not been collected. We believe that OCRM must develop a strategy to measure the effectiveness of the CZM program, in order to understand what CZM activities are best helping to achieve the goals of the Coastal Zone Management Act and to make effective decisions in the future (see page 36).
- **The full potential of the National Estuarine Research Reserve System program is not being realized.** While the NERRS is a unique system that serves to promote informed management of the Nation’s estuarine and coastal habitats, it faces a number of challenges in meeting its full potential. First, as new NERRS sites gain entry to the program, federal assistance, which has been level for many years, is becoming less and less adequate to support the program’s ambitious goals. Hard choices will have to be made to prioritize the use of limited funding in order for the program to remain viable. In addition, NOAA has not fully supported the use of NERRS sites for NOAA-funded research. Another challenge the program faces is becoming more visible in the scientific community and achieving better utilization of the sites. To meet this challenge, the NERRS need to develop site profiles which will serve both as a baseline of the sites’ characteristics and help researchers choose appropriate sites for their investigations. Also, the usefulness of NERRS scientific results could be improved if brief and clear summaries of NERRS research were made available more routinely to both CZM managers and the public. Finally, improvements in the NERRS cannot be made without key staff in place at the right time. The education and research coordinator positions at the NERRS site are often vacant for several years after their start up (see page 40).
- **The coastal and marine management computer information system lacks sufficient resources.** Currently, the ability of OCRM and the Grants Management Division to process grant applications and evaluate performance reports from the states is hampered by the lack of a computerized information tracking system. The Coastal and Marine Management Program is a computer-based information system being developed to electronically process grant applications and performance reports. It will also serve as a national database of coastal management information, accessible by the Internet, for use by state CZM and NERRS program officials. Despite the promise of this project, it has suffered setbacks and scope limitations due to insufficient resources (see page 51).

On page 54, we offer a number of recommendations to address our concerns.



In responding to a draft of this report, NOAA’s Acting Chief Financial Officer/Chief Administrative Officer agreed with all of the report recommendations. NOAA informed us that it has either taken steps that satisfy the intent of those recommendations or will implement changes or procedures in the near future. We are generally satisfied that these actions meet the intent of

our recommendations. However, for recommendations 3, 16, and 17 we request that NOAA reconsider its proposed actions to more fully comply with our intent (see pages 17, 50, and 52, respectively). In addition, we are requesting that NOAA provide us with an action plan detailing how it will implement its proposed actions for recommendation numbers 1, 2, 11, and 14 (see pages 12, 14, 38, and 47, respectively). Finally, we are requesting that NOAA take appropriate action to ensure that the memorandum it will prepare in response to recommendation number 13 is issued within 60 days of the publication of this report. We would like to be provided with a copy of the memorandum when it is issued, as well as provided with the results of the NOS Assistant Administrator's consultation with the other Assistant Administrators regarding the implementation of the memorandum as soon as possible after this consultation occurs (see page 45). Where necessary, we have made minor changes to the report and recommendations. NOAA's complete response is included as an appendix to this report.

INTRODUCTION

Pursuant to the Inspector General Act of 1978, as amended, the Department of Commerce Office of Inspector General evaluated the two programs created by the Coastal Zone Management Act of 1972, the Coastal Zone Management (CZM) and the National Estuarine Research Reserve System (NERRS) programs. Our goal was to determine whether the programs are achieving the goals of the Act and whether they might operate more effectively and efficiently through additional program improvements.

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 by the OIG's inspection staff 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 September 1996 through April 1997. During our evaluation and upon its conclusion, we discussed our observations with both the outgoing and incoming Assistant Administrator for Ocean Services and Coastal Zone Management, as well as with other senior program officials.

PURPOSE AND SCOPE

The purpose of this evaluation was to determine whether the CZM and NERRS programs, both administered by the National Ocean Service's Office of Ocean and Coastal Resource Management (OCRM), were achieving their goals, as determined by the Coastal Zone Management Act (CZMA) of 1972. Our study did not include a review of the National Marine Sanctuaries program, another program managed by OCRM, because it was created under separate legislation, the Marine Protection, Research and Sanctuaries Act of 1972.

During our review, we analyzed relevant documents, legislation, data, and prior studies. We also had wide-ranging discussions with representatives from NOAA, the Environmental Protection Agency, the Federal Emergency Management Agency, the U.S. Army Corps of Engineers, the U.S. Coast Guard, the Department of Interior's Minerals Management Service, the Federal Energy Regulatory Commission, the Department of Transportation's Maritime Administration, various environmental groups, academic experts in the field of coastal management, state CZM program officials and staff, and state NERRS officials and staff. To gain additional insight into the workings of the programs at the state level, we visited the CZM program officials in California, Oregon, Washington, Michigan, Wisconsin, Ohio, Louisiana, Maine, Florida, Virginia, and Maryland. We also visited the following NERRS sites: Tijuana River and Elkhorn Slough (California), Sapelo Island (Georgia), Chesapeake Bay (Maryland), and Rookery Bay and Apalachicola (Florida).

BACKGROUND

In 1969, the federal government's Stratton Commission report, *Our Nation and the Sea*,¹ focused the attention of citizens, politicians, and scientists on the importance of coastal regions and the lack of effective management of coastal resources on the part of many different parties, including federal, state, and local governments. The legislative result was both the creation of NOAA in 1970 and the passage of the CZMA in 1972. This unique law put in place the CZM program that attempts to balance competing demands of economic development with environmental protection on the coast. The CZM program is a partnership in which the federal government encourages and relies on the coastal states and territories to implement voluntary CZM programs. Currently 31 of the 35 coastal states, including those of the Great Lakes and U.S. territories, have approved CZM programs with three additional state programs in development. There is one remaining state, Illinois, that has chosen not to participate in the program. However, officials in that state have just recently contacted OCRM about developing a program, so it may be that all 35 coastal states will soon be active in the program.

Another component of the CZMA was the creation of the NERRS program, which has the objectives of preserving estuaries as sites for research and education of coastal zone decision makers and the public about their importance. NERRS education programs include field trip programs, adult lectures, teacher workshops, volunteer programs, and a wide variety of printed media. Currently, there are 21 NERR sites in 18 states and territories, encompassing approximately 440,000 acres.

Specifically, it is the intent of Congress for the CZM program to:

- Preserve, protect, develop, and, where possible, restore and enhance the land and water resources of the Nation's coastal zone for this and future generations. (A shorter way to describe this function is "stewardship," a term used throughout this report),
- Encourage and assist the states to effectively exercise their responsibilities in the coastal zone and to achieve wise use of land and water resources of the coastal zone, giving full consideration to ecological, cultural, historic, and esthetic values as well as the needs for compatible economic development,
- Encourage the preparation of special area management plans to provide increased specificity in protecting significant natural resources, reasonable coastal-dependent economic growth, improved protection of life and property in hazardous areas, and improved predictability in governmental decision-making, and
- Encourage the participation, cooperation, and coordination of the federal, state, local, interstate and regional agencies, and governments affecting the coastal zone.

¹*Our Nation and the Sea*, U.S. Commission on Marine Science, Engineering, and Resources, Washington, D.C., 1969.

The U.S. coastal zone, which encompasses 190 seaports, contains some of our nation's most productive natural resources. As of 1990, the U.S. coasts supported 40 percent of national employment and 32 percent of gross national product. These figures are generated in part by the 180 million Americans who annually visit ocean and bay beaches, by the commercial fishing industry that employs hundreds of thousands of people, and by the recreational fishing industry. Also, as of 1990, 44 percent of the nation's population lived in the country's 451 coastal counties and over the past three decades, U.S. coastal populations have grown by over 40 million, faster than the country as a whole. The five states that have seen the greatest increases in population -- California, Texas, Florida, Georgia, and Virginia -- are all coastal. It is estimated that by the year 2025, close to 75 percent of all Americans could be living in coastal counties, the majority in sprawling, interconnected metropolitan centers.

Such population growth and related development, however, has a detrimental impact on the sensitive and vulnerable coast. This can be seen in the degraded water and habitat quality, real losses of habitat, declines in fish and shellfish populations, limitations on the harvest of shellfish, and public beach closures. Not all indicators point to a worsening situation, and certain contaminants, such as the banned pesticide DDT, have clearly decreased. Nonetheless, recent findings by NOAA and other authoritative groups indicate generally declining coastal health. For instance:

- high levels of toxic contaminants have been found in sediments in major urbanized estuaries such as Boston, Baltimore, and San Diego harbors;
- excess loading of nutrients where rivers meet the sea, largely from fertilizer run-off, has resulted in eutrophication--where plant life squeezes out aquatic animal life--and creates chronic oxygen deficiency in part or all of 37 of 55 of the major estuaries;
- over half of the nation's original salt marshes and mangrove forests were destroyed as of 1970;
- in 1990 over a third of the nation's shellfishing waters had some form of harvest restrictions, an increase of six percent since 1984, due largely to poorly planned coastal development; and
- high levels of fecal coliform bacteria from overloaded sewage treatment plants, raw sewage discharges, and animal wastes were the primary cause of more than 10,200 beach closings since 1988.

The pressures of population growth, urbanization, and economic development have obvious damaging effects on the land and water resources of the coast. This is matched by a complexity of laws, competing philosophies of use, and numerous federal, state, and local management agencies that each attempt to cope with specific coastal issues. These multiple complexities and the need for developmental and ecological balance call for a comprehensive approach such as the kind provided for in the CZMA. Justification for such an approach continues today.

OCRM Organization and Staffing

As mentioned previously, OCRM is housed within the National Ocean Service (NOS), one of NOAA's line offices (see Exhibit 1). To manage the CZM and NERRS programs, as well as the National Marine Sanctuaries program, OCRM is organized into the following four offices/divisions.

Director's Office: Oversees OCRM's programs and administers budgeting, planning, and multi-divisional projects. The Director's Office is also responsible for managing intra-NOAA and federal interagency activities such as strategic planning. The Director also acts as the national leader on ocean and coastal management issues, and directs OCRM's international coastal and resource management activities.

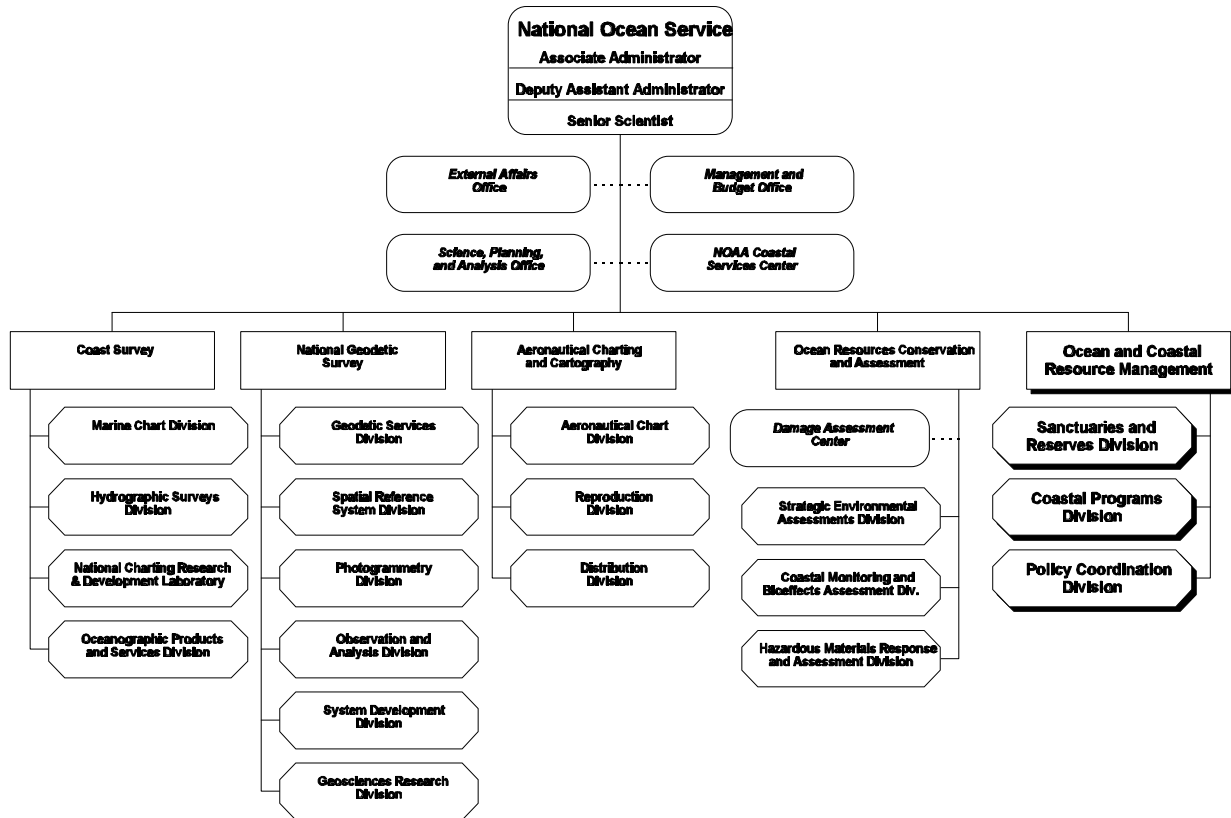
Policy Coordination Division: Evaluates the states' coastal management and estuarine reserve programs, in accordance with the CZMA. The Division also coordinates OCRM's legislative and regulatory activities and manages OCRM's outreach and communications efforts.

Coastal Programs Division: Provides technical support to state, local, and federal agencies on policy, planning, and regulation. The Coastal Programs Division administers the national CZM program, including developing, supporting, and approving state CZM programs, as well as acting as an intermediary between the coastal states. The Division also reviews whether other federal agencies are complying with the states' coastal regulations.

Sanctuaries and Reserves Division: Administers the NERRS and the National Marine Sanctuaries programs, including the national research, education, and monitoring programs. The Division operates in partnership with the sanctuaries and reserves to develop, support, and operate these sites. It also plays a primary role in helping to restore the resources of the marine sanctuaries.

In its entirety, OCRM employs approximately 111 full-time equivalent employees plus nine NOAA Corps officers. Of this number, 27 are dedicated full-time to the CZM program, 5 are dedicated full-time to the NERRS program, 56 are dedicated full-time to the National Marine Sanctuaries program, and 32 employees serve as management and support to more than one of the programs housed in OCRM.

Exhibit 1: NOS Organizational Chart



Funding and Cooperative Agreements

The CZM program is generally funded at approximately \$56.0 million annually through three different Congressional appropriations: one to cover CZM and NERRS program administration by OCRM, and two separate appropriations for the CZM and NERRS financial assistance programs. In addition, the NERRS program receives a small amount of NOAA's overall construction appropriation in some years. For program administration, OCRM receives funding for its internal operations from the Coastal Zone Management Fund, a fund comprised of loan repayments from state and local governments under the Coastal Energy Impact Program. Annually, Congress designates in its appropriations bill for the Department of Commerce how much OCRM may spend from the CZM Fund for the administration of the CZM and NERRS programs. In fiscal year 1996, this amount was \$4.0 million, and \$4.3 million in fiscal year 1997. Of the \$4.0 million in fiscal year 1996, approximately \$422,000 was provided to NOS and NOAA for overhead, leaving \$3.6 million for program administration. In fiscal year 1997, NOS and NOAA overhead costs were approximately \$471,000, resulting in \$3.8 million for program administration.

OCRM issues cooperative agreements² to the states for both the CZM and NERRS programs. Cooperative agreements for the CZM program are issued under two sections of the CZMA: sections 306 and 309. Section 306 awards are administrative cooperative agreements that the states must match dollar for dollar and use for administering the states' coastal management program. These 306 award funds are distributed using a formula that takes into account the length of shoreline and the coastal counties population in each state. Congress has consistently set a \$2.0 million cap on the annual amount given to any one state for a section 306 award.

Section 309 financial assistance awards are cooperative agreements for coastal zone enhancement that the states are not obligated to match. Awards issued under section 309 are competitively awarded for use in creative and effective programs that address the most pressing issues affecting coastal resources, such as coastal hazards or degradation of wetlands. For CZM awards, under sections 306 and 309, the funding is received through a direct appropriation from the NOAA Operations, Research, and Facilities account. In fiscal years 1996 and 1997, the appropriation was \$47.7 million. In keeping with the intent of the CZMA, OCRM allocates 15 percent of the total appropriation to section 309 assistance (\$7.2 million). The remainder, \$40.5 million, is allocated to section 306 cooperative agreements.

NERRS cooperative agreements are issued under section 315 of the CZMA and are given for the acquisition of lands and waters for a reserve, operation and maintenance of a reserve, educational or interpretive activities, and research within a reserve. With the exception of cooperative agreement funds used to acquire land or waters, NERRS awards are matched by the state at 30 percent. Funding for NERRS awards is typically received from two sources: the CZM Fund and direct appropriations under the NOAA Operations, Research, and Facilities account. In fiscal year 1996, \$4.3 million was designated for NERRS awards (\$3.3 million from the CZM Fund and \$1 million from the Operations, Research, and Facilities account). In fiscal year 1997, OCRM again has \$4.3 million to dispense for NERRS awards (\$3.0 million from the CZM Fund and \$1.3 million from the Operations, Research, Facilities account). Funding is also periodically made available for NERRS construction grants under the NOAA construction appropriation. For fiscal year 1997, this amount is \$1.0 million.

² NOAA and CZM community members often refer to cooperative agreements, as "grants." However, cooperative agreements differ from grants in that substantial involvement is anticipated between the federal agency and recipient during the performance period. For simplicity, we sometimes use the terms "cooperative agreements," "grants," "financial assistance awards," or "awards" interchangeably in this report.

Table 1: Summary of CZM Funding/Cooperative Agreements

	FY 1996	FY 1997
Section 306 Awards (CZM)	\$40,770,000	\$40,770,000
Section 309 Awards (CZM)	6,930,000	6,930,000
Section 315 Awards (NERRS)	4,300,000	4,300,000
NERRS Construction Grants	0	1,000,000
Program Management (OCRM)	4,000,000	4,300,000
TOTAL	\$56,000,000	\$57,300,000

OBSERVATIONS AND CONCLUSIONS

I. NOAA Coordination to Aid Coastal Management is Deficient

Coastal management in the United States has historically had a diffuse structure with many issues and players. A key challenge of the CZM program has always been coordinating the numerous overlapping and cross-cutting mandates in the coastal zone where significant pressure exists from population growth and development. Now, however, with growing ecological concerns, the CZM program must become increasingly more effective in its efforts to manage coastal land and water resources. Furthermore, state coastal managers face a growing need to meet court-imposed requirements for more legally defensible regulatory actions. These actions and decisions require the objective science and technical expertise that NOAA can provide.

In recent years, NOAA, and OCRM in particular, have been challenged to provide this objective science and technical expertise, while dealing with an organizational structure that has the responsibility for coastal matters distributed among several different line and program offices. Recognizing this as a problem, the Assistant Administrator for NOS, in the fall of 1993, convened an ad hoc committee of managers and scientists from state coastal management and Sea Grant programs; federal, state, and local government agencies; academia; and other interest groups. The group, named the Integrated Coastal Management Committee, was asked to provide constructive insights on strengthening and improving NOAA's coastal management and stewardship initiatives. The committee recommended that NOAA improve the integration of its science, research, and management activities, as well as tailor its products and services to better meet the needs of its users. However, little action, if any, was taken by NOAA on the recommendations made by the committee, although numerous incremental changes were made within NOS to make that office focus more on coastal concerns. The organizational structure problem was later studied by NOAA's internal Coastal Stewardship Task Force. The Task Force was created in 1994, by the Under Secretary for Oceans and Atmosphere, to review NOAA's various coastal programs to assess their effectiveness in working together and to prepare recommendations for improvement. In its July 1996 report, the panel called for organizational changes within NOAA to better support coastal and ocean management, as well as for improved cooperation and coordination with other federal agencies with coastal responsibilities.

Just recently, the Under Secretary for Oceans and Atmosphere began to take action on the recommendations of the Coastal Stewardship Task Force. In late April 1997, the Under Secretary announced as a first of two phases, several personnel changes, including the assignment of a new Assistant Administrator of NOS.³ In the second phase, the Under Secretary directed the new Assistant Administrator of NOS to implement or respond to the recommendations contained

³ The following reappointments took effect on June 2, 1997: the Assistant Administrator of NOS became the NOAA Deputy Chief Scientist, the Deputy Assistant Administrator of the National Marine Fisheries Service became the Assistant Administrator of NOS, and the Deputy Assistant Administrator of NOS became the Deputy Assistant Administrator of the National Marine Fisheries Service.

in the Coastal Stewardship Task Force report by creating a new Office of Coastal Ocean Science within NOS. This new office would serve to consolidate several NOAA coastal science programs, including the Coastal Ocean Program and Great Lakes Environmental Research Laboratory, into one office. The Assistant Administrator's action plan for implementation and response is due to the Under Secretary by September 22, 1997.

NOAA, to effectively build on the shift to a more coastal-focused NOS, must better coordinate among its own offices, with other federal agencies, and its state coastal management partners to effectively promote coastal stewardship. NOAA needs to better use and leverage its own scientific resources to aid coastal management and to help facilitate the work of OCRM in carrying out its mission of coastal stewardship. NOAA also needs to take the lead in improving coordination among federal agencies involved in the coastal zone to better link a complex and fragmented coastal community. Finally, we note that a significant step has been taken to advance coastal stewardship with NOAA's creation of the Coastal Services Center, but coordination between OCRM and the Center needs to be considerably improved.

A. NOAA Needs to Further Focus and Integrate Its Coastal Stewardship Efforts

As the repository for a great deal of coastal-related research, as done by the Coastal Ocean Program, Sea Grant institutions, and the various Environmental Research Laboratories, NOAA has the unique ability to assist coastal states and territories in developing and implementing their CZM programs. This technical assistance is critical to the states, since most do not possess the capability or the funding to perform much, if any, coastal-related research. Despite the large amount of scientific and technical information produced by NOAA, state coastal managers told us that little of it is immediately useful in helping them make practical and informed decisions on policy and resource management issues. In addition, much of the scientific and technical information possessed by NOAA is simply not being made available to state coastal managers. A significant way to make NOAA more directly able to affect habitat protection, hazard mitigation, and coastal water pollution, however, is to put such science-based information in the hands of state coastal managers and thereby strengthen the states' technical capability. Making coastal and ocean science applicable and useful to the coastal management community requires a new way of doing business, including changes in the way scientists and resource managers interact at NOAA.

NOAA has had some success coordinating its in-house resources to service the coastal management community, as demonstrated by a few cross-office projects that apply NOAA's expertise to help solve coastal management problems. An example of coordination between NOAA's line offices is the Coastal Change Analysis Project (C-CAP), a cooperative effort between OCRM and the National Marine Fisheries Service, funded by the Coastal Ocean Program. C-CAP is a comprehensive, nationally standardized geographic information system that uses both satellite imagery and aerial mapping to detect and assess changes in both land use patterns and specific habitats in coastal wetlands and adjacent regions. Both OCRM and the National Marine Fisheries Service are using C-CAP to monitor the effectiveness of alternative management measures in coastal wetland areas and have funded eight projects, each involving state coastal management programs. Five of the eight projects involve NERRS sites and add the component of land-based watershed monitoring.

Within NOS, a number of projects that combine the staff skills and resources of its various offices have also been launched. Several NOS offices have collaborated on the San Francisco Bay Project which gives local public and private coastal stakeholders the ability to use various NOS charting and geodesy tools and data to improve navigation safety and efficiency, prevent oil spills, and restore wetlands using dredged materials. The maritime transportation community in the Bay area will have computerized real-time, accurate water level and current information to improve planning and control of vessel transits. Data derived from NOS charting and geodesy programs will provide local management agencies and researchers with a common geo-spatial framework for the Bay's ecosystem processes. The navigation and positioning aspects of the San Francisco Bay Project are being replicated in Cook Inlet and Prince William Sound in Alaska and the Puget Sound Region in Washington under the Pacific Coast Program. While these projects primarily involve intra-NOS coordination at this time, a number of state CZM managers regard this as a model of how partnerships with the states can work for NOAA as a whole.

Despite these efforts to utilize NOAA resources and expertise to benefit coastal management, we found that overall support for the CZM program in NOAA is limited. The CZM program, as a federal-state partnership, is often perceived by other NOAA offices as simply a grants administration program. This may be due in part to the fact that OCRM does not have the same visibility it once had, ever since an attempt was made to dismantle the CZM program in the early 1980s. OCRM, and its predecessor, the Office of Coastal Zone Management, were distinct line offices in NOAA until NOS was created in 1983. At that time, OCRM became one of several offices under the NOS line office structure. Between 1983 and 1994, the national component of the CZM program was severely truncated and CZM program functions were reduced to basic administration of cooperative agreements. Staff, technical assistance, and general service to the states were all cut in size and scope, and workshops, conferences, and other avenues for state CZM managers and OCRM officials to interact were significantly reduced. Since 1994, however, OCRM has worked to significantly rebuild its technical expertise, outreach, and policy making capabilities. With the appointment of the current Director in 1994, OCRM has heightened its outreach and leadership in coastal affairs and is trying hard to provide the technical assistance needed by state coastal managers. However, during the course of our review, we noticed that many state coastal managers and staff, as well as OCRM's colleagues in other NOAA offices, still see OCRM as being primarily in the business of administering cooperative agreements rather than providing technical assistance. Many of the state coastal managers said that they would like OCRM to provide more technical assistance, especially assistance that draws on the relevant science and research performed by other NOAA offices.

To date, OCRM has had difficulty delivering to the state coastal managers what they are demanding -- clear and concise scientific information they can use to make more informed policy decisions about coastal resources. OCRM's problems in providing this information can be attributed to its position as a small resource management office in an organization that has a dominant and largely traditional scientific orientation. Within NOAA, only the National Marine Fisheries Service and some offices within NOS, including OCRM, are devoted, primarily, to resource management. The other line offices and programs have higher proportions of their budgets devoted to information gathering, research, and science.

NOAA's mission, however, stresses both science and resource management. Those committed to a science focus within NOAA point out that the quality of research or the integrity of the research process can be undermined when resource management and research functions are combined. They also tend to believe that in a time of declining resources, organizational walls must be retained to prevent managers from "raiding" the research budget, or to keep research from being driven by political considerations. Those committed to resource management, however, believe that these arguments are made to protect the status quo. They point out that if adequate resource management structures are not in place in NOAA and in the user community, NOAA will be in the unhappy position of being able to describe and predict, with increasing accuracy, the continued decline of coastal and ocean resources.

Despite this conflict, NOAA must build more productive relationships between resource managers and scientists. The major finding of the National Research Council's 1995 study, *Science, Policy, and the Coast*,⁴ was that coastal scientists and policymakers do not interact sufficiently to ensure that decisions and policies related to coastal management are adequately informed by science. This basic problem was also discussed in both the Integrated Coastal Management Committee and the Coastal Stewardship Task Force reports. Despite all of these previous reports regarding this problem, NOAA has responded with limited action. Aside from the creation of the Coastal Services Center, which we discuss later in this report, and the collaborative projects discussed previously, NOAA has not yet begun a serious campaign to strengthen the interaction between scientists and resource managers. In addition, according to OCRM's Director and OCRM's National Research Coordinator, NOAA has not funded a significant amount of research directly in support of coastal managers. We recognize that NOAA is currently attempting to address these issues by reorganizing NOS to better focus on coastal issues and we eagerly await the results of the Assistant Administrator's efforts in this regard.

NOAA needs a general strategy and plan for creating a more coherent NOAA-wide approach to coastal stewardship. Scientists are needed in interdisciplinary teams to help formulate problems and design research agendas with coastal managers, stakeholders, and the public so that research will be directed to areas of management concern. Coastal managers, similarly, have to learn more about the language and procedures of science and more aggressively verify how well their policies are working. OCRM, as the organization with the ongoing relationships with state coastal managers, should be the office to facilitate the interdisciplinary teams. Yet, it must be NOAA management that endorses and actively promotes this new way of doing business for it to be successful. In addition, NOAA needs to both encourage and support OCRM in its move beyond just grants administration to also providing technical support and strategic advice to the coastal states.

⁴National Academy Press, Washington DC, 1995.

In responding to our draft report, NOAA stated that it has created an Office of Coastal Ocean Science within NOS that will have a science mission supporting coastal mandates of all NOAA line offices. This office includes a consolidation of certain existing NOS programs, as well as the cross-cutting Coastal Ocean Program and the National Ocean Partnership Program from NOAA Headquarters, and the Great Lakes Environmental Research Laboratory from the Office of Oceanic and Atmospheric Research. In addition the new Assistant Administrator of NOS will work with NOAA line and program offices to increase NOAA's coordination and delivery programs at local and regional levels, produce a "State of the Coast" report, work with the Office of the Chief Scientist to review how NOAA's coastal research priorities are set and guide future efforts, and improve the scientific basis supporting NOAA's coastal missions. Although these proposed actions meet the intent of our recommendation, we would appreciate NOAA providing us with a copy of the action plan created to implement these actions, as well as keeping us informed of its progress in meeting these ambitious goals.

B. Federal Interagency Coastal Council Is Needed to Fulfill Mandate

The federal government still manages its ocean and coastal areas and resources primarily on a sector-by-sector basis involving a diffuse structure of overlapping and uncoordinated laws. To a large degree, one law, one agency, and one set of regulations govern such areas as offshore oil and gas, fisheries, navigation, marine protected areas, or endangered species and marine mammals. Such a system neglects the effects of a particular resource use on other resources or on the environment. The growing pressure on coastal areas, driven largely by population growth, tends to increase competition between user groups and between developers and environmentalists. With many overlapping governmental jurisdictions and legal authorities, it is often difficult to define coastal management priorities and resolve the multitude of coastal issues and problems.

NOAA shares coastal responsibilities with the U.S. Environmental Protection Agency (EPA), the U.S. Army Corps of Engineers, the Federal Emergency Management Agency, several agencies within the Department of Interior, (such as the National Park Service, the U.S. Fish and Wildlife Service, the Minerals Management Service, and the Bureau of Land Management), as well as the Department of Defense, the U.S. Coast Guard, and the Department of Transportation's Maritime Administration. The CZMA charges NOAA with providing national leadership in encouraging the participation and cooperation of all federal agencies with programs affecting the coastal zone. NOAA has passed this responsibility on to OCRM, which is responsible both for the coordination of coastal activities within the Department of Commerce and among federal agencies. While OCRM has the mission of coordinating overall coastal zone management, its actual powers are limited since each of the aforementioned agencies has its own mission with regard to the coast.

In an attempt to involve federal agencies in joint projects and a coastal management dialogue, OCRM has created and participates in numerous national policy groups on such issues as ports and dredging, emergency management, coral reef and ecosystem planning, and water quality.

Coastal America, an OCRM-based partnership of 12 federal agencies⁵, provides a forum for interagency collaboration and promotes specific projects to protect, preserve, and restore the nation's coastal living resources. OCRM also entered into a Memorandum of Agreement with Interior's Fish and Wildlife Service to coordinate the CZM and NERRS programs with the National Wildlife Refuge System. Finally, OCRM runs joint workshops with the Federal Emergency Management Agency on mitigation planning efforts to reduce the risk of loss of life and property from storms. All of these OCRM coordination activities have created numerous synergies, but additional gains in coordination could be made through an issues-oriented federal forum to help establish a clear federal coastal agenda, collectively address critical problems, and help ensure more planned coordination among federal agencies.

Currently, the various federal agencies involved in coastal matters often work at cross purposes. For instance, the Army Corps of Engineers, in laying the infrastructure for commerce and development of ports and shorelines, has often been in conflict with agencies such as EPA, NOAA, and the Fish and Wildlife Service, whose missions are to preserve coastal resources. While there have been recent improvements in coordination among these agencies, especially at the federal level, state managers reported that many Army Corps of Engineers regional office commanders were focused on their own missions to the exclusion of other considerations. For example, the Army Corps of Engineers engages in extensive dredging of rivers, ports, and harbors but usually dumps dredged material at sea rather than using it to restore endangered wetlands. In another instance, while disaster relief and federally subsidized flood insurance administered by the Federal Emergency Management Agency help individuals recover from catastrophic natural events, they may also have the unintended effect of encouraging overbuilding and possibly hazardous development on the coast. While the latter point is widely debated, it should be studied and its true effect on development clarified. A federal council should help to address these and similar critical coastal issues, most of which are multi-jurisdictional.

Questions of ocean governance could also be taken up by the federal council. An increasingly busy ocean is forcing some states to increase regulation in their own territorial waters and to want to extend their control and management beyond the 12-mile contiguous zone.⁶ There is also a need for regional entities to be linked to the federal coastal forum. While state agencies can influence federal activity through the federal consistency provisions of the CZMA,⁷ they may be

⁵ Coastal America was established by a memorandum of understanding in 1992. The partnership is comprised of those federal agencies with statutory responsibilities for coastal resources or whose operational activities affect the coastal environment. Coastal America generally focuses on regional activities to provide support directly to a local project or watershed.

⁶ The Convention on the Territorial Sea and Contiguous Zone of 1958 allows a country to claim a Contiguous Zone of up to 12 miles.

⁷ As part of the creation of a federally approved CZM program, the states were promised that federal agencies whose activities affect the coastal zone will act consistently to "the maximum extent practicable" with the enforceable standards set forth in the states' approved programs. This provision, which we found is being forcefully and effectively implemented by current OCRM management, has allowed states a good measure of control over such federal activities as navigational and flood control projects, wetlands permits, highway and airport development, military activities, and fisheries management.

less able to influence broad national policy or large federally-sponsored projects, such as the construction of airports, highways, or waste-treatment plants, that drive a great deal of activity in the coastal zone. Regional teams, made up of both state and federal officials, however, would be able to bring their concerns to the national level through the federal coastal forum.

A federal council, linked to regional teams, would provide a means for discussing current and emerging national policy, specific multi-agency jurisdictional issues, and other issues of common interest. In addition, each agency could gain a broader awareness of how their actions on coastal issues impact the activities of other federal agencies, as well as the coastal areas themselves. In times of declining budgets, possible redundancies between agencies could be reduced and resources leveraged. If successful, the council could help extend OCRM's, and therefore NOAA's, national leadership and authority on coastal issues, enabling them to better meet their responsibilities for overall coastal management. We recognize that such a federal council was also proposed in the Coastal Stewardship Task Force report, and that NOAA is currently reviewing how it will implement this recommendation. Such an ambitious project should not be undertaken if it will not be given the resources to make it both effective and efficient. Therefore, we encourage NOAA to ensure that sufficient resources, both in staffing and funding, are provided to the federal coastal council. We look forward to evaluating NOAA's proposed strategy to fully support and fund this new interagency forum.



In its response to our draft report, NOAA stated that it will “develop a proposal to establish a Federal interagency coastal council, led by NOAA, as a forum for discussing and coordinating coastal policy issues that have multiple agency jurisdiction.” Legislation to create such a council has been introduced in both houses of Congress. While this action meets the intent of our recommendation, we encourage NOAA to explore other alternatives for creating a Federal interagency coastal council should the currently proposed legislation not become law. We would also like to be provided with a copy of the action plan formulated to implement this recommendation.

C. OCRM and the Coastal Services Center Must Work Together

The Coastal Services Center, established in Charleston, South Carolina in 1994, is intended to be a one-stop clearinghouse for information, products, and services for the coastal and ocean management communities, as well as for the private sector. It was established, in large part, in response to the criticism of coastal managers that a high proportion of NOAA products were too technical or abstract to be of use in decision-making and were not readily convertible to applied use. As part of the “Reinventing Government” movement, all projects undertaken by the Center are to be client-driven and geared to local, state, and regional issues. Twenty-six staff positions, many drawn from NOAA line offices, give the Center the ability to enter into partnerships with a wide range of governmental organizations at all levels, to address specific coastal issues and problems. The Coastal Services Center was funded at \$10.0 million in fiscal year 1996 and \$12.0 million in fiscal year 1997. During the course of our review, we found that the Center has a somewhat overlapping mission with that of OCRM, so it is important that the two organizations

coordinate their services. However, while the process of coordination between OCRM and the Coastal Services Center has begun, much more needs to be done to get these two entities working well together.

The Center, while formally located within NOS, answers to a Management Committee comprised of the Assistant Administrators of all NOAA line offices and the Director of the Coastal Ocean Program. State CZM program and National Marine Fisheries Service managers participate on other teams that advise the Center on a multitude of issues. The Center provides a venue for the linkage of NOAA's three research and data gathering line offices -- the Office of Oceanic and Atmospheric Research, the National Environmental, Satellite, Data and Information Service, and the National Weather Service, with its two resource management line offices -- NOS and the National Marine Fisheries Service. A major aspect of the Center's work is to make the highly technical NOAA products produced by the research and data gathering line offices more understandable and usable by coastal managers, so that they can make more informed decisions about coastal resources. The Center hopes to overcome what is, for coastal clients, a confusing tangle of research and fragmented services within NOAA by offering relevant products and services for coastal clients from all of NOAA's line offices in one central location.

Not only does the Center translate NOAA's scientific information, it also assesses management needs and provides programmatic guidance; develops and distributes a wide range of management techniques and strategies for local, state, and federal coastal managers; and provides training on various aspects of coastal management. It is this last function that most overlaps with the work that OCRM performs. OCRM is also responsible for producing and disseminating coastal management information, research, and technical assistance, as well as making the results of management-oriented research available to coastal states in the form of technical assistance, publications, and workshops. Despite the overlap in missions, we found that the Center and OCRM tend to deliver the technical assistance in different ways. In providing assistance to its clients, the Center concentrates more on the scientific aspects of coastal management and providing research in a format useful to coastal managers. OCRM, on the other hand, focuses on providing technical assistance on regulatory and policy-making functions through an established federal-state partnership. However, OCRM has not had adequate funding or staff time, given other multiple responsibilities, to keep up with the growing needs of the states for scientific information and other technical assistance. The Coastal Services Center needs to work in concert with OCRM to fill this information dissemination void.

To ensure that there is no duplication of effort, significant coordination between OCRM and the Center is required to define specific roles. We found that there is a commitment on the part of NOS management to see that OCRM, the Coastal Services Center, and the Office of Ocean Resources Conservation and Assessments integrate their services. OCRM and the Center have discussed how best to coordinate their programs and the Office of Ocean Resources Conservation and Assessments has coordinated with the Center regarding technical work on monitoring data, national trends, and assessment research. In another important link, the Coastal Zone Information Center collection, which represents a library of all work generated by the CZM program since 1972, is being transferred from OCRM to the Center, where it will be cataloged and archived by a professional librarian, for the first time.

However, in part because of the differences between the Center and OCRM, we found that considerable tension exists between the two entities. Also contributing to the tension is the fact that OCRM is resource-poor and over-extended while the Coastal Services Center has a comparatively large budget and staff, which is allowing it to move into new areas. Consequently, OCRM feels that the Center is more interested in developing new relationships to serve its varied clientele than coordinating with existing NOAA programs, such as CZM. The Center, however, feels that OCRM makes unduly burdensome requests. The Center's Director of Coastal Management Services, for example, reports that he has to coordinate with six managers and staff within OCRM alone. NOS management acknowledges that friction exists, but believes that it will diminish naturally over time. Nevertheless, we found that the current tension between the Center and OCRM is inhibiting adequate coordination. For example:

- The Center has undertaken numerous initiatives without sufficient coordination with OCRM. For instance, the Center's ad hoc review team, made up mostly of state coastal managers, met for a strategic planning session without informing OCRM. However, the OCRM liaison was in Charleston at the time and could have been invited to meet with the review team. We find this lack of appropriate consultation worrisome, especially since OCRM has an established and ongoing relationship with state coastal managers and, as such, would have a legitimate interest in anything that might impact this constituency.
- Coastal nonpoint source pollution, to be discussed later in this report, was dropped from the Center's priorities. Numerous state CZM managers were angered that the Center would not provide resources for this initiative, even though controlling coastal nonpoint source pollution was a top priority of 20 out of 34 coastal managers according to a 1995 survey by NOAA's Coastal Committee. We are concerned that the Center's lack of funding and support for coastal nonpoint source pollution diminishes current efforts to support this important NOAA and EPA-led campaign.
- The Center's offerings include a wealth of on-line policy and technical information, but potential users of this information are not routinely told whether the policies are employed as part of a formally-approved state CZM plan. Because of the Center's scientific focus, it is not well versed in which policies are part of a state CZM plan, meaning they have been deemed valid and effective by OCRM. OCRM is concerned that without better coordination and on-line explanation, the Center might disseminate incorrect or inconsistent policy information or propose techniques actively discouraged by OCRM. However, to the best of our knowledge, this problem has not actually occurred yet.

Differences in philosophy make resolving tensions between the Center and OCRM difficult. The Center emphasizes its obligation to serve its clients and be responsive to their needs. OCRM believes, and we agree, that the Center should serve these clients, but in the context of existing NOAA programs, particularly the CZM program and those programs housed in the National Marine Fisheries Service. Such as is the case with the CZM program, many NOAA programs already have established relationships with the clients the Center is trying to serve and any projects undertaken by the Center should be fully coordinated with the NOAA staff on those programs to ensure that there is no duplication of effort and, more importantly, to demonstrate to clients that NOAA is able to coordinate internally and speak with one voice on important issues.

We recognize that both the Center and OCRM share similarities, such as progressive leaders and highly competent staffs. The current tensions, however, are interfering with the ability of both offices to improve the level of NOAA's service to the coastal constituency. Areas of responsibility need to be clearly defined to ensure optimum cooperation, coordination, and communication between the two offices. In addition, it would further help agency integration if the Director of OCRM were to serve on the Management Committee of the Coastal Services Center. It is critical that the Center and OCRM present a unified image to all clients, as any apparent lack of coordination would perpetuate whatever negative images may exist among state CZM managers about the continued lack of integration in NOAA.



While NOAA stated in its response to our draft report that it agreed with our recommendations dealing with the Coastal Services Center, its proposed actions do not completely meet the intent of our recommendations. NOAA said that "the NOS Assistant Administrator will officially designate the Director of OCRM as her alternate on the Coastal Services Center Management Committee." This does not make the Director of OCRM an equal player on the Management Committee, which is what we feel is necessary to resolve the problems discussed in the above section. While we recognize NOAA's desire to maintain "proper balance between line offices," we believe that NOS, because of its new and expanded focus on coastal issues, can safely be allotted more positions on the Management Committee than other line offices. Therefore, we request that NOAA reconsider its proposed action and appoint the Director of OCRM to the Coastal Services Center Management Committee as a full member, not an alternate.

With regard to our recommendation that the partnership between OCRM and the Coastal Services Center be reviewed to clarify areas of responsibility, NOAA's planned actions fully meet the intent of our recommendation.

II. Administration of CZM Cooperative Agreements Warrants NOAA Management's Attention

NOAA issues CZM financial assistance awards, in the form of cooperative agreements, to the coastal states based on an annual appropriation from Congress, which in recent years has been approximately \$47.7 million. OCRM and NOAA's Grants Management Division (GMD) work together to issue the CZM cooperative agreements, which provide funding for program implementation, program enhancement, and when funds are appropriated, coastal nonpoint source pollution. OCRM generally handles the programmatic requirements, while GMD is responsible for ensuring that the cooperative agreements are issued in accordance with all applicable agency, departmental, and federal rules and regulations. The CZM cooperative agreement typically includes funding for program management and a separate amount for individual projects. The percentage of funding provided for program management versus projects varies considerably by state, depending on how they choose to manage their individual program. Program management includes the administrative cost of managing the program at the state level, including salaries, fringe benefits, travel, and office supplies for the state program manager and staff. Typical program management activities include the oversight of projects performed by outside contractors and routine functions of the program such as hazard mitigation. The individual projects, also called tasks, involve the performance of the actual "on-the-ground" activities related to the CZM program such as outreach programs, marina development, small construction, and education.

To apply for a CZM cooperative agreement, a coastal state submits its application package to OCRM approximately four months before the financial assistance is to be awarded. CZM cooperative agreement applications vary from applicant to applicant for many reasons, including differences in the level of funding requested for program management versus projects, budget details at the project level, and the number and type of projects. There may be as many as 40 projects funded under any one CZM award. OCRM reviews the completed application from a programmatic standpoint, concentrating on whether the projects within the cooperative agreement application are reasonable and relevant to the applicant's program. After OCRM's review and approval, the cooperative agreement application is then sent to GMD. GMD's review process includes reviewing the standard forms, budget details, and ensuring that costs are reasonable, allowable, and allocable. Subsequent to GMD's review and approval, cooperative agreement applications must also be cleared by the Department of Commerce's Office of Inspector General and the Department's Office of General Counsel. For any assistance over \$100,000, which would include most CZM and NERRS awards, the Financial Assistance Review Board must also give its approval. After these clearances and approvals are received, GMD has the final approval authority to make the financial assistance award.

Processing the annual award applications is only one of many cooperative agreement administration activities involved in the CZM program. Other activities include processing requests for no-cost extensions of time on projects, processing requests to move funds around within an already awarded cooperative agreement, monitoring financial and performance reports, and closing out the award. In the past, GMD and OCRM have been criticized by the awardees for many delays in processing cooperative agreements and have been under intense pressure to improve the timeliness of the cooperative agreement administration process. Within the last year,

OCRM and GMD have worked to streamline the cooperative agreement administration process by eliminating the requirement for a new budget for no-cost extensions, establishing a threshold of \$100,000 for competitively-selected awards to require review by the Office of General Counsel, and removing the requirement for two pieces of documentation for travel expenses. OCRM and GMD are also currently involved in several efforts to facilitate better communication and to improve the cooperative agreement administration process, such as conducting joint quarterly meetings to discuss CZM cooperative agreement administration issues and a project to simplify the application process by minimizing the required documentation for section 306A awards.

Several of the awardees interviewed said they have definitely observed improvements in the cooperative agreement administration process. However, we found that there are several cooperative agreement administration issues and opportunities for improvement that should be addressed to further improve the process. First, multi-year cooperative agreements for the CZM program may be beneficial to OCRM, GMD, and the awardees by reducing the amount of time spent on paperwork required for cooperative agreement submissions. Second, during our discussions with some of the awardees, we noted that several of them were having difficulty complying with the current accounting requirements for tracking and allocating oversight costs when a project has been extended into subsequent award periods. Third, requests for no-cost extensions of time on a cooperative agreement are not being processed in a timely manner, thus causing delays in initiating and completing projects. Lastly, OCRM and GMD are often not communicating a consistent message on grant policies and procedures to the CZM awardees, thereby causing much confusion and additional effort to correct the resulting problems.

A. *Multi-Year Cooperative Agreements Offer Potential Opportunity to Alleviate Administrative Workload*

A multi-year cooperative agreement award may be beneficial to OCRM, GMD, and the coastal states because it offers the opportunity to cut down on the frequency of performing administrative tasks involved with the submission and review of the annual CZM cooperative agreement application. If time can be saved in this process, awardees, as well as OCRM staff, can spend more time on substantive programmatic CZM activities. In addition, the continuous nature of the CZM program, where a cooperative agreement is routinely issued year after year for an ongoing program, lends itself to the use of multi-year awards.

In recognition of the need to cut down on paperwork in the CZM cooperative agreement administration process, OCRM and GMD recently implemented a new award period, beginning in fiscal year 1996, which will allow awardees to expend funds over 18 months, rather than the previous 12-month period. The main purpose behind the 18-month extension was to eliminate the paperwork involved in processing no-cost extensions for projects that have a tendency to run longer than 12 months. Despite this improvement, it is important to note that the awardees will continue to receive an annual award, which will include just 12 months of funding for program administration even though they may take up to the full 18 months to expend funds provided for projects. While the move to an 18-month award period is a good initial effort, we found that there may be potential for further streamlining by using multi-year cooperative agreements, rather than an annual award.

OCRM had previously considered a multi-year award as an option, hoping to reduce administrative time spent on processing cooperative agreement packages each year by OCRM, GMD, and the awardees. OCRM believed, however, that Department of Commerce guidelines restricted the use of multi-year awards for a program like CZM, so it did not pursue such an option. However, during the course of our review, we determined that there are no Departmental restrictions on issuing two or three year cooperative agreements for the CZM program, as long as OCRM and GMD obtain specific authority based upon bona fide need to issue multi-year awards from the Department's Office of Executive Assistance Management. Many of the state CZM officials we interviewed also favored multi-year awards for the CZM program primarily because it would permit them to focus on programmatic issues during the time it usually takes them to prepare a cooperative agreement submission. Most of these awardees expressed a preference for a two-year award period, because they feel most comfortable planning over this time horizon and can save as much as two to three months time by not having to prepare an application for the second year. Other significant benefits of a two-year award period identified by awardees include the reduction in the number of no-cost extensions prepared for projects that take longer than a year or 18 months to complete, being able to execute larger projects over a longer period, and the ability to parallel a two-year award period to the state biennial budget cycle.

Yet, several additional issues must be resolved before multi-year cooperative agreements can be used for the CZM program. One significant problem exists because the CZM program receives a different annual appropriation and the amount of funding provided under each CZMA section varies each year. This makes it very difficult to plan beyond the current year. For example, there was no section 308 funding, covering regional projects and demonstration projects, in fiscal years 1992, 1993, 1996, and 1997, however funding was available for section 308 in fiscal years 1994 and 1995. Funding for Projects of Special Merit, the portion of the section 309 annual appropriation that is competitively bid each year, has been sporadic as well. For example, in fiscal years 1992 through 1995, funding was available for Projects of Special Merit, but in fiscal years 1996 and 1997 there was no funding for these projects. Another problem, identified by some awardees, is unpredictable political pressures in the state that may cause a change in priorities during the multi-year period. Several awardees also mentioned the uncertainty they face due to the state match for the second year of a two-year award period, because these awardees receive an annual state appropriation. For these reasons, some awardees would like flexibility in the scope of the projects and the state match for the second year of a two-year cooperative agreement, if multi-year awards were to be implemented.

Despite the difficulties cited above, we believe the potential benefits of multi-year awards warrant having OCRM and GMD further explore their feasibility. We suggest that OCRM and GMD test the multi-year cooperative agreement process in a pilot project with a limited number of CZM awardees. Such a pilot project would be an important step in determining whether full implementation of multi-year awards for the CZM program is justified.

In responding to our draft report, NOAA stated that it would work towards developing a pilot program for making multi-year awards to state CZM programs. This action meets the intent of our recommendation. We believe multi-year grants, if implemented properly, will be of great benefit to both NOAA and the recipients. Therefore, we encourage OCRM to aggressively work through the potential stumbling blocks to make the pilot program a reality and to look to other programs, such as NERRS and Sea Grant, as models and for “lessons learned.”

B. Continuous Nature of the Coastal Zone Management Program Requires Different Accounting for Program Management Costs

A majority of the CZM grantees we interviewed are not properly accounting for the program management costs to oversee a project that has been given a no-cost extension into a subsequent award period, primarily because they believe the required accounting effort is burdensome. As described earlier, CZM cooperative agreements typically include funding for both program management and individual projects, such as small construction or development projects in coastal areas. Program management involves a variety of functions including the oversight of such projects, the majority of which are performed through outside contracts and awards made by the awardee to other entities. Program management also involves the responsibility for routine functions, such as education, outreach, and hazard mitigation. Program management costs are continuous in nature because the awardee is responsible for running the program year after year. The projects, however, are periodic in nature with finite beginning and ending dates. Currently, if a project goes beyond the 18-month award period, a no-cost extension may be granted by GMD. In contrast, each cooperative agreement only provides 12 months worth of program management funding. Therefore, all program management funds have usually been expended by the end of the 12-month award period. Many state program officials routinely use the subsequent year’s award to cover any necessary program management or oversight expenses required on the projects carried over from a previous award, which violates applicable cost principles contained in OMB circulars.

This problem was first identified through an audit of the South Carolina Coastal Council (the Council) performed by our office in 1996.⁸ The audit questioned the accounting for oversight costs in the Charleston Harbor Project, a five-year project with separate cooperative agreements for each of the five years. During the five-year period, GMD approved several no-cost extensions for tasks in the Charleston Harbor Project award. However, for several years, the Council was found to have improperly assigned costs from subsequent awards to cover the oversight of tasks extended from previous cooperative agreements. The auditors stated that the correct way would have been to allocate (at the end the first year) some of the oversight costs from the award on which the task was originally approved to cover any oversight necessary on the task in any subsequent years.

⁸ “South Carolina Coastal Council Causes Project To Cost An Additional \$250,000”, May 1996, Audit Report No. ATL-7863-6-0001.

The audit finding highlighted a major problem for CZM awardees, many of whom have since told us that they, too, were not technically in compliance with the accounting requirements for oversight costs. By the end of a 12-month award period, the awardees have generally expended the funds allocated for program management, making it difficult to set aside some funds for the purpose of administering a project that is extended into a subsequent year. State CZM officials were concerned that to comply with the cost accounting requirements would place a heavy administrative burden on them in terms of record keeping and financial management.

As discussed earlier in this report, CZM awardees are also faced with these same administrative difficulties as a result of the recent implementation of a new 18-month award. The cooperative agreements will continue to be awarded every 12 months and, as a result, the awardees will continue to expend program management and oversight funds over a 12 month period, so there will be no cooperative agreement funds left to oversee any projects that take the full 18 months. For the same reasons as discussed above, the awardees are again faced with the difficult task of trying to properly account for program management costs.

OCRM, in an effort to reach a compromise on this issue, attempted to provide guidance to the awardees to assist them in correctly accounting for the oversight costs during the no-cost extension period of a project. OCRM was basically advising the awardees to set aside funds at the beginning of the award period, to cover the cost of oversight of projects that may be extended into the next year. This is not an optimal solution for several reasons. First, the estimate is not always accurate, and by the end of the award period, the recipient may either not have enough or have too much money set aside for oversight. The recipients risk deobligation of any money set aside that is not actually spent for oversight. To prevent deobligation of excess funds, the awardees would then need to go through the additional effort of applying for a reassignment of funds to another task within three months of the end of the award year.

OCRM, GMD, and our office recently met to discuss this issue. As a result of this meeting, OCRM and GMD drafted a proposed solution that OIG auditors found acceptable under current audit and cost accounting standards. Generally, the proposed solution will allow for some flexibility to be written into the standard terms and conditions of CZM cooperative agreements to recognize that funds for program management from the current cooperative agreement may be used to oversee projects being completed with funds from previous awards, as well as projects in the current cooperative agreement. The precise wording to be placed in the cooperative agreements can be found on Page 50 of this report, under recommendation No. 6. OCRM and GMD still need to address whether it is possible to “grandfather” in current outstanding cooperative agreements where this is also a problem. This solution, while ensuring compliance with applicable OMB circulars and guidelines, will ease the requirement to account for program oversight costs by award year, thus allowing the states to spend more time concentrating on programmatic issues.



NOAA agreed with this recommendation in its response to our draft report, and has already taken action to fully implement the recommendation. We commend NOAA for moving quickly to resolve this issue and we are satisfied that the intent of the recommendation has been satisfied.

C. Timeliness of Cooperative Agreement Extension Process Needs Improvement

Requests for no-cost extensions of time on awards are currently not being tracked by GMD, which has led to substantial delays in their approval. Just about all of the recipients we interviewed identified the processing of no-cost extensions as a significant problem for them. They noted extensive delays of as long as five months for GMD's approval. This, in turn, creates delays for the awardees. For example, one recipient was unable to pay its contractor on time, because of GMD's delay in approving its no-cost extension. As of April 1997, GMD did not have an automated process to monitor the status of no-cost extensions and, as a result, it does not have the ability to focus its attention on the older requests first. GMD recognizes this problem and is currently in the process of creating an internal office computer tracking system to monitor the status of no-cost extension applications. This tracking system should enable GMD to prioritize the processing of no-cost extension applications, thus improving its approval time.



In responding to our draft report, NOAA agreed with this recommendation. It stated that OCRM and GMD would create an electronic tracking system for no-cost extensions and other grant amendment requests by the end of the first quarter, fiscal year 1998. In addition, OCRM and GMD will "monitor the effectiveness of the tracking system and develop statistics on processing time to determine success." If completed, these actions will meet the intent of our recommendation.

D. Coordination Between OCRM and GMD Needs Improvement

OCRM and GMD have been working on improving the cooperative agreements management process, as well as coordination and communication between their two offices. However, we found that additional coordination is required in several areas. In their favor, OCRM and GMD can be credited with working together on several streamlining efforts that have been implemented to date, including eliminating the requirement for a new budget for no-cost extensions, establishing a threshold of \$100,000 for competitively selected awards to require review by the Office of General Counsel, and removing the requirement for two pieces of information for travel expenses. OCRM and GMD are also currently involved in several additional efforts to facilitate better communication and to improve their administration of the cooperative agreements. First, GMD and OCRM recently initiated joint quarterly meetings to discuss CZM cooperative agreement administration issues and improve communication. Second, OCRM and GMD formed a committee comprised of individuals from the Department's Office of General Counsel (OGC), GMD, NOS's Office of General Counsel, and OCRM to streamline the award application and review process, especially for those applications with Special Award Conditions. Lastly, OCRM and OGC will be working together during the fiscal year 1997 grant year, to reduce the required documentation for section 306A cooperative agreements, thereby simplifying the application process. OCRM expects this project to be completed by the end of the fiscal year 1997.

Despite OCRM and GMD's ongoing efforts to improve the grant administration process, coordination between OCRM and GMD on cooperative agreement administration issues is not always optimal. For example, GMD is not always provided with copies of correspondence between the award recipient and OCRM with regard to the administration of cooperative agreements and other guidance, such as program regulations that OCRM sends to recipients. This has led to some misunderstandings by the awardees, resulting in additional time-consuming efforts by GMD to clarify issues with the awardees and with OCRM. For example, when the Florida CZM program requested a change in start date from October 1 to July 1 for its fiscal year 1997 award, OCRM and GMD provided inconsistent advice on how to go about making the change. This caused much confusion at the state level, ultimately leading to a delay in the award process and additional efforts by GMD and OCRM to resolve the inconsistencies.

A coordination problem also exists between OCRM and GMD with regard to the transition from a 12-month to an 18-month award period. While this transition was implemented for fiscal year 1996, OCRM issued only a few paragraphs of guidance on the subject in a memo to award recipients in February 1996. As of March 1997, both GMD and OCRM had differing views on the procedures the recipients need to follow, and had not yet resolved all of these differences. However, OCRM and GMD recently made the effort to resolve one problematic issue, that being whether no-cost extensions were required during the 18-month award period. During the CZM program managers' meeting in April 1997, OCRM and GMD issued joint verbal guidance to the attendees that no such extensions would be needed and later followed up, in July 1997, with written guidance to all award recipients. While the no-cost extension issue has been resolved, there are other procedural differences between OCRM and GMD on the conversion to an 18-month award period that need to be corrected before further inaccurate information is communicated to the recipients.

Finally, we found that OCRM is sending cooperative agreement applications to GMD with inconsistent information. For example, an application with a term of one year may have supporting information provided for two years. GMD believes OCRM should work with the recipient to correct these inconsistencies prior to OCRM sending the application to GMD, thereby reducing the time GMD must spend on each cooperative agreement package. This is clearly an example of how GMD needs to better communicate to OCRM problems and issues in the cooperative agreement application process that occur as a direct result of OCRM's activities. If OCRM is alerted to these issues and can correct them, then GMD can do its job better. OCRM agrees with this problem and, in the future, will correct discrepancies in the cooperative agreement application packages before sending them to GMD.

It is clear that OCRM and GMD have made progress this past year in improving their cooperation in streamlining the cooperative agreement or grant administration process. However, they need to increase these efforts with the goal of providing one voice from NOAA to the awardees on grant administration issues.



NOAA's response to our draft report stated that it agreed with our recommendation that OCRM and GMD coordinate their guidance to CZM and NERRS financial assistance recipients. It said

that the two offices would “coordinate all grant-related correspondence” as well as continue quarterly coordination meetings, clarify the OCRM point-of-contact for grants issues, and clarify and implement procedures for OCRM and GMD to follow when dealing with recurring grant actions, such as award processing. These actions meet the intent of our recommendation.

III. Current Coastal Nonpoint Source Pollution Provisions Are Unworkable

In 1990, as part of the Congress' process of reauthorizing the CZM Program, a new section was added to the CZMA entitled "Protecting Coastal Waters." The purpose of this new measure, commonly referred to as section 6217, was to address the impacts of nonpoint source pollution on the water quality of the coasts. Nonpoint source pollution is any water contamination that does not originate from a point source, such as a pipe or ditch. Typically nonpoint source pollution occurs when rainwater or snowmelt washes off agricultural fields and city streets, and picks up pollutants from the land surface, such as pesticides and animal waste, as it runs into rivers, lakes, wetlands, and coastal waters.

Section 6217 requires that NOAA, specifically OCRM, work with the EPA to implement the statute, with the objective of strengthening the links between federal and state CZM and water quality programs to better manage land use activities that degrade coastal waters and coastal habitats. As part of section 6217, the 29 coastal states under the CZM program at that time were required to develop and submit a coastal nonpoint pollution control program submission for OCRM and EPA's approval. The submissions were to lay out a state program that would strengthen standards and improve coastal water quality. The only other federally mandated nonpoint source pollution program was established by the Clean Water Act. In 1987, Congress passed the Water Quality Act, which added section 319 to the Clean Water Act. Section 319 was the first national nonpoint source pollution program, and is administered by the EPA and funded through federal grants to the states. Under this program, states are to develop both an assessment report detailing the level of nonpoint source pollution and a management program describing how the pollution will be controlled. The management programs are typically developed and managed by the state water quality agency and funded by EPA. The main connection between EPA's section 319 program and section 6217 is that the coastal states may use their section 319 grants to cover expenses associated with complying with section 6217.

From the outset, section 6217 has been fraught with controversy. While environmentalists generally hail the statute as a much needed step toward controlling nonpoint source pollution along the coast, state CZM program officials say that the program is both unworkable and politically untenable. The legislation was clearly ambitious in both its scope and time frame, which caused much of the controversy. In addition, federal funding provided to the states to develop the program submissions was limited and no additional funding is being provided to implement the actual programs. This has led state CZM program officials to refer to section 6217 as an "unfunded mandate" from the federal government. Despite the controversy, all 29 coastal states⁹ have submitted programs for OCRM and EPA review. However, officials at OCRM and EPA have stated that none of the state program submissions will receive final approval because the submissions do not fully comply with the statute. Instead, OCRM and EPA, in an attempt to be flexible and work with the states, have chosen to give the program submissions conditional approval, which gives the states up to five years to prove that the

⁹ The two states that entered the CZM program in 1997, Texas and Ohio, will be given 30 months from the date of their entry into the program to submit a coastal nonpoint source pollution program to OCRM and EPA.

measures set forth in their programs comply with the statute, as well as to address identified gaps and develop other incomplete program elements. The coastal states' inability to obtain final approval indicates that they are having fundamental problems developing coastal nonpoint programs under section 6217. Despite the problems, some benefits have accrued as a result of section 6217 and this progress should be preserved. However, as it currently exists, section 6217 is not workable without improvements, such as changing the time frames for program implementation.

A. Requirements of the Statute Are Difficult to Implement

Many of the problems and controversy surrounding section 6217 arise from the structure and requirements of the statute itself. Passed in 1990, section 6217 was designed to compel state CZM and water quality agencies to address the growing problem of nonpoint source pollution along the nation's coasts. In most states, these two parties are not organizationally located in the same agency, and previously had little interaction with each other. In addition, the statute also required that the federal agencies responsible for administering the CZM program (NOAA) and water quality programs (EPA) work together to ensure that their state partners were adequately addressing the coastal nonpoint source pollution problem. To accomplish this, the statute directed NOAA and EPA to jointly publish guidance for the states on how to develop an acceptable program submission.

The states were given 30 months from the date of the publication of the final federal guidance to submit a program to NOAA and EPA for approval. Section 6217 required that the state programs contain "management measures." Management measures are provisions for the reduction of nonpoint source pollution that can be implemented through enforceable state policies and mechanisms. Finally, the statute required that penalties be levied if a state failed to submit an approved program within the allotted 30-month time-frame. The penalties were set as 10 percent of both federally-provided CZM and Clean Water Act¹⁰ funds in fiscal year 1996, 15 percent in fiscal year 1997, 20 percent in fiscal year 1998, and 30 percent in fiscal years 1999 and beyond.

In 1989, there was a strong push from some members of Congress to toughen nonpoint source pollution provisions in the Clean Water Act, which was scheduled for reauthorization in 1990. The proposed additional legislation to toughen those provisions would have required that all states confront nonpoint source pollution problems through the application of management measures. The Clean Water Act's nonpoint source pollution program was previously based on voluntary compliance and did not require management measures. However, for a number of reasons, these efforts failed. In fact, the Clean Water Act was never successfully reauthorized in 1990, nor has it subsequently been reauthorized. To ensure passage of the tougher nonpoint source pollution provisions, supporters moved the proposed legislation into the CZMA, which was also up for reauthorization in 1990. The House of Representatives committee with jurisdiction over the CZMA already had several efforts underway to address nonpoint source

¹⁰ Specifically, funding provided through section 319 of the Clean Water Act would be targeted for penalties.

pollution in the country's coastal regions, so it made sense to move the proposed legislation into the CZMA. The House of Representatives held hearings on the CZMA reauthorization in March 1990 and interest groups, federal agencies, and the public were invited to offer comments. At the time of these hearings, the coastal nonpoint source pollution measures had already been moved into the proposed bill to reauthorize the CZMA. However, a conference committee, formed by the House of Representatives and the Senate to seek a compromise between different bill versions, made significant changes to the coastal nonpoint source pollution portion of the legislation, as detailed below. In November 1990, the reauthorization of the CZMA was passed as part of the Omnibus Reconciliation Bill of 1990. Section 6217 of that bill contained the newly rewritten coastal nonpoint source pollution provisions.

Almost immediately after the CZMA was reauthorized, the controversy began. The Coastal States Organization, the association that represents the governors of the 35 coastal states and territories, complained that the conference committee substantively changed the CZMA in a way that would make it difficult for states to comply. Specifically, the states argued that the committee changed the legislation so that section 6217 is now the only statute that addresses the nonpoint source pollution problem by requiring that management measures be achieved through enforceable state policies and mechanisms, such as state or local laws or regulations. States would have preferred to be given the flexibility to decide whether an enforceable policy was required to meet the particular management measure. Very often states find that voluntary, non-enforceable policies are best to encourage compliance by polluters, such as those permitted by the Clean Water Act. In addition, new regulations would have to be passed in the states to create the enforceable policies required by section 6217.

These new regulations would apply to industries, such as timber and agriculture, whose polluting practices had previously been largely unregulated by the state. In many states, these industries are large and politically powerful. As a result, there is minimal political action taking place at the state level to pass new regulations that might constrain or negatively impact the operation of these industries. In our review, we found this problem to be particularly prevalent in the Great Lakes states. Another controversial aspect of the section 6217 legislation was the 30-month time frame permitted for submittal of the states' programs. Again, most states needed to develop additional state authorities (laws, enforceable standards, etc.) to meet the requirements of section 6217. States argued that developing the authorities and gaining public and political support for passage of such measures through the state legislatures or rulemaking would take more than 30 months to accomplish.

The states observed that not only was the time frame unrealistic for submittal of their programs, but the penalties that were to be levied for not submitting an acceptable program were misdirected because they serve to penalize the regulator (state government), rather than the nonpoint source polluter. In addition, the monetary penalties of section 6217, as described previously, were considered to be a weak motivator to encourage states to develop and implement coastal nonpoint source pollution programs. The penalties pale in comparison to the costs, both economic and political, of implementing a coastal nonpoint source pollution program. For example, in one Great Lakes state, the state estimated that the projected cost to the agricultural industry to fully comply with all provisions of section 6217 is \$500 million. This same state receives approximately \$800,000 in annual CZM funding from the federal government.

In our discussions with state CZM officials on this issue, several states acknowledged that they have considered ending their participation in the CZM program rather than expending potentially excessive funds to comply with section 6217 in future years. Because compliance with section 6217 is only applicable to states with federally approved CZM programs, dropping out of the CZM program means that states would no longer be subject to section 6217. However, leaving the CZM program is not considered a good alternative, either by OCRM or this OIG review team, since many states have made positive progress on many coastal issues while in the program. In addition, one state that was in the process of creating a coastal management program for acceptance by OCRM, has tentatively decided not to continue the development of its program because entering the CZM program would mean having to comply with the provisions of section 6217¹¹. According to state officials, the general public in that state is opposed to the enforceable policies inherent in section 6217. Finally, the states argue that the success of the CZM program is due in great part to its flexibility and voluntary nature, yet section 6217 does not possess either quality. Some states believe that section 6217 was misplaced and is better suited to the Clean Water Act, providing there is also some flexibility built into the law for states to decide where enforceable policies make the most sense. The Clean Water Act, unlike the CZM program, applies to all states and all regions, not just those on the coast. As watersheds know no boundaries, in many cases it is the non-coastal regions (those not covered by section 6217) that are the upstream source of a considerable proportion of coastal nonpoint source pollution.

B. Limited Funding Available for Development and Implementation of State Programs

In addition to the problems inherent in the section 6217 legislation itself, funding for the development and implementation of the states' coastal nonpoint source pollution programs became a significant issue by 1992. The statute authorized NOAA to provide cooperative agreement funds to states to develop their programs. Specifically, section 6217 authorized \$6.0 million in fiscal year 1992, increasing to \$12.0 million for each fiscal year from 1993 through 1995, the last year covered by the statute. Actual appropriations were consistently less than the authorized amounts, and funding for the development of coastal nonpoint source pollution programs has never been more than \$5.0 million in any one year (see Table III.1). Appropriations were allotted to the 29 states in the CZM program according to a formula based on coastal mileage and population.

¹¹ This state is technically still developing its program, because it is still expending cooperative agreement funds provided for that purpose. However, the last year the state received a CZM award was 1994 and unless the state applies for additional funding, it is unlikely that much additional program development will be accomplished.

Table III.1: Section 6217 Appropriations, Fiscal Years 1992 - 1998

Fiscal Year	Appropriation	Range of Amounts Allotted to the States
1992	\$2,000,000	\$42,000 - 100,000
1993	2,000,000	42,000 - 100,000
1994	4,000,000	84,000 - 200,000
1995	5,000,000	103,000 - 250,000
1996	0	0
1997	0	0
1998 ¹²	1,000,000	250,000

According to section 6217, the total amount of federal grant assistance provided to the states cannot exceed 50 percent of the total cost to the states of developing their coastal nonpoint pollution programs. However, for some states, the cost of developing a coastal nonpoint pollution program has been much greater than 50 percent of the limited funding provided under section 6217. In many states, additional staff were required, in both the state CZM agency and the state water quality agency, to develop the program. Additional staff was necessary to conduct essential interaction with other local, state, and federal agencies and officials, to arrange public hearings, and to perform general administrative coordination among the various parties with interests in section 6217 and the development of the program.

Section 6217 did not provide any additional funding to help states in the actual implementation of their programs. According to the statute, once a state's coastal nonpoint pollution program is approved, the cost of its implementation is to be drawn from existing grants or cooperative agreements under section 319 of the Clean Water Act and/or section 306 of the CZMA.¹³ OCRM and EPA have urged the states to work internally, between the CZM and water quality agencies, to prioritize tasks performed with section 319 and section 306 funding, to ensure that sufficient funding is allocated to the implementation of the states' section 6217 program. Realistically, however, securing sufficient funding for the implementation of section 6217 programs will be a challenging task for the states. With rare exception, the awards received by the states under section 319 and section 306 are already being used to meet existing requirements under the Clean

¹² According to the Fiscal Year 1998 President's Budget, the funding provided in fiscal year 1998 is for the development of section 6217 programs for the two states, Texas and Ohio, that entered the CZM program in 1997 and the two states, Georgia and Minnesota, still seeking approval for entry into the program.

¹³ Another source of federal funding that OCRM and EPA have identified for section 6217 implementation is the Environmental Quality Incentive Program (EQIP), which is administered by USDA. EQIP has a total annual appropriation of approximately \$200.0 million and section 6217 is designated as one of its priority areas. It is unclear whether any of the coastal states have been successful in obtaining any EQIP funding for section 6217 implementation.

Water Act and the CZMA. According to several of the state CZM officials we interviewed, there is no “extra” money available to fund section 6217, as both section 319 and section 306 awards are covering programs mandated by the Clean Water Act and the CZMA. In addition, funding received under section 319, a much greater amount per year than that received by the states under section 306, is received by the state as a block grant and is controlled by the state agency responsible for water quality. However, because section 6217 is under the CZMA, it is usually the responsibility of the state CZM agency to administer the statute. As a result, the 6217 program is being forced to compete for section 319 funds with programs under the control of the state water quality agency. In at least a few states, we were told that because section 6217 is not a program housed in the state water quality agency, the agency is reluctant to hand over grant funds to the state CZM agency to pay for section 6217 implementation. Therefore, with no additional funding, states will have to take funds away from existing water quality and CZM programs to pay for the implementation of their section 6217 program.

OCRM and EPA recognize that funding is a problem, but they are unable to obtain additional funding. The statute only permits NOAA to provide funding for program development and not program implementation. OCRM and EPA have tried to be flexible to make it easier for states to implement their programs incrementally, so that smaller amounts of funding are required by the states in any one year. In particular, OCRM and EPA have allowed the states the ability to phase-in the implementation of their programs over time, as long as implementation is complete by 2004. However, because of the lack of federal funding for the implementation of section 6217 programs, the states will continue to experience problems in implementing a coastal nonpoint source pollution program that meets all the requirements set forth in the statute. To help the states, NOAA and EPA must create incentives to encourage the state agencies that receive federal funding under the Clean Water Act (section 319) and EQIP to work with the state CZM agencies in allocating grant funding to the section 6217 program. Because section 6217 implementation will begin in earnest later this year, it is important that NOAA and EPA work together now to identify other sources of funding to help states in implementing their section 6217 programs.



In its response to our draft report, NOAA agreed to “work with EPA regional offices and state water quality agencies to ensure that an increasing amount of section 319 funds will be allocated to support the approved state coastal nonpoint programs.” In addition, NOAA stated that it would continue to work (1) with USDA to ensure coastal nonpoint source pollution efforts are funded through EQIP, (2) through the regular budget process to seek an appropriate level of funding to support states’ efforts to implement their section 6217 programs. Finally, NOAA said it would work with other federal agencies to identify opportunities for directing federal funding to assist states with their coastal nonpoint source pollution programs. These proposed actions meet the intent of our recommendation.

C. *Coastal States Are Having Fundamental Problems Developing Programs*

Due to the difficulty with the requirements set forth in the statute and the limited funding available for use in creating a coastal nonpoint source pollution program, the states are experiencing fundamental problems in developing their programs. As stated previously, the statute required that the states submit their program submissions for OCRM and EPA review and approval within 30 months after the publication of the final federal guidance. This guidance was published in January 1993, so the proposed programs were to have been submitted by July 1995. However, after doing a preliminary review of the progress states were making toward developing their programs, it was clear to OCRM and EPA that several significant changes needed to be made to provide additional time and flexibility to the states in developing their section 6217 programs. Specifically, OCRM and EPA found that the states had many gaps in their draft programs. Given the limited resources the states had to work with, as well as the slow pace at which necessary legislative changes were occurring, it was clear to the federal agencies that the states would not be able to meet the approval requirements by July 1995. Therefore, in March 1995, OCRM and EPA jointly issued new, more flexible guidelines for the states to follow in developing and implementing their section 6217 programs.

The new guidelines gave OCRM and EPA the option of granting conditional approval of a state's coastal nonpoint source pollution program, rather than just final approval or no approval. Conditional approval would give the states up to five years¹⁴ to complete their program without invoking the penalty provisions set forth in the statute. The conditional approval option was intended primarily to provide states with additional time to obtain new statutory or regulatory approval and/or to demonstrate that existing authorities are adequate to meet the requirements of the statute. The guidelines did not, however, change the July 1995 due date for program submissions. All 29 states were able to submit programs for OCRM and EPA review, although not all were submitted by the July 1995 deadline. The statute also required that OCRM and EPA review all program submissions within six months of their submission, or by January 1996. Based on that schedule, starting in January 2001, statutory penalty provisions would be applied to states that had not yet received final approval.

Despite the requirement that OCRM and EPA review all programs within six months of their submission, OCRM and EPA officials knew almost immediately that they were not going to be able to review all of the states' program submissions and grant conditional or final approval of those submissions by January 1996. According to OCRM personnel, the statute failed to consider that NOAA, unlike EPA, is subject to the terms of the National Environmental Policy Act. This Act requires that any federal requirement, such as section 6217, be publicly assessed for its environmental impact. Therefore, NOAA was required to prepare one programmatic environmental impact statement for the entire section 6217 program and an individual environmental assessment for each state program. Both the programmatic environmental impact statement and the environmental assessments had to be published in the *Federal Register* and any public comments or suggestions had to be taken into consideration, a process that alone can easily

¹⁴ The length of the conditional approval period would depend on the complexity of the work that still must be done by the state in order to fully comply with section 6217.

take six months. In addition to the National Environmental Policy Act requirements, the sheer volume of the program submissions, the necessary legal and programmatic analyses, and the substantial consultation required with some states in order for their program submissions to achieve an acceptable level, prevented the federal agencies from completing their review within the six-month time frame set forth in the statute.

Officials at OCRM and EPA completed their review of all program submissions in June 1997. However, they were unable to give final approval to any of the 29 submitted programs because none of them fully complied with the terms of the section 6217 statute. However, based on their review, OCRM and EPA will be able to grant conditional approval for all of the state programs.

The fact that none of the states were able to submit a program that fully complied with the terms of the statute is cause for concern. In most cases, state program submissions failed to identify the need for new laws and regulations in order to comply with the provisions of section 6217. CZM officials in several of the states that we visited stated that the programs they had submitted were probably as complete as they would ever be, mostly due to the lack of political support for new, tougher nonpoint source pollution regulations in their states. They also said that if, after the conditional approval period had expired, OCRM and EPA began fully enforcing the terms of the statute, including the penalty provisions, they would be forced to withdraw from the CZM program. Losing states over the section 6217 issue is troubling because it will undermine the larger goals of the CZMA and slow or compromise the progress in coastal management that has been made through the program to date.

D. Progress Made to Date Should Be Preserved

Despite the controversy surrounding section 6217, benefits have accrued as a result of the initial effort in developing the coastal nonpoint programs and we believe these efforts should not be abandoned. The most significant benefit has been the fact that the coastal states have been able to identify both the strengths and weaknesses of their existing nonpoint source pollution strategies. Many states found that there were holes or gaps in their strategies or that existing state regulations were not sufficient to address the significant problem of nonpoint source pollution. The coastal nonpoint source pollution program development process ended up providing the states with an education about the problem, as well as a thorough inventory of nonpoint source pollution measures already on the books in their states. Other benefits that have accrued as a result of section 6217 include better working relationships between OCRM and EPA and between some, but not all, of the state CZM and water quality agencies.

Nearly everyone we contacted during our review, from environmentalists to state CZM program officials, agrees with the objectives of section 6217 -- to restore and protect coastal waters from nonpoint source pollution. While environmentalists fully support section 6217 because it is the only legislation that addresses the problem by requiring enforceable policies, the states tend to fault this feature of the legislation because it is very difficult to obtain legislative approval for such policies in many of the coastal states. Coastal states would prefer to rely on existing enforceable policies which prohibit activities that affect coastal water quality because they rely primarily on

voluntary compliance, but do provide the legal authority for enforcement if necessary. Section 6217 also has its proponents and detractors in the Congress, where its future is uncertain. At the start of the 104th Congress in 1995, jurisdiction over section 6217 was moved from the congressional committee with responsibility for the CZMA to the committee with purview over the Clean Water Act and other water pollution issues. The Clean Water Act has not been reauthorized since 1987 and the addition of section 6217 to that reauthorization package has not made it any easier for the Congress to agree on reauthorizing it. A bill to reauthorize the Clean Water Act was introduced in 1996, during the second session of the 104th Congress, but it was never passed. Section 6217 proved to be one of the most contentious issues in the reauthorization process as was evidenced by a heated floor debate on the statute. It is unclear whether a bill to reauthorize the Clean Water Act will be introduced in the 105th Congress.

Recognizing that they are facing considerable difficulty in trying to implement their section 6217 programs and that the Congress may not act soon to make legislative changes, state CZM program officials recently asked OCRM and EPA to examine four significant section 6217 issues for possible administrative improvements. The four areas are: financial resources to meet the statute's objectives; time frames for implementing the program; application of enforceable policies and mechanisms; and the ability to use a targeted approach to program implementation (only applying section 6217 measures to those coastal areas where a state has problems with nonpoint source pollution, versus applying it to the entire coastline.) Using a workgroup approach, the states, OCRM, and EPA examined each of these four areas in detail to determine what administrative changes OCRM and EPA can make to address the concerns of the states, yet still maintain the integrity of the coastal nonpoint source pollution program and the statute itself. The workgroups were successful in reaching a compromise in most of the areas reviewed, but there is still disagreement on using a targeted approach to program implementation. The states would prefer to be able to decide for themselves where the 6217 program is most needed on their coastline and what management measures would be required to achieve the desired actions by industry and others in that specific coastal region. The workgroups officially submitted their proposed changes to OCRM and EPA on August 1, 1997. The two federal agencies are currently reviewing these proposed changes and intend to publish the proposed changes in the *Federal Register* in the next few months. It is at this point that other stakeholders, such as environmental groups and affected industries, will have an opportunity to officially comment on the proposed changes. Once all public comments are evaluated, OCRM and EPA will most likely issue new administrative guidance to the states that provides new direction on how to comply with section 6217.

We commend both OCRM and EPA for recognizing the significant problems faced by the states in trying to comply with section 6217 and the need to capitalize on the progress the states have made to date in developing their nonpoint source pollution programs. The flexibility OCRM and EPA have shown in trying to make section 6217 workable for the states has been admirable. However, we are concerned that because of the large number of stakeholders in the outcome of section 6217, and their divergent views on the subject, additional problems may be created by further administrative changes to the federal agencies' guidance on section 6217 implementation. Environmental groups, for example, will likely argue that OCRM and EPA have watered down the intent of the statute, making it less likely that the problem of coastal nonpoint source pollution

will truly be addressed. Conversely, affected industries might argue that OCRM and EPA have still not focused on the fundamental problems of section 6217, making it difficult to implement in some states. If this controversy occurs, or if OCRM and EPA are unable to implement administrative changes that are sufficient to address the four issues raised by the states, we suggest that OCRM and EPA determine whether changes need to be made to the statute itself. If so, any proposed legislative changes should immediately be referred to the Congress for action so that the momentum achieved in addressing coastal nonpoint source pollution is not lost, and most importantly, so that states will have a better chance of implementing an effective coastal nonpoint source pollution program that will help meet water quality standards on the coast.



In its response to our draft report, NOAA stated that it will issue the proposed administrative changes to the section 6217 program guidelines for public review and comment, and based on those comments, revise and finalize the changes. In addition, NOAA will maintain an ongoing dialogue with the states to assess the impact of the administrative changes. These actions comply with the intent of our recommendation.

IV. The Effectiveness of the Coastal Zone Management Program Has Not Been Measured

OCRM has two mandates under the CZMA to document the accomplishments of the CZM program. First, OCRM is required to prepare a written evaluation that addresses the extent to which each state has satisfied the goals of the CZMA every three years. Second, OCRM is required to prepare a biennial report to the President, that includes a description of the accomplishments of each state program during the preceding two years and a summary of the national strategy and accomplishments for the entire coastal zone. In addition to the mandates under the CZMA, OCRM will also soon be subject to the requirements of the Government Performance and Results Act of 1993 (GPRA), a law passed by the Congress as part of the current federal initiative seeking to better link resources with results. GPRA is intended to change federal management and accountability from a focus on output, such as activities and staffing levels, to the demonstration of outcomes, such as the difference a federal program makes on the national economy.

Despite these mandates to demonstrate effectiveness, OCRM is only able to offer non-systematic or anecdotal evidence to demonstrate the accomplishments of the CZM program. This anecdotal evidence shows how well states are meeting goals and implementing their federally approved management plans, but does not address the “on-the-ground” outcomes of the state programs. On-the-ground outcomes are the specific measurable effects that result from implementing the various CZM program tools and techniques, such as improvement in water quality in a particular wetland or the number of miles of beach opened to the public. On-the-ground outcomes are much more useful indicators of actual CZM program effectiveness than the type of information currently put forth by OCRM.

The primary reason that OCRM is unable to report on the effectiveness of the CZM program is the lack of a requirement for coastal states to collect the necessary data to measure the on-the-ground outcomes of the program. The data that OCRM has required the coastal states to track and maintain has historically focused more on coastal management processes, such as the number of permits issued for coastal development or a description of plans created to deal with particular coastal issues, such as beach preservation. The data generally does not address the actual outcomes of those permitting actions or the documented results of the plans. Therefore, the necessary data simply does not exist for use in measuring the effectiveness of the CZM program. Further compounding the problem is the fact that OCRM and the coastal states have never, in the 25 years of the CZM program, consistently or routinely measured the status of natural resources on the coast, so there is no extensive baseline inventory of these resources. Even if there was data available on the current status of coastal resources, there are no readily available starting points from which to assess trends.

Recognizing the need to evaluate the effectiveness of the CZM program, OCRM commissioned a comprehensive study in September 1995. The National CZM Effectiveness Study was competitively awarded as a \$150,000 Sea Grant program grant, to a University of Washington

team that included five recognized coastal zone experts. The study was to measure the overall effectiveness of the CZM program in addressing the following goals of the CZMA: natural resource protection; public access to the coast; urban waterfront revitalization; and promotion of coastal dependent uses, such as commercial boatyards, recreational marinas, and fisheries development. OCRM selected these goals based on their significance and/or uniqueness to the CZM program. These goals were also selected because they represent a combination of the often competing objectives of the CZMA -- maintaining development activities while still protecting natural resources on the coast.

The National CZM Effectiveness Study was to have been completed in October 1996. However, as of August 1997, the study team had delivered only preliminary findings to OCRM. The broad scope of the study, as well as the limited amount of funding available, are the primary causes for the delay. OCRM and the Coastal Services Center were able to set aside approximately \$25,000 in additional funding for the study. However, the additional funding did not help in getting the study completed any faster. Due to the study's broad scope, a significant problem seems to be in reconciling the work of the five team members into one report. We found that each team member designed his or her own data collection and analysis procedures, which resulted in five very different formats for their findings. In addition, because of the different methodologies used in collecting and analyzing the data, not all of the findings can be easily grouped with others to come up with the overall findings. At this time, it is still unclear when the team's final report will be issued. While it is clear that OCRM should have played a stronger role in overseeing this study, it is now appropriate for OCRM to bring the study to a close and make suggestions to measure program effectiveness in the future.

In reviewing the preliminary findings submitted by the study team, we found that they have been fairly successful in obtaining and summarizing the management tools used by the coastal states, such as laws, regulations, programs, and techniques. However, the study team's preliminary findings indicate that on-the-ground outcome indicators for the areas being reviewed do not exist for measuring the success of the CZM program since OCRM never required the coastal states to collect the data necessary to make this assessment. As such, the team says it will be unable to reach any conclusions as to the overall effectiveness of the CZM program.

The National CZM Effectiveness Study team is not the first to conclude that the effectiveness of the CZM program could not be measured. A study by the Coastal Ocean Policy Roundtable, as detailed in a September 1992 report, *The 1992 Coastal Status Report: A Pilot Study of the U.S. Coastal Zone and its Resources*, found that there was insufficient information available to assess the effectiveness of the CZM program on the coast. In addition, the report supported the need for a comprehensive assessment of the U.S. coastal resources and the various activities that affect them. Unfortunately, OCRM did not immediately follow-up on that 1992 study and begin to ask the states to develop baseline data and report subsequent developments.

Clearly, the next step for OCRM, in coordination with the coastal states, is to make a concerted effort to measure the effectiveness of the CZM program. OCRM and the coastal states must understand what activities are best helping to achieve the goals of the CZMA in order to make effective decisions in the future. Conversely, OCRM and the coastal states need to be aware of

activities that fail to achieve the goals of the CZMA. Without accurate and valid information about the accomplishments and failures of their previous efforts, the coastal states and OCRM cannot responsibly plan for the future efforts of the CZM program. Further, showing results should also help counter the arguments made by those opposed to the CZM program¹⁵, or certain parts of it, such as section 6217. Finally, if the CZM program cannot substantiate its progress in meeting the objectives of the CZMA, it will be difficult for OCRM and the coastal states to justify future funding.

OCRM now recognizes that it must measure the effectiveness of the CZM program in order for the program to continue and it has, just recently, begun impressing upon the coastal states the importance of measuring the program's effectiveness. However, because the coastal states have not previously been required to collect the data necessary to measure the effectiveness of the CZM program, they are reluctant to begin now. They argue that they do not have the time or resources to collect the data or to conduct a thorough evaluation of coastal resources in their state.

We recognize that the biggest hurdle for both OCRM and the coastal states will be how to allocate resources for the effort of measuring the performance of the CZM program. We believe that it is critical for OCRM and the coastal states to make some painful, yet necessary, tradeoffs with other CZM activities in order to assign more resources to the effort of measuring the effectiveness of the CZM program. In addition, in our discussions with several of the team members working on the National CZM Effectiveness Study, they indicated their hope to identify, in the study's final report, those on-the-ground outcome indicators that states should be measuring. However, if the study is unable to deliver on this point, it will be up to OCRM to identify what it wants states to measure so that the information can be used in a national statement on the effectiveness of the CZM program.



NOAA's response to our draft report stated that it agreed with our recommendation to develop a strategy to measure the effectiveness of the CZM program and that it would begin to take action to put together a project team and conduct a national workshop to complete development of draft outcome indicators. While we are encouraged by NOAA's recognition that the effectiveness of the CZM program must be measured, we are troubled by the amount of time (two years) that it is saying will be needed to develop and adopt specific outcome indicators. We expected that the results of the National CZM Effectiveness Study would have provided NOAA with a good head start to developing outcome indicators, yet this study is hardly even mentioned in NOAA's response to our draft report. Because of the amount of time and money already invested in the National CZM Effectiveness Study, we encourage NOAA to build upon the results from that study, so as to reduce the amount of time it will take to develop workable outcome indicators. Although NOAA's proposed actions generally meet the intent of our recommendation, we ask

¹⁵ During the course of our review, we did not identify any interest group or individual opposed to the overall CZM program. By in large, the only opposition to the CZM program that we encountered was limited those who had difficulty with the coastal nonpoint source pollution (section 6217) provisions of the program.

that NOAA provide us with an action plan that addresses how the results of the National CZM Effectiveness Study will be used to more quickly get to a point where coastal states can start measuring outcome indicators for the purpose of assessing the effectiveness of the CZM program.

V. Full Potential of the Estuarine Research Reserve Program Is Not Being Realized

In an estuary, freshwater from rivers meets and mixes with salt water from the sea producing a variety of salinities suitable to a great diversity of marine and plant life. The National Estuarine Research Reserve System (referred to as NERRS or Reserve System), created by the CZMA in 1972, is a network of protected lands designed to promote informed management of the nation's estuaries and provide a stable environment for research. In addition to research, education is a key objective of the Reserve System. Every year, hundreds of thousands of visitors visit the Reserves to participate in interpretive guided tours, educational classes, and training in estuarine ecology. These dual objectives of research and education are what set the NERRS apart from other federal protected area programs, such as EPA's National Estuary Program, which tend to concentrate only on research and generally are not open to the public. Likewise, the NERRS program differs from the National Marine Sanctuaries program in that the Reserves are on land, while the Sanctuaries encompass marine resources. In addition, the NERRS connection to the CZM program is critical. Based on the understanding that sound coastal management decisions must be based on fundamental scientific information, the Reserve System strives to perform research and test management practices that will directly assist coastal managers and other decision-makers.

To enter the Reserve System, supporters of a potential site must show that the site is well suited to long-term estuarine research and education, it is compatible with existing and potential land and water uses in contiguous areas, and its boundaries encompass an adequate portion of key land and water areas so as to approximate an ecosystem. Another factor that OCRM must consider when it reviews a potential Reserve System site, is how the new site would contribute to the CZMA goal that all regions and habitat types of America's coasts and the Great Lakes are represented by the network. There are currently 21 designated Reserves, consisting of approximately 440,000 acres of protected estuarine lands in 20 coastal states and Puerto Rico, that are funded at \$4.3 million annually.

While the NERRS is a unique system with considerable potential, it faces a number of challenges. First, Congressional funding for the program has not increased significantly as new NERRS sites gain entry to the system. This has resulted in increased pressure on the Reserve System's resources and finances. As a result, current funding is less than adequate to support the program's ambitious goals of estuarine research and education. Difficult choices will have to be made in order for the Reserve System to remain a viable program. Second, an existing policy to encourage NOAA-sponsored research in the NERRS and the National Marine Sanctuaries is routinely ignored and should be reiterated. Third, the Reserves need to become more visible in the scientific community and increase use of their sites. To meet this challenge, the Reserves need to develop site profiles that will serve both as a baseline of the sites' characteristics and help researchers choose appropriate sites for their investigations. Fourth, the usefulness of NERRS scientific results could be improved if brief and clear summaries of their research were made available more routinely to both CZM managers and the public. Finally, improvements in the Reserve System cannot be made without key staff in place at the right time. The education and

research coordinator positions in the Reserves are often vacant for several years after designation, thus making it difficult for a new Reserve to get off to a good start.

A. *Difficult Choices Must be Made to Keep Research Reserve System Viable*

Over the nearly 25-year history of the NERRS program, significant progress has been made in furthering its primary goals of integrated estuarine research, education, and advocacy dedicated to improving coastal management. Unfortunately, the program's continued success appears at risk because OCRM officials have, until recently, allowed the number of Reserves to steadily increase without:

- (1) corresponding increases in funding to properly accommodate the new Reserves, or
- (2) establishing a process that ensures that the available -- albeit limited -- funding is directed to the program's best performing Reserves.

This problem has been particularly evident in recent years and is expected to become more severe in fiscal year 1998 when four new Reserves are projected to enter the program with no increase in funding. (See Table V.1)

Table V.1: Reserve System Appropriations in Selected Years (\$000)

	1974	1980	1984	1990	1994	1996	1998
Number of Reserves	1	9	13	18	22	21	25*
Total Appropriation	\$4,000	\$3,000	\$2,930	\$3,490	\$3,214	\$4,300	\$5,650

* Projected

In 1974, the NERRS program, consisting of just one Reserve, received its first appropriation of \$4 million. Throughout the 1980s, the appropriation generally remained level at about \$3 million per year. During this period, however, the Reserve System grew from a total of nine sites in 1980, to 18 sites by the end of the decade. Throughout the early 1990s, the annual NERRS appropriation has been approximately \$3 to 4 million per year and currently is just \$300,000 higher, without inflation adjustment, than when the program first began receiving funding in 1974. Four new Reserve sites were designated in 1991 and 1992 bringing the total system size to its current 21 sites.

Over the years, in order to compensate for the growth in the number of Reserves and the limited available funding, OCRM has increased the amount of funding provided for the day-to-day operations of the Reserves and virtually eliminated the amount allocated for the acquisition of land to develop new Reserves. In fact, OCRM has not been able to provide significant funding for this purpose since the late 1980s. As a result, states have had little or no federal assistance to

secure lands for Reserves in those biogeographical areas not yet represented in the NERRS program, thus preventing the Reserve System from becoming fully representative of the estuarine ecosystems found in the United States.

The operations funding per Reserve generally increased from \$70,000 to \$110,000 in 1990, and to \$125,000 in 1996. Today, the amount provided to each Reserve is \$135,000. In addition to this funding, most Reserves also receive two competitive graduate research fellowships valued at \$16,500 each, while a few Reserves receive just one fellowship and two Reserves receive none. Ironically, OCRM's own internal studies show that each Reserve requires at least \$200,000 in federal funding, exclusive of the research fellowships, to maintain a basic level of operations. Also, in 1993, an independent review panel assessed the NERRS program and in its report, *Building a Valuable National Asset*,¹⁶ the panel suggested that each Reserve should receive \$405,000 per year in federal funding to successfully meet the NERRS program objectives. Clearly, without sufficient federal funding, the states have had to contribute more than what is required of them by the CZMA¹⁷ just to keep the Reserves operational. However, the states have also faced funding shortfalls and have not always been able to provide enough funding to ensure that the Reserves do not face problems. As discussed later in this chapter, insufficient funding has contributed to many of the concerns we have with the NERRS program, including underutilization of the Reserve System for research, problems in linking research and education to coastal management issues, and staffing shortages in the Reserves.

The funding problem is likely to become more severe as new Reserves are added in the future. In addition to the 21 sites currently in the program, there are six additional proposed Reserves currently in the review, or "designation," process. Four of these potential Reserves are located in the states of New Jersey, New York, California, and Florida. Each of these Reserves are eligible for, and slated to receive, federal funding for operations when they come on-line in 1998. Two additional Reserves in the designation process, located in Alaska and Mississippi, will be paid for with state funds or funds from another source. For example, the new Alaska Reserve will be paid for using funds set aside from the settlement of the Exxon Valdez disaster.

In 1995, OCRM decided not to permit any other potential Reserves to enter the designation process unless, like Alaska and Mississippi, they are able to enter the program without the promise of federal funds.¹⁸ The four potential Reserves in the states of New Jersey, New York, California, and Florida were already in the designation process at the time of the new policy and were allowed to continue towards admittance to the program. Therefore, until funding is increased, the NERRS program will consist of a maximum of 27 sites, unless future sites can be developed without the promise of federal funding. To date, at least five potential sites have been

¹⁶ "The National Estuarine Research Reserve System: Building a Valuable National Asset", a report to NOAA from the Review Panel on the NERRS, Robert W. Knecht, Chair, October 1993.

¹⁷ The states are required to match federal NERRS funding at 30 percent on the dollar.

¹⁸ Sites that do not receive federal funds will still be held to the site designation rules and regulations set forth in the CZMA.

turned away by OCRM, and it is suspected that several more have been discouraged from even contacting OCRM after hearing of the new policy. This was a difficult decision for OCRM because of its desire to allow any site that met the requirements of the CZMA to be permitted entry to the system. However, OCRM felt that the integrity of the current Reserve System would likely be sacrificed if the system continued to grow without corresponding increases in the NERRS appropriation. It appears unlikely that there will be large increases in the NERRS program's appropriation in the near future, although we are encouraged by the 30 percent increase the Congress provided for the program in fiscal year 1998. Therefore, hard choices will have to be made within the limitations of current and probable appropriations.

OCRM recently took steps to help protect the integrity of the Reserve System by limiting the number of new Reserves that may enter the program in the future. However, this is just one option for dealing with the funding problem, and it may not be the best strategy for keeping the NERRS program viable. By limiting the addition of any new Reserves, OCRM may be hindering its ability to achieve broad biological and geological representation in the sites within the Reserve System. In addition, OCRM is giving an unfair advantage to those Reserves that came into the program first. Under the current strategy, a stellar potential Reserve applying to the program would be turned down, while a less than effective Reserve would be allowed to continue in the program just because it was admitted first.

In addition to the option chosen by OCRM to deal with the funding limitations, they might consider refining and improving the criteria by which a Reserve is judged suitable for entry into the program. Criteria could include the completion of a site profile, full staffing levels, and active research projects in support of the NERRS and CZM program objectives. Both current and future Reserves could be judged against these criteria and only those Reserves that were judged best would be permitted in the Reserve System. Another option might be to divide up the limited federal dollars based on the accomplishments of the Reserves, rather than giving each Reserve the same amount of funding regardless of their contributions to the program. Under this option, those Reserves unable to perform would eventually be dropped, thus making the entire Reserve System stronger. A final option might be to set a realistic cap on the number of Reserves, based on the available (and anticipated) funding and OCRM's estimation of the amount of funding needed by each Reserve to best meet the objectives of the NERRS program. The cap should be set low enough to ensure that the Reserve System could be supported even in austere budget years. Current and future potential Reserves that wish to receive federal funding, would then compete for retention or admission to the NERRS program. Reserves could compete based on the strength of their research and education programs, their contribution to the goal of biogeographical representation, and their ability to support the CZM program. Those Reserves that do not require federal funding would not be subject to the cap.

We recognize that these are difficult options to contemplate for a program that has long prided itself on being open to all sites that meet the requirements set forth in the CZMA. In actuality, however, the Reserve System is not an entitlement program and for the sake of the program's future, difficult decisions must be made to protect its integrity and effectiveness. We are not advocating any particular option as being the best one for the program and OCRM. They are presented simply to show that if tough decisions are made, a stronger NERRS program is

possible, even within the tight funding constraints currently threatening the Reserve System. We suggest that OCRM, with the assistance of other NOAA offices, determine how the goals and objectives of the NERRS program can best be attained in an era of declining federal funding. A good starting point for this assessment is the recently completed Strategic Plan for the program. The plan effectively outlines the critical problems facing the Reserve System and identifies program priorities within the context of available funding.



In its response to our draft report, NOAA stated that it would “review NERR standard operating procedures to make clear the policy on admitting new reserves into the System, including possible criteria for new sites.” NOAA also said it would review and make recommendations on funding allocations to Reserve sites and review NERR work plans against the NERRS Action Plan. While these actions generally meet the intent of our recommendation, we ask that NOAA carefully consider the potential options set forth in the above section. We recognize that these are not popular nor easy options, but they need to be evaluated.

B. Research Should Be Performed in Accordance with NOAA Policy

The Reserve System was established to ensure a stable, protected environment for research and to address significant coastal management issues. The results of research conducted in the NERRS are used to inform coastal managers and the public, especially local citizens, of the factors affecting the health of estuarine areas in order to better preserve, protect, and restore them. NOAA is supposed to promote and coordinate the use of the NERRS (and the National Marine Sanctuary Program) for research purposes, so that relevant information can be provided to those making decisions about coastal resources. In particular, the CZMA states that, in acting to promote and coordinate the use of the system for research, the Secretary shall require that NOAA “give priority consideration to research that uses the Reserve System.”

In May 1992, John A. Knauss, then the Under Secretary for Oceans and Atmosphere, signed a directive stating that the NERRS and the National Marine Sanctuaries were to receive priority consideration for NOAA-sponsored research. The directive indicated that this policy would be implemented through a clause in NOAA’s request for applications, through cooperative funding, and by improved lines of communication between OCRM’s Sanctuaries and Reserves Division and other NOAA programs. This clause, to be inserted into all appropriate NOAA funding announcements, strongly encouraged prospective investigators to consider conducting research at National Marine Sanctuary and/or NERR sites. The word “appropriate” was included so that the policy applied only to relevant research that could benefit from using the Reserves or Sanctuaries. The use of this term, however, has provided a loophole for certain offices to exclude this clause in their announcements to direct researchers to the NERRS and Sanctuaries.

In practice, the directive has not been adhered to, even when applicable. To examine the degree of compliance with the supportive language clause called for in the May 1992 memo, we sampled 33 NOAA-funded announcements of various research opportunities from five NOAA offices for

fiscal years 1995-97. In 27 of those cases, an insertion of the language calling for research to be done in the Reserves or Sanctuaries seemed inapplicable to that particular announcement. In six cases, some or all of the research mentioned in the funding announcement could have been performed in either the NERR sites or the Sanctuaries. Only one of the six announcements, however, contained the applicable clause.

Non-implementation of this policy results in underutilization of these unique Research Reserves. As a result, the NERRS program falls short of its potential for developing knowledge useful to CZM managers and other stakeholders who could best protect these and similar estuarine areas. We found that non-implementation is related, in large part, to the opposition of some in academia supported by NOAA grants, as well as some scientists within NOAA, who resist any policy or guidance that would limit their research options. They believe that non-scientific intrusion into any aspect of their research might bias their work and its results. However, we do not believe that this policy to guide research to designated sites needs to compromise research quality. Funding decisions can be made, primarily, on the criteria of research quality and, secondarily, on programmatic grounds. Among research proposals of similar quality, those that opt for conducting research in the NERRS would be given additional weight but need not be given consideration over superior research. NOAA has parallel obligations to fund high quality research and to maintain and improve its existing programs, such as the NERRS. The May 1992 directive is still NOAA policy. It is important that the policy be both reiterated and followed in order to allow the NERRS program to attain its potential as a network of vital research centers that answer crucial questions that arise in the management of coastal ecosystems.



In NOAA's response to our draft report, it agreed with our finding and stated that it would draft an updated memorandum by November 15, 1997. NOAA also stated that the Assistant Administrator of NOS would consult with the other Assistant Administrators on the implementation of the memorandum 60 days after its distribution and assure ongoing implementation of the memorandum. While these actions generally meet the intent of our recommendation, we ask that NOAA take appropriate action to ensure that this memorandum is issued within 60 days of the publication of this report. We would like to be provided with a copy of the memorandum when it is issued. In addition, six months after the release of the memorandum, we would like to be provided with a summary of NOAA's compliance with the terms of the memorandum, including the percentage of appropriate NOAA-funded announcements that encouraged research to be performed in the NERR sites or the Sanctuaries and a brief description of new research projects that have been started in the NERRS as a result of this effort.

C. Reserve System Is Underutilized for Substantive Research

State NERRS officials, as we have already mentioned, generally feel that the Reserves are not sufficiently recognized either within the Sanctuaries and Reserves Division or NOAA as a whole. However, the problem also extends to the larger scientific community, including other federal agencies that perform coastal-related research. NERRS officials believe the system is not well

known and, therefore, is not fully appreciated and used by researchers as a unique system for integrated research, monitoring, and education. Utilization by more researchers would bring in additional funds and talent, as well as build greater links to the local community, environmentalists, and coastal managers. Greater utilization of the NERRS sites would also build the credibility of the entire system and help it meet its potential.

One of the main functions of the NERRS program is to provide research opportunities for researchers, graduate students, and advanced undergraduates. Each Reserve has its own unique physical and geographical characteristics, as well as land and water species. Scientists need to know the distinctive features of each Reserve in order to select the appropriate site to conduct their research. Research on restoration of mangrove wetlands, for example, could be performed at Rookery Bay, Florida, where mangrove forests are extensive. Similarly, studies of the effects of pesticides and fertilizers on estuarine systems might be done at Weeks Bay, Alabama, or Old Woman Creek, Ohio, where such work is already established. However, in many cases, researchers do not readily have access to this information about Reserve capabilities and ongoing research, so often the Reserve System is overlooked when researchers make decisions about where to conduct their research.

Each Reserve, as required by the CZMA, is responsible for developing a site profile, that will provide researchers, students, coastal managers, and the public with detailed summaries of site resources and discussions of issues of concern. A site profile, at a minimum, should include the existing state of scientific knowledge about the Reserve's resources, a description of ongoing research and monitoring efforts, and an identification of future research needs and opportunities. Site profiles are intended to be primarily technical documents that summarize scientific information for academic and agency researchers to enable them to decide on the most appropriate Reserve for their work. The site profiles would also provide baseline information needed to make decisions that will help sustain estuarine resources and protect ecosystem integrity. The development of site profiles is, in fact, part of a three-phase monitoring program that involves characterizing the Reserve environment, the more in-depth development of a site profile, and long-term monitoring. The NERRS sites have made a good start in this area both through initial environmental site characterization and systemwide monitoring efforts. However, most Reserves have not completed a site profile due to funding constraints, inadequate staff to complete the profiles, or competing program priorities.

Thus far, only the Tijuana River, California; Great Bay, New Hampshire; and Waquoit Bay, Massachusetts, Reserves have completed their site profiles. During our field visits, several Reserves raised concerns about their individual difficulties in completing this task. State NERRS officials and staff said they need both assistance from outside researchers to develop a comprehensive site profile, and additional funding to write, publish, and distribute the profile. Furthermore, staff believe that little direction has been given by OCRM's National Research Coordinator on how to complete the site profile. Although several Reserves stated a lack of funding as a primary reason for not having completed the site profile, the CZMA states that the Reserves are to use monitoring funds to complete the site profile. Many Reserve managers have chosen, however, to concentrate on developing a strong monitoring program with the funds available rather than use a portion of those funds to develop site profiles. The three Reserves that

have completed their site profiles did have help from outside researchers, but they also chose to prioritize the site profile by spending a portion of their monitoring funds for this task.

OCRM recognizes the importance of completing site profiles and has addressed the completion of this goal during fiscal years 1997-1998 in the Sanctuaries and Reserves Division's three-year action plan. The plan estimates that an additional \$500,000-\$1.0 million will be needed to complete the site profiles. Although the action plan identifies the need for funding to complete site profiles, the NERRS sites did not receive any additional federal funding in fiscal year 1997. OCRM has received additional funding for fiscal year 1998, but it is unclear how that additional funding will be allocated. Nevertheless, the Reserves must begin or continue developing site profiles with a portion of the federal monitoring funds and seek additional funds from other sources to help complete this task.

We believe that OCRM needs to stress to the Reserves the importance of completing their site profiles in a timely manner. OCRM did recently provide Reserve managers with specific guidance on developing site profiles and has identified the minimum amount of information necessary to make each Reserve's profile a meaningful and useful document. Perhaps sharing the three completed site profiles with the other Reserves would also be helpful. The expeditious completion and distribution of site profiles will allow the Reserve System to begin attracting researchers and improving the connection between research, education, and stewardship.

NOAA's response to our draft report acknowledged the importance of site profiles and stated that NOAA will continue to seek cooperative funding from other sources for the completion of the NERRS site profiles. This action only partially complies with the intent of our recommendation. NOAA has not put in place mechanisms to ensure that all site profiles are completed in a timely manner, which we believe is fundamental to encourage the Reserves to finally complete this task. Therefore, we are asking that NOAA provide us with an action plan detailing what mechanisms it will put in place to ensure the site profiles are completed as quickly as possible. In addition, we expect NOAA to direct a good portion of its fiscal year 1998 NERRS funding increase to this extremely important component.

D. Research and Education Performed in the Reserve System Should Be More Strongly Linked to Coastal Management

The CZMA suggests that research performed at NERRS sites should be designed, in part, to address relevant coastal management issues. To meet this requirement, OCRM's Sanctuaries and Reserves Division makes approximately \$750,000 available per year for competitive research in the NERRS. Recent research priorities have been nonpoint source pollution and habitat restoration. Research in NERRS sites is also supported by a number of other federal and state programs as well, especially the National Science Foundation's Land Margin Ecosystem Research Program. In addition to sponsored research, the Sanctuaries and Reserves Division also instituted a national systemwide long-term monitoring program in fiscal year 1994. This monitoring program provides a national model for water-quality data collection between research sites. Data

collected by mechanized data loggers at each site are analyzed and the results sent to a shared nationwide database for storage, standardization, analysis, and graphic manipulation. Research Coordinators at the NERRS sites assist with logistics, provide laboratory and field facilities, and offer assistance for both research and the long-term monitoring program.

In our discussions with state CZM managers, they agreed that scientific research and monitoring performed in the NERRS has helped to address issues related to estuarine protection and restoration. However, the link between science performed in the NERRS and CZM management could be made stronger if clear, brief summaries of results of research performed in the NERRS were made available more routinely to both CZM managers and the public. As discussed earlier in this report, the translation of research is a crucial function that makes scientific research accessible to many different audiences such as coastal managers, stakeholders, and local citizens.

A general strengthening of this function in the NERRS, as well, would increase the use of science to help make sound management decisions. The Waquoit Bay, Massachusetts, NERR, recognized this need and created a distinct position of Research Translator who rewrote scientific findings in a form useful to multiple audiences, especially coastal managers. Given funding problems at many NERRS sites, however, it is unlikely that a separate translator position could be created. In other Reserves, this function could be the responsibility of either the Research or the Education Coordinator. Whoever performs this function, however, needs to understand the "language" and relevant issues and problems of scientists as well as those of coastal managers. Each Reserve should concentrate on succinctly conveying the most relevant aspects of research to busy state CZM officials to better enable them to manage wetland and estuarine areas. The Sanctuaries and Reserves Division's National Research Coordinator should encourage this translation function within the Reserve System and find a way for scientific information to be prioritized, summarized, and systematically circulated both to state CZM managers and relevant personnel at NOAA.

With regard to education, the other main objective of the NERRS program, many Reserves have created programs that strive, through outreach, to both raise the level of environmental awareness and create a general stewardship ethic in the public. While this is a worthwhile goal, it is similar to the efforts made by many interpretive nature centers and environmental educators throughout the country. The Sanctuaries and Reserves Division's National Education Coordinator, however, believes that this function should go beyond just general environmental education to promote behavior change in those segments of the public whose activity has a real impact on a NERRS site or a similar coastal area. For instance, strawberry growers upstream from the Elkhorn Slough, California, Reserve are learning to adopt best management practices for fertilizers, pesticides, and to control run-off by planting vegetative buffer strips. By implementing these best practices, the health of the Reserve and the nearby area can be improved. While the National Education Coordinator encourages the Reserves to go beyond general environmental education, we found that some Reserves are more comfortable with a general environmental education approach and do not agree with this more focused behavioral change strategy. Nevertheless, the National Education Coordinator should continue to promote and reinforce education programs that are clearly linked to coastal management issues.

In its response to our draft report, NOAA agreed with our finding and recommendation. It stated that it would evaluate the types of information needed and formats used by coastal managers and identify opportunities to package Reserve System results on a national and/or regional basis. These actions meet the intent of our recommendation.

E. Staffing Shortages at the Reserve Sites Have Limited the Effectiveness of the Program

Typically, there are three staff positions at a Reserve: Site Manager, Research Coordinator, and Education Coordinator. In addition, the Reserves typically receive \$135,000 per year in federal funding to finance their operations. Each Reserve is different, but typically staff positions are paid for with state funds, while the federal funds are used to pay for other components of the operation, such as educational programs or facility maintenance. The three staff members are responsible for core operations of the Reserve, although at some Reserves they are supplemented with additional help. However, most Reserves, when initially designated, are staffed with only a full-time Site Manager and either Research or an Education Coordinator. Often, either the Research or the Education Coordinator position is filled by a part-time staff person. Ultimately, the Reserve suffers if all three core staff positions are not properly filled at the beginning of the Reserve's operation.

The Research and the Education Coordinator positions are critical to the operation of the Reserves. A Research Coordinator is needed to implement the research plan section of the management plan, implement the NERRS monitoring plan, promote the Reserve's resources as a natural laboratory for studies, and direct and supervise research interns. The Research Coordinator also serves as the liaison with the scientific community and coastal managers, promotes data utilization, and acts as the primary contact for scientists performing research within the Reserve System. This includes coordinating research activities within the Reserve, communicating with other Reserves, and actively promoting a site for conducting research and monitoring.

Likewise, Education Coordinators are responsible for a broad spectrum of activities, such as training state and local permit administrators, assisting teachers to both meet state continuing education requirements and bring knowledge of estuaries into the classroom, and providing information and assistance to the general public. The NERRS Education Coordinators also issue and accept funding requests for education, interpretation, and visitor use programs, and conduct peer reviews of proposals received. Finally, Education Coordinators work with coastal managers to identify and address issues and problems that have the most significant impact on coastal areas.

We found that there are two major reasons for inadequate staffing at many of the Reserve sites. First, OCRM has not required new Reserves entering the system to have all three positions filled in order to receive designation. As a result, many positions go unfilled until OCRM conducts a performance evaluation three years after a Reserve is designated. Then, OCRM gives them three additional years, until the next performance evaluation, to fill the vacancies. For example, the Sapelo Island, Georgia, NERR, was told in its last performance evaluation, in September 1996,

that the Research Coordinator position must be filled by the next scheduled evaluation in 1999. This is too long a period for a Reserve to experience under-staffing and potentially inadequate management. Second, the states, whose obligation it is to hire and fund these positions, are not meeting their responsibilities to ensure that the Reserve sites are getting off to a good start. Inadequate funding has often been cited by states to explain why they are unable to fill these key positions. In many cases, OCRM cannot force states to fill these positions after designation, because they are funded through non-matching state funds. Therefore, OCRM needs to work with the six proposed Reserves currently in the development process to ensure that staffing of all three positions is completed before OCRM designates the site as a member of the Reserve System. This policy should be formalized in appropriate guidance provided to prospective Reserves, so that it is understood that a complete staff contingent must be in place before the Reserve will receive the official designation of entry into the NERRS program. For Reserves already in the program, a complete staff, regardless of funding source, should be added as a requirement for renewal of the federal cooperative agreement for the Reserve.



In its response to our draft report, NOAA stated it would “put appropriate states on notice that during the next grant cycle, core positions/functions must be filled. NOAA funds must be used to complete staffing before going toward other reserve tasks. If, within one year, positions are not filled, NOAA will consider reducing funds or taking de-designation actions.” NOAA also stated that it would evaluate the core functions that a Reserve needs and make appropriate changes to the NERRS Standard Operating Procedures. However, NOAA did not address the key point in our recommendation--that the designation policy for new NERRS sites be changed so as not to permit entrance into the Reserve System unless core staff are in place. Therefore, we request that NOAA reconsider its proposed actions to include making the above change to the NERRS designation policy.

VI. The Coastal and Marine Management Computer Information System Lacks Sufficient Resources

Currently, all cooperative agreement applications and performance reports prepared by the coastal states are manually submitted to OCRM and GMD for review. With the number of coastal states increasing, and the staff level in OCRM and GMD generally declining, keeping up with all the required paperwork has become a serious challenge for the two offices. OCRM recognized that the review of paperwork was slowing down its responsiveness, so, in the summer of 1995, it began developing a computer-based information system called the Coastal and Marine Management Program (CAMMP). The project is being jointly designed by OCRM and NOS's Office of Ocean Resources Conservation and Assessments (specifically their Strategic Environmental Assessments Division), with input from GMD and officials from several of the coastal states. CAMMP is intended to process cooperative agreement applications and performance reports electronically. However, the ultimate objective is for CAMMP to be a consistent, national database of coastal management information, accessible by the Internet, for use by state CZM and NERRS program officials. The users will be able to query the CAMMP database of research, education, projects, and policies to obtain information on a real-time basis to assist them in decision-making.

When fully completed, CAMMP is expected to provide many benefits, including simplification and standardization of requirements for the award application and performance reporting process. CAMMP will allow state program officials to submit applications and performance reports electronically, thus significantly reducing the amount of paperwork the coastal states must submit to OCRM and GMD. A standardized format will allow OCRM and GMD to process the information more efficiently, as opposed to receiving it in the many different formats the coastal states use currently. In addition, CAMMP will provide built-in mathematical checks on the data being entered to minimize errors in the financial assistance application process. The CAMMP database should also be a tremendous resource to OCRM and the states for technical issues, such as compiling information for both the Biennial Report to the President and performance reviews. The database will list coastal management information by subject and regions, making it useful for state CZM and NERRS program officials, academia studying coastal management, and OCRM staff to find information that is specific to their coastal management issues. For example, if a coastal manager wants to find out the research results and best practices for using beach grass to preserve dunes, he could use the system to identify ongoing or past projects and practices reported by the various other coastal managers.

Over the 22 months CAMMP has been in development, approximately \$280,000 has been expended on the project. Just over half of this amount (\$154,000) has been OCRM and Strategic Environmental Assessments Division staff time. Discretionary funding from OCRM, in the amount of \$80,000, was paid to a contractor for computer programming. Finally, in April 1997, OCRM was awarded an additional \$46,400 for the CAMMP project in a Pioneer Grant issued by the Office of the Secretary of the Department of Commerce. These funds will primarily be used for the purchase of electronic versions of federal forms. While additional funding could certainly be used for specific project tasks, as well as to conduct the necessary training for OCRM staff and

state coastal management officials, the biggest problem in CAMMP's development has not been funding. Rather, the absence of staff dedicated to the project has caused it to languish, with tasks being done piecemeal and only as staff have time. Over the course of CAMMP's development, no single person has been devoted to the project on a full-time basis. OCRM has tasked four people to work on the CAMMP project on a part-time basis, for a total effort of less than one full-time staff person. Two people from the Strategic Environmental Assessments Division have spent approximately 20 percent of their time providing computer programming and analytical services to the CAMMP project for the past year and a half. Additionally, GMD has assigned a liaison to the project who is working on a part-time basis only. As a result of the minimal level of staff assigned to the project, CAMMP's development schedule has been slowed tremendously.

OCRM is now estimating that the first two CAMMP modules, those dealing with cooperative agreement applications and performance reporting, will be on-line by the end of fiscal year 1998. However, without knowledgeable OCRM and Strategic Environmental Assessments Division staff assigned to the project on a full-time basis, we believe the CAMMP project will continue to move along at a slow pace. There is a pressing need for a system such as CAMMP. In our review, we found that OCRM, GMD, and the coastal states can immediately benefit from an automation of the award application and performance reporting process. In addition, coastal management officials can make good use of the information that the CAMMP database will maintain, in order to make more informed decisions about coastal resources. Therefore, it is critical that OCRM and/or the Office of Ocean Resources Conservation and Assessments immediately dedicate two full-time staff members, at a minimum, to the project to ensure that CAMMP is implemented in a timely manner.

We recognize that OCRM and/or the Office of Ocean Resources Conservation and Assessments are short-staffed, but changing priorities now to reassign the necessary employees to this project will likely result in additional performance and efficiency gains in later years. Also, we suggest that current employees be assigned to the project since the CAMMP system requires the use of persons familiar with the workings of the CZM program and coastal management issues. If this expertise can be found through a contracting arrangement or if contractors are needed to input data, we encourage OCRM and/or the Office of Ocean Resources Conservation and Assessments to also evaluate these options. Finally, we did not review CAMMP's system design, functionality, or ability to accommodate future growth in the database holdings because it was outside the scope of our review. However, it is important that OCRM and/or the Office of Ocean Resources Conservation and Assessments make this assessment of the CAMMP system to ensure the system will function, as intended, for the coastal management community.

NOAA's response to our draft report stated that it agreed with both of our recommendations dealing with CAMMP. Specifically NOAA said that it will create an expanded development team in fiscal year 1998, which will include 1.5 full-time equivalent (FTE) staff persons from OCRM, 1.5 FTE from the Office of Ocean Resources Conservation and Assessments, and 1 FTE in the form of a contractor hired primarily to do programming. In addition, it will conduct beta testing workshops with state partners and perform a project validation to ensure CAMMP's system design will meet the needs of the coastal management community. While NOAA's proposed

actions generally meet the intent of our recommendations, we are concerned that none of the staff proposed by OCRM and the Office of Ocean Resources Conservation and Assessments for the development team will be dedicated full-time to the CAMMP project. We recognize that both offices have competing priorities, but without the full-time attention of at least two staff persons, CAMMP is at continued risk for delays. Therefore, we request that NOAA reconsider its proposed action to include the assignment of at least two full-time staff to the CAMMP project.

RECOMMENDATIONS

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

1. Devise a strategy that promotes improved coordination and integration, whenever possible, of all coastal activities within NOAA. This strategy should address organizational limitations that hamper OCRM from effectively fulfilling its responsibilities under the Coastal Zone Management Act.
2. Establish a Federal Interagency Coastal Coordinating Council to serve as a forum for national policy on coastal issues, enhance interagency cooperation, and promote increased integrated ecosystem management of the Nation's coastal waters. The Director of OCRM should be appointed to this Council. Ensure that sufficient resources, both staff and funding, are dedicated to this project.
3. Appoint the Director of OCRM to the Management Committee of the Coastal Services Center.
4. Review the partnership between OCRM and the Coastal Services Center to clarify the areas of responsibility of each office; take appropriate action to ensure optimum cooperation, coordination, and communication between the two offices; and assess progress toward that end within six months after implementing these actions.
5. Develop a pilot project to test the feasibility of multi-year cooperative agreements for the CZM program.
6. Revise the language of CZM cooperative agreements to address current accounting and audit issues related to the allocation of oversight costs. This should involve adding the following wording to the terms and conditions of all CZM cooperative agreements: "Funds provided under this cooperative agreement for program administration and monitoring are to cover (1) the oversight of all tasks and projects approved under this cooperative agreement, and (2) the oversight required for any incomplete projects or tasks from previous cooperative agreements that were not caused by, or were otherwise outside the control of, the recipient, and that are clearly identified and have been approved for continuation under this cooperative agreement." In addition, the problem of making this policy retroactive for cooperative agreements that are currently open should be addressed.
7. Improve the approval time for no-cost extensions to cooperative agreements and complete the development of a tracking system for incoming no-cost extension requests to expedite the timely approval of these applications.
8. Ensure that OCRM and GMD coordinate their guidance to CZM and NERRS financial assistance recipients, where appropriate, so that all direction provided to the awardees is consistent and agreed to by both offices.

9. Work with the EPA Administrator to identify other federal sources of funding or assistance to help states in implementing their section 6217 coastal nonpoint source pollution programs. This includes working with EPA to create incentives that encourage the state water quality agencies to work with the state CZM agencies in allocating Clean Water Act (section 319) grant funding to the section 6217 program.
10. Closely monitor the progress of the current section 6217 workgroups to determine whether the problems inherent in the statute can adequately be addressed through policy and administrative changes. If such changes cannot address the problems, work with the EPA Administrator to draft legislation to change the section 6217 statute and submit any proposed legislation to the Congress.
11. Develop a strategy to measure the effectiveness of the CZM program. The strategy should take into account the findings of the University of Washington team whose study should be brought to a businesslike conclusion. The strategy should also include requiring the states to complete a baseline inventory of the relevant coastal resources. It should also identify which entities (NOAA offices, federal agencies, or the coastal states) should be collecting what kinds of data, the frequency of the data collection, and controls to ensure uniform data collection and quality control.
12. Determine how the goals and objectives of the National Estuarine Research Reserve System can best be attained in an era of declining funding. Options to be considered should include refining and improving suitability criteria for entry into the program; reducing the number of Reserves supported with federal funding by setting a cap on the number of Reserves; having current and future sites compete for the funding; and having current and future sites meet specific performance criteria set by NOAA.
13. Send a memorandum to all appropriate NOAA offices and grantees, that reinforces NOAA policy to strongly encourage research to be performed within the National Estuarine Research Reserve System and/or the National Marine Sanctuaries, and ensure that all appropriate requests for research applications or proposals include a clause stating this policy. Within 60 days of the date of the memorandum, determine whether the policy is being fully implemented and, if necessary, take the necessary corrective action.
14. Immediately direct each Reserve to prepare a comprehensive site profile; provide guidance and technical assistance to the NERRS sites; and set a realistic time table for the completion of the site profiles. If a Reserve does not complete its profile in a timely manner, NOAA should consider withholding future funding.
15. Develop guidance to promote the application of NERRS research findings and knowledge to stewardship activities, the development of research results in a format that could prove most useful to coastal managers, and the routine delivery of applicable research results to coastal managers.

16. Change the designation policy for new NERRS sites so that a site may not be approved for entrance into the Reserve System unless it has the core staff in place, including a Site Manager, a Research Coordinator, and an Education Coordinator. For Reserves already in the program, having all three staff positions filled should be added as a requirement for cooperative agreement renewal.
17. Immediately dedicate two full-time staff members, at a minimum, to the CAMMP project to ensure that CAMMP is implemented in a timely manner. If this expertise can be found through a contracting arrangement or if a contractor can be used for data entry, NOAA should also evaluate these options.
18. Assess the design and functionality of the CAMMP system to ensure that it will work, as advertised, for the coastal management community.


APPENDIX--AGENCY COMMENTS



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

DEC 10 1997

MEMORANDUM FOR: Frank DeGeorge
Inspector General

FROM: Andrew Moxam 
Acting Chief Financial Officer/
Chief Administrative Officer

SUBJECT: OIG Draft Report: Coastal Zone Management and
National Estuarine Research Reserve System
Programs Require Management Attention to
Increase Effectiveness (IPE-9044)

Thank you for the opportunity to review and comment on the draft audit report on the Coastal Zone Management Act programs. NOAA appreciates the obviously thorough review by your staff, and the thoughtful recommendations to help NOAA to realize the full potential of these programs. In recognition of the value of coastal programs, NOAA has established a Coastal Stewardship Task Force for the purpose of exploring new directions for these vital programs. We are pleased that the report recognizes these initiatives.

In general NOAA agrees with the discussions in each of the report's findings. Some points could use clarification or minor factual corrections, but NOAA considers none of these a significant problem. Staff of the National Ocean Service would be willing to discuss such items with representatives of your office.

Attachment



**NOAA COMMENTS IN RESPONSE TO DRAFT INSPECTOR GENERAL REPORT:
COASTAL ZONE MANAGEMENT AND NATIONAL ESTUARINE RESEARCH RESERVE
SYSTEM PROGRAMS REQUIRE MANAGEMENT ATTENTION TO INCREASE
EFFECTIVENESS (REPORT NO. IPE-9044)**

**FINDING I: NOAA COORDINATION TO AID COASTAL MANAGEMENT IS
DEFICIENT.**

RECOMMENDATION 1:

Devise a strategy that promotes improved coordination and integration, whenever possible, of all coastal activities within NOAA. The strategy should address organizational limitations that hamper OCRM from effectively fulfilling its responsibilities under the Coastal Zone Management Act.

DISCUSSION 1:

NOAA agrees with this recommendation. NOAA agrees that more effort is needed to realize the full potential for the agency under its Coastal Zone Management Act (CZMA) responsibilities. As the OIG report points out, the Coastal Stewardship Task Force, which was convened earlier by the NOAA Administrator, called for organizational changes within NOAA to better support coastal and ocean management, as well as for improved cooperation with other federal agencies with coastal responsibilities. NOAA has begun to move forward in the spirit of these recommendations. The NOAA Administrator has assigned a new Assistant Administrator to head NOAA's National Ocean Service (NOS), where NOAA's CZMA functions reside. This was accompanied by steps to create an Office of Coastal Ocean Science within NOS with a science mission supporting coastal mandates of all NOAA line offices. This office will include a consolidation of certain existing NOS programs, as well as the cross-cutting Coastal Ocean Program and National Ocean Partnership Program from NOAA Headquarters, and the Great Lakes Environmental Research Laboratory from the Office of Oceanic and Atmospheric Research. NOS will also work with the National Marine Fisheries Service to establish cooperative arrangements in two or three coastal habitat laboratories.

The new NOS Assistant Administrator, Dr. Nancy Foster, pursuant to the direction from the Administrator, has taken additional steps to carry out the recommendations of the Coastal Stewardship Task Force, as highlighted below.

PROPOSED ACTIONS 1:

NOS will develop an action plan to implement the Task Force's recommendations, reiterated by the NOAA Administrator as follows. Several of these, such as a "State of the Coast" report, already are under way.

1. Develop a proposal to establish a Federal interagency coastal council, led by NOAA, as a forum for discussing and coordinating coastal policy issues that have multiple agency jurisdiction.
2. Work with other NOAA Line and Program Offices to increase NOAA's coordination and delivery of programs at local and regional scales.
3. Produce a "State of the Coast" report summarizing the economic and environmental health of the Nation's coastal areas.
4. Work with the Office of the Chief Scientist to review how NOAA coastal research priorities are set and to establish appropriate advisory panels to help guide future efforts.
5. Improve the scientific basis supporting our coastal missions, includes realigning some NOAA coastal programs within NOS.

RECOMMENDATION 2:

Establish a Federal Interagency Coastal Coordinating Council to serve as a forum for national policy on coastal issues, enhance interagency cooperation, and promote increased integrated ecosystem management of the Nation's coastal waters. The Director of OCRM should be appointed to the Council.

DISCUSSION 2:

NOAA agrees with this recommendation. This is another recommendation that coincides with one from the NOAA-established Coastal Stewardship Task Force. NOAA has taken steps with respect to this concept of improving interagency coordination, by supporting the recent introduction of legislation that would foster improved coastal and ocean policy. The bills are in the Senate, S.1213, and in the House of Representatives, H.R. 2547. The resulting acts from both bills would be titled, "The Oceans

Act of 1997." Both bills set forth, as their purpose, to develop and maintain (or implement) a coordinated, comprehensive, and long-range national policy that will assist the Nation in meeting a stated list of ocean and coastal policy objectives. The Senate bill would establish an interagency National Ocean Council, which would serve a number of identified functions that are aimed at an improved coastal and ocean policy and program. Also, both bills would establish a Commission on Ocean Policy, which would report to the President and Congress on a comprehensive ocean and coastal policy.

PROPOSED ACTION 2:

As reflected in proposed action item number 1 above, this will be part of an action plan developed by NOS.

RECOMMENDATION 3:

Appoint the Director of OCRM to the Board of the Coastal Services Center.

DISCUSSION 3:

NOAA agrees with this recommendation. NOAA agrees that better linkage is needed between OCRM and the Coastal Services Center (CSC). It is important to ensure that the services provided by the Center match up with the needs of the OCRM programs. One way for that to occur is for the Director of OCRM to have a more clearly defined role with the Center's Management Committee (referred to in this report as the "Board"). Currently the Assistant Administrator (AA) for each NOAA line office serves on the Committee. In order to maintain the proper balance between line offices, the Director of OCRM will be appointed as the alternate to the NOS AA on the Committee.

PROPOSED ACTION 3:

The NOS Assistant Administrator will officially designate the Director of OCRM as her alternate on the Coastal Services Center Management Committee.

RECOMMENDATION 4:

Review the partnership between OCRM and the Coastal Services Center to clarify the areas of responsibility of each office;

take appropriate action to ensure optimum cooperation, coordination, and communication between the two offices; and assess progress toward that end within six months after implementing these actions.

DISCUSSION 4:

NOAA agrees with this recommendation. OCRM and the CSC have been working over the past year to better understand and integrate each others' functions. The objective is to recognize the inherent strengths within each organization and to work together in a complementary manner to achieve both organizations' purposes. Specific next steps are set out below.

PROPOSED ACTIONS 4:

1. CSC and OCRM will coordinate development of their annual operating plans, conduct joint quarterly briefings, and hold an annual evaluation of joint projects and activities. Tables will be maintained and distributed to all OCRM and CSC staff of all joint activities and principal points of contact within the two groups to encourage interaction and communication on all levels.
2. A plan for how to implement short-term staff exchanges will be developed and implemented during FY 1998. This will include exchanges in both directions and will center around mutually beneficial exchanges.
3. The CSC agrees to communicate with OCRM prior to state site visits to learn of any issues prior to visiting. Opportunities to develop shared state files over the internet will be explored to enhance communication and coordination.
4. CSC and OCRM will jointly establish (with the new NOS Coastal Ocean Science Office) an external review group that meets 1-2 times per year to provide programmatic thoughts on ways to bridge the science, management, and technical assistance interfaces. The group will be kept to 8-10 individuals and would review programs/ activities and provide a looking ahead function.

**FINDING II: ADMINISTRATION OF CZM COOPERATIVE AGREEMENTS WARRANTS
NOAA MANAGEMENT'S ATTENTION.**

RECOMMENDATION 5:

Develop a pilot project to test the feasibility of multi-year cooperative agreements for the CZM program.

DISCUSSION 5:

NOAA agrees with this recommendation. NOAA will award between 31 and 33 (depending upon the approval of CZM programs in Georgia and Minnesota) Coastal Zone Management Program (CZMP) administration awards to states, territories, and commonwealths during FY 1998. Multi-year awards have the potential to reduce some paperwork (e.g., resubmittal of some standard forms such as the "drug free workplace" certification.) However, as noted in the report, there are significant potential limitations to using this process as currently structured. Primary among them is the inherent unpredictability of funding levels from year to year resulting from formula-based allocations of varying levels of appropriations and different awards of the competitive funding. Current multi-year guidance calls for level funding over the years, or a ceiling above which a new application is required.

OCRM and the NOAA Grants Management Division (GMD), in cooperation with the states, will re-examine the potential for applying multi-year awards to state CZM programs. A feasible alternative procedure would recognize the varying funding levels; the long term continuing nature of the state-federal partnership; and the flexibility required to address the various budgetary, administrative, and legislative processes of the state partners. If such a procedure can be developed, it will be submitted.

PROPOSED ACTIONS 5:

1. Identify OCRM/CPD and GMD taskgroup members.
2. Identify state workgroup participants and potential pilot states (from states with annual and biennial budget processes).
3. Gather guidance materials and clarify existing NOAA and DOC procedures.

4. Examine the success and limitations of the existing multi-year process for the National Estuarine Research Reserve System.
5. Develop a "model" multi-year process for CZMP programs, if feasible.
6. Consult with DOC on the feasibility of approval of the proposed process.
7. Implement pilot program if approved by DOC.

RECOMMENDATION 6:

Revise the language of CZM cooperative agreements to address current accounting and audit issues related to the allocation of oversight costs. This should involve adding the following to the terms and conditions of all CZM cooperative agreements: "Funds provided under this cooperative agreement for program administration and monitoring are to (1) the oversight of all tasks and projects approved under this cooperative agreement, and (2) the oversight required for any incomplete projects or tasks from previous cooperative agreements that were caused by, or were otherwise outside the control of, the recipient, and that are clearly identified and have been approved for continuation under this cooperative agreement." In addition, the problem of making this policy retroactive for cooperative agreements that are currently open should be addressed.

DISCUSSION 6:

NOAA agrees with this recommendation. OCRM appreciates the Department of Commerce Office of Inspector General and NOAA GMD participation in developing a long term, program-wide solution to this situation which arose in FY1997.

PROPOSED ACTION 6:

Action Completed: OCRM and GMD sent a memorandum on May 28, 1997, to all state Coastal Program Managers clarifying their cooperative agreement oversight responsibilities. Retroactivity was implied in this clarification.

RECOMMENDATION 7:

Improve the approval time for no-cost extensions to cooperative agreements and complete the development of a tracking system for incoming no-cost extension requests to expedite the timely approval of these applications.

DISCUSSION 7:

NOAA agrees with this recommendation. OCRM/CPD and GMD are developing electronic tracking systems for no-cost extension and other grant amendment requests that do not include additional funding. OCRM/CPD and GMD will share this information on a routine basis to identify potential delays or problems.

PROPOSED ACTIONS 7:

1. Develop OCRM/CPD and GMD tracking systems by end of first quarter, FY98.
2. Provide OCRM's Sanctuaries and Reserves Division with a copy of the OCRM/CPD tracking system.
3. Exchange CPD and GMD status reports monthly.
4. Monitor effectiveness of tracking system and develop statistics on processing time to determine success.

RECOMMENDATION 8:

Ensure that OCRM and GMD coordinate their guidance to CZM and NERRS financial assistance recipients, where appropriate, so that all direction provided to the awardees is consistent and agreed to by both offices.

DISCUSSION 8:

NOAA agrees with this recommendation. OCRM agrees that there is a need to coordinate guidance to recipients. OCRM and GMD will continue to improve ongoing coordination procedures.

PROPOSED ACTIONS 8:

1. Conduct quarterly OCRM-GMD coordination meetings (ongoing).
2. Clarify via memorandum the OCRM centralized point of contact for grants issues.
3. Identify recurring grant actions (i.e., funding allocation announcements, award processing), and clarify and implement procedures for OCRM and GMD.
4. Coordinate all grant-related correspondence.

FINDING III: CURRENT COASTAL NONPOINT SOURCE POLLUTION PROVISIONS ARE UNWORKABLE.

RECOMMENDATION 9:

Work with the EPA Administrator to identify other federal sources of funding or assistance to help states in implementing their section 6217 coastal nonpoint source pollution programs. This includes working with EPA to create incentives that encourage the state water quality agencies to work with the state CZM agencies in allocating Clean Water Act (section 319) grant funding to the section 6217 program.

DISCUSSION 9:

NOAA agrees with this recommendation. The adequacy of funding for the development and implementation of the coastal nonpoint program has been and continues to be a significant impediment to its success. The program development funds appropriated under section 6217 from 1992 - 1996 were less than a third of the authorized funding levels, and resulted in states receiving only \$271,000 (for the smaller states and territories) to a maximum of \$650,000 for the largest states over the five year period. These funds required a 50% matching share from the states. In most states these funds supported one staff person, and allowed a minimal amount for public education and coordination activities. Section 6217 does not provide funds for program implementation.

When section 6217 was passed in 1990, it was envisioned that funding for implementation of the coastal nonpoint program would come through section 306 of the Coastal Zone Management Act (authorized funding for Section 306 increased from \$42 million in FY 1990 to \$90 million in FY95) and section 319 of the Clean Water Act. In an April 1996 letter to coastal state governors, Robert Perciasepe, Assistant Administrator for the EPA Office of Water, affirmed that Clean Water Act section 319 grant funds could be used to fund projects that implement approved coastal nonpoint programs. However, during this same period, EPA was revising its grant procedures to allow greater flexibility to states in their use of section 319 funds. In addition, states indicated that funds under both of these programs were already fully allocated to activities needed to address the existing requirements of these statutes. The result has been that the use of section 306 for coastal nonpoint activities and section 319 funds by states for the implementation of section 6217 has varied widely.

Beginning in 1997, funds for improving the control of pollution from agricultural sources became available under USDA's Environmental Quality Incentive Program (EQIP). OCRM staff participated on the inter-agency working group determining potential uses for EQIP funds. In addition, funds to implement pollution control practices for federally-supported highway improvements are also available through the Department of Transportation. NOAA will continue to work with all pertinent Federal agencies to identify sources of funding for the 6217 program. The need to identify other resources to implement pollution control practices is paramount to the success of the coastal nonpoint program.

PROPOSED ACTIONS 9:

1. Work with EPA regional offices and the state water quality agencies to ensure that an increasing amount of section 319 funds will be allocated to support of the approved state coastal nonpoint programs.
2. Maintain an active role with USDA in the implementation of the EQIP to ensure that coastal waters are a priority area for funding for agriculture pollution control efforts.
3. Engage in discussions with other Federal agencies to identify opportunities for directing Federal funding and technical assistance efforts to assisting states in implementing protections for coastal waters. This will be

accomplished through the recently established Federal Inter-Agency Working Group on Non-Point Source Pollution and one-on-one interaction.

4. Continue to work through the regular budget process to seek an appropriate level of funding under section 6217 and section 306 of the CZMA to support states' efforts to complete development and begin implementation of their coastal nonpoint programs.

RECOMMENDATION 10:

Closely monitor the progress of the current section 6217 workgroups to determine whether the problems inherent in the statute can adequately be addressed through policy and administrative changes. If such changes cannot address the problems, work with the EPA Administrator to draft legislation to change the section 6217 statute and submit any proposed legislation to the Congress.

DISCUSSION 10:

NOAA agrees with this recommendation. Because of its ambitious scope and time frame, the implementation of section 6217 has presented a major challenge both to the states and to the Federal agencies. As NOAA and EPA began to review state program development efforts through the threshold review process in 1994 and 1995, it was clear that some changes to the program were needed. In March 1995, NOAA and EPA issued guidance entitled Flexibility for State Coastal Nonpoint Programs. This guidance was intended to respond to state concerns regarding time frames for program development and implementation, geographic scope of the program, targeting program implementation efforts, the need for enforceable policies and mechanisms, and the statutory penalty provisions. The guidance provided for up to five years of conditional approval to allow states further time to complete development of their coastal nonpoint programs without incurring statutory penalties; extended the time frame for implementation of the basic (g) management measures and the state-developed additional measures; defined existing tools, e.g., exclusions, that states could use to target their programs; and, generally deferred to states in the determination of the geographic scope of the coastal nonpoint program unless NOAA and EPA had evidence that significant sources were not being included within the

program boundary.

In recent months, states have again raised concerns with the scope and time frames for the program, particularly in light of the limited funding available to support the states' efforts. In response to this, OCRM has engaged in extensive discussion with the states and affected interests, and has developed a proposal for administrative changes to address the state concerns. Under this proposal, NOAA and EPA would grant full approval for voluntary and incentive-based programs backed by existing authorities under certain circumstances; would allow states to focus their limited resources on the most important problems by prioritizing program implementation and excluding sources and geographic areas where sources are not significant; and would extend to 15 years the time frame for addressing all significant nonpoint source categories and all watersheds within the 6217 management area. In addition, NOAA and EPA would work with the states and affected interests to identify sources of funding and technical support to assist the states in the implementation of their programs.

PROPOSED ACTIONS 10:

1. Issue the proposed administrative changes for public review and comment.
2. Based on public comment, revise and finalize the administrative changes.
3. Review the Findings developed for the state coastal nonpoint programs, and revise as necessary.
4. Maintain an ongoing dialogue with the states to assess the impact of the administrative changes in improving the states' ability to effectively manage nonpoint pollution impacts to coastal waters.

FINDING IV: THE EFFECTIVENESS OF THE COASTAL MANAGEMENT PROGRAM HAS NOT BEEN MEASURED.

RECOMMENDATION 11:

Develop a strategy to measure the effectiveness of the CZM program. The strategy should take into account the findings of the University of Washington team whose study should be brought

to a businesslike conclusion. The strategy should also include requiring the states to complete a baseline inventory of relevant coastal resources. It should also identify which entities (NOAA offices, federal agencies, or the coastal states) should be collecting what kinds of data, the frequency of the data collection, and controls to ensure uniform data collection and quality control.

DISCUSSION 11:

NOAA agrees with this recommendation. As noted in the report, OCRM "... recognizes that it must measure the effectiveness of the CZM program in order for the program to continue..." OCRM will undertake a two year project to develop and adopt specific outcome indicators to be used in measuring the effectiveness of state CZM programs. Specifically, OCRM will sponsor a national workshop in FY 1998 to develop a draft set of indicators, which will be tested, evaluated and made available for public review in FY 1999. The overall goal would be to begin collecting outcome data as part of the integrated Grant Application and Reporting System component of the Coastal and Marine Management Program (CAMMP) Information System for grants awarded in the summer of 1999.

The initial starting point would be the indicators recommended in the Effectiveness Study. The work program will include all of the factors listed in the above recommendation. Workshop participants will include a representative group of state CZM managers, experts in the field of program evaluation, particularly the use of outcome indicators, and NGOs representing conservation and resource development interests. Staff support for this effort will come from OCRM, other parts of NOS, such as the Strategic Environmental Assessment Division, and possibly from a small contract with an institution with experience in outcome indicator development.

PROPOSED ACTIONS 11:

1. Review FY 1998 budget to determine available resources.
2. Develop project team from OCRM, NOS staff, and contractual sources.
3. Identify workshop participants.
4. Conduct a national workshop to complete development of draft indicators.

FINDING V: FULL POTENTIAL OF THE ESTUARINE RESEARCH RESERVE PROGRAM IS NOT BEING REALIZED.

RECOMMENDATION 12:

Determine how the goals and objectives of the National Estuarine Research Reserve System can best be attained in an era of declining funding. Options to be considered should include refining and improving suitability criteria for entry into the program; reducing the number of Reserves supported with federal funding by setting a cap on the number of Reserves; having current and future sites compete for the funding; and having current and future sites meet specific performance criteria set by NOAA.

DISCUSSION 12:

NOAA agrees with this recommendation. OCRM/Sanctuaries and Reserves Division appreciates the recommendation to look at alternatives for funding and improving the National Estuarine Research Reserve System (NERRS). OCRM/SRD recognizes that the program cannot depend on large or regular increases in program appropriations, so a number of steps have been taken to alleviate this problem. Among other things, OCRM issued a policy in 1995 that stated no new reserves would be considered unless additional or alternative funds to support a given site were found. Within the last ten years, a goal of the program has been that the system should consist of at least one reserve from each of the twenty-nine biogeographic subregions. Therefore, the NERRS is not complete and is not fully meeting its mission.

Over time, OCRM has been able to shift its emphasis from land acquisition to site operations, with a corresponding shift in funding, because increasingly, sites proposed as reserves already encompassed large tracts of public land. Acquisition became a less significant priority. However, construction of reserve facilities is now a high priority,

A critical part of OCRM/SRD's efforts is the strategic planning process, which resulted in a NERRS strategic plan in 1995 and a series (now in the second year) of rolling three-year actions

plans. Outgrowths of the strategic planning process have been the development of NERRS Standard Operating Procedures (SOPs) for use by both OCRM headquarters and state field staff, and a clear recognition of the need to update the NERRS program implementing regulations. In addition, as specified in the NERRS Action Plan, OCRM is seeking funds from other sources to contribute to the System and to individual sites. OCRM also has made it clear that a function of staff at the sites is to find funds from other sources. During the next year, OCRM will look at other options to strengthen the NERRS.

PROPOSED ACTIONS 12:

1. Review NERR Standard Operating Procedures to make clear the policy on admitting new reserves into the System, including possible criteria for new sites.
2. Review and make recommendations on funding allocations to reserve sites.
3. Revise NERR regulations based on decisions in Proposed Action item 2.
4. Review NERR workplans against NERRS Action Plan and recommend appropriate changes to reserves.

RECOMMENDATION 13:

Send a memorandum to all appropriate NOAA offices and grantees, that reinforces NOAA policy to strongly encourage research to be performed within the National Estuarine Research Reserve System and/or the National Marine Sanctuaries, and ensure that all appropriate requests for research applications or proposals include a clause stating this policy. Within 60 days of the date of the memorandum, determine whether the policy is being fully implemented and, if necessary, take the necessary corrective action. With the establishment of the new NOS Science Office operating principles will include a focus on encouraging research in the NERRS/NMS's.

DISCUSSION 13:

NOAA agrees with this recommendation. As discussed in the report, NOAA Administrator Knauss sent a memorandum in 1992 to all appropriate NOAA offices to encourage research in National Estuarine Research Reserves and/or National Marine Sanctuaries.

NOAA agrees that the policy established by the CZMA, as reflected in this memorandum, has been largely ignored. NOAA will review and reissue the memorandum, and follow up with appropriate actions. With the establishment of the new NOS Science Office operating principles will include a focus on encouraging research in the NERRs and NMSs.

PROPOSED ACTIONS 13:

1. Draft an updated memorandum, for the NOAA Administrator's review, by November 15, 1997.
2. The Assistant Administrator for NOS will consult with the other NOAA Assistant Administrators on implementation of the memorandum 60 days after its distribution in accordance with the Science Office operating principles.
3. Compile responses and work with the other Assistant Administrators to assure ongoing implementation of the memorandum.

RECOMMENDATION 14:

Immediately direct each Reserve to prepare a comprehensive site profile; provide guidance and technical assistance to the NERRS sites; and set a realistic time table for the completion of the site profiles. If a Reserve does not complete its profile in a timely manner, NOAA should consider withholding future funding.

DISCUSSION 14:

NOAA agrees with this recommendation. OCRM concurs that site profiles are a valuable research and management tool. Completion of site profiles is a priority in both the 1997 and 1998 NERRS Action Plans. As directed by the 1997 NERRS Action Plan, SRD developed policy guidance on the purpose and content of site profiles. In addition, SRD and the reserves developed a time line for completion of profiles. Four reserves have now produced site profiles.

As noted in the report, funding for site profiles has risen as a major issue. Generally, the allocation each reserve receives for monitoring purposes is not adequate to cover costs of site profile development or printing. Development funds were made available in FY 1997 for completion of four additional site profiles over the next 18 months, which will bring the total

completed to eight. Funds from the NOAA Coastal Services Center and Exxon Valdez Oil Spill fund, among others, are contributing to two additional profiles. The NERRS has made it a priority to find additional funds during the next four years to complete this process.

PROPOSED ACTIONS 14:

1. Change NERRS Standard Operating Procedures and program regulations to require development of a site profile in the first year of each new reserve's operation.
2. Continue to find partners to augment funding for completion of site profiles. (ongoing)

RECOMMENDATION 15:

Develop guidance to promote the application of NERRS research findings and knowledge to stewardship activities, the development of research results in a format that could prove most useful to coastal managers, and the routine delivery of applicable research results to coastal managers.

DISCUSSION 15:

NOAA agrees with this recommendation. OCRM agrees that the application of research to help solve coastal management problems should be strengthened in the NERRS as a whole. This priority has become part of the vision and goals of the NERRS Action Plan. There are numerous audiences and methods best suited to get scientific and technical information across. OCRM will pursue various options to improve information transfer, including directing the use of certain NERRS education funds specifically for this purpose.

OCRM believes that there are additional methods to strengthen the utility of the NERRS for research. Using education funds, OCRM produced a brochure on the NERRS System-wide Monitoring Program and is completing a research prospectus on the NERRS. Both of these documents will be widely distributed in the academic and government communities. NOS is also planning direct ties between the NERRS and the new Office of Coastal Ocean Science to strengthen research communication.

PROPOSED ACTIONS 15:

1. Evaluate various kinds of information needed and formats used by coastal managers and other audiences. (ongoing)
2. Complete the NERRS research prospectus and disseminate to appropriate audiences.
3. Identify opportunities to package reserve research results on a national and/or regional basis.
4. Prioritize use of NERRS system-wide education funds to address national management themes.

RECOMMENDATION 16:

Change the designation policy for new NERRS sites so that a site may not be approved for entrance into the Reserve System unless it has the core staff in place, including a Site Manager, a Research Coordinator, and an Education Coordinator. For Reserves already in the program, having all three staff positions filled should be added as a requirement for cooperative agreement approval.

DISCUSSION 16:

NOAA agrees with this recommendation. OCRM agrees that adequate staffing at reserve sites, and at the national program level, is important to fully implement the NERRS program. As recognized in the report, it has been difficult to get staff on board at several reserves over the years. This situation became more of an issue as there was a change in the focus of the NERRS in the 1980's from acquisition to active management. Since then, all but approximately four reserves have achieved the full contingent of a manager, research coordinator, and education coordinator. OCRM has described in the NERRS Standard Operating Procedures that these three staff positions are considered necessary for a fully operational reserve. OCRM also has included as a special award condition in one reserve operations grant that award funds may not be drawn down until a research coordinator is hired. In the meantime, all reserves now being considered for future designation are being required to include a plan to fill these positions.

OCRM is rethinking the idea of what core positions are truly needed at a reserve and at the national program level. It is more important that core functions are covered adequately than

the position names. Core functions include overall site administration, science coordination (research and monitoring), traditional education as mandated in the CZMA (awareness and better understanding), information translation and delivery, and reserve land and water stewardship. OCRM will work with reserves during then next year to refine this list and incorporate the items into a revised set of program regulations and Standard Operating Procedures.

PROPOSED ACTIONS 16:

1. Put appropriate states on notice that during the next grant cycle, core positions/functions must be filled. NOAA funds must be used to complete staffing before going toward other reserve tasks. If, within one year, positions are not filled, NOAA will consider reducing funds or taking de-designation actions.
2. Evaluate, with a committee from OCRM and the reserves, the core functions that each reserve needs. Update NERRS Standard Operating Procedures and regulations to incorporate these.

FINDING VI: THE COASTAL AND MARINE MANAGEMENT COMPUTER INFORMATION SYSTEM LACKS SUFFICIENT RESOURCES.

RECOMMENDATION 17:

Immediately dedicate two full-time staff members, at a minimum, to the CAMMP project to ensure that CAMMP is implemented in a timely manner. If this expertise can be found through a contracting arrangement or if a contractor can be used for data entry, NOAA should evaluate these options.

DISCUSSION 17:

NOAA agrees with this recommendation. Development and implementation of the Coastal and Marine Management Program (CAMMP) Information System is a high priority for OCRM. Objectives for FY1998 include completion of the CZMA Section 309 portion of the Grant Application and Reporting (GARS) component of CAMMP, and substantial progress on the CZMA Section 306/306A portion of GARS. Initial CAMMP generated Section 309 reports

should be available by the 2nd quarter of FY1998. Full implementation of the CZM portion of GARS (Sections 306/306A/309) are scheduled for completion by early FY1999.

An expanded development team is being established consisting of the following for FY1998:

Organization/Function/Person	Time	FTE	Element
OCRM/PCD Development Team Leader	60%	.6	Section 309 - completion to limited use and Beta testing - implementation (mid FY98) Section 306/306A - initial design - completion to limited use and Beta testing (by end of FY98)
OCRM/CPD Development-Technical Specialist	50%	.5	
OCRM/CPD Development-Coastal Specialist	20%	.2	
OCRM/CPD Development-Coastal Specialist	20%	.2	
ORCA/Technical Support Lead	90%	.9	
ORCA/Technical Support	as required	.6	
Programmer (OCRM contract)	100%	1.0	
OFA (Support and Coordination)	as required	.1	Link to the NOAA system
OFA/GMD (Support & Coordination)	as required	.2	Link to NOAA grants system
Coastal Services Center (CSC) and contract support	15%	.15	Participate in design of training support

A minimum of 2.5 FTE from OCRM have been assigned to this project for development activities. Additional support will be provided as indicated above by other OCRM/CPD staff (data entry, design of 306/306A data base and reports), the Office of Ocean Resources Conservation and Assessment (ORCA), Grants Management Division (GMD), Coastal Services Center (CSC), and five partner state CZM agencies involved as pilot states in system development.

PROPOSED ACTIONS 17:

1. Review FY 1998 budget to determine available resources.
2. Identify and confirm development team members.
3. Hire contractor.
4. Continue development and implementation actions.

RECOMMENDATION 18:

Assess the design and functionality of the CAMMP system to ensure that it will work, as advertised, for the coastal management community.

DISCUSSION 18:

NOAA agrees with this recommendation. Participation of the coastal management community has been a vital component of this project since its conception in early FY 1996. It has been part of an overall modernization of OCRM, including development of the CAMMP system (ongoing), establishment of an electronic network and communication capability for the CZM, NEERRS, and National Marine Sanctuary programs (completed), and development of an OCRM-based Internet homepage incorporating these management programs (completed).

These three initiatives were discussed in presentations and workshop sessions in the FY 1996 annual Ocean and Coastal Managers meeting, followed in the FY 1997 annual meeting by a presentation of progress to date and an open discussion of state partner views on the developing CAMMP Information System. Information mailings also have been provided, and five state CZM programs (DE, MA, ME, OR, SC) volunteered for participation in development and testing of the CAMMP's Grant Application and Reporting System. OCRM has used a portion of its operating funds to provide invitational travel to bring state staff to Silver Spring for working sessions. OCRM will continue, to the extent that funds are available, to conduct workshops with its state partners; will schedule a session at the FY 1998 meeting of managers; and will provide information hard copy and electronic mailings.

PROPOSED ACTIONS 18:

1. Conduct Section 309 Beta testing workshop with state partners. (October 1997)
2. Information mailing and solicitation to all state CZM partners, including announcement of availability for use of Section 309 component on the Internet. (2nd quarter FY 1998)
3. Presentation/working session at FY 1998 Coastal and Ocean

Managers meeting. (March 1998)

4. Follow-up information dissemination and project validation.
(to be scheduled)