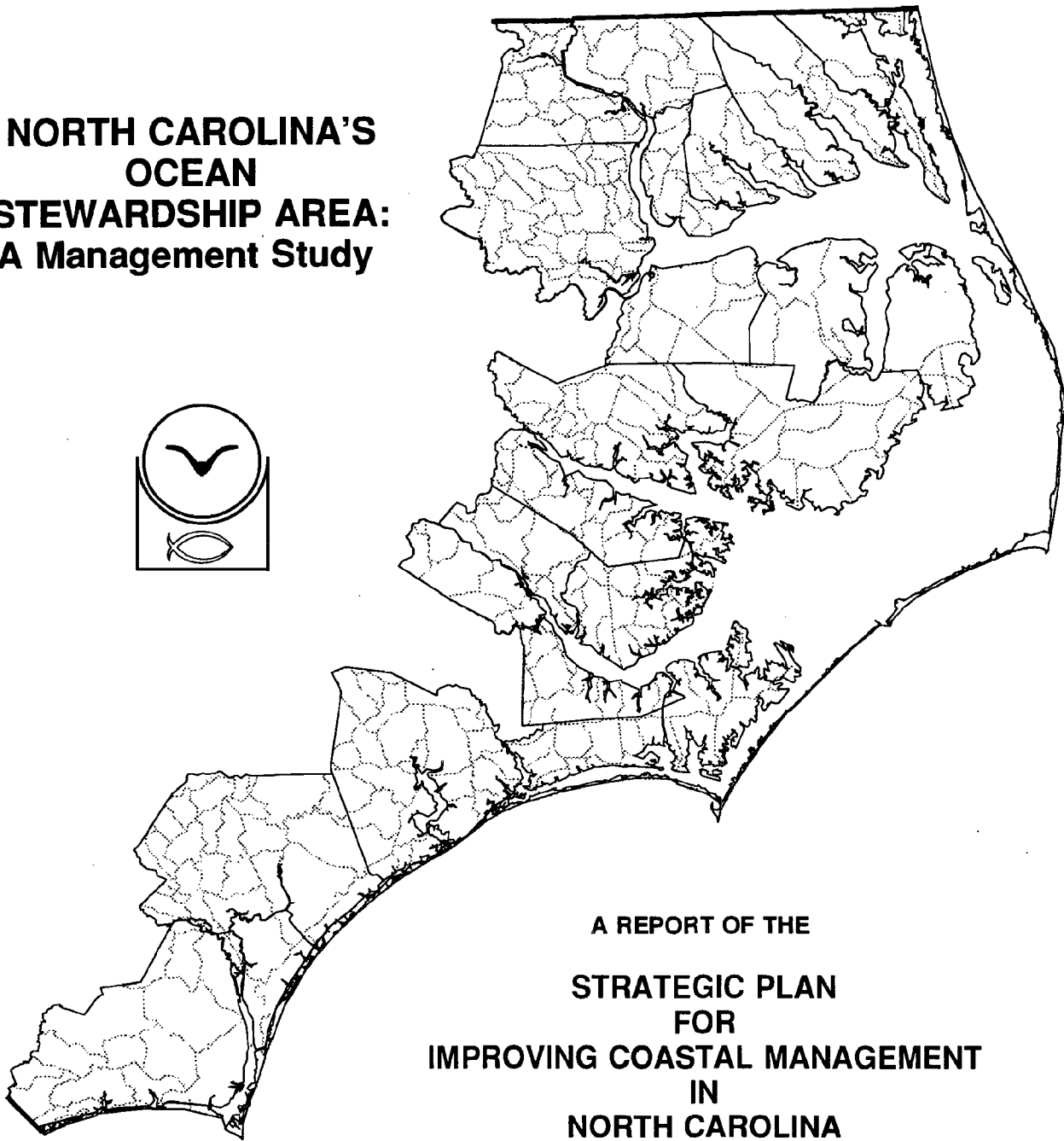
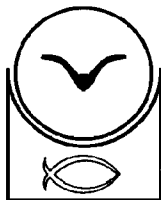


**NORTH CAROLINA'S
OCEAN
STEWARDSHIP AREA:
A Management Study**



**A REPORT OF THE
STRATEGIC PLAN
FOR
IMPROVING COASTAL MANAGEMENT
IN
NORTH CAROLINA**

Performed Under the Coastal Zone Enhancement Grants Program

**Division of Coastal Management
North Carolina Department of Environment, Health and Natural Resources**

COVER GRAPHIC: This GIS map of the North Carolina Coastal Area shows boundaries of counties and small watersheds, or hydrologic units. These hydrologic units are the focus of analytical and planning components of the Strategic Plan for Improving Coastal Management in North Carolina.

**NORTH CAROLINA'S OCEAN STEWARDSHIP AREA:
A MANAGEMENT STUDY**

Walter F. Clark
Ocean and Coastal Law Specialist
North Carolina Sea Grant College Program

and

Steven E. Whitesell
Research Assistant
North Carolina Sea Grant College Program

July 1, 1994

The preparation of this report was financed through a contract by the North Carolina Division of Coastal Management with the North Carolina Sea Grant College Program through funds provided by the Office of Ocean and Coastal Resources Management, NOAA, under the Coastal Zone Enhancement Grants Program. The views expressed herein are those of the authors and do not necessarily reflect the views of NOAA or any of its subagencies or those of the North Carolina Department of Environment, Health and Natural Resources.



A publication of the North Carolina Department of Environment, Health and Natural Resources pursuant to National Oceanic and Atmospheric Administration Award No. NA270Z0332-01.

HT 393
. N8
N67
1994

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ACKNOWLEDGMENTS

I want to thank Dr. B.J. Copeland and Dr. James Murray, North Carolina Sea Grant College Program, for their support, patience and understanding. This project took more time and energy than any of us anticipated.

I also want to extend special thanks to Kim Crawford, Division of Coastal Management, for her guidance and knowledge. I am also most grateful to Jeannie Faris, North Carolina Sea Grant, for her skill and patience in editing what must, at times, have seemed like an endless sea of legalese.

I am grateful to Steve Whitesell, my project research assistant, for the hours he spent in the summer of 1993 studying federal and state statutes and regulations. He did an excellent job of making sense of the maze of policy and law applicable to North Carolina's ocean stewardship area.

I want to extend special thanks to the Ocean Resources Task Force for collectively and individually providing insight into the many different aspects of ocean management. It is my hope that the results of this study will be a positive force in completing the Ocean Resources Plan — the ultimate goal of this project.

Finally, I am forever grateful to my father, Foy Clark, for his wisdom and the insight he continues to share with me regarding fairness and stewardship.

INTRODUCTION

1 Section S

In 1984, North Carolina published "North Carolina and the Sea: An Ocean Policy Analysis." This report was the first in a long line of ocean policy reports produced by maritime states around the country. [1] The N.C. Marine Science Council issued the report recognizing a trend in the early 1980s "toward a more independent and certainly less federally financed role (in ocean and coastal management) for states." [2] As a result of that trend, the council felt that "it behooves the states to pursue their own independent analysis of their individual and collective policy relationships to ocean and coastal issues, not only for their own benefit but also to prepare their contributions for future federal-state dialogues." Almost 10 years have passed since "North Carolina and the Sea" was printed, and many of the issues that spawned the publication remain unaddressed.

It was these unaddressed issues and an entirely new set of issues that led the N.C. Division of Coastal Management to recommend ocean resources planning as a priority area for funding and study under the federal Coastal Zone Management Act's Enhancement Grants Program. In 1990, the U.S. Congress amended the Coastal Zone Management Act to provide funding to states with federally approved coastal management programs to examine means of better managing issues of national importance. [3] Of the eight issues listed in the program guidelines, North Carolina identified four as priority areas for funding and research: wetlands; cumulative and secondary impacts of development; special area management planning; and ocean resources planning. [4] To fulfill the ocean resources planning requirements under the Enhancement Grants Program, the Division of Coastal Management developed a work plan in cooperation with the former Office of Marine Affairs. One component of the plan is the ocean management study presented in this document.

The purpose of this study is to analyze North Carolina's current ocean management regime and identify deficiencies that should be addressed by the ocean management plan. To that end, six study areas were identified as important because they involve marine resources and/or uses that are likely to be at issue. These areas include: (a) the extraction of solid minerals from the seabed; (b) oil and gas exploration and exploitation; (c) marine fisheries management; (d) the discharge of pollutants into the marine environment from ocean outfalls, ocean dumping and littering; (e) recreational uses of the marine environment; and (f) marine protected areas, including archeological sites and ecological preserves.

The management study encompasses North Carolina's ocean stewardship area. This includes the Atlantic Ocean and lands thereunder from mean high tide oceanward to the end of the 200-mile Exclusive Economic Zone.

The ocean stewardship area was defined by the Ocean Resources Task Force. It is the ultimate responsibility of the task force to assist the Division of Coastal Management in developing the Ocean Resources Plan [see Appendix 1 for a list of task force members]. In the interim, the task force will review the recommendations presented in this report.

The second section of the report outlines the jurisdictions found in North Carolina's coastal ocean. Section 3 discusses some basic and constant themes as a foundation for analyzing the study areas. Sections 4 through 9 discuss the six study areas in detail.

Each section concludes with recommendations for action, which grew from areas where the current management regime is either unclear or deficient. They should serve as a catalyst for discussion and a basis for final recommendations in the Ocean Resources Plan.

Footnotes

[1] Ocean policy reports have been produced in Oregon, Maine, Hawaii, Mississippi and Florida. California is developing a plan that will be completed in July 1994.

[2] Much of the work originally undertaken by the Marine Science Council was later shifted to the state's Ocean Affairs Council. The Ocean Affairs Council was abolished by the N.C. Legislature in 1993, and many of its responsibilities have since been given to the N.C. Division of Coastal Management in the Department of Environment, Health and Natural Resources.

[3] 16 U.S.C.A. 1456b(a).

[4] The other four areas are: management of development in high-hazard areas, public access, control of marine debris and siting of coastal energy and governmental facilities.

OCEAN JURISDICTION

Section 2

For purposes of this discussion, ocean jurisdiction is divided into two parts. The first part is a brief description of offshore territorial boundaries. It focuses on the level of government (state or federal) that owns the submerged lands and natural resources off North Carolina's shoreline. The second part, legal/regulatory jurisdiction, is a general discussion of the level of government (local, state or federal) that has the power to regulate activities in the ocean regardless of territorial ownership. These jurisdictions are included in a map at the end of this section.

Territorial Boundaries

State and federal territorial boundaries have been clarified and established by two actions — the passage of the federal Submerged Lands Act in 1953 and the Territorial Sea Proclamation issued by President Reagan in 1988. The Submerged Lands Act granted to coastal states the ownership of submerged lands and natural resources to a point three miles off their coasts. [1] In North Carolina, state ownership begins at the mean high tide line. [2] Consequently, the tidal zone and the submerged land in the Atlantic Ocean out to three miles are state-owned, with all state laws applying as though the area were dry land. [3] North Carolina's lateral seaward boundaries — between its territorial sea and the waters of South Carolina and Virginia — are determined by statute. [4]

In 1988, President Reagan proclaimed a 12-mile territorial sea for the United States. [5] The consequence of this action was to extend U.S. territory into the adjacent oceans to 12 miles. The president's proclamation contained a disclaimer indicating that it does not extend or otherwise alter "existing federal or state law or any jurisdiction, rights, legal interests or obligations derived therefrom." This disclaimer allows the president to assert U.S. sovereignty out to 12 miles for international purposes yet retain the three-mile limit for all domestic laws and regulations. Although the intent of the disclaimer and the Submerged Lands Act of 1953 is to limit state ownership of submerged lands to a distance of three miles, there are questions regarding the president's legal authority to limit the proclamation exclusively to foreign affairs. Some legal scholars contend that the states may have extended claims resulting from the proclamation. [6] This issue will likely remain unsettled until it is clarified by presidential, congressional or judicial action. [7]

In 1991, the N.C. Marine Science Council prepared a report examining the advantages and

disadvantages of extended state ownership and control of resources in the territory three to 12 miles out to sea. The report concluded that "seeking ... an extension of state jurisdiction would not, at this time, be in the best interests of the state." North Carolina may want to revisit the conclusions of that report as it develops the Ocean Resources Plan [see Appendix 2 for a copy].

Legal/Regulatory Jurisdiction

Although territorial boundaries are important in determining legal and regulatory jurisdiction, other factors have weight in ascertaining what level of government will broker ocean management. Some of these factors are discussed.

Paramount Rights of the Federal Government in all Territorial Waters

The federal government has certain paramount rights in all waters of the United States (including waters within the boundaries of state territory). These are rights, grounded in the commerce and property clauses of the Constitution, to regulate U.S. waters for the purposes of navigation, commerce, national defense and international affairs. Consequently, many laws passed by the U.S. Congress apply to North Carolina's ocean waters — the most notable of these being the Clean Water Act, Rivers and Harbors Act; Coastal Zone Management Act; Endangered Species Act; Marine Mammal Protection Act; Marine Protection, Research and Sanctuaries Act; Abandoned Shipwreck Act; and, to some degree, the Magnuson Fishery Conservation and Management Act (Magnuson Act). These laws are generally administered by federal agencies, but occasionally the federal government delegates its authority to individual states. For example, the Clean Water Act allows the U.S. Environmental Protection Agency (EPA) to delegate water quality responsibilities to states with programs that meet federal guidelines. In 1974, EPA gave North Carolina the authority to coordinate its own water quality management program.

The federal government also has the power to enter into international agreements or treaties with other governments. The responsibilities and obligations flowing from these treaties can apply to state and federal waters. For example, the International Convention for the Prevention of Pollution from Ships (MARPOL Annex V) prohibits the overboard discharge of plastics from ships in all ocean waters, including North Carolina's marginal sea.

Rights of the Federal Government in Waters Beyond the Territorial Sea

Though not territorial in nature, the federal government's regulatory jurisdiction extends beyond the 12-mile territorial sea. From that point oceanward to 24 miles is the Contiguous Zone. Within this zone, the United States controls customs, rights of passage, health regulations, military activities and navigation. The United States and most other maritime countries claim an Exclusive Economic Zone that extends 200 nautical miles as measured from the mean low tide. [8] Within this zone, the United States has sovereign rights to explore, exploit, conserve and manage natural resources, both living and nonliving, of the seabed, subsoil and overlying waters. The ocean beyond 200 nautical miles is the high seas to which international law applies. [9]

State Rights in the Federal Territorial Sea and Exclusive Economic Zone

Even though state territorial rights in the ocean end at three miles, adjacent coastal states do have some regulatory power in the federal territorial sea and the Exclusive Economic Zone. The most powerful of these rights — the consistency determination — was given to coastal states by Section 307 of the federal Coastal Zone Management Act of 1972. [10]

Under Section 307, activities in federal ocean waters (such as the proposed Mobil Oil project) that affect any natural resource, land or water use in the coastal zone of an adjacent state (with an approved coastal zone management program) must be consistent with the enforceable policies of that state's coastal management program. Failure to satisfy this consistency requirement can cause federal permits or licenses to be denied. The consistency requirement, thereby, gives a coastal state the tool to influence permitting in federal waters. The power of this tool, however, depends largely on the strength of the state's enforceable policies in its own coastal ocean.

Enforceable policies are defined by federal regulation as "state policies that are legally binding through constitutional provisions, laws, regulations, land-use plans, ordinances or judicial decisions by which a state exerts control over private and public land and water uses and natural resources in the coastal zone." [11]

In addition to the consistency requirement, coastal states may have some limited au-

thority to manage fisheries in the federal territorial sea and Exclusive Economic Zone. The Magnuson Act gives states a limited right to regulate fishing vessels registered in the state and operating in federal waters. However, from a practical standpoint, states seldom have the resources to manage fisheries beyond their jurisdictions.

Rights of Local Governments in State Territorial Waters

As conflicts in the nearshore waters of the Atlantic Ocean have increased, so has the desire of local governments to regulate solutions. Both county and municipal governments have expressed interest in regulating activities such as jet skiing, surfing, littering, advertising by floating billboards and, most recently, the menhaden fishery. But without specific grants of power from the state Legislature, local government is powerless to regulate activities on land or in the coastal ocean.

A grant of power from the Legislature to local government is called enabling legislation. The state has given both county and municipal governments broad powers. General Statute 153A-121, the general enabling legislation for counties, is very similar to the broad grant of power given to municipalities in GS 160A-174. GS 153A-121(a) reads:

A county may by ordinance define, regulate, prohibit or abate acts, omissions or conditions detrimental to the health, safety or welfare of its citizens and the peace and dignity of the county; and may define and abate nuisances . . .

In addition to these broad grants of power, the Legislature occasionally grants county and municipal governments the right to regulate certain activities both within and adjacent to their boundaries. Specific enabling legislation is usually passed when local government and/or the General Assembly are unsure of the ability of local government to regulate through its broad general powers. For example, the General Assembly in 1983 passed a statute explicitly giving counties the right to regulate development over state public trust waters within their jurisdictional boundaries. [12]

Whether through its broad enabling legislation or in response to specific laws, local government is restrained from passing ordinances that are inconsistent with state or federal law. For example, a city cannot regulate a subject "for which a state or federal statute clearly shows a legislative

intent to provide a complete and integrated regulatory scheme to the exclusion of local legislation." [13] In matters related to the Atlantic Ocean, federal and state governments often have a regulatory scheme in place, though it can be argued that such schemes are "complete and integrated." Such schemes take precedence, however, particularly when they exclude local government participation. For example, the General Assembly in 1965 abolished all local fishing acts, declaring that "the enjoyment of the marine and estuarine resources of the state belongs to the people of the state as a whole and is not properly the subject of local regulation." [14]

Ordinances passed by local governments under the state's broad enabling legislation apply only within their jurisdictional boundaries. The seaward boundaries of some local governments have, at times, been at issue. There have been attempts by some local governments to regulate activities in the ocean under general enabling legislation, although the charters of most littoral counties and municipalities cite the Atlantic Ocean as their eastern boundary. [15] Some legislative clarification of this issue would be helpful. Otherwise, local governments may continue to attempt to regulate nearshore activities through general enabling legislation, believing their jurisdiction extends into the ocean.

Because of the increase in nearshore conflicts and the lack of certainty about regulating ocean waters, local governments have, in some instances, been granted specific powers by the General Assembly to manage activities beyond their boundaries. For example, the General Assembly has given municipalities the right to regulate swimming, surfing and littering in the Atlantic Ocean "adjacent to that portion of the city within its boundaries or within its extraterritorial jurisdiction." [16] Also, some municipalities have been given the power to regulate and control personal watercraft (jet skis). [17] Although the right to regulate swimming, surfing and littering is available to all municipalities in oceanfront counties, the right to regulate personal watercraft only applies to those listed in the statute (Atlantic Beach, Carolina Beach, Caswell Beach, Emerald Isle, Holden Beach, Kitty Hawk, Long Beach, Nags Head, Ocean Isle Beach, Sunset Beach, Topsail Beach, Wrightsville Beach and Yaupon Beach). It is likely that more cities will be added as conflicts increase. A more detailed discussion of boating and boating safety will appear in Section 8. For now, suffice it to say that local governments would benefit from legislative consistency regarding their ability to regulate activities in ocean waters.

Recommendations

I. The task force may want to re-examine the conclusions of the report prepared by the N.C. Marine Science Council in 1991 [Appendix 2], even though there does not appear at this time to be an advantage to extending the state territorial sea from three to 12 miles.

II. The jurisdictional boundaries of local governments should be clarified by statute as ending at the Atlantic Ocean. Local governmental boundaries should extend oceanward to the mean low tide line. This would give local governments the ability to regulate activities on the wet and dry sand beaches.

III. The General Assembly should give local governments authority to regulate a broad range of activities in the state's coastal ocean for a distance no more than one mile seaward of the mean low tide. This would extend local governments' zoning and regulatory powers into the ocean. This power must be consistent with state and federal law. For example, local government may not regulate fishing activities in violation of GS 113-133.

Local governments should have the authority to regulate activities such as jet skiing, beach driving, surfing, swimming, advertising by floating billboards and commercial activities originating from the public beach and occurring in the one-mile regulatory zone.

Footnotes

[1] Submerged Lands Act, 43 U.S.C. 1301 et seq.

Section 1311(a) of the act reads as follows:

It is determined and declared to be in the public interest that: (1) title to and ownership of the lands beneath waters within the boundaries of the respective states and the natural resources with such lands and waters and (2) the right and power to manage, administer, lease, develop and use the said lands and natural resources all in accordance with applicable state law be, and they are, subject to the provisions hereof, recognized, confirmed, established and vested in and assigned to the respective states.

Before the Submerged Lands Act was passed, there was some confusion about ownership of the three-mile margin. Prior to World War II, coastal states believed they had jurisdictional control over the territorial or marginal sea. The federal government acquiesced in this belief, altered only by its supremacy powers. However, after World War II, the federal government had a change of heart. In a famous Supreme Court decision, United States v. California, 332 U.S. 19 (1947), the court agreed with the federal government that the marginal sea properly appertained to the United States in its entirety. In providing rationale, the court emphasized the need for uniformity and national security. The Submerged Lands Act re-established state ownership of the marginal sea.

[2] In some states, public ownership begins at mean low tide, making the wet sand beach or the foreshore privately owned. The foreshore is privately owned in Delaware, Maine, Massachusetts, New Hampshire, Pennsylvania and Virginia.

[3] Even though North Carolina claims ownership of the foreshore below mean high tide, the eastern boundary of state territory is determined by measuring from the extreme low watermark, not from the mean high tide line.

The N.C. Constitution and the General Statutes define the eastern boundary of the state as one marine league eastward from the Atlantic seashore, measured from the extreme low watermark. Constitution of North Carolina, Art. I, sec. 34 and GS 141-6(a). In English-speaking countries, a league is roughly three miles.

[4] GS 141-7.1 Southern lateral seaward boundary with South Carolina. This act was approved by the state of South Carolina and consented to by Congress.

GS 141-8 Northern lateral seaward boundary with Virginia. This act was approved by the state of Virginia and consented to by Congress.

[5] Presidential Proclamation # 5928 (Dec. 27, 1988).

[6] Many state and federal statutes contain some reference to a territorial sea of an undefined width. "If the territory to which these statutes apply is defined simply as the territorial sea, the statute could be interpreted to incorporate an expanded 12-mile territorial sea rather than be limited to three miles." Mississippi Ocean Policy Study, Mississippi-Alabama Sea Grant Legal Program, MASGP-91-010.

[7] In 1991, a legislative solution was attempted in Congress. A bill was introduced that would have extended all coastal states' jurisdiction over offshore lands and waters seaward to 12 nautical miles. This would have been accomplished by amending the Submerged Lands Act.

[8] Presidential Proclamation # 5030 (March 10, 1983).

[9] The recent ratification of the Law of the Sea Treaty may have an impact on the international management of the high seas. To date, management of the high seas has been exercised through bilateral or multilateral treaties or through customary international law.

[10] Section 307 of the federal Coastal Zone Management Act. 16 U.S.C.A. 1456(c)(1).

[11] 15 CFR 923.102(b)(1).

[12] GS 153A-340.

[13] GS 160A-174(b)(5). There is no comparable statute regarding county government, although the courts have so limited county authority.

[14] GS 113-133. This statute does add some confusion by stating that "nothing in this section is intended to invalidate local legislation or local ordinances that exercise valid powers over subjects other than the conservation of marine and estuarine resources, even though an incidental effect may consist of an overlapping or conflict of jurisdiction as to some particular provision not essential to the conservation objectives set out in this subchapter." (emphasis added)

[15] Presumably, local government boundaries end at the mean high tide line since this is where state ownership begins. However, research into the session laws of North Carolina has found that Nags Head, Holden Beach, Carolina Beach, Surf City, Topsail Beach and Wrightsville Beach all defined their eastern boundary as either the edge or the low watermark of the Atlantic Ocean.

[16] GS 160A-176.1. This section applies to cities in the counties of Brunswick, Carteret, Currituck, Dare, Hyde, New Hanover, Onslow and Pender. This includes all of the counties that abut the Atlantic Ocean.

GS 160A-360 permits municipalities to increase their jurisdiction for the purposes of regulating development, such as zoning and land use. The size

of this increased area, called extraterritorial jurisdiction, is dependent on the population of the city in question. A city with a population between 10,000 and 25,000 may increase its extraterritorial jurisdiction to two miles. Those with a population greater than 25,000 may have an extraterritorial jurisdiction of three miles. Some oceanfront municipalities have extended their extraterritorial jurisdictions into the Atlantic Ocean. For example, Southern Shores and Nags Head have extraterritorial jurisdiction extending one mile into the Atlantic.

[17] GS 160A-176.2. This section, in contrast to 160A-176.1, includes adjacent waterways in addition to the Atlantic Ocean. The state's Boating Safety Act, GS 75A-1 et seq., does contain the statutory authority for the state (Wildlife Resources Commission) to regulate jet skis that pose a substantial safety risk. To date, the commission has not regulated jet skis, perhaps because they are more parochial than most other watercraft in the territory they occupy. In other words, they are typically nearshore recreational devices (such as surfboards) that appertain more readily to local control.

INTERNATIONAL INTERESTS

NATIONAL INTERESTS

FEDERAL LAWS AND REGULATIONS
(Applicable to Terrestrial, Fresh Water,
and Marine Areas):

- Coastal Zone Management Act (CZMA)
- Clean Water Act
- Endangered Species Act
- Rivers and Harbors Act
- National Environmental Policy Act

FEDERAL LAWS AND REGULATIONS
(Applicable to Marine Waters):

- Marine Mammal Protection Act
- Sanctuaries Act
- Fisheries Conservation and Management Act (Limited Applicability to State Waters)

COASTAL STATES INTERESTS

STATE CONSISTENCY REVIEW

- N.C. Coastal Area Management Act (CAMA)
- Public Trust Waters AEC
- Estuarine Waters AEC
- Water Quality Laws and Regulations
- Fisheries Laws and Regulations
- Sedimentation Pollution Control Act
- N.C. Environmental Policy Act



INTERNATIONAL INTERESTS

NATIONAL INTERESTS

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INTERNATIONAL INTERESTS

NATIONAL INTERESTS

COASTAL STATES INTERESTS

**COASTAL MANAGEMENT
AND OTHER CONSTANT
THEMES IN OCEAN
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Introduction

This chapter reviews North Carolina's coastal management program with an eye toward its capacity to manage activities in the state's ocean stewardship area. North Carolina's program is broad and has significant power over development activities proposed for state jurisdictional waters. It also has the power to influence proposed activities in federal ocean waters through the consistency provision of the federal Coastal Zone Management Act.

Also reviewed in this chapter are the many constant legal themes that are integral to the regulatory structure for activities discussed in later chapters. These themes include the public trust doctrine and its embodiment in state legislation, state and federal water quality laws, the State and National Environmental Policy Acts, and state and federal law protecting endangered species and marine mammals.

Coastal Zone Management

The federal Coastal Zone Management Act was passed in 1972. Its intent is "to preserve, protect, develop and, where possible, to restore or enhance the resources of the nation's coastal zone for this and succeeding generations." [1] The act encouraged state coastal management programs by offering federal funding for their development and administration. The act also offered states with a federally approved program the opportunity to influence activities proposed for federal waters through its consistency provision. The Coastal Zone Management Act is implemented by the Office of Ocean and Coastal Resources Management within the U.S. Department of Commerce's National Oceanic and Atmospheric Administration.

**North Carolina's Coastal
Management Program**

North Carolina established its coastal management program in 1974 with the passage of the Coastal Area Management Act (CAMA). CAMA recognized that the state's coastal area was being subjected to pressures that "are the result of the often conflicting need of a society expanding in industrial development, in population and in the recreational aspirations of its citizens" [2] To address these pressures, the General Assembly passed CAMA, which laid the framework of "a comprehensive plan for the protection, preservation, orderly development and management of the coastal areas of North Carolina." [3] CAMA also

created the Coastal Resources Commission, making it responsible for designing state guidelines to regulate development activities in the coastal area. [4] During the past 20 years, North Carolina has made significant progress in developing a comprehensive management program for nearshore land and water. But little attention has been given to expanding the program to the state's ocean waters.

CAMA's jurisdictional area, referred to as the coastal area, includes 20 of North Carolina's coastal counties, estuarine waters within these counties and the Atlantic Ocean seaward to the end of state jurisdiction. [5] Within the coastal area, CAMA directed the Coastal Resources Commission to designate areas of environmental concern (AECs). [6] These are specific areas within the broader coastal area that need special protection because of their resource and use values and environmental sensitivity. All ocean waters in North Carolina fall within two AECs — the public trust and estuarine waters AECs. [7]

The Coastal Resources Commission has designed management guidelines for both AECs. Any development activity within these areas must be consistent with the guidelines. The N.C. Division of Coastal Management in the Department of Environment, Health and Natural Resources (DEHNR) administers a permit program to ensure that development activity is consistent with AEC standards.

Development is defined by CAMA as:

Any activity in a duly designated area of environmental concern involving, requiring or consisting of the construction or enlargement of a structure; excavation; dredging; filling; dumping; removal of clay, silt, sand, gravel or minerals; bulkheading; driving of pilings; clearing or alteration as an adjunct of construction; alteration or removal of sand dunes; alteration of the shore, bank or bottom of the Atlantic Ocean or any sound, river, creek, stream, lake or canal. [8]

This definition is quite broad and would include almost any bottom-disturbing activity in the state's ocean waters. Activities such as the extraction of solid minerals from the seabed, exploration and development of oil and gas resources, channel dredging and other bottom-disturbing activities associated with ocean outfalls, ocean jetties

and artificial reefs would qualify as development and require permits from the Division of Coastal Management. However, other activities in the state's ocean waters, such as commercial and recreational fishing and the expulsion of waterborne pollutants from ships, may not constitute development. These cases may not trigger CAMA's regulatory review process. Of course, activities not covered by CAMA would likely be covered by other state and federal laws.

One objective of this chapter is to examine the adequacy of CAMA and its regulatory standards to properly manage activities likely to occur in the state's ocean waters. Other state and federal laws and regulations that apply in conjunction with or independently from CAMA are discussed in later chapters.

I. The CAMA regulatory process

Development activities regulated by CAMA are divided into major and minor categories. Major development is any activity that requires permission, licensing, approval, certification or authorization from another state or federal agency; occupies more than 20 acres of land or water; contemplates drilling for or excavating natural resources on land or underwater; or contemplates, on a single parcel, a structure or structures in excess of a 60,000-square-foot area. [9] Minor development is any other activity fitting the definition of development.

Permits for major development are processed by the Division of Coastal Management, while all minor permit applications are processed by the local government where the development is planned. Because development activities in North Carolina's ocean will likely require permission from another state or federal agency, most will be classified as major and processed by the state.

The review process for major development is more rigorous than that for minor permits. Applications are reviewed by Division of Coastal Management staff using information from the applicant, AEC standards applicable to the proposed activity, comments by other state and federal agencies and comments from third parties (including adjoining property owners). These informational requirements and the AEC review standards were written with land-based and nearshore development in mind and may not be adequate to cover proposed ocean activities. The requirements and standards are reviewed on the following pages.

A. Application materials and public notice

Applicants for major development permits must complete an application form and attach:

- (1) an accurate work plan;
- (2) a copy of a deed or other instrument under which the applicant claims title;
- (3) proof that adjacent riparian landowners have been notified of the proposed activity by including certified return mail receipts [or copies thereof] to show they were sent a copy of the application;
- (4) the appropriate environmental assessment document for development proposals subject to review under the N.C. Environmental Policy Act; and
- (5) any other information needed for a thorough and complete application review. [10]

It should be noted that the Division of Coastal Management often requires information for an entire development project when only a portion of it falls within an AEC. This requirement, often referred to as "the total development concept," could have interesting ramifications in situations where only a small portion of the development touches the AEC. Take, for example, ocean outfall proposals where only the pipe draining sewage from a multijurisdictional area falls within the AEC. Would an applicant be required to submit plans for the entire system?

Even though (4) and (5) should be sufficient to require the necessary materials for an application review, provisions (2) and (3) should be modified to cover development activities proposed for the ocean. For example, provision (2) should state that leases for state submerged lands are sufficient legal instruments if they convey a right to use the land and/or water in question. There are times when a legal right may be less than fee simple title. In any event, having the legal right of use should always be a prerequisite to an application review. This has the advantage of avoiding the public expense of a review for which a lease may be denied. It also can avoid unnecessary expenses to an applicant. Even though it is clear under CAMA standards that a legal instrument conveying a use right is a prerequisite to review, other laws (including those setting up the state leasing structure) are less clear on the sequence of events [see Section 4 (Extraction of Solid Minerals) and Section 5 (Oil and Gas Activities) for a discussion of state policy for leasing submerged lands].

Provision (3) should be amended to state who (what entity) should be notified when a project is proposed for ocean waters. For example, should coastal counties and towns adjacent to the project be notified? Should all littoral owners in each county or town be notified?

Once an application has been accepted, public notice is issued by mailing an application copy to anyone who has requested notification, by posting notice at the development site or by publishing notice in a newspaper of general circulation in the county where the development is proposed. [11] For development activities proposed in the ocean, these requirements are deficient. As noted in the former chapter on jurisdiction, ocean lands and waters do not fall within any county. Consequently, in what newspapers should notice be given? Perhaps statewide? Of course, posting notice at the site may be impossible and fruitless.

B. Application circulation and review by other state and federal agencies

Completed applications are circulated to several state and federal agencies with expertise in relevant fields. In addition to the Division of Coastal Management, other state agencies within DEHNR review applications. They are: the Division of Environmental Management, Division of Marine Fisheries, Division of Environmental Health (Shellfish Sanitation), Division of Land Resources, Division of Water Resources and the Wildlife Resources Commission. Other reviewing agencies are the Division of Archives and History in the Department of Cultural Resources, Division of Community Assistance in the Department of Commerce, State Property Office in the Department of Administration and Department of Transportation. Federal agencies reviewing applications are: the U.S. Army Corps of Engineers, Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service and National Marine Fisheries Service.

The Division of Coastal Management decides major development permits in part by using these agencies' comments. It should be noted that many commenting agencies have their own legal authority and may process permits under their own laws and regulations. For example, the Division of Environmental Management processes NPDES (National Pollution Discharge Elimination System) permits and water quality certifications (401 certifications) under the authority of the federal Clean Water Act. Also under the Clean Water Act, the Army Corps of Engineers processes 404 permits for applicants wanting to fill navigable waters.

C. CAMA review standards for the estuarine waters and public trust AECs

The focus of the CAMA review process is to determine an activity's consistency with standards developed by the Coastal Resources Commission for AECs. North Carolina's coastal ocean includes the public trust and estuarine waters AECs.

The public trust AEC includes all waters of the Atlantic Ocean and the lands thereunder from the mean high watermark to the seaward limit of state jurisdiction. [12] The management objective for this area is to protect public rights for navigation and recreation and to preserve and manage the biological, economic and aesthetic value of public trust areas. [13]

The estuarine waters AEC also includes all ocean waters within the state's jurisdiction. [14] The management objective for this area is to give the highest priority to conserving and managing the important features of estuarine waters so as to safeguard and perpetuate their biological, social, aesthetic and economic values ... [15] Some of the important features of the estuarine system are listed in the standards. They include mud and sand flats, eelgrass beds, salt marshes, submerged vegetation beds, clams and oyster beds and important nursery beds. [16] Missing from this list, however, are many important features found in the open ocean, such as hard or live bottoms.

To achieve the AEC management objectives, the Coastal Resources Commission has developed general and specific use standards against which proposed development activities are measured. The general use standards for both public trust and estuarine waters AECs state that before an activity can be permitted, it must be water-dependent with no suitable alternative site outside the AEC, it must not violate water and air quality standards, it must not cause major or irreversible damage to valuable documented archaeological or historic resources, it must not measurably increase siltation, it must not create stagnant water bodies, it must be timed to have minimum effects on life cycles of estuarine resources and it must not impede navigation or unduly interfere with access to or use of public trust or estuarine waters. [17]

In addition to these general standards, the Coastal Resources Commission has specific use standards to cover the following activities: (1) construction and maintenance of navigation channels, canals and boat basins; (2) hydraulic dredging; (3) drainage ditches; (4) nonagricultural drainage ditches; (5) marinas; (6) docks and piers; (7) bulk-

heads and shore stabilization measures; (8) beach nourishment; and (9) wooden and riprap groins. [18] It is apparent from this list that specific standards have been developed only for nearshore activities. The Coastal Resources Commission has not developed specific use standards for activities likely to occur in the coastal ocean.

For most rules there are exceptions, and that is true for the use standards of the Coastal Resources Commission. A development activity can be permitted without meeting state standards by demonstrating that it will have public benefits that "clearly outweigh the long-range adverse effects of the project, that there is no reasonable and prudent alternate site available for the project, and that all reasonable means and measures to mitigate adverse impacts have been incorporated into the project design and will be implemented at the applicant's expense." [19]

To guide mitigation proposals and efforts, the Coastal Resources Commission developed a mitigation policy. [20] The policy defines mitigation as the enhancement, creation or restoration of coastal resources to maintain the ecosystem's characteristics and processes, such as natural biological productivity, habitat and species diversity, physical integrity, water quality and aesthetics. [21] The policy ranks mitigation forms in the following order of preference:

- (1) (mitigation that leads to the) enhancement of coastal resources with created or restored systems determined to be potentially more productive of the resources characteristic of unaltered North Carolina ecosystems than those destroyed;
- (2) (mitigation that leads to the) creation or restoration of an area of similar ecological utility and potential biological value than that destroyed or altered; and
- (3) (mitigation that leads to the) creation or restoration of an area with a desirable but different ecological function or potential than that destroyed or altered. [22]

In addition, the following actions may be allowed under the policy even though they do not meet the definition of mitigation:

- (1) acquisition for public ownership of unique and ecologically important systems not protected by state and/or federal regulatory programs,

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- (2) transfer of privately owned lands subject to state and federal regulatory control into public ownership,
 - (3) provision of funds for research or for management programs, or
 - (4) increased public access for recreational use. [23]

Even though the mitigation policy was written with nearshore activities in mind, it still may be workable in addressing offshore proposals. It will be useful to revisit the policy to determine its applicability to potential ocean activities, such as the extraction of hard minerals or gas and oil. Also, for the sake of consistent interagency review, other "mitigationlike" state policies (for example, the reclamation provisions developed by the state Mining Commission under the Mining Act) should be reviewed and, where possible, made consistent with the coastal management mitigation policy.

II. CAMA and state agency coordination and consistency

CAMA envisioned a coastal management program that would coordinate the actions of relevant state agencies. To ensure this coordination, Gov. James B. Hunt signed Executive Order # 15 in 1977. The order states, in part, that:

All state agencies shall take account of and be consistent to the maximum extent possible with the coastal policies, guidelines and standards contained in the state guidelines, with the local land-use plans developed under the mandate of the Coastal Area Management Act and with the North Carolina coastal plan prepared under the federal Coastal Zone Management Act of 1972 in all regulatory programs, use and disposition of state-owned lands, financial assistance for public facilities, and encouragement and location of major public and private growth-inducing facilities.

The secretary of Natural Resources and Community Development (now Environment, Health and Natural Resources) and the Coastal Resources Commission shall ensure the opportunity for full participation by affected state agencies in the development of policies and guidelines for the coastal area prior to their adoption.

All conflicts arising from the implementation of this order with the Department of Natural Resources and Community Development shall be resolved by the secretary of that department, and all conflicts over consistency between the administering coastal management agency (Department of Natural Resources and Community Development) and another department of state government shall be resolved by the governor [see Appendix 3, Executive Order # 15].

The CAMA process for reviewing major development permits was designed, in part, to bring about the multiagency review envisioned by the governor's order. However, a consistent complaint has been that development and implementation of state regulations occurs in a vacuum without interagency or intercommission coordination.

To address this issue, the task force may want to recommend to the Division of Coastal Management and Coastal Resources Commission that an interagency and intercommission management committee be created. This committee should be composed of heads of the agencies and commissions responsible for major programs affecting coastal management. At a minimum, the committee should include representatives of the Coastal Resources Commission, Division of Coastal Management, Environmental Management Commission, Division of Environmental Management, Marine Fisheries Commission and Division of Marine Fisheries. The committee would integrate and coordinate agency and commission policies and coastal activities, identify and resolve jurisdictional conflict and overlap, and recommend legislation, rules and memoranda of understanding.

III. CAMA and federal consistency

Under the Coastal Zone Management Act, activities in federal ocean waters that affect any natural resource, land or water use in the coastal zone of an adjacent state must be consistent with the enforceable policies of the state's approved coastal management program. Federal permits or licenses can be denied if this consistency requirement is not satisfied. The consistency requirement, thereby, gives a coastal state the tool to influence permitting in federal waters. The power of this tool, however, depends largely on the strength of the state's enforceable policies in its own coastal ocean.

The federal regulation defines enforceable policies as "state policies that are legally binding through constitutional provisions, laws, regulations, land-use plans, ordinances or judicial decisions by which a state exerts control over private and public land and water uses and natural resources in the coastal zone." [24] These policies include CAMA and its implementing regulations as well as the other laws and regulations pertaining to the ocean activities discussed in this report [see Appendix 4 for enforceable policies identified in North Carolina's coastal management plan].

The act's consistency provision gives states some jurisdiction in federal waters by treating activities there as though they were taking place in state waters if they affect state land or water resources. Without this provision, a state would have no jurisdiction and its policy would not be binding on federal permittees or licensees. To take maximum advantage of the consistency provision, North Carolina should examine its coastal zone management program with an eye toward shaping activities in federal waters off its shoreline. More specifically, North Carolina should examine each potential development activity in federal waters and then evaluate how it currently regulates that activity in state waters. Weaknesses should be noted and corrected. That is, in part, the objective of this report.

The Public Trust Doctrine

The judicially created public trust doctrine is based on the theory that title to all submerged lands under navigable waters is vested in the state in trust for the benefit of its people. [25] It is rooted in the American colonies' claim of independence from England. Historically, the primary function of the doctrine was to recognize and protect a public right of navigation by prohibiting obstructions in navigable waters. Other public rights, such as the right to fish and swim, have been more recently recognized. North Carolina courts have interpreted the doctrine as open-ended, recognizing that new rights may be added as societal needs dictate. [26] In 1985, the General Assembly codified a list of public trust rights and recognized that the courts may continue to define and expand the doctrine. It provides that:

... "public trust right" means those rights held in trust by the state for the use and benefit of the people of the state in common. They are established by common law as interpreted by the courts of this state. They include, but

are not limited to, the right to navigate, swim, hunt, fish and enjoy all recreational activities in the watercourses of the state and the right to freely use and enjoy the state's ocean and estuarine beaches and public access to the beaches. [27]

The General Assembly has codified the geographic boundaries of the public trust doctrine, applying it to "submerged lands under navigable waters." Submerged lands are state lands that lie beneath any navigable waters within the boundaries of this state or the Atlantic Ocean to a distance of three geographical miles seaward from the state coastline. [28] Even though there has been some difficulty in determining how to apply the term navigable waters to nonocean interior waters (particularly fresh waters), it is clear from common law and statutory definition that the public trust doctrine applies to the lands and waters of the Atlantic Ocean within the state's territorial sea.

In addition to codifying public trust rights and the geographic boundaries within which those rights can be exercised, the General Assembly has also recognized the public trust nature of marine and estuarine wildlife resources. General Statute 113-131 recognizes that "the marine and estuarine resources of the state belong to the people of the state as a whole." The statute charges DEHNR and the Wildlife Resources Commission with stewardship responsibilities for these resources.

The Public Trust Doctrine and State Legislation

CAMA gives the Coastal Resources Commission authority to adopt standards for the "protection of present common law and statutory rights in the lands and waters of the coastal area." [29] The act also gives the Division of Coastal Management the power to deny a permit to any proposed development activity that would jeopardize public trust rights. [30] As discussed earlier, the Coastal Resources Commission has developed regulations for the public trust AEC.

In addition to the Coastal Resources Commission and Division of Coastal Management, several other commissions and agencies within DEHNR are authorized to regulate certain activities (including navigation and fishing) that could negatively impact the public trust. As will be discussed later [Section 6], the Marine Fisheries Commission and Division of Marine Fisheries are authorized to regulate fishing in the state's estuarine and ocean waters. The Wildlife Resources Com-

mission and its staff are authorized to regulate boating and promote boating safety in state waters [Section 8]. In addition, the State Property Office of the Department of Administration is responsible for leasing and granting easements over public lands. This is of great importance to the proper management of the state's ocean public trust lands and waters [see Section 4 (Extraction of Solid Minerals) and Section 5 (Oil and Gas Activities) for a discussion of state leasing procedures].

Federal and State Law Regulating Water Quality

The Water Pollution Control Act, more commonly called the Clean Water Act, is the leading federal law addressing water quality. [31] The overall goal of the act is to make all waters of the United States fishable and swimmable. One of its missions is to limit and eventually eliminate direct (point source) pollution discharges. Examples of point source discharges include those from a pipe, such as wastewater from a municipal sewage facility or industrial site. To limit pollution from point sources, the act requires that: (1) the waters of the country be classified according to their highest and best use; (2) for each classification, water quality standards be developed; and (3) point source discharges be allowed only if the discharge does not violate the water quality standards of the receiving waters.

The act creates a permit process to assess the impact of discharges. This process, established by Section 402 of the Clean Water Act, is called the National Pollution Discharge Elimination System (NPDES). Permits issued under the process are NPDES permits. [32]

The Clean Water Act is administered by EPA, which develops the regulatory standards to fulfill the act's broad directives. However, the act does require that other federal agencies participate in implementing the law. For example, the U.S. Army Corps of Engineers executes the permit program that regulates placement of fill material into the navigable waters of the United States. This would include fill placed in North Carolina's coastal ocean. This program is often called the 404 Program after the section of the act that created it. [33] The Clean Water Act also requires the U.S. Coast Guard to enforce the use of marine sanitation devices. [34] These devices receive, retain, treat and discharge sewage from boats.

The Clean Water Act allows individual states to set up their own water quality programs

so long as they are consistent with federal guidelines. [35] In 1974, EPA gave North Carolina the authority to implement its own water quality program. Consequently, the state Legislature adopted laws that outline North Carolina's water quality strategy. Most of these laws can be found in Chapter 143, Article 21, Part I of the N.C. General Statutes. These laws established the Environmental Management Commission (staffed by the Division of Environmental Management) and authorized it to adopt and establish standards for state water quality classifications. [36] The commission has developed classifications and standards for both fresh and tidal waters. [37] In line with the federal act, discharges are only allowed if they do not violate water quality standards. A state permit process is in place to determine the impact of a discharge. [38] It should also be noted that Section 401 of the Clean Water Act requires all applicants for federal licenses or permits to obtain a state water quality certification for any activity that may discharge into state waters. [39]

Water quality issues can take many different forms in the ocean. Point source discharges can occur from ocean outfalls. Other discharges can be associated with mining activities, oil and gas activities and the construction of navigation aids, such as jetties or channel dredging. [40] These activities and their possible impacts on water quality will be explored in later chapters.

The National and State Environmental Policy Acts

The National Environmental Policy Act, signed into law in 1970, requires a detailed statement regarding "every recommendation or report on proposals for legislation and other major federal actions significantly affecting the quality of the human environment." [41] In particular, the act requires the statement to include:

- (1) the environmental impact of the proposed action,
- (2) any adverse environmental effects that cannot be avoided should the proposal be implemented,
- (3) alternatives to the proposed action,
- (4) the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity, and
- (5) any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented. [42]

One of the most contentious issues regarding the National Environmental Policy Act has been the question of when an impact statement is necessary. For instance, what constitutes a "major federal action" and what action "significantly affects the quality of the human environment?" For purposes of this study, suffice it to say that most activities in the state's ocean stewardship area requiring a federal permit or license would require a federal environmental impact statement or, at a minimum, an environmental assessment.

An environmental assessment under the National Environmental Policy Act is an initial document in which the proposer briefly discusses the need for the proposal as well as the environmental impacts and alternatives to the proposal. It is a threshold document, and it is held to a lower standard of analysis than an environmental impact statement. Agencies often use the environmental assessment to make a "finding of no significant impact." These findings are attractive to many federal project directors because they allow the agency to circumvent the requirements of an environmental impact statement. [43]

In 1971, North Carolina passed its own Environmental Policy Act. [44] The purpose of the act is:

to declare a state policy which will encourage the wise, productive and beneficial use of the natural resources of the state without damage to the environment, maintain a healthy and pleasant environment and preserve the natural beauty of the state [45]

To accomplish this goal, state agencies are required to "consider and report upon environmental aspects and consequences of their actions involving the expenditure of public moneys or the use of public land." [46] Ocean activities within three miles of the shoreline are likely to invoke the reporting requirements of the N.C. Environmental Policy Act since they would be on state property. If a report is necessary, the act requires the responsible state official to set forth:

- (1) the environmental impact of the proposed action,
- (2) any significant adverse environmental effects that cannot be avoided should the proposal be implemented,
- (3) mitigation measures proposed to minimize the impact,

- (4) alternatives to the proposed action,
- (5) the relationship between the short-term uses of the environment involved in the proposed action and the maintenance and enhancement of long-term productivity, and
- (6) any irreversible and irretrievable environmental changes that would be involved in the proposed action should it be implemented. [47]

North Carolina's reporting standards are almost identical to the requirements of the National Environmental Policy Act except that the state also requires the notation of mitigation measures. Chapter 25 of the N.C. Administrative Code outlines the rules for implementing the act. [48] The Department of Administration is designated as the clearinghouse agency to coordinate the act's requirements.

Methods of compliance with the N.C. Environmental Policy Act are very similar to the national act. An environmental assessment is used as a decision-making tool to determine if a planned project would require an environmental impact statement. [49] If the assessment demonstrates that the project will have no significant adverse effect on the quality of the environment, the state agency must file a finding of no significant impact. It must contain:

- (1) a brief narrative description of the proposed activity, including a description of the area affected by the proposed activity and a site location plan;
- (2) a list of probable environmental impacts of the proposed activity;
- (3) a list of the reason(s) for concluding that the action will not have a significant adverse effect on the quality of the environment, with reference to mitigation activities to be carried out, thereby negating the necessity of preparing an environmental impact statement; and
- (4) a statement that no environmental impact statement is to be prepared, and the finding of no significant impact completes the environmental review record. [50]

Of course, a state agency can choose to prepare an environmental impact statement without going through the environmental assessment process.

Endangered Species and Marine Mammals

As noted in Section 2, many laws passed by Congress apply to North Carolina's lands and waters. From an oceanic perspective, two federal laws that could significantly influence the management of living resources are the Endangered Species Act of 1973 and the Marine Mammal Protection Act of 1972. Both acts have been controversial and are going through the legislative reauthorization process in 1994 — a process that could mean substantial change.

Marine Mammal Protection Act

The intent of the Marine Mammal Protection Act is to impose a general moratorium, with certain exceptions, on the taking of marine mammals. In passing the act, Congress found that:

- (1) certain species and population stocks of marine mammals are, or may be, in danger of extinction or depletion because of man's activities;
- (2) such species and population stocks should not be permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part, and, consistent with this major objective, they should not be permitted to diminish below their optimum sustainable population. Further measures should be immediately taken to replenish any species or population stock that has already diminished below that population. In particular, efforts should be made to protect the rookeries, mating grounds and areas of similar significance for each species of marine mammal from the adverse effect of man's actions ... [51]

Based on these findings, the act establishes a moratorium on the taking and importing of marine mammals and marine mammal products. [52] To take is defined as "to harass, hunt, capture or kill or attempt to harass, hunt, capture or kill any marine mammal." [53] There are, however, four types of exemptions under the act. They include small take permits, general permits, permits for public display and scientific research, and a special permit for Alaskan natives.

Small take permits are issued by the secretaries of the departments of Commerce or Inte-

rior (or their representative within the National Oceanic and Atmospheric Administration or the U.S. Fish and Wildlife Service) for activities that involve the incidental and unintentional taking of small numbers of marine mammals that are not part of a depleted species or population stock. [54] There are two types of small take permits — one applicable to U.S. citizens who fish commercially and another to citizens not involved in commercial fishing activities. [55]

General permits can be issued for marine mammals taken incidentally in the course of commercial fishing. However, in allowing general permits, the act states that:

... In any event, it shall be the immediate goal that the incidental kill or incidental serious injury of marine mammals permitted in the course of commercial fishing operations be reduced to insignificant levels approaching a zero mortality and serious injury rate ... [56]

The National Marine Fisheries Service of the National Oceanic and Atmospheric Administration must estimate the population of any marine mammal that is the subject for a general permit before the permit can be issued. National Marine Fisheries Service must also determine if the species is at its optimum sustainable population. [57] This requirement was judicially asserted in the 1988 case Kokechik Fisherman's Association v. Secretary of Commerce, 839 F.2d 795, holding that a permit for incidental takings of a marine mammal could not lawfully be issued before the secretary ascertained that species' optimum sustainable population. Partly as a reaction to this case, Congress amended the Marine Mammal Protection Act in 1988 to establish an interim exemption for commercial fisheries. While the exemption gave the fishing industry a temporary reprieve from the incidental takings requirement, the amendment mandated reporting and monitoring to increase overall data on marine mammal populations. The interim period, originally set to end Oct. 1, 1993, was extended twice as Congress struggled with amendments to the act. Agreement has since been reached and the new law sets out immediately to reduce incidental mortality or serious injury of marine mammals to near-zero levels within seven years. [58]

Under the new law, fishers cannot intentionally kill a marine mammal unless it is "imminently necessary in self-defense or to save the life of a person in immediate danger." The legislation

requires the identification of marine mammal stocks that are in trouble and the formation of teams to develop take-reduction plans. Sometime this summer (1994), three scientific groups must be assembled to represent the East Coast and Gulf of Mexico, the Pacific Coast and Hawaii, and Alaska. The mandate is to bring together people with scientific or practical fishing experience to provide information on marine mammal populations, trends, research needs and the impacts of habitat destruction, pollution and natural environmental change. These groups are to advise the secretary of commerce on the number of animals that can safely be removed from the population. By Aug. 1, 1994, the secretary — by way of these groups — must prepare for public comment the assessments of all marine mammal stocks in U.S. waters. The assessments will describe the geographic range of the stock, estimate minimum population size and trends, estimate annual human-caused mortalities and serious injuries and describe any fishing activity that interacts with the stock and the rate of takes. [59]

The assessments must also categorize the stocks in one of two ways: as strategic or as not having a level of human-caused mortality and injury that would reduce them below levels of optimum sustainable population. Strategic stocks are populations for which the level of direct human-caused mortality exceeds the potential biological removal level; that are listed as threatened, endangered or depleted; or that are declining and likely to soon be designated as threatened. Potential biological removal levels are the "maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population." [60]

North Carolina must ensure that development activities (regulated by CAMA) and nondevelopment activities (typically not regulated by CAMA) abide by the mandates of the Marine Mammal Protection Act. It is unlawful to take any marine mammal without abiding by the specific permit criteria for exceptions.

In addition to the extraction of living resources from the coastal ocean, the future prospects of nonliving resource exploitation should be considered in a comprehensive ocean policy. Oil and natural gas exploration and drilling, as well as the extraction of solid minerals, must abide by the Marine Mammal Protection Act. A small take permit is available under Section 1371(a)(5)(A) for noncommercial fishing activities. This section states that:

Upon request therefor by citizens of the United States who engage in a specified activity (other than commercial fishing) within a specified geographical region, the secretary shall allow, during periods of not more than five consecutive years each, the incidental, but not intentional, taking by citizens while engaging in that activity within that region of small numbers of marine mammals of a species or population stock if the secretary, after notice (... in the coastal areas that may be affected by such activity) and opportunity for public comment — (i) finds that the total of such taking during each five-year (or less) period concerned will have a negligible impact on such species or stock and will not have an unmitigated adverse impact ...

The Marine Mammal Protection Act allows states to develop and implement a marine mammal protection and conservation strategy and seek a transfer of the act's authority. [61] North Carolina has yet to develop an overall strategy that would qualify for a transfer even though it has passed a statute specifically protecting porpoises. [62]

Endangered Species Act

The purpose of the Endangered Species Act is to :

... provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species ... [63]

The act defines endangered and threatened species respectively as:

... any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the secretary (of commerce) to constitute a pest whose protection under the provisions of this chapter would present an overwhelming and overriding risk to man ... [64]

... any species which is likely to become an endangered species within

the foreseeable future throughout all or a significant part of its range. [65]

The secretary of commerce must make determinations based solely on the best scientific and commercial information available after reviewing the status of any species in question. [66] The secretary is also required to designate critical habitat, which is defined as:

(i) the specific areas within the geographical area occupied by the species ... on which are found those physical or biological features (I) essential to the conservation of the species and (II) may require special management considerations or protection; and

(ii) specific areas outside the geographical area occupied by the species at the time it is listed upon a determination by the secretary that such areas are essential for the conservation of the species [67]

The secretary shall publish a list of all designated endangered and threatened species and their respective critical habitat. [68] The list is evaluated every five years.

Once listed or proposed for listing, it is unlawful for any federal agency to take an action (either funded or carried out) that is likely to jeopardize the existence of an endangered or threatened species or cause the destruction or adverse modification of its habitat. [69] It is also unlawful for any person subject to U.S. jurisdiction to import or export fish and wildlife species, to take such species within the United States or its territorial sea or upon the high seas. Further, it is unlawful to possess, sell, deliver, carry, transport or ship, by any means, an endangered or threatened species. [70]

To take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or to attempt to engage in any such conduct." [71] Harm has been construed broadly as an act that significantly modifies or degrades habitat so that it actually kills or injures wildlife by impairing essential behavioral patterns, including breeding, feeding or sheltering. [72]

In carrying out the mandates of the Endangered Species Act, the secretary of interior must cooperate to the "maximum extent practicable with the states." [73] The secretary is authorized to enter into management agreements with

states by approving a state program for the conservation of endangered and threatened species and subsequently helping to implement it. If there are any conflicts between federal and state law with regard to the provisions of the Endangered Species Act, the state law or regulation is void. [74]

Although North Carolina does not have a federally approved management program, the state has passed legislation to protect endangered or threatened species. [75] This legislation, the Endangered and Threatened Wildlife and Wildlife Species of Special Concern, is administered by the Wildlife Resources Commission and makes it unlawful to take, possess, transport, sell, barter, trade, exchange, export (or offer to engage in these activities) any wild animal on the state protected list. [76]

The state act, however, is not as comprehensive as the federal law. For example, a wild animal under the state legislation is any native or once-native nongame amphibian, bird, crustacean, fish, mammal, mollusk or reptile ... except those inhabiting and depending upon coastal fishing waters, marine and estuarine resources, marine mammals found in coastal fishing waters and sea turtles found in coastal fishing waters. [77] This exception likely derives from the jurisdictional limitations of the Wildlife Resources Commission. Even though General Statute 113-131 gives both the Wildlife Resources Commission and Division of Marine Fisheries (as part of DEHNR) stewardship responsibilities over marine and estuarine resources, the Marine Fisheries Commission generally has management authority over living marine resources. With the exception of sea turtles, the Wildlife Resources Commission does not have authority over marine species. [78] The General Assembly has not enacted broad legislation for marine endangered species, though it has passed specific legislation protecting sea turtles. [79] The director of the Division of Marine Fisheries has proclamation authority to close or restrict coastal waters "with respect to taking or attempting to take any or all kinds of marine resources when the method (equipment) used is a serious threat to an endangered or threatened species listed pursuant to the federal Endangered Species Act" [80] [see Appendix 5 for a list of endangered wildlife of North Carolina].

The state statute makes it unlawful for anyone to willfully take, disturb or destroy sea turtles or porpoises. Of course, the inconsistency here, when compared to the federal Endangered Species Act, is the lack of protection from the incidental take of these species.

Recommendations

I. In order for North Carolina's coastal management program to be truly comprehensive, it must anticipate activities that are likely to occur in the state's coastal ocean. To accomplish this goal, it is recommended that the task force ask the Division of Coastal Management and Coastal Resources Commission to:

A. Review the current definition of development under CAMA and assess whether it is sufficiently inclusive to bring within its regulatory jurisdiction all those ocean activities for which CAMA regulation may be desirable.

B. Refine the application procedures for CAMA major development permits to adequately cover ocean activities. In particular, review and refine the required application support materials and public notice requirements.

C. Refine the current AEC (public trust and estuarine waters) regulations to make them more ocean-focused. In particular, develop specific use standards for activities likely to occur in the state's coastal ocean. An example is the draft coastal energy policy discussed in Section 5, Oil and Gas Activities.

D. Assess coastal management's "total development concept" in light of development activities that could be proposed for the estuarine and public trust AECs. For example, would a proposal for a sewage ocean outfall lead the Division of Coastal Management to require the applicant to submit development plans for the entire centralized sewage system? If so, what conditions could the division impose on the applicant beyond those associated with construction within the AEC? Could the Coastal Resources Commission and Division of Coastal Management impose growth management conditions on a permit for outfall construction?

E. Review the Division of Coastal Management's mitigation policy in light of ocean concerns. Where possible, make the policy consistent with other "mitigationlike" requirements prescribed by other laws as prerequisites to allowing ocean activities.

F. Assess the need of adding another member to the Coastal Resources Commission with ocean affairs expertise. This would ultimately require an amendment to CAMA.

II. In order for North Carolina's coastal management program to be truly comprehensive, it should strive to more effectively coordinate the activities of agencies and commissions that are responsible for the major programs affecting coastal management. It is recommended that the task force ask the Division of Coastal Management and Coastal Resources Commission to:

A. Recommend the creation of a management committee composed of the heads of the agencies and commissions responsible for major programs that affect coastal management. At a minimum, the committee should include representatives from the Coastal Resources Commission, Division of Coastal Management, Environmental Management Commission, Division of Environmental Management, Marine Fisheries Commission and Division of Marine Fisheries. The committee should integrate and coordinate agency and commission policies and coastal activities; identify and resolve jurisdictional conflict and overlap; and recommend legislation, rules and memoranda of understanding.

B. From an ocean perspective, this committee should be responsible for reviewing new state standards with an eye toward their use as enforceable policies in future consistency determinations.

III. With regard to marine mammals and endangered species:

A. North Carolina should become an active participant in the East Coast and Gulf of Mexico scientific group established through the Marine Mammal Protection Act. This group will identify troubled marine mammal stocks and develop take reduction plans.

B. North Carolina should assess whether it desires a transfer of Marine Mammal Protection Act authority. Obtaining this authority would require the state to develop a protection and conservation strategy, which would need approval from the secretary of the U.S. Department of Commerce.

C. North Carolina should consider developing comprehensive endangered species laws for the marine environment. The state currently has a program for nonmarine species and sea turtles, which is administered by the Wildlife Resources Commission. A comprehensive marine program would likely be administered by the Marine Fisheries Commission and Division of Marine Fisheries.

Footnotes

- [1] 16 U.S.C.A. 1451 et seq.
- [2] GS 113A-102(a).
- [3] Id.
- [4] GS 113A-107(b).
- [5] GS 113A-103(2).
- [6] GS 113A-113.
- [7] There are 13 AEC subcategories within four broad categories: the estuarine system, ocean hazard areas, public water supplies, and natural and cultural resource areas.
- [8] GS 113A-103(5).
- [9] GS 113A-118(d).
- [10] 15A NCAC 7J .0204(b).
- [11] GS 113A-119(b) and 15A NCAC 7J .0206.
- [12] 15A NCAC 7H .0207(a).
- [13] 15A NCAC 7H .0207(c).
- [14] GS 113A-113(b)(2).
- [15] 15A NCAC 7H .0206(c).
- [16] 15A NCAC 7H .0206(b).
- [17] 15A NCAC 7H .0208(a).
- [18] 15A NCAC 7H .0208(b).
- [19] 15A NCAC 7H .0208(a)(3).
- [20] 15A NCAC 7H .0700.
- [21] 15A NCAC 7H .0702.
- [22] 15A NCAC 7H .0704(1)-(3).
- [23] 15A NCAC 7H .0704(4).
- [24] 15 CFR 923.102(b)(1).
- [25] Brower, David and William Dossett. Memo-
randum Regarding Coastal Resources Commis-
sion Administrative Rules Relating to Erosion Con-
trol Activity, Public Trust and Marina Develop-
ment. Center for Urban and Regional Studies,
1991.
- [26] Clark, Walter. North Carolina's Estuaries: A
Pilot Study for Managing Multiple Use in the
State's Public Trust Waters. Albemarle-Pamlico
Estuarine Study, Report 90-10, 1990.
- [27] GS 1-45.1.
- [28] GS 146-64(7) and 146-64(4).
- [29] GS 113A-102.
- [30] GS 113A-120(a)(5).
- [31] 33 U.S.C.A 1251 et seq.
- [32] 33 U.S.C.A 1342 (often referred to as Section
402).
- [33] 33 U.S.C.A. 1344.
- [34] 33 U.S.C.A 1332. The U.S. Coast Guard has
the duty to "certify" devices that meet the EPA
standards.
- [35] 33 U.S.C.A. 1342.
- [36] GS 143-214.1.
- [37] 15A NCAC 2B .0211-.0212.
- [38] GS 143-215.1.
- [39] 33 U.S.C.A. 1341.
- [40] "Pollutants" falling under the NPDES regula-
tory system include dredged material, solid waste,
incinerator residue, filter backwash, sewage, gar-
bage, sewage sludge, munitions, chemical wastes,
biological materials, radioactive materials (except
those regulated by the Atomic Energy Commis-
sion), heat, wrecked or discarded equipment, rock,
sand, cellar dirt and industrial, municipal and
agricultural waste discharged into water. 40 CFR
122.2.
- [41] 42 U.S.C.A. 4321 et seq., Pub. L. 91-190(1970).
- [42] Id.
- [43] Plater, Zygmunt; Robert Adams; and William
Goldfarb. Environmental Law and Policy: Nature,
Law and Society. West Publishing Co., 1992.
- [44] GS 113A-1 et seq.

[45] GS 113A-2.

[46] Id.

[47] GS 113A-4(2).

[48] 1 NCAC 25 .0100 - .0900.

[49] 1 NCAC 25 .0401.

[50] 1 NCAC 25 .0505.

[51] 16 U.S.C. 1361.

[52] 16 U.S.C. 1371.

[53] 16 U.S.C. 1362(13).

[54] The National Oceanic and Atmospheric Administration is responsible for mammals within the order Cetacean and, except for walruses, the order Pinnipedia. The Department of Interior is responsible for all other marine mammals. 16 U.S.C. 1362(12).

[55] 16 U.S.C. 1371(a)(4)(A)-(5)(A).

[56] 16 U.S.C. 1371(a)(2).

[57] 16 U.S.C. 1373 and 1374.

[58] 16 U.S.C. 1379(b).

[59] Fullilove, Jim. National Fisherman, Vol. 75, No. 3, July 1994.

[60] Id.

[61] 16 U.S.C. 1379(b) and 1379(c).

[62] GS 113-189.

[63] 16 U.S.C. 1531(b).

[64] 16 U.S.C. 1532(6).

[65] 16 U.S.C. 1532(20).

[66] 16 U.S.C. 1533(b).

[67] 16 U.S.C. 1532(5).

[68] 16 U.S.C. 1533(a).

[69] 16 U.S.C. 1536(a)(2). A federal action may qualify for an exemption to this rule if it can meet specific criteria set out in Section 1536(h)).

[70] 16 U.S.C. 1538(a)(1). Whereas Section 1536 only applies to federal actions, including federally permitted actions, Section 1538 is more expansive in that it applies to any person subject to U.S. jurisdiction (federal and state, public or private). Section 1538(a)(2) covers plant species, and although similar to Section (a)(1), some of the section's language is directed specifically to plants.

[71] 16 U.S.C. 1532(19).

[72] For an interesting case regarding this language, see: Palila v. Hawaii Department of Land and Natural Resources 852 F.2d 1106 (1988). This case upheld a lower court's holding that habitat degradation does constitute harm in that it could result in extinction. The Sierra Club, Audubon Society and other environmentalists succeeded in convincing the court to order the removal of mouflon sheep from the critical habitat of the Palila (a small bird listed as an endangered species). The sheep had been feeding on a certain tree upon which the Palila is totally dependent. The sheep had been introduced by the department mainly for the use of sport hunters. Both the hunters and the department argued the Palila was not harmed by the sheep because the harm suffered was not "actual" — it did not result in the immediate destruction of the Palila's food sources. The court disagreed with this position.

[73] 16 U.S.C. 1535.

[74] 16 U.S.C. 1535(f).

[75] GS 113-331.

[76] GS 113-337.

[77] GS 113-331(10).

[78] 15A NCAC 3I .0007. Endangered or Threatened Species. Pursuant to a cooperative agreement entered into on Feb. 5, 1979, by DEHNR, the Marine Fisheries Commission and the Wildlife Resources Commission, the Wildlife Resources Commission will exercise regulatory jurisdiction over any species of sea turtles and their eggs and nests, consistent with designation of such species as endangered or threatened by the U.S. Fish and Wildlife Service.

[79] GS 113-189.

[80] 15 NCAC 3I .0007(6).

**EXTRACTION OF
SOLID MINERALS**

4
Section
S

Mining for solid or hard minerals in the coastal ocean off North Carolina's shoreline is a possibility within the foreseeable future. Significant deposits of oceanic sand, gravel and phosphate have been identified. Interest in mining these resources will increase as land deposits become more difficult to access and the technology improves for extracting solid minerals from submerged land. Mining for titanium, though at one time considered a possibility, is not likely in the foreseeable future.

To date, there has been limited interest in marine mining in state and federal waters, primarily because land-based supplies are readily available. But there are other reasons: (1) depressed market prices relative to the higher costs of marine mining, (2) uncertainty in the legal/regulatory regime, (3) environmental concerns, (4) uncertainty with respect to seabed mineral resource potential and (5) the need for technological developments in resource extraction or environmental monitoring. [1] As these conditions change, there could be an increased interest in marine mining. North Carolina must be prepared to meet the significant challenges presented by a desire to extract resources from state and federal submerged lands.

There are significant deposits of sand, gravel and phosphate in the coastal ocean off North Carolina's shoreline. The pressure to mine these resources will increase. One of the driving forces to mine for oceanic sand will be the state's eroding shoreline. The average erosion rate is just under 4 feet per year, with some developed beaches eroding at an annual rate of more than 10 feet. Beach nourishment — bringing in sand from an outside source — is one of a few allowable ways for oceanfront communities and property owners to protect shoreline structures. Beach nourishment is likely to remain a preferred option since alternatives such as seawall construction — a practice no longer allowed along North Carolina's oceanfront shoreline — can lead to the loss of the public beach. Consequently, as erosion continues there could be increased pressure to look to oceanic sand resources for beach nourishment.

The rapid rate of development and construction in North Carolina's coastal area might be another driving force to mine for sand and gravel. Between 1980 and 1990, the growth rate for the Albemarle-Pamlico Estuarine Study area averaged 15.5 percent. The statewide estimate for the same area and time period is 12.5 percent. [2] The growth rate for oceanfront and soundfront counties is greater, with some counties — Dare, Carteret and Currituck — experiencing growth rates 2.5

times higher than the state's. Since sand and gravel are major components of most construction activities (including road construction), demand for these resources will continue to increase with the rate of growth. Along with an increase in demand will be pressure to extract sand and gravel from local areas, including the ocean adjacent to many of these rapidly growing communities. Demand for local sand is directly related to its low unit value and high transportation cost. If sand is not produced and marketed locally, construction costs could escalate greatly. [3] The demand for sand and gravel for construction, coupled with economic forces, could result in pressure to mine oceanic sources.

Large deposits of phosphate in the submerged lands in North Carolina's coastal ocean (Onslow Bay) may become more attractive as land sources are depleted. Texasgulf Corp. currently has a large land-based phosphate mine in Beaufort County and holds a mining lease to state-owned submerged lands in the adjacent Pamlico River. As land-based deposits are depleted, interest may escalate in deposits located under wetlands, the Pamlico River or the Atlantic Ocean.

Extraction of Solid Minerals in State Waters

The Mining Act of 1971, the Coastal Area Management Act of 1974 (CAMA) and North Carolina laws governing the disposition of state lands are the most pertinent pieces of state legislation regarding the potential extraction of hard minerals from the coastal ocean. Other relevant state laws include the Sedimentation and Pollution Control Act, the Environmental Policy Act and the water quality laws as adopted and administered by the Environmental Management Commission and Division of Environmental Management.

Even though the state owns the submerged lands under the territorial sea, the federal government retains concurrent authority to regulate them. As a result, the federal government can regulate certain activities related to the extraction of solid minerals in state waters. Federal laws that may be relevant to North Carolina's coastal ocean are the Clean Water Act; Coastal Zone Management Act; Endangered Species Act; Marine Mammal Protection Act; Marine Protection, Research and Sanctuaries Act; Rivers and Harbors Act of 1899; and, to a limited degree, the Magnuson Fishery Conservation and Management Act.

Without special legislation to the contrary, it is doubtful that local government has the ability to regulate development in ocean waters. However, cities and counties clearly have the authority to regulate activities on land adjacent to the ocean. This power can be used to encourage or discourage solid mineral extraction by allowing, limiting or disallowing supporting land-based activities.

The Mining Act of 1971 and the North Carolina Mining Permit

The Mining Act of 1971 finds that mining is a "basic and essential activity making an important contribution to the economic well-being of North Carolina and the nation." The act further states that "it is possible to conduct mining in such a way as to minimize its effects on the surrounding environment." [4] The remainder of the act and its accompanying regulations outline the procedure for assessing the impacts of a proposed mining activity so that the goals of economic development and environmental protection can be realized.

Mining of submerged lands under North Carolina's coastal ocean was not fully contemplated in 1971. Consequently, the act and its regulations are designed to assess the impacts of land-based mining and give little attention to the impacts of mining underwater.

Under the act, mining is defined as "the breaking of the surface soil in order to facilitate or accomplish the extraction ... of minerals, ores, soils, and other solid matter from its original location." [5] Minerals are defined as "soil, clay, coal, stone, gravel, sand, phosphate, rock, metallic ore, and any other solid material or substance of commercial value found in natural deposits or in the earth." [6] Even though this appears to be a comprehensive definition that would include the extraction of sand, gravel and phosphate from North Carolina's coastal ocean, there are several exceptions both in law and in practice. The act excludes from the definition: (1) deep mining not having a significant effect on the surface; (2) any area where the affected land does not exceed 1 acre in area; (3) the removal of "overburden" and the mining of "limited amounts" of ores or minerals when done for purely exploratory reasons, provided that the minerals or ores are not sold and the affected land does not exceed 1 acre. [7] In addition to these exceptions, no mining permits are currently required to excavate sand (for beach nourishment) or dredge material from access channels, even though they may have a commercial value and their removal may have an environmental impact. This is true regardless of the size of the area affected.

To assist in administering the Mining Act, the General Assembly created the N.C. Mining Commission and empowered it to make mining regulations. [8] The commission is within the Department of Environment, Health and Natural Resources (DEHNR) and is staffed by the Land Quality Section of the Division of Land Resources. The governor appoints the nine-member commission. [9]

The Mining Commission has adopted several regulations to administer the act. These establish procedures for obtaining mining permits, including requirements for bonds, land reclamation plans and processing fees. Much like the Mining Act, the mining regulations have a land focus and give little attention to the concerns that might arise from mining minerals from submerged lands. For example, the permit application requires land-specific information that may not be sufficient for the Division of Land Resources to assess an aquatic mining proposal. [10] The regulations also require any operator seeking to mine to post a performance bond. Bond amounts can range from \$500 to \$5,000 per acre, based on the estimated costs of post-mining land reclamation. [11] One could argue that these amounts are not sufficient to cover the potential difficulties and liabilities associated with mining minerals from the state's submerged lands.

Based on the Mining Act and the regulations adopted by the commission, the Division of Land Resources has developed an application form. The form requests specific information about the required reclamation plan. Again, the type of information requested may not be adequate to determine whether a reclamation plan of mined submerged land is adequate to remedy environmental disturbances.

CAMA — The Extraction of Solid Minerals as a Development Activity

The extraction of minerals (sand, gravel and phosphate) from submerged lands under North Carolina's coastal ocean would constitute development as defined by CAMA. Development includes:

Any activity involving, requiring or consisting of the ... excavation; dredging; filling; dumping; removal of clay, silt, sand, gravel or minerals; (or) ... alteration of the ... bottom of the Atlantic Ocean. [12]

Since extraction of minerals would be a

development activity in two CAMA areas of environmental concern (AECs) — estuarine and public trust waters — a CAMA permit would be required. Major development permits are necessary for activities that require permission, licensing, approval, certification or authorization from any state or federal agency; occupy a ... water area in excess of 20 acres; contemplate drilling or excavating natural resources ... under water ... [13] Based on this language, mineral extraction activities would likely require a CAMA major development permit. The permit invokes a review process that would solicit comments from other state and federal agencies and would weigh the activity against general and specific use standards for the estuarine waters and public trust AECs. To be permitted, the mining activity must be water-dependent and consistent with the applicable use standards. The only exception is when a proposed project will have public benefits that clearly outweigh the long-range adverse effects, no reasonable and prudent alternate site is available for the project, and all reasonable means and measures to mitigate adverse impacts have been incorporated into its design.

The general and specific use standards for the estuarine waters and public trust AECs focus on activities likely to occur in and along the sounds and coastal rivers — not within the coastal ocean. There are no specific standards for ocean mining, nor are there any other use standards that could adequately assess a mining proposal. The general use standards do contain some language protecting public trust rights and conserving the biological integrity of estuarine waters, but without specific ocean-oriented standards, this is unlikely to lead to an adequate review.

The Sedimentation Pollution Control Act of 1973

The Sedimentation Pollution Control Act recognizes that sedimentation of North Carolina's waters constitutes a major pollution problem. [14] The act establishes mandatory standards and directs the Sedimentation Control Commission to use them to regulate erosion and sedimentation from land-disturbing activities. [15]

The act and regulations, however, do not apply to activities governed by the state's Mining Act. The act specifically excludes agriculture, forestry and mining from land-disturbing activities covered by the law. As a consequence, more stock must be placed on the state's Mining Act and CAMA as the means for assuring that sedimentation from ocean mining is adequately controlled.

Regarding the excavation/pumping of sand for beach nourishment (an activity that has raised some concerns about sedimentation), current practice does not require a mining permit even though it appears to fall under the Mining Act's authority. If beach nourishment is indeed a mining activity, it is exempt from the Sedimentation Pollution Control Act. If not, then the act should apply.

State Water Quality Laws

The federal Clean Water Act allows individual states to set up their own water quality programs so long as they are consistent with federal guidelines.

In 1974, the U.S. Environmental Protection Agency (EPA) gave North Carolina the authority to coordinate its water quality management program. Consequently, the state Legislature adopted laws that outline North Carolina's water quality strategy. Most of these laws can be found in Chapter 143, Article 21, Part 1 of the N.C. General Statutes (laws regarding oil pollution, litter and solid waste are found in other sections and are addressed separately in this report). These laws established the N.C. Environmental Management Commission (staffed by the Division of Environmental Management) and gave it the authority to adopt water quality classifications for the state's waters and standards for each classification. [16] The commission has developed classifications and standards for both fresh and tidal waters. [17] In line with the federal act, discharges are only allowed if they do not violate water quality standards. A state permit process is in place to determine the impact of a discharge. [18] It should also be noted that Section 401 of the Clean Water Act requires all applicants for federal licenses or permits to obtain a state water quality certification for any activity that may discharge into state waters.

Solid mineral extraction from the ocean has the potential for water quality impacts. Depending on the type of operation, waste discharges could emanate from numerous sources. The statutory definition of waste is broad, including sewage, industrial waste, toxic waste and others that may be discharged or placed in such proximity to the water that drainage may reach the water. [19] The definition of discharge includes the "discharge, spillage, leakage, pumping, placement, emptying, or dumping into waters of the state" [20] Currently, however, any discharge into the Atlantic Ocean is prohibited by law unless permitted by Environmental Management Commission regulation. [21] In 1983, the commission adopted EPA

regulations for the discharge of wastewaters into the Atlantic Ocean. [22] The Environmental Management Commission and Division of Environmental Management may want to review the EPA regulations to determine if they are sufficient to cover the types of concerns that could arise from mineral extraction.

Laws and Procedure Governing the Disposition of State Lands — The Leasing of State Submerged Property for Ocean Mining

All land and ocean waters from the mean high tide to the end of state jurisdiction at three miles is owned and held in trust by the state of North Carolina. The state has stewardship responsibility for these submerged lands and must see that any disposition does not violate public trust rights. Public trust rights are established by common law and are interpreted and refined by state courts. They include, but are not limited to, the public's right "to navigate, swim, hunt, fish and enjoy all recreational activities in the waters of the state" [23]

The N.C. Department of Administration, subject to rules and regulations adopted by the governor and approved by the Council of State, is responsible for managing, controlling and disposing of lands owned by the state. Regarding the disposition of submerged lands, the department's authority is limited. It is prohibited from selling submerged lands. [24] The Department of Administration can grant easements to these lands to riparian owners and, according to a recent judicial decision, may even be required to do so in some situations. It can also lease state submerged lands for certain purposes, including the extraction of minerals. Administratively, easement and lease decisions are handled by the department's State Property Office.

N.C. General Statute 146-8 gives the Department of Administration the power to lease state submerged lands for the purpose of selling, leasing or otherwise disposing of mineral deposits belonging to the state. Leases are granted at the request of DEHNR. Applications for mining permits are submitted to the Land Quality Section of the Division of Land Resources, DEHNR. The request is then forwarded from DEHNR to the Department of Administration, which negotiates the lease terms with the permittee. It is unclear from the statute whether this request is forwarded prior to or after permit approval.

The Department of Administration is authorized to set lease terms and conditions that it deems wise and expedient for the state's best interest. However, before any lease becomes binding, it must be approved by the Department of Administration, the governor and the Council of State. The gross payment from a lease, sale or other disposition of mineral deposits is placed into the treasury to be used exclusively by DEHNR to develop and conserve the natural resources of the state (after the subtraction of administrative costs). To date, Texasgulf Inc. holds the only mining lease to submerged lands in North Carolina. Texasgulf holds a lease to 9,209 acres of submerged land under the Pamlico River in Beaufort County. The original lease was granted in 1967 and contained an automatic renewal clause. The company renewed its lease in 1992 for another 25 years. There is an estimated 20,000 to 30,000 tons of phosphate per acre in the lease area.

In making lease decisions, the Department of Administration relies on other state agencies to consider the public trust and environmental impacts of mining activities. N.C. General Statute 146-8 does require that any sale, lease or other disposition of mineral deposits be made subject to all rights of navigation (an identified public trust right) and subject to state-imposed terms and conditions. Despite this language, the Department of Administration has traditionally deferred public trust considerations to the Division of Coastal Management in DEHNR. The Division of Coastal Management administers public trust standards developed by the state's Coastal Resources Commission under the authority of CAMA. A recent Court of Appeals decision may call into question the Department of Administration's practice of deferring public trust considerations. That decision, Walker et al. v. Coastal Resources Commission, 111 N.C. App. 851, 433 S.E. 2d 767 (1993), suggests that the department may have some public trust responsibilities when the impacts of an activity on state property and in state waters has a substantial impact on public trust rights. Even though this decision involved an easement question, the logic could be extended to require the Department of Administration to develop public trust standards (or at a minimum, reference the Coastal Resources Commission's public trust standards) and apply them in its decisions to grant easements or to lease state submerged lands.

North Carolina's Environmental Policy Act

As reviewed in Section 3 of this report, North Carolina's Environmental Policy Act requires that an environmental impact document be

prepared for publicly funded actions, *including actions involving the use of public lands* (emphasis added), that might significantly affect the environment. [25] An environmental impact statement includes: (a) the environmental impact of the proposed activity, (b) any significant adverse environmental effects that cannot be avoided should the proposal be implemented, (c) mitigation measures proposed to minimize the impact, (d) alternatives to the proposed action, (e) the relationship between the proposed short-term uses of the environment and the maintenance and enhancement of long-term productivity, and (f) any irreversible and irretrievable environmental changes resulting from the proposed action, should it be implemented.

Since mineral extraction from state waters would involve the use of public lands and possibly public funds, a state environmental impact document would be required. The term "expenditure of public funds" has been interpreted broadly and includes public monies expended for infrastructure development. If the environmental impact document indicates that the project will have an environmental impact and there is no appropriate alternative, the governor decides whether the project will go forward. [26]

The Concurrent Application of Federal Law in State Jurisdictional Waters

Under the federal Submerged Lands Act, the state owns the submerged lands under the territorial sea, but the federal government retains concurrent regulatory authority over them. [27] As a result, the federal government continues to regulate certain activities in North Carolina's jurisdictional waters. For example, the Rivers and Harbors Act (Section 10) and Clean Water Act (Section 404) permits are required for mining and shipboard processing in state and federal waters. In addition, an ocean dumping permit under Section 103 of the Marine Protection, Research and Sanctuaries Act may be required. The U.S. Army Corps of Engineers administers these permit programs.

A permit applicant does not generally need other required state, local or federal permits in hand before applying for Corps of Engineers permits. However, if one of the other needed permits is denied before the corps takes final action on its permits, the corps permits will be denied. The Corps of Engineers considers comments from other agencies with jurisdiction over or interest in the proposed activity even if no permit is required from the commenting agency. [28]

In addition to the permits that are required under the Clean Water Act and the Rivers and Harbors Act, mining activities in state waters are governed by the Marine Mammal Protection Act and the Endangered Species Act. It should be noted that the Clean Water Act, the Endangered Species Act and the Marine Mammal Protection Act are all up for reauthorization in 1994 in the U.S. Congress.

Mineral Extraction in Federal Waters

The Outer Continental Shelf Lands Act

The Outer Continental Shelf Lands Act established federal jurisdiction over submerged lands on the outer continental shelf (OCS) seaward of state boundaries. [29] Under this act, the secretary of the Department of Interior administers mineral exploration and development of the OCS. The secretary has designated the Minerals Management Service to administer mineral leases on submerged OCS lands and to supervise offshore operations after the lease is issued. Two separate mineral exploration, leasing and development programs have been established for the OCS — one for oil, gas and sulphur [discussed in Section 5] and another for all other minerals. [30]

The Minerals Management Service administers three sets of regulations for the exploration, leasing and development of minerals other than oil, gas and sulphur.

The first set of regulations outlines the prospecting/exploration procedures. [31] It requires a permit for any activity conducted for commercial purposes. Prospecting permits are issued for three years with an option for renewal. Permit applications must contain detailed descriptions and schedules for the proposed activities, a prospecting plan and an indication of data and information that is considered proprietary. A copy of the application must be supplied to the governors of adjacent states before planned prospecting activities can begin. An environmental assessment under the National Environmental Policy Act may be required for prospecting/exploration activities. Scientific research may be conducted without obtaining a permit if the proposed activities will not: (1) interfere with or endanger existing leases or rights-of-way, (2) be unduly harmful to aquatic life, (3) create hazardous or unsafe conditions, or (4) interfere with other uses and users of the area. However, if explosives or the drilling of boreholes greater than 300 feet deep are part of the research endeavor, a permit will be required.

The second set of regulations outlines the lease sale process. [32] Sales may be initiated by the secretary or by an unsolicited request for a lease sale. All sales must be preceded by a proposed leasing notice and an actual leasing notice. These notices outline lease size, duration, environmental concerns and financial considerations. States, industry, other federal agencies and the public are given opportunity to comment on the terms and conditions of a sale. The secretary or governor of an adjacent state may initiate a request to establish a joint state/federal task force to plan or consult on lease sales. Also, an environmental impact statement will be required under the National Environmental Policy Act for a proposed sale.

The rules allow two bidding procedures — sealed and oral bidding. For the successful bidder, the rules outline rental/royalty procedures. Reduced royalties are allowed early in the lease period, presumably to reduce the operation start-up burden.

The third set of regulations outlines post-lease obligations. [33] These include establishing requirements for environmental surveys; monitoring programs; inspections of operations; bonding requirements; and the review and approval of delineation, testing and mining plans and lease operations. It should be noted that an additional environmental impact statement under the National Environmental Policy Act could be required for activities proposed for the lease.

Federal Coastal Zone Management Act — How the State Might Influence Mineral Extraction Activities in Federal Waters

Under Section 307 of the Coastal Zone Management Act, activities (such as mineral extraction) in federal waters that affect any land or water use or natural resource of the state's coastal zone must be consistent with the enforceable policies of the affected state's coastal management program. Failure to satisfy this consistency requirement will generally result in denial of federal permits or licenses. The requirement gives coastal states a tool to influence permitting activities in federal waters. The power of the tool, however, depends largely on the strength of the state's enforceable policies in its own coastal ocean.

The Coastal Zone Management Act defines enforceable policies as "state policies that are legally binding through constitutional provisions, laws, regulations, land-use plans, ordinances or judicial decisions by which a state exerts control

over private and public land and water uses and natural resources in the coastal zone." North Carolina's CAMA (including its use standards for development), the Mining Act and the other state laws and regulations already discussed are enforceable state policies with regard to the extraction of hard minerals from the coastal ocean. Consequently, any inadequacies in these laws could weaken the state's ability to control activities in federal waters. For example, if North Carolina exempts from the Mining Act exploratory mining operations in state waters, it may find it difficult to successfully object on the grounds of consistency when similar mining activities are proposed in federal waters.

Recommendations

I. The task force should recommend to the Division of Coastal Management and the Coastal Resources Commission that:

A. They amend the present regulatory guidelines to make the estuarine waters and public trust AECs more responsive to mineral extraction activities, including sand extraction for beach renourishment projects.

The Division of Coastal Management has prepared a draft policy for oil and gas exploration and development [see Appendix 6]. This document provides a good model for developing policies for the extraction of solid minerals. In developing draft policies, the Division of Coastal Management and Coastal Resources Commission should work closely with the Division of Land Resources and the Mining Commission.

B. North Carolina should continue to participate in the federal OCS program. Pressure to extract minerals from the OCS is likely to increase. North Carolina must be in a position to respond to this pressure. The state should also prepare to join with the federal government to create a joint task force (as allowed by the Outer Continental Shelf Lands Act) should there be a proposal to lease OCS submerged lands. To accomplish these objectives, the Division of Coastal Management should maintain staff capability to respond to federal actions.

II. The task force should also recommend to the Division of Land Resources and Mining Commission that they:

A. Amend the regulations developed by the Mining Commission and the application procedure and requirements developed by the Division of Land Resources to anticipate the additional

information needed for solid mineral extraction from the seabed. For example, reclamation plans should be tailored for ocean mining and the size of performance bonds should be increased to reflect the greater environmental risks associated with mining at sea.

In amending its regulations, the Mining Commission and its staff should work closely with the Coastal Resources Commission and its staff. This is particularly necessary when the regulations developed by the two commissions attempt to address the same or similar issues. One example would be the Mining Commission's reclamation standards and the Coastal Resources Commission's mitigation standards.

B. Review the Mining Act's exemption of activities involving less than 1 acre and exploratory operations in light of the federal Coastal Zone Management Act's consistency determination. Would North Carolina's position be weakened in finding an exploratory operation in federal waters inconsistent with the state's coastal management program because of these exemptions?

III. The task force should recommend that the Environmental Management Commission assess EPA's ocean discharge criteria to determine whether they are sufficient to cover the concerns that could arise from mineral extraction at sea [see Section 7 for a more detailed discussion].

IV. The task force should recommend to the Department of Administration and Council of State that the state's current leasing structure be reviewed and revised. The department and the council should address the issues of competitive bidding, rents and royalties, environmental reporting, compliance and enforcement. Lease contracts should carry public trust and environmental protection conditions and should be made revocable on condition of violation.

Additional monies collected through lease fees or royalties should continue to be used for state conservation efforts. For example, fees or royalties collected for phosphate extraction could be channeled to farmers to continue the use of best management practices that reduce nonpoint runoff of phosphate enriched fertilizers into coastal waters.

Footnotes

[1] U.S. Outer Continental Shelf Sand and Gravel Resources: Programs, Issues and Recommendations, Final Report of the OCS Policy Committee on OCS Sand and Gravel Resources, April 1993.

[2] Albemarle-Pamlico Estuarine Study, Status and Trends Report, 1989.

[3] OCS Policy Committee Report on Sand and Gravel Resources.

[4] GS 74-47.

[5] GS 74-49(7).

[6] GS 74-49(6).

[7] GS 74-49(7).

[8] GS 143B-290. In addition to its power to make rules for administering the Mining Act, the Mining Commission has the following powers and duties: to hear (mining) permit appeals, conduct a full and complete hearing on such controversies and affirm, modify or overrule permit decisions made by DEHNR pursuant to GS 74-61.

[9] GS 143B-291.

[10] 15A NCAC 5B.0004-.0005.

[11] 15A NCAC 5B.0003.

[12] GS 113A-103(5).

[13] GS 113A-118(d).

[14] GS 113A-51.

[15] GS 113A-54 and 15A NCAC 4A-E.

[16] GS 143-214.1.

[17] 15A NCAC .02B .0211-.0212.

[18] GS 143-215.1.

[19] GS 143-213(18).

[20] GS 143-213(9).

[21] GS 143-214.2.

[22] 15A NCAC .02H .0400(d). EPA's ocean discharge criteria can be found at 40 CFR 125.120-125.124.

[23] GS 1-45.1.

[24] GS 146-3.

[25] GS 113A-1- 113A-10. See Mullin v. Skinner, 756 F. Supp. 904 (E.D.N.C. 1990).

[26] GS 113A-5.

[27] 43 U.S.C.A. 1301 et seq.

[28] 33 CFR 320.4(j).

Normally, the Corps of Engineers will not issue a permit for an activity that affects a state's coastal zone unless the applicant certifies to the district engineer that the proposed activity is consistent with the state's coastal zone management program. [33 CFR 320.3(b), 320.4(b) and 325.2(b)(2)(ii)] After the district engineer receives the certification, the state coastal zone management agency will be asked to concur or object to the certification of consistency. If the state finds that further review is needed, the corps will not issue the permit until the state concurs that the activity is consistent with its coastal zone management program. Consistency is a powerful tool that North Carolina can use to control and manage activities proposed for federal waters.

However, if the secretary of commerce determines that the proposed activity is consistent with the purposes of the federal Coastal Zone Management Act or is necessary in the interests of national security, then the corps may issue the permit over state objections.

[29] 43 U.S.C. 1331 et seq.

[30] Section 8(k) of the act authorizes the secretary to lease any minerals — other than oil, gas, sulphur — on the OCS on the basis of competitive bidding under such terms and conditions as may be prescribed at the time of offering the area for lease.

[31] 30 CFR 280.

[32] 30 CFR 281.

[33] 30 CFR 282.

Oil and Gas Activities

5 Section

Geologic features indicate the possibility of oil and gas deposits within 100 miles of North Carolina's shoreline. The current regulatory regime for oil and gas activities in federal waters includes: the Coastal Zone Management Act, Outer Continental Shelf Lands Act, National Environmental Policy Act, Clean Water Act, Oil Pollution Act (including the Outer Banks Protection Act), Marine Mammal Protection Act, Endangered Species Act and Resource Conservation and Recovery Act. To a more limited degree, the Clean Air Act, National Historic Preservation Act and Ports and Waterways Safety Act may also be applicable.

The current regulatory regime for oil and gas activities in state waters includes the above federal statutes where applicable and the federal Submerged Lands Act. Also included are the following state controls: the Coastal Area Management Act (CAMA); N.C. Environmental Policy Act; statutes authorizing the Department of Environment, Health and Natural Resources (DEHNR) to review and prohibit exploratory operations where environmental conditions warrant; statutes and regulations governing ocean discharges; statutes controlling the lease of state lands; and the Oil Pollution and Hazardous Substances Act. Even though there is little potential for gas and oil deposits in North Carolina's submerged lands, the enforceable policies that govern these waters can be used in consistency determinations for activities proposed for federal waters.

Introduction

In September 1988, North Carolina got a wake-up call that oil and gas exploration and exploitation could become a reality in the ocean waters off its shore. In 1981, at a cost of \$103.8 million, a consortium of oil companies acquired exploration and development rights from the federal government to a 9-square-mile area of the Atlantic Ocean known as Block 467. Seven years later, Mobil Oil and its partners notified North Carolina that they intended to submit an exploration plan to the federal government to drill a well in submerged lands about 32 miles east of Salvo. The proposed well was in 2,690 feet of water with a depth estimated at 14,000 feet below sea level. Mobil's geologic evidence indicated a 10 percent chance of discovering commercially recoverable quantities of natural gas (possibly as much as 5 trillion cubic feet) and a 1 percent chance of finding oil. This was the beginning of a long and still unresolved struggle between North Carolina and the U.S. Department of Interior's Minerals Management Service over the wisdom of allowing oil and gas exploration in these waters.

A tool available to North Carolina for influencing the oil and gas debate in federal waters is the consistency provision of the Coastal Zone Management Act. Under the act, activities in federal ocean waters that affect any natural resource, land or water use in North Carolina's coastal area must be consistent with the enforceable policies of the state's coastal management program. The state exerts its enforceable policies over private and public land and water uses and natural resources. They are legally binding constitutional provisions, laws, regulations, land-use plans, ordinances or judicial decisions. Together, these policies make up the state's coastal management program.

In 1990, the DEHNR, acting as an agent for the state, found that Mobil had not provided sufficient information for determining consistency with North Carolina's coastal management program. The state, in two separate decisions, based its determination on insufficient information regarding Mobil's proposed discharge permit and exploration plan. Mobil appealed to the secretary of the U.S. Department of Commerce, who has legal authority to overturn the state's decision. The secretary has yet to issue an opinion. In October 1992, Mobil and 11 other oil companies filed a complaint for a breach of contract in U.S. Claims Court. The companies are asking for a cancellation of their leases and a refund of some money paid to the federal government for leases off the North Carolina coast. [1] The U.S. Department of Justice filed a response in April 1994 and is awaiting a ruling on summary judgment. [2]

Also in 1990, Congress passed the Outer Banks Protection Act, creating a five-member environmental sciences review panel to determine the adequacy of information for assessing leasing and drilling proposals off North Carolina. In its final report, issued January 1992, the panel recommended a set of socioeconomic studies and a site-specific seafloor study before any exploratory drilling. The seafloor study, completed March 1993 by the Virginia Institute of Marine Sciences, concluded that drill discharges from a single exploratory well would impact a small portion (less than 2 percent) of the bottom community in the vicinity. The socioeconomic study is complete but has yet to be released by Minerals Management Service. [3]

In addition to the controversy surrounding Mobil's plans, another event in March 1989 contributed to growing concern about oil and gas exploration and production. On March 24, the Exxon *Valdez* oil tanker ran aground in Alaska, spilling 11 million gallons of oil. This event precipitated the federal Oil Pollution Act of 1990 and

several state statutes to guard against oil pollution. The Oil Pollution Act substantially alters and increases the liability to those who explore, produce and transport oil within the territorial seas and the U.S. Exclusive Economic Zone. In July 1989, North Carolina amended its Oil Pollution and Hazardous Substances Act to more specifically address environmental hazards of offshore oil and gas activities. This amendment directed the development of an oil spill contingency plan to deal with the undersea exploration, extraction and production of oil and gas and their transport in the marine environment.

Jurisdiction

The Outer Continental Shelf Lands Act of 1953, as amended in 1988, established federal jurisdiction over submerged lands on the outer continental shelf (OCS) seaward of state boundaries. [4] Under the act, the secretary of the Department of Interior administers mineral exploration and development on the shelf. The secretary has designated the Minerals Management Service as the agency responsible for administering mineral leasing of submerged OCS lands and supervising offshore operations after a lease is issued. As noted in the previous section, the Minerals Management Service administers two sets of regulations — one for oil and gas development and one for all other solid minerals. The oil and gas regulations — found in the Code of Federal Regulations, Title 30, Section 250 — outline the requirements for leasing, exploration and development.

The Submerged Lands Act of 1953 granted coastal states ownership of submerged lands and natural resources to a point three miles from the coast. [5] Consequently, North Carolina has authority to control oil and gas exploration and exploitation within and directly under marine waters out to three miles from its shore. Within this area, the N.C. Department of Administration is responsible for leasing state-owned submerged lands, and DEHNR has the authority to prohibit exploratory or production wells if environmental conditions warrant. [6]

Leasing Procedures

Federal Leasing Procedures

The Minerals Management Service in the Department of Interior has the authority to lease offshore federal submerged lands. In carrying out the leasing program, Section 18 of the Outer Continental Shelf Lands Act requires consideration of

these factors: (1) the receipt of fair and equitable return on oil and gas resources; (2) the preservation and maintenance of competition; (3) the balance of orderly energy resource development with the protection of human, marine and coastal environments; and (4) the rights and responsibilities of all states and appropriate local governments to preserve and protect their marine, human and coastal environments. [7] The Minerals Management Service has developed the following leasing procedures in an attempt to address these factors.

I. Federal pre-leasing procedures and opportunities for state involvement

The Minerals Management Service has developed a five-year OCS leasing program to set the pace and scale of offshore development. Every five years, the service develops a comprehensive program that identifies leasable areas and the time when they will be offered. [8] As part of the 1992-1997 leasing period, the Minerals Management Service modified its program in hopes of encouraging earlier coordination and communication. The modified program, called the Area Evaluation and Decision Process, seeks to facilitate pre-lease consensus among parties likely to be affected by drilling activities (federal, state and local governments; industry; and the public). [9]

While a leasing program is being prepared, the secretary of the Department of Interior must invite and consider suggestions from the governor of any affected state. Each governor receives a copy of the proposed leasing program for review and comment prior to its publication in the Federal Register. The Outer Continental Shelf Lands Act requires the secretary to respond in writing to any governor's request for modification of a proposed leasing program. Both state and local governments may comment. [10]

Because five-year leasing programs are actions that could affect the environment, the National Environmental Policy Act requires an environmental impact statement. [11] North Carolina can review and comment on the statement. This provides another avenue, in addition to the Outer Continental Shelf Lands Act, for the state to influence the leasing program in federal waters.

To facilitate state participation in the leasing process and to implement lease offerings on a geographical basis, Minerals Management Service divided the OCS into 26 planning areas. North Carolina falls into two areas: the Mid-Atlantic and the South Atlantic. The boundary between the two planning areas follows the 35th parallel, which is

roughly halfway between Cape Hatteras and Cape Lookout.

Under the 1992-1997 program, 18 lease sales are scheduled for 11 OCS planning areas. In the Atlantic Ocean, one sale combining the Mid- and South Atlantic is scheduled for late 1996. Because of the unresolved situation with Mobil and a congressional moratorium on offshore drilling for much of the United States, the Minerals Management Service has not initiated pre-lease activities, including the Area Evaluation and Decision Process. [12]

II. Federal lease sales and opportunities for state involvement

Once the five-year plan has been approved by Congress, the Minerals Management Service moves ahead with the leasing process. At this point, the governor of any affected state or the executive of any affected local government may recommend to the secretary the timing, size or location of a proposed lease sale. The secretary must respond to the governor in writing, giving reasons for accepting, rejecting or modifying such recommendations. [13]

Once state concerns have been addressed, the Minerals Management Service proceeds with lease offerings. Sealed bids are accepted for specific blocks. A block consists of about 9 square miles (5,760 acres). Lease contracts are issued to the successful bidder, conveying certain rights and responsibilities. The contract grants the holder the right to drill and extract oil and gas from a particular block. Of course, this right is contingent on other factors, particularly the consistency requirements of the federal Coastal Zone Management Act. Normally, a leaseholder has five years to conduct approved drilling or to produce oil or gas before the lease expires. However, most leases off the North Carolina coast carry 10-year terms. Longer lease terms were found to be necessary because deep water at these drilling sites requires greater technological capabilities. [14]

With the reauthorization of the Coastal Zone Management Act in 1990, states are able to apply their coastal management programs to OCS lease sales through the act's consistency provisions. The reauthorization of the act effectively overruled Secretary of Interior v. California, 464 U.S. 313 (1984), which held that Section 307 (the consistency section) does not apply to the lease sale phase of federal oil and gas leases because lease sales do not "directly" affect the coastal zone. Also, as with the five-year program, individual lease

sales are considered actions that could adversely affect the environment. Consequently, sales are subject to the environmental impact statement requirements of the National Environmental Policy Act. North Carolina can review and comment on the development of the impact statement.

North Carolina Leasing Procedures

Although it is highly unlikely that oil and gas resources are present under state submerged lands (out to three miles), it is still important to understand the leasing process for this area.

N.C. General Statute 146-6 gives the Department of Administration the power to lease state submerged lands for the sale, lease or other disposal of mineral deposits (including oil and gas) belonging to the state. The department grants leases to state submerged lands at the request of DEHNR. Applications to extract oil and gas are submitted to the Division of Land Resources in DEHNR. If the application is approved, DEHNR forwards a request to the Department of Administration, which negotiates the terms of the lease with the permittee. Although it is unclear from the statute, the applicant would likely need a valid lease before a permit could be granted. In other words, an applicant should hold an instrument granting a legal right to occupy the land before a permit to engage in activity there is issued. [15]

The Department of Administration is authorized to set lease terms and conditions that it deems wise and expedient for the state's best interest. However, before any lease becomes binding, it must be approved by the governor, the Council of State and Department of Administration. The gross payment from a lease is deposited into the treasury to be used exclusively by DEHNR to develop and conserve the state's natural resources (after administrative costs are subtracted). In making lease decisions, the Department of Administration relies on other state agencies to consider public trust and environmental impacts. There is nothing in the statute that requires the department to include public trust and environmental considerations as lease terms and conditions. [16]

Exploration, Development and Production of Oil and Gas In Federal Waters

A lease under the Outer Continental Shelf Lands Act entitles the lessee "to explore, develop and produce the oil and gas contained within the

lease area, conditioned upon due diligence requirements and the approval of the development and production plan." [17] Before either of these plans can be submitted, however, an exploration plan (including any associated drilling permit) must be approved by the secretary of the Department of Interior. [18]

The Exploration Plan

The first step in the post-lease, pre-extraction process is for the lessee to submit an exploration plan to the Minerals Management Service and the state adjacent to the proposed activities. Adjacent states can submit to the Minerals Management Service comments and recommendations, which must be received within 20 days. The secretary is required to approve the exploration plan unless the "activity pursuant to such a lease or permit would probably cause serious harm or damage to life, property, to any mineral ... or to the marine, coastal or human environment." [19] In other words, rejection of the plan is not mandatory; it is at the discretion of the secretary.

In contrast, Section 1340 of the Outer Continental Shelf Lands Act forbids the secretary from granting a "license or permit for any activity described in an exploration plan and affecting any land uses or water uses in the coastal zone of a state ..." if the state finds it inconsistent with its coastal management program. This language tracks the consistency requirements of the Coastal Zone Management Act. The secretary of the Department of Commerce can overrule the state's consistency determination if he/she determines that the plan is consistent with the objectives of the Coastal Zone Management Act or is necessary for national security. [20]

Since drilling is likely to be a part of the exploratory process, the secretary of the Department of Interior can require a permit to drill. Any permit for drilling or geological exploration will be issued only if the secretary determines that the operation will not unduly harm aquatic life or unreasonably interfere with other uses of the area. [21]

Section 250.33 of the Code of Federal Regulations outlines information required for exploration plans. This includes an accounting of potentially affected flora and fauna, environmentally sensitive areas and an assessment of direct and cumulative offshore and onshore environmental impacts. Also, Section 250.33(b)(2) of the code requires the applicant to submit an oil spill contingency plan with the exploration plan.

The federal Clean Water Act requires a National Pollutant Discharge Elimination System (NPDES) permit for discharges associated with exploratory activities. Adjacent coastal states may review and comment on NPDES permit applications. States with approved coastal management programs can also review discharge permits to determine consistency.

The National Environmental Policy Act does not usually require an environmental impact statement for exploration plans. However, an adjacent state could attempt to force one through litigation. The state would need to successfully argue that the plan is a major federal action with the potential to adversely affect the environment. A state might want to pursue this avenue if it feels there is insufficient information to go forward with the development and production phase of the OCS activity.

The federal Endangered Species Act requires the denial of any action authorized by a federal agency if it is likely to jeopardize the continued existence of an endangered or threatened species or to destroy or adversely modify its habitat. [22] Consequently, any action associated with exploratory drilling, including discharges, must be reviewed under procedures outlined in the Endangered Species Act [see Section 3 of this report for a full discussion of these procedures].

Finally, the federal Marine Mammal Protection Act prohibits the taking and importing of marine mammals and their products. [23] The act defines taking as harassing, hunting, capturing or killing marine mammals (attempting any of these actions is also included in the definition). Consequently, any intentional or incidental taking of marine mammals in association with a drilling operation is prohibited unless allowed through one of the act's exceptions [again, see Section 3 for a discussion of the Marine Mammal Protection Act].

Development and Production Plans

Once an exploration plan is approved, a drilling permit issued and the other requirements satisfied, exploratory operations can begin. If a company finds oil or gas, it must submit a development and production plan before going forward. [24]

The development and production plan must set forth: (1) the specific work to be performed; (2) a description of all facilities and operations on the OCS — including the location and size of the

facilities and the land, labor, material and energy requirements of the operation; (3) environmental safeguards and how they will be implemented; (4) safety standards and how they will be met; (5) an expected rate of development and production and a schedule for performance; and (6) any other relevant information that the secretary of interior may require by regulation. [25] The development and production plan must be accompanied by a statement describing all proposed facilities and operations (other than those on the OCS) that will be built or used in developing and producing oil and gas from the lease area. [26] Section 250.34 of the Code of Federal Regulations details the requirements for development and production plans. They are essentially the same as those for exploration plans with the additional requirement of environmental documentation to meet the threshold of an environmental impact statement pursuant to the National Environmental Policy Act. [27]

Unlike exploration plans, activities proposed in development and production plans are likely to be deemed a major federal action, invoking the environmental impact statement requirements of the National Environmental Policy Act. In this case, the Minerals Management Service will draft an environmental impact statement and make it available to the governor of any affected state for review. [28] Also, activities proposed in development and production plans shall not violate the provisions of the Endangered Species Act or the Marine Mammal Protection Act [see Section 3 of this report for a discussion of these acts].

The consistency requirement of the Coastal Zone Management Act also applies to development and production plans. The secretary shall not grant a license or permit for any activity affecting a land use or water use in the coastal zone of a state unless the state finds the activity consistent with its coastal management program. [29]

In 1991, the N.C. Outer Continental Shelf Office and Division of Coastal Management developed a draft OCS policy that could be incorporated into the state's coastal energy policies. These policies are part of the regulations developed under CAMA. The draft suggests regulatory changes that will better prepare state and local governments to respond to exploration, development and production plans in the federal OCS and to assess associated energy facilities proposed for the state's coastal land and water. The existing coastal energy policies, including future modifications, are enforceable policies that can be used in consistency determinations for oil and gas activities proposed for the federal OCS [see Appendix 6 for a copy].

The Oil Pollution Act of 1990

The Oil Pollution Act of 1990 is the principal federal legislation regarding oil pollution cleanup and liability. [30] Title II of the act states:

Notwithstanding any other provision or rule of law, and subject to the provisions of this act, each responsible party for a vessel or a facility from which oil is discharged, or which poses the substantial threat of a discharge of oil, into or upon the navigable waters or adjoining shorelines or the Exclusive Economic Zone is liable for the removal costs and damages that result from the act.

A responsible party can be a private owner, a vessel operator or lessee, an offshore or onshore facility, a deepwater port licensed under the Deepwater Port Act of 1974 or a pipeline. Section 2702(b) of the Oil Pollution Act outlines the types of costs and damages for which a responsible party is liable. Basically, these include removal costs incurred by the federal government, a state or Indian tribe. Also included are costs incurred by individuals for removal actions consistent with the Clean Water Act's National Contingency Plan. This plan coordinates the various public entities involved in a cleanup, the procurement and storage of equipment and supplies, the establishment of U.S. Coast Guard strike teams that deal with oil spills and other matters necessary to ensure a coordinated government cleanup. [31]

Damages include those to natural resources, real or personal property, the loss of subsistence use of natural resources, loss of revenues, loss to profits or earning capacity, and damages associated with providing additional public services during or after removal activities. Developing methods for assessing damages under the Oil Pollution Act has been controversial, particularly the methods for measuring damages to natural resources. Section 2706(d)(1) states that the measure of natural resource damages is:

the cost of restoring, rehabilitating, replacing or acquiring the equivalent of the damaged resource; the diminution in value of those natural resources pending restoration; plus the reasonable cost of assessing those damages.

Under Section 2716 of the Oil Pollution Act, all responsible parties must establish and maintain sufficient financial responsibility to cover the maximum amount of liability enforceable under the act. Section 2704 sets liability limits. For example, an offshore facility's liability shall not exceed the total of all removal costs plus \$75 million. Liability limits are also set for deepwater ports and for tank vessels. Limits to liability may be waived if an accident is caused by gross negligence, willful misconduct or a violation of an applicable federal regulation. Limits may also be waived if a responsible party fails to report a discharge or fails to provide all reasonable cooperation and assistance. Section 2712 of the act also establishes the Oil Spill Liability Trust Fund to be used by the president to clean up and remove oil spills and to monitor removal actions consistent with the National Contingency Plan.

Nothing in the Oil Pollution Act pre-empts a state or political subdivision from imposing additional liability or requirements related to the discharge or removal of oil. Also, nothing in the act prevents a state from establishing its own fund to cover costs and damages resulting from an oil spill. As will be discussed, North Carolina has established a liability strategy and has a fund to cover costs and damages from oil spills in state waters.

In conclusion, it should be noted that acts of God, acts of war or an act or omission of a third party not employed by or an agent of the responsible party are complete defenses to liability.

Other federal statutes and regulations continue to be important and should be mentioned. The Comprehensive Environmental Response, Compensation and Liability Act of 1980 governs water pollution from nonpetroleum hazardous substances. It pre-empts the Oil Pollution Act and the Clean Water Act to the extent that either is inconsistent. [32]

Except for liability provisions covered by the Oil Pollution Act, the Clean Water Act continues to operate with regard to oil pollution. Section 311(b)(3) states:

The discharge of oil or hazardous substances (i) into or upon the navigable waters of the United States, adjoining shorelines or into or upon the waters of the contiguous zone, or (ii) in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act

of 1974, or which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act) in such quantities as may be harmful ... is prohibited ...

Title 40 of the Code of Federal Regulations covers environmental protection, and Section 110 of this title governs the discharge of oil. Section 110.1 defines discharge as "any spilling, leaking, pumping, pouring, emitting, emptying or dumping" Excluded from the definition are those discharges allowed by the NPDES of Section 402 of the Clean Water Act. Sections 110.3, .4 and .5 establish the guidelines for "harmful" discharges, pertaining respectively to navigable waters, the contiguous zone and waters beyond the contiguous zone. The standards are the same for all three. They include those discharges of oil that:

- (a) violate applicable water quality standards or
- (b) cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

Exploration, Development and Production of Oil and Gas in State Waters

Chapter 113 of the N.C. General Statutes governs conservation and development of the state's natural resources. Article 27, Subchapter V deals specifically with oil and gas conservation.

General Statute 113-378 requires any person, firm or corporation interested in oil and gas exploration to register with DEHNR, giving the location of the proposed exploratory drilling operation. DEHNR can prohibit a well if it poses a hazard to the quality of the state's air, water, soil or any other environmental resource. [33] If an exploratory well is allowed, a \$5,000 bond must be posted to help ensure that it is properly plugged once drilling operations are complete. [34] Before drilling can begin, the appropriate leasing procedures for state lands must be followed.

N.C. Coastal Area Management Act

Drilling related to the exploration or extraction of oil or gas from North Carolina's coastal ocean would constitute development as defined by CAMA. Development includes:

any activity in a duly designated area of environmental concern involving, requiring or consisting of the construction or enlargement of a structure; excavation; dredging; filling; dumping; removal of clay, silt, sand, gravel or minerals; bulkheading; driving of pilings; clearing or alteration of land as an adjunct of construction; alteration or removal of sand dunes; alteration of the shore, bank or bottom of the Atlantic Ocean or any sound, bay, river, creek, stream, lake or canal. [35]

Since drilling for oil or gas would be a development activity in two of CAMA's areas of environmental concern (AECs) — estuarine waters and public trust — a CAMA permit would be required. Major development permits are needed for activities that require permission, licensing, approval, certification or authorization from any state or federal agency; occupy a .. water area in excess of 20 acres; contemplate drilling or excavating natural resources ... under water [36] Based on this language, drilling for oil or gas would require a CAMA major development permit. The permit invokes a review process that would solicit comments from several other state and federal agencies and would weigh the activity against general and specific use standards for the estuarine waters and public trust AECs. [37] To be permitted, the activity must be water-dependent and consistent with the applicable use standards. An exception is granted when a proposed project will have public benefits that clearly outweigh its long-range adverse effects, no reasonable and prudent alternate site is available and all reasonable means and measures to mitigate adverse impacts have been incorporated into its design.

The general and specific use standards for estuarine waters and public trust AECs focus on activities likely to occur in and along the state's sounds and coastal rivers — not within the state's coastal ocean. The Coastal Resources Commission has adopted some standards that address the development of energy resources. [38] However, these standards are very general and primarily focus on land-based energy facilities. As stated already, a draft OCS policy was developed in 1991

for possible incorporation into the state's coastal energy policies. In addition to laying a foundation for consistency reviews, the draft contains a list of factors to be considered should oil and gas exploration and development be proposed for the state's coastal ocean [see Appendix 6 for these draft policies, which have not been adopted as state standards].

North Carolina's Environmental Policy Act

As reviewed in Section 3 of this report, North Carolina's Environmental Policy Act requires an environmental document (either an environmental assessment or impact statement) for actions that are publicly funded or involve public lands and might significantly affect the environment. [39] Since oil and gas exploration and production activities in the state's coastal ocean would involve public lands and possibly public funds, a state document would be required. [40] Also, a proposal to lease state property for oil and gas exploration and production could evoke the requirement since the leasing procedure could lead to activities on state lands that may significantly affect the environment. [41]

If an environmental document is required, and it indicates that the project may have a major environmental impact but no appropriate alternative is available, the governor will decide whether the project will go forward. [42]

State Water Quality Laws

The Clean Water Act allows individual states to set up their own water quality programs so long as they are consistent with federal guidelines. These guidelines require that the country's waters are classified according to their highest and best use and that water quality standards are developed for each classification to protect designated uses. A state must also adopt an anti-degradation policy and procedures to conserve, maintain and protect existing uses and water quality.

In 1974, the U.S. Environmental Protection Agency (EPA) gave North Carolina the authority to implement its own water quality management program. Consequently, the state Legislature adopted laws that outline a water quality strategy. Most of these laws can be found in Chapter 143, Article 21, Part I of the N.C. General Statutes. These laws established the Environmental Management Commission (staffed by the Division of Environmental Management) and gave it the authority to adopt and establish standards for

water quality classifications for state waters. [43] The commission has developed classifications and standards for both fresh and tidal waters. [44] In line with the federal act, discharges are only allowed if they do not violate water quality standards. A state permit process is in place to determine the impact of a discharge. [45] It should also be noted that Section 401 of the Clean Water Act requires all applicants for federal licenses or permits to obtain a water quality certification for any activity that may discharge into state waters.

However, any discharge into the Atlantic Ocean is currently prohibited by law unless permitted by Environmental Management Commission regulation. [46] In 1980, the commission adopted EPA's regulations for the discharge of wastewaters to the Atlantic Ocean. [47] Consequently, any discharge associated with an oil or gas operation would have to satisfy these regulations before being permitted.

A discharge involving oil products is also controlled by the N.C. Oil Pollution and Hazardous Substances Act of 1978 and its amendments. [48] The purpose of this act is:

to promote the health, safety and welfare of the citizens of this state by protecting the land and the waters over which this state has jurisdiction from pollution by oil, oil products and other hazardous substances The General Assembly further declares that it is the intent of this article to support and complement applicable provisions of the federal Water Pollution Control Act (Clean Water Act), 33 U.S.C. sec. 1251 et seq., as amended and the National Contingency Plan for removal of oil adopted pursuant thereto. [49]

To achieve its purpose, the act makes it unlawful:

for any person to discharge, or cause to be discharged, oil or other hazardous substances into or upon any water, tidal flats, beaches or lands within this state or into any sewer, surface water drain or other waters that drain into the waters of this state, regardless of the fault of the person having control over the oil or other hazardous substances [50]

In July 1989, North Carolina amended the Oil Pollution and Hazardous Substances Act to include a new section dealing with offshore oil and gas activities. This section, entitled "Adverse Environmental Impact Protection," declares that:

- (1) the traditional uses of the seacoast of the state are public and private recreation, commercial and sportfishing and habitat for natural resources;
- (2) the preservation of these uses is a matter of the highest urgency and priority, and such uses can only be preserved effectively by maintaining and enhancing the existing condition of the coastal waters, estuaries, wetlands, tidal flats, beaches and public lands adjoining the seacoast;
- (3) the coastal economy, including access to the coast of the state, depends, either directly or indirectly, upon a ready and continuous reserve of petroleum products and by-products, including that portion of the supply resulting from oil and gas activities on the Outer Continental Shelf;
- (4) offshore oil and natural gas exploration, production processing, recovery and transportation pose increased potential for damage to the state's coastal environment to the traditional uses of the area and to the beauty of the North Carolina coast;
- (5) spills, discharges and escapes of pollutants occurring as a result of procedures involving offshore oil and natural gas-related activities have occurred in the past, and future threats of potentially catastrophic proportions from such activities require adoption of this part as mitigation against such events;
- (6) the economic burdens imposed by the General Assembly upon those engaged in the offshore exploration, processing, recovery and transportation of oil and natural gas are reasonable and necessary in light of the traditional uses and interests herein protected, which are expressly declared to be of grave public interest and concern to the state in promoting its general interest and welfare, promoting the public health, preventing diseases and providing for the public safety. [51]

Anyone discharging or leaking natural gas, oil or drilling waste into coastal fishing waters or offshore waters is held strictly liable for all cleanup costs and all direct and indirect damages incurred within the territorial jurisdiction of the state. [52] The act covers the following sources:

- (1) any offshore well or undersea site where there is exploration for, or extraction or recovery of, natural gas or oil;
- (2) any offshore facility, oil rig or oil platform where there is exploration for, or extraction, recovery processing or storage of, natural gas or oil;
- (3) any vessel offshore on which natural gas, oil or drilling waste is transported, processed or stored other than for purposes of fuel for the vessel carrying it; and
- (4) any pipeline located offshore in which natural gas, oil or drilling waste is transported. [53]

Offshore waters include both the territorial sea extending seaward from the coastline to the state and federal boundary and U.S. jurisdictional waters adjacent to the territorial sea. [54] This means that the liability provision governs all ocean waters out to 12 miles. State law can presumably control activities in the federal waters so long as the injury suffered is within state jurisdictional waters and the state law is not inconsistent with federal law.

The definition of damages under the act is broad, including the costs of property restoration, lost income, impairment of earning capacity, cleanup costs and the rehabilitation of natural resources. This broad definition and the unlimited liability provisions give the state a powerful tool for protecting its coastal and marine resources.

Enforcement of these provisions rests with the Environmental Management Commission. The act authorizes the attorney general to initiate citizen suits against violators for injunctive relief and/or damages and allows an injured party to bring suit for civil damages. [55]

The act gives the governor power to proclaim an emergency if a spill occurs. [56] In this light, the act requires the development of an oil spill contingency plan "relating solely to the undersea exploration, extraction, production and transport of oil or natural gas in the marine environment off the North Carolina coast, including any such development on the Outer Continental Shelf

seaward of the state's jurisdiction over its territorial waters." [57]

To date, the N.C. Division of Emergency Management has developed a draft oil spill contingency plan. [58] The purpose of the plan is to minimize the risk to the public, its property and to the environment. The plan would coordinate a multiorganizational response and recovery effort in order to minimize the impact of oil spills on state waters. It attempts to integrate the state's oil spill emergency response into the framework of the National Contingency Plan [see Appendix 7 for parts of the draft plan]. Leadership under the plan rests with the state director of Emergency Management, who has access to all state government resources during an emergency as the State Emergency Response Team leader. [59]

The state Legislature established the Oil or Other Hazardous Substances Pollution Protection Fund as part of the original Oil Pollution and Hazardous Substances Control Act. [60] It is a nonlapsing, revolving fund consisting of money appropriated by the General Assembly. It is to be used to defray the expenses of containing, collecting, dispersing or removing oil or other hazardous substances discharged to state land or waters or discharged into waters outside the territorial limits of the state that affect land or waters or related uses within the state.

Recommendations

I. The task force should ask the Division of Coastal Management and the Coastal Resources Commission to:

A. Review the draft document — "Draft OCS Policy for Incorporation into 7M.0400 (Coastal Energy Policies)." This document contains valid recommendations and should be reviewed for formal adoption [see Appendix 6].

B. Continue support for the state's OCS program (currently housed in Division of Coastal Management) and state participation in the federal OCS program. There are multiple reasons for continued support.

(i) Mobil Oil's lawsuit and federal consistency appeals are still pending. If the company fails to win its lawsuit seeking refund of money paid on leases off the Atlantic, then it may pursue its lease rights under the Outer Continental Shelf Lands Act.

(ii) The state should maintain its ability to respond adequately to future OCS proposals, including the five-year oil and gas program, lease program and lease-sale environmental impact statements, and exploration proposals. A change in administration and/or in the world energy markets could affect oil and gas demand, which could lead to a push for increased domestic exploration and production.

(iii) The Minerals Management Service has statutory authority for implementing many of the safety and financial liability provisions of the federal Oil Pollution Act. The state, which is finalizing its own oil spill contingency plan, has a direct interest in monitoring implementation of the Oil Pollution Act and participating in its rule-making.

(iv) North Carolina has historically supported OCS revenue sharing. The federal OCS policy committee has endorsed a recommendation to the secretary of the Department of Interior that favors revenue sharing with all states that have an approved coastal program. North Carolina should continue to support revenue sharing through participation on the policy committee.

II. The task force should ask DEHNR to review provisions of GS 113-378 to determine if the \$5,000 bond requirement to ensure that a well is properly plugged once drilling operations are complete is adequate for underwater drilling.

III. The task force should recommend to the Department of Administration and Council of State that the state's current leasing structure be reviewed and revised. The department and the council should address the issues of competitive bidding, rents and royalties, environmental reporting, compliance and enforcement. Lease contracts should carry public trust and environmental protection conditions and should be made revocable on condition of violation.

Additional monies collected through lease fees or royalties should continue to be used for state conservation efforts.

Footnotes

[1] Memorandum to Steve Levitas, N.C. Department of Environment, Health and Natural Resources, from Kim Crawford and Roger Schecter, N.C. Division of Coastal Management. Status of Mobil Oil's drilling proposal, pending lease sales and the federal OCS program, May 25, 1993.

[2] Phone conversation with Kim Crawford, N.C. Division of Coastal Management, March 15, 1994, and later memorandum from Tony Giordano, Minerals Management Service, April 1994.

[3] Phone conversation with Kim Crawford, N.C. Division of Coastal Management, March 15, 1994.

[4] 43 U.S.C.A. 1331 et seq.

[5] 43 U.S.C.A. 1301 et seq.

[6] GS 113-391.

[7] 43 U.S.C.A. 1344.

[8] Moffitt, Donna. "OCS Lease Sale Update and Lease Status Summary for Offshore North Carolina," N.C. Office of Marine Affairs, 1984.

[9] Kerttula, Elizabeth and Gabrielle LaRoche. "Alaska Outer Continental Shelf Oil and Gas Lease Sale Review and Coastal Zone Management (Public Review Draft)," Alaska Department of Law and Division of Governmental Coordination, 1993.

[10] 43 U.S.C.A. 1344.

[11] 42 U.S.C.A. 4321 et seq.

[12] Phone conversation with Kim Crawford, N.C. Division of Coastal Management, March 15, 1994.

[13] 43 U.S.C.A. 1345.

[14] Moffitt, Donna. "OCS Lease Sales Update and Lease Status Summary for Offshore North Carolina," N.C. Office of Marine Affairs, 1984.

[15] Phone conversation with Daniel F. McLawhorn, N.C. Department of Justice, April 4, 1994.

[16] Id.

[17] 43 U.S.C.A. 1337(b)(4).

[18] 43 U.S.C.A. 1340(c)(1).

[19] 43 U.S.C.A. 1334(a)(2)(A)(i).

[20] 16 U.S.C.A. 1456(c)(3)(B)(iii).

[21] 43 U.S.C.A. 1340(d).

[22] 16 U.S.C.A. 1536(a)(2).

[23] 16 U.S.C.A. 1362(6).

[24] 43 U.S.C.A. 1351.

[25] 43 U.S.C.A. 1351(c).

[26] 43 U.S.C.A. 1351(a)(2).

[27] 30 CFR 250.34(j).

[28] 43 U.S.C.A. 1351(e) and (f).

[29] 43 U.S.C.A. 1351(d).

[30] 33 U.S.C.A. 2701 et seq.

[31] 33 U.S.C.A. 1321(d).

[32] 42 U.S.C.A. 9607(a).

[33] GS 113-391(c)(16).

[34] GS 113-378.

[35] GS 113A-103(5).

[36] GS 113A-118(d).

[37] In addition to the internal review conducted by the Division of Coastal Management, other state agencies that review applications are: the Division of Environmental Management in DEHNR; Division of Marine Fisheries in DEHNR; Division of Environmental Health (Shellfish Sanitation Branch) in DEHNR; Division of Land Resources in DEHNR; Division of Water Resources in DEHNR; Division of Archives and History in the Department of Cultural Resources; Division of Community Assistance in the Department of Commerce; State Property Office in the Department of Administration; and the Department of Transportation. Reviewing federal agencies include: the U.S. Army Corps of Engineers, Environmental Protection Agency, U.S. Fish and Wildlife Service and National Marine Fisheries Service.

[38] 15A NCAC 7M .0400.

[39] GS 113A-1-10.

[40] Phone conversation with Daniel F. McLawhorn,
N.C. Department of Justice, April 4, 1994.

[41] Comment by Beth McGee, N.C. Division of
Environmental Management.

[42] GS 113A-5.

[43] GS 143-214.1.

[44] 15A NCAC 2B .0211-.0212.

[45] GS 143-215.1.

[46] GS 143-214.2.

[47] 15A NCAC 2H .0400(d). Federal regulation of
ocean outfalls is found in Section 403 of the Clean
Water Act, 33 U.S.C.A. 1343; EPA's ocean dis-
charge criteria can be found at 40 CFR 125.120-
125.124.

[48] GS 143-215.75.

[49] GS 143-215.76.

[50] GS 143-215.83(a).

[51] GS 143-215.94AA.

[52] GS 143-215.94CC(a).

[53] Id.

[54] GS 143-215.94BB(7).

[55] GS 143-215.94FF(a)-(b).

[56] GS 143-215.94II.

[57] GS 143-215.94HH.

[58] N.C. Emergency Operations Plan, Part III,
Annex N, Oil Spill Contingency Plan, N.C. Division
of Emergency Management, March 1992.

[59] Id.

[60] GS 143-215.87.

**Ocean Fisheries
Management**

**6
Section**

The N.C. Marine Fisheries Commission regulates the conservation of marine fishery resources in the Atlantic Ocean out to three miles, the end of the state's jurisdiction. The commission's jurisdiction also includes coastal sounds and estuarine waters inland to a dividing line agreed to with the state's Wildlife Resources Commission. Staff support for the Marine Fisheries Commission is provided by the Division of Marine Fisheries, which is located in the Department of Environment, Health and Natural Resources (DEHNR).

The Atlantic States Marine Fisheries Commission develops and enforces coastal fishery management plans on an interjurisdictional basis among the states. The plans and associated regulations are applicable within state jurisdictional waters (out to three miles).

The South Atlantic Fishery Management Council, created by the federal Magnuson Fishery Conservation and Management Act, manages fish stocks in the ocean from three to 200 miles off North Carolina's coast. This council also develops and enforces management plans for specific fisheries.

Introduction

North Carolina has within its jurisdiction about 2.2 million acres of estuarine waters and a half million acres of ocean waters. These waters have a long history of providing fish and shellfish in an abundance that seemed inexhaustible at one time. In a book published almost 100 years ago, North Carolina's shellfish beds were described as "ample for all time" and as "one treasure-house not yet plundered; one great water granary whose doors are not yet thrown open." [1] However, that same book contained a warning for those who fail to exercise moderation. In lamenting the demise of the shellfish industry in other states, the book reads:

The consequence [of overexploitation] is the depletion of many grounds once regarded as inexhaustible, the diminution in other waters where diminution seemed impossible, followed by the assertion of local rights, attempts at the exclusion of invading trespassers, contention, bloodshed; finally legislative action and the effort to define rights by law, with power to assert and secure them by force; and all this made necessary because human nature knows no moderation in the use of the free gifts of Provi-

dence, or in the attainment of that which leads to competency and wealth.

The attempt to retrace the steps of past waste and neglect is what invariably follows in locking the stable door after the horse has gone — vain regrets and fruitless self-reproach. All the deep research of science, all the labor of planting new territory of waters, will not bring back to Connecticut, New York, Maryland and Virginia the store they wasted and the abundance they so universally squandered.

Although the author was referring to an estuarine rather than an ocean resource, there is wisdom in these early observations. North Carolina, like the states described here, is now experiencing the consequences of overexploitation of its fishery resources. Overharvesting by commercial and recreational fishers, coupled with disease and pollution, has produced a fishery that is in trouble.

Jurisdiction — Local and State

By the early 1960s, the N.C. General Assembly realized a need for state action. In 1965, the Legislature enacted a statutory package recognizing that "the enjoyment of the marine and estuarine resources of the state belongs to the people of the state as a whole and is not properly the subject of local regulation." [2] This package abolished "all special, local and private acts and ordinances regulating the conservation of marine and estuarine resources" and vested the state (DEHNR and the Marine Fisheries Commission) with the power to administer "governing statutes and adopting rules in a manner to reconcile as equitably as may be the various competing interests of the people as regards these resources" [3] In carrying out these duties, DEHNR and the Marine Fisheries Commission are charged with "considering the interests of those whose livelihood depends upon full and wise use of renewable and nonrenewable resources and also the interests of the many whose approach is recreational" [4] Although it appears that the General Assembly gave the state the exclusive right to regulate and control marine and estuarine resources, there is statutory language that creates confusion about local government's role in some aspects of fisheries management. The language states that a local ordinance may be valid if it is limited to an "incidental effect" on estuarine or marine resources and does not conflict with any state law that is "essential" to the conservation of these resources. [5]

As oceanfront communities become increasingly crowded, local governments will grapple with more conflict between users of the shoreline and users of the ocean waters beyond their shoreline. These conflicts are pressing local governments to ascertain their role in managing some fisheries-related activities. Questions will arise. For example, is it appropriate for local government to regulate fishing activities on the public beach within a local jurisdiction? Answers will depend on knowing what types of action constitute an "incidental effect" on estuarine and marine resources and knowing how to craft local ordinances that do not conflict with existing state and federal law. This is a difficult task and can lead to contention among local government, the Marine Fisheries Commission, DEHNR and advocacy groups representing various users.

The Marine Fisheries Commission and Division of Marine Fisheries

The Marine Fisheries Commission regulates the conservation of marine fisheries resources within the state jurisdiction of the Atlantic Ocean (out to three miles). [6] Its jurisdiction also includes the coastal sounds and estuarine waters inland to a dividing line agreed to with the Wildlife Resources Commission. [7] The Wildlife Resources Commission has jurisdiction over waters inland of the dividing line. Coastal waters that host a significant number of freshwater fish may be designated as "joint fishing waters." [8] In these waters, the Marine Fisheries Commission and the Wildlife Resources Commission may jointly make regulations. The Marine Fisheries Commission is a citizen commission staffed by the Division of Marine Fisheries in DEHNR. The attorney general acts as attorney for the commission and, through separate legal counsel, advises the Division of Marine Fisheries.

The Marine Fisheries Commission has a broad range of powers within the geographic boundaries of its jurisdiction. It can authorize, license, regulate, prohibit, prescribe or restrict:

- (1) the time, place, character or dimensions of any methods or equipment that may be employed in taking fish. This includes the power to open and close coastal fishing waters completely or only to the taking of particular fish;
- (2) the seasons for taking fish;
- (3) the size limits of fish and maximum quantities of fish that may be taken,

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- possessed, bailed to another, transported, bought, sold or given away; and
- (4) the possession, importation and exportation of fish, including young "edible" fish and seafood. [9]

In the context of this language, fish includes shellfish and other living marine and estuarine resources.

The Marine Fisheries Commission can also:

- (1) adopt rules and take all steps necessary to develop and improve aquaculture, including the cultivation, harvesting and marketing of shellfish and other marine resources. The commission has the authority to adopt rules regarding the leasing of public lands and waters for aquaculture purposes; and [10]
- (2) establish rules for the use of private fisheries when such private claims have been recognized under GS 113-205. GS 113-205 required that all claims to public lands under the navigable waters of any coastal county or any right of fishery in those waters be registered on or before Jan. 1, 1970. The commission, acting through the attorney general, can institute an action in court to contest a private claim of title or claimed right of fishery in any navigable water of North Carolina. [11]

Finally, the Marine Fisheries Commission can develop cooperative and reciprocal agreements with other departments and jurisdictions. It can, acting in cooperation with DEHNR:

- (1) enter into cooperative agreements with other public and private agencies (including other state commissions that play a role in managing marine and estuarine resources); [12]
- (2) comment on and otherwise participate in the determination of permit applications received by other state agencies that may have an effect on the marine and estuarine resources of the state, [13] such as CAMA major development permits;
- (3) make reciprocal agreements with other jurisdictions regarding the management of estuarine resources. [14] This includes, for instance,

- (4) agreements made with other state jurisdictions through the Atlantic States Marine Fisheries Compact; and adopt, by reference, relevant provisions of federal laws and regulations where there is concurrent state and federal jurisdiction. [15]

Because conditions in the marine and estuarine environment are variable and may require expedient action, the Marine Fisheries Commission is allowed by law to delegate "proclamation authority" to the director of the Division of Marine Fisheries to suspend or implement commission rules. [16] More specifically, this includes the broad authority to open and close seasons and areas, govern various activities, and reduce or increase the size or harvest limits. [17] For example, it is not uncommon for certain estuarine waters to register high fecal coliform counts after heavy rains. These conditions are likely to prompt a recommendation from the Division of Health Services (Shellfish Sanitation Branch) to the Division of Marine Fisheries director that these areas be closed to shellfishing for health reasons. From a more oceanic perspective, red tides brought north on the Gulf Stream can also require closure of marine waters. Because the public's health may be at risk, rapid response is needed in these situations. In addition to public health concerns, the Marine Fisheries Commission has given the director proclamation authority to address socioeconomic conflicts. Because of its breadth, this authority has been controversial. There appears to be a trend by the commission to place some restrictions on the authority, such as "sunset" and review provisions. The Marine Fisheries Commission also reserves the right to override the director's proclamations.

Like other state commissions, the Marine Fisheries Commission is composed of citizens representing a variety of interests. The appointments are made by the governor. Of the 17 members, four must represent commercial fishing interests (three of these must be "actively connected with and have experience in" commercial fishing, earning at least 50 percent of their income by selling food from coastal waters, and one must be "actively connected with and have experience in" seafood processing, again earning at least 50 percent of his or her income from seafood processing and distribution). The governor must also appoint four commissioners who are actively connected with sportfishing to represent recreational interests. In 1993, the General Assembly created three slots on the commission for shellfishing representatives. These positions were added to help the commission focus

on concerns about the decline in North Carolina's shellfish production. The remaining positions are divided as follows: three at-large appointees and three appointees with training and expertise in marine or estuarine sciences or the environment affecting marine and estuarine resources. [18]

State Fisheries Management

The statutes outlining the powers and duties of the Marine Fisheries Commission present two regulatory options to facilitate its broad stewardship responsibility for state marine and estuarine resources — a licensing and/or permit strategy and the development and enforcement of use restrictions. The licensing and permitting requirements most applicable to ocean activities are discussed below. Those solely applicable to activities in internal waters are not discussed in this report.

Licenses and Permits

I. Commercial fishing vessel license

Licenses are required for all vessels fishing commercially in coastal waters. This includes all North Carolina vessels that fish commercially outside of state waters but land and sell fish within the state. [19] Nonresident vessels must also be licensed if they fish commercially within state waters or they land and sell fish in North Carolina (regardless of where the fish were caught). Reciprocity for nonresident vessels is allowed when fishers hold a valid license from their state of residence, and their state allows North Carolina vessels to land and sell their catch. [20] Licenses are issued on a fiscal-year basis in the name of the owner of the vessel. It should be noted that the General Assembly recently (summer 1994) passed a moratorium on new commercial licenses. The desire for a moratorium is partly due to the growing number of license requests from out-of-staters.

In addition to a license, commercial fishing vessels must also have an identification number. This requirement applies to every vessel operating on state waters. [21] The definition of a vessel is very broad, including every description of a watercraft or structure capable of being used for transportation or habitation on the water. [22]

North Carolina does not require a saltwater recreational fishing license, although the Marine Fisheries Commission is discussing the issue. [23] The state does require a license for hook-and-line fishing in inland (fresh) waters and in joint waters. [24] Hook-and-line licenses are issued by

the Wildlife Resources Commission. Some argue that a saltwater license should be required because saltwater anglers use a common property resource. That argument is usually conditioned on assurances that fees collected would be used to enhance fishery resources. Also, a saltwater license could provide valuable fishery statistics, such as the size of the user population.

II. Shellfish and crab license

North Carolina requires a license to take shellfish or crabs from public or private grounds by mechanical means or for commercial use by any means. [25] Licenses are issued on a fiscal-year basis. They may not, however, be required for individuals taking less than: (1) 1 bushel of oysters per day, not to exceed 2 bushels per vessel per day; (2) one-half bushel of scallops per person per day, not to exceed 1 bushel per vessel; (3) 100 clams per person per day, not to exceed 200 per vessel per day; (4) 50 crabs per person per day, not to exceed 100 per vessel per day; (5) 10 conchs or whelks per person per day, not to exceed 20 per vessel per day; and (6) 100 mussels per person per day, not to exceed 200 per vessel per day. [26]

Shellfish (clams) are harvested from the Atlantic Ocean, although not in the quantity taken from North Carolina's coastal sounds and rivers. The commission recently voted to remove daily limits on hard clams to encourage an ocean clam fishery. However, before harvesting clams, a mechanical harvest permit is required. [27]

III. Licenses for fish dealers/endorsements to sell

Fish handlers have been called on since 1984 to meet two sets of requirements before their products can pass legally from the ocean to the table. First, the fisher who takes or lands any fish species from coastal waters must have a valid endorsement from the Division of Marine Fisheries to lawfully sell it, offer it for sale or exchange it. [28] This includes fish taken from aquaculture operations. Second, the individual or company that sells the fish to the public must be a licensed fish dealer. [29] It is unlawful for fish dealers to buy fish unless the seller presents a current and valid vessel license with an endorsement to sell. Obviously, there are situations where the fisher is also the dealer. In these cases, both a valid endorsement and a dealer license are required.

Recreational anglers can sell their catch if they hold a valid endorsement to sell. Also, fish caught at tournaments can be sold so long as the

tournament is officially sanctioned by Division of Marine Fisheries and its representatives hold an endorsement to sell. These fish are donated to the tournament and sold collectively.

There has been some confusion about the endorsement to sell requirement. Since the endorsement applies to each commercial vessel, fishers with more than one vessel must get multiple endorsements — a requirement seen by some as burdensome.

IV. Ocean fishing pier license

Every manager of an ocean fishing pier who charges the public a fee to fish must secure a pier license from the Marine Fisheries Commission. This license authorizes the pier manager and employees to act as fish dealers without having to secure the dealer license. [30]

V. Spotter plane license

A spotter plane is an aircraft used to locate schools of fish from the air. Once located, the plane directs vessels to the fish. In North Carolina, the menhaden industry uses spotter planes. A license is required for planes used in a commercial fishing operation. [31]

It is illegal to use spotter planes to search for food fish except in connection with a purse seine operation authorized by the Marine Fisheries Commission. [32] And in North Carolina, it is unlawful to use purse seines except to take menhaden or Atlantic thread herring. [33]

VI. Scientific collecting permit

A scientific collecting permit is required to take for scientific purposes any marine or estuarine species that is out of season or otherwise protected. [34]

VII. Pound net permit

It is unlawful to set pound nets without first obtaining a pound net permit. The permit is required to reduce user conflicts and to protect traditional uses. [15 NCAC 3J.0107]

VIII. Special permit for specific management purposes

The fisheries director may require by proclamation that any licensee obtain a special permit and keep records and accounts that may be reasonably required to participate in a fishery. [35]

Use Restrictions

Use restrictions are another regulatory option available to the Marine Fisheries Commission. Most can be grouped into two general but interrelated categories: (1) the permanent or temporary closure of certain marine and estuarine waters to specific fishery activities for geographic, resource or environmental reasons and (2) fishing gear restrictions.

I. Areas permanently or temporarily closed to specific fishery activities

A. Primary and secondary nursery areas

The Marine Fisheries Commission has developed regulations to establish and protect nursery areas that support juvenile populations of economically important seafood species. Many of these species are caught in North Carolina's coastal ocean.

Primary nurseries have characteristics (food, cover, bottom type, salinity, temperature) that enhance the initial postlarval development of young finfish and crustaceans. [36] Consequently, these areas must be protected so juvenile organisms can develop normally. Without protection, the state's fishery and the livelihood and recreational enjoyment of its fishers would suffer. These nurseries are generally located in the uppermost reaches of the estuaries. The Division of Marine Fisheries attempts to mark them by posting signs downstream of their boundaries. Primary nursery boundaries are also described in the fishery regulations. [37] It is unlawful to use any trawl net, long haul seine, swipe net or dredge to harvest marine fish in a primary nursery area. It is also unlawful to use any mechanical methods for clam or oyster harvest in these areas. [38]

Later juvenile development occurs in secondary nurseries. Fish populations in these areas are usually composed of developing subadults of similar size that have migrated from an upstream primary nursery. [39] As a general rule, it is unlawful to use trawl nets in any of the permanent secondary nursery areas. [40] However, the Division of Marine Fisheries director can open by proclamation certain secondary nursery areas to trawling during specified times of year. [41]

Even though primary and secondary nursery areas are located in the estuaries and not the ocean, they are crucial for the continued health of most commercially important oceanic fish species.

B. Military restricted areas

The U.S. Army Corps of Engineers has restricted access to certain areas of coastal and marine waters. [42] These areas are used for military training, which may include bombing, and consequently pose serious risk to people who attempt to use them. The restricted areas are shown on navigational charts and are generally described in the state's fisheries regulations. [43]

One designated restricted area in the Atlantic Ocean is in the vicinity of Bear Inlet. [44] The military should be consulted on its plans to change these areas.

C. Sea turtle sanctuary

The Marine Fisheries Commission has identified a sea turtle sanctuary in the Atlantic Ocean adjacent to Onslow County near Bear Island. [45] It is unlawful at designated times to use any commercial fishing equipment in this area. The fisheries director can protect turtles by modifying by proclamation the area and times for commercial fishing. [46]

D. Crab spawning sanctuaries

The Marine Fisheries Commission has identified several crab spawning areas with an oceanside boundary along the high water line near Oregon Inlet, Hatteras Inlet, Ocracoke Inlet, Drum Inlet and Bardens Inlet. [47] It is unlawful to use trawl nets or take crabs with commercial fishing gear in these areas during designated times. The fisheries director can further restrict by proclamation activities in these areas. [48]

E. Areas adjacent to ocean fishing piers

It is unlawful to fish in the Atlantic Ocean from vessels or with a net within 750 feet of an ocean pier if: (1) the pier is licensed; (2) buoys or beach markers clearly indicate the requisite distance to fishermen in vessels and on the beach; and (3) the public is allowed to fish from the pier for a reasonable fee. [49] This prohibition does not apply to littoral owners of property within 750 feet of a licensed pier.

In 1993, the Marine Fisheries Commission gave the fisheries director proclamation authority to close areas to the use of specific commercial fishing gear. Those areas extend one-half mile into the Atlantic Ocean from the beach and up to one-half mile in all directions of fishing piers open to the public. [50] One reason for this new author-

ity is the growing number of conflicts between commercial fishers who set offshore nets (stop nets) and ocean pier owners. As a result of the new proclamation authority, there can be instances where nets must be set farther than 750 feet from an ocean pier. [51]

F. Artificial reefs and research sanctuaries

The fisheries director may prohibit or restrict by proclamation the taking of fish and the use of any equipment in and around an artificial reef or research sanctuary. In the Atlantic Ocean, the area closed around artificial reefs must not exceed 500 yards. [52] Before closing an area, the economic effect of the closure on fishing interests must be considered and documented.

G. Areas closed to certain types of fishing techniques — particularly purse seines and trawl nets

Purse seines can only be used in North Carolina to take menhaden or Atlantic thread herring. [53] In connection with the menhaden industry, their use is also unlawful in certain ocean areas designated by the Marine Fisheries Commission. [54] Beach communities and recreational fishing interests have increasingly pressured the commission to add new prohibited areas next to developed shorelines. To date, most of the pressure has come from Dare County beach communities that claim a negative impact on tourism. The commission voted in August 1993 to prohibit menhaden fishing within 1 1/2 miles of the Atlantic shoreline during the summer months (May to September) and within one-half mile of shoreline during the fall (October to December). [55] In doing so, the commission recognized that it must reach a compromise between two conflicting groups — a compromise that failed to completely satisfy either party.

As with purse seines, the use of trawl nets is also restricted by the Marine Fisheries Commission. [56] And again, there is mounting pressure to further restrict the trawl fishery. It is likely that the commission will soon decide on additional prohibited areas and/or gear restrictions.

II. Gear restrictions

The Marine Fisheries Commission has developed regulations that control and/or prohibit the use of certain types of fishing gear in coastal and marine waters. Commission action has been prompted by a concern for threatened and endan-

gered species and by a decline in important recreational and commercial fisheries stocks. [57] Trawl fishing — particularly shrimp trawling — is currently the most controversial gear issue. Crab trawling is also controversial, but much smaller in scale.

A. Shrimp trawl fishing

The shrimp industry is important in North Carolina. In 1992, the 5.5 million pounds harvested were worth about \$11 million. [58] Shrimp are harvested almost exclusively by otter trawls — a highly unselective type of fishing gear. In the process of trawling, shrimpers catch a variety of other incidental species called bycatch. Bycatch of the southeastern shrimp fishery includes several species of juvenile and adult finfish, crustaceans such as blue and calico crabs, and other invertebrates such as jellyfish. [59]

Although bycatch has been recognized as an issue since the 1940s, it has been most recently highlighted with the realization that sea turtles were being trapped and killed in trawl nets. Because sea turtles are endangered or threatened under the federal Endangered Species Act [see Section 3 of this report] and can be caught and harmed by traditional shrimp trawling practices, the federal government now requires that shrimp trawls be equipped with turtle excluder devices (TEDs).

With the TED controversy slowly fading into the background, a new bycatch issue is coming to the forefront in North Carolina. There is growing concern about finfish mortality from shrimp trawling — particularly in internal estuarine waters. As might be expected, the severity of the issue is debatable; recreational fishing interests and some scientists claim a devastating impact, while commercial fishing interests and other scientists claim a much less severe impact. Currently, both the Division of Marine Fisheries and the South Atlantic Fishery Management Council are attempting to assess the true impact of bycatch and are studying potential solutions. [60] Solutions could range from requiring bycatch reduction devices (BRDs) in trawl nets to barring trawls from additional estuarine and/or marine areas.

The Marine Fisheries Commission has already taken some actions to regulate trawling. For example, in addition to opening the shrimping season, the fisheries director can, by proclamation, close coastal waters to trawling if sampling indicates (primarily) undersized shrimp or juveniles of any other species of major economic importance.

[61] The Marine Fisheries Commission has also given the fisheries director proclamation authority, with the prior consent of the commission, to require BRDs on trawls to reduce the finfish catch. [62] BRDs are now required, and the fishing community will likely see mandatory BRD designs in the future. In addition, the commission has limited takings of unmarketable finfish (sometimes referred to as scrap fish) caught in conjunction with other fishing operations. [63] And recently (January 1994), the commission voted to prohibit all inside trawling from one hour after sunset on Friday to one hour before sunset on Sunday — an action that added a day to the former prohibition on inside weekend trawling. [64] These actions exemplify the commission's trend toward addressing the bycatch issue. How far down the regulatory road it travels may depend on the results of ongoing bycatch studies. However, as with the purse seine issue, the regulatory response could depend on the strength of political winds from the gathering storm over allocating finite resources among a growing number of users.

The National Marine Fisheries Service will provide Congress with a bycatch reduction plan for the southeastern shrimp fishery by April 1994. Also, the Gulf and South Atlantic Fisheries Development Foundation and the National Marine Fisheries Service are conducting bycatch characterization studies to assess the need for seasonal and geographic closures. The N.C. Sea Grant College Program and Division of Marine Fisheries have focused on developing BRD designs. As many as 60 different designs are being explored by researchers and the commercial fishing industry. [65] These research endeavors are expected to provide fishery managers with some direction in addressing the bycatch issue.

B. Other net/gear restrictions

The Marine Fisheries Commission has developed a set of regulations for other types of fishing gear. [66] Although too numerous and specific to mention here, these regulations exhibit some constant themes — themes that are primarily designed to minimize conflict among users. The regulations contain numerous provisions to protect navigation (by keeping nets out of navigation channels) and the rights of other gear users (by requiring distances between users). The regulations also require that gear be attended during legal deployment seasons and removed at seasons' end. [67]

In 1993, the Marine Fisheries Commission gave the fisheries director broad proclamation

authority to close areas to the use of specified fishing gear out to one-half mile in the Atlantic Ocean. This action gives the director the power to act promptly in addressing the growing number of user conflicts in the nearshore ocean waters. [68] The commission put some limitations on the breadth of this authority. The fisheries director is required to hold public meetings in affected areas before issuing proclamations. The regulation also contains a "sunset" provision causing the rule to expire on July 1, 1995. This gives the commission an opportunity to review the success or failure of the authority at the end of two years.

In concluding the discussion on state management, it must be remembered that North Carolina's fishery laws and regulations come under the umbrella of its coastal management program. They are enforceable state policies that can be used in consistency determinations to influence permitting and licensing decisions in federal waters.

Interjurisdictional State Fisheries Management

The Atlantic States Marine Fisheries Commission (ASMFC) was created in 1942 to coordinate the actions by Atlantic Coast states to protect and preserve fisheries stocks under their individual jurisdictions. [69] North Carolina joined the commission in 1949. [70] The 14 other members are Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, South Carolina, Georgia and Florida. Each state's delegation to the commission includes the executive director of its marine fisheries agency, a lawmaker and a governor's appointee. The original commission compact was amended in 1950 to allow groups of states to designate ASMFC as a joint regulatory agency for specific shared fisheries. [71]

Until recently, the commission's powers were purely recommendatory, except in the case of the Atlantic striped bass. [72] It was charged to: (1) develop and administer coastal fishery management plans (for individual species), (2) recommend coastwide management measures to member states, (3) be a fact-finding and deliberative body and (4) establish the commission's position on national legislation affecting member states. [73] In 1993, Congress passed the Atlantic Coastal Fisheries Cooperative Management Act, which gave the commission substantial powers. [74]

The new act finds that "no single governmental entity has exclusive management authority for Atlantic coastal fishery resources (and that) harvesting of such resources is frequently subject to disparate, inconsistent and intermittent state and federal regulation that has been detrimental to the conservation and sustainable use of such resources" The act further finds that "the failure by one or more Atlantic states to fully implement a coastal fishery management plan can affect the status of Atlantic coastal fisheries" Based on these findings, the act states as its purpose "to support and encourage the development, implementation and enforcement of effective interstate conservation and management of Atlantic coastal fishery resources." More specifically, the act requires the commission to prepare and adopt coastal fishery management plans, outlining the requirements for state compliance. Upon adoption of each plan, the commission must identify the states required to implement and enforce it. Put simply, North Carolina and other member states will be required to implement and enforce the commission's regulations or face substantial enforcement action. Enforcement action includes a fishing moratorium on the fishery in question within the waters of the noncomplying state.

Beyond this provision, the new act attempts to clarify the roles of the ASMFC and the councils operating under the Magnuson Fishery Conservation and Management Act. The act requires the commission to consult with appropriate councils to determine areas where its coastal fishery management plans might complement council fishery management plans. (Note: don't confuse the commission's interstate coastal fishery management plans with the council's fishery management plans for federal waters.)

The new act has already generated some concern in North Carolina. The commission has developed a coastal fishery management plan for weakfish that calls for a reduction in trawl bycatch. Some believe that the weakfish plan could cause southern commercial fishers to suffer at the hands of northern recreational fishers.

The ASMFC has identified the following fishery conservation issues as serious challenges to the future management of Atlantic interstate fisheries: (1) habitat protection, (2) fishing access, (3) fishery conflicts, particularly between recreational and commercial fishers, (4) bycatch and (5) overfishing. [75]

Federal Fisheries Management

The Magnuson Fishery Conservation and Management Act (Magnuson Act) of 1976 was passed to manage coastal and ocean fisheries in waters beyond state jurisdiction. [76] Its impetus was the United States' desire to restrict fishing efforts by foreign vessels within 200 miles of its shoreline. Congress felt that "massive foreign fishing fleets ... have contributed," by means of overfishing, to the badly damaged economics of coastal areas within the United States. Congress also believed that the nation's fisheries were in dire straits due to overfishing; so dire that the nation could not realistically wait for an international fisheries agreement to address the problem.

Notwithstanding the nationalistic undertones that helped precipitate the act, it has evolved into a conservation measure, limiting annual yields (fisheries catch) to levels for sustaining the reproductive capacity of selected fisheries. The embodiment of this conservation strategy is the theory of optimum sustainable yield. Traditionally, the fisheries have been managed using the concept of maximum sustainable yield — the maximum take to ensure that enough of each species was left to replenish the stock. The current optimum sustainable yield practice uses maximum sustainable yield as a starting point, yet proffers flexibility into the equation. Biological, ecological, economic and social factors are considered along with the maximum sustainable yield to safeguard the best interests of the nation.

The act established a fisheries conservation zone that extends 200 miles offshore of the United States and its territories. Within this area, the United States has sovereign rights to fish and exclusive authority to manage fisheries except for highly migratory species managed by international cooperation. In other words, foreign fishing is prohibited unless authorized by an existing international treaty or the secretary of the U.S. Department of Commerce. Foreign nations must apply to the United States for approval to fish within the 200-mile zone or to fish for United States anadromous fish beyond 200 miles. The act clearly states that preference to harvest fish within the 200-mile zone must go to U.S. fishermen. Unless there is an existing treaty, approval for foreign fishing within the conservation zone is only allowed for that portion of a particular fishery's optimum sustainable yield that is not being harvested by U.S. fishermen. In 1983, the fisheries conservation zone was subsumed into the Exclusive Economic Zone.

The Magnuson Act created eight regional councils to manage domestic and foreign fishing within the Exclusive Economic Zone. [77] Council membership includes the regional director of the National Marine Fisheries Service, state fishery management officers and appointees recommended by state governors and approved by the secretary of the Department of Commerce. The appointed council members, who constitute more than half of the membership, must be knowledgeable about fishery conservation and management, commercial or recreational fishing, or the fisheries resources of the region. These councils prepare fishery management plans and recommend regulations for each fishery. Fishery management plans are developed based on the following seven standards set out in the Magnuson Act:

- (1) conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the U.S. fishing industry;
- (2) conservation and management measures shall be based on the best scientific information available;
- (3) to the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and inter-related stocks shall be managed as a unit or in close coordination;
- (4) conservation and management measures shall not discriminate between residents of different states. If it becomes necessary to allocate or assign fishing privileges among various U.S. fishermen, such allocation shall be (a) fair and equitable to all such fishermen, (b) reasonably calculated to promote conservation and (c) carried out in such a manner that no particular individual, corporation or other entity acquires an excessive share of such privileges;
- (5) conservation and management measures shall, where practicable, promote efficiency in the use of fishery resources, except that no such measure shall have economic allocation as its sole purpose;
- (6) conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources and catches; and
- (7) conservation and management measures shall, where practicable, mini-

mize costs and avoid unnecessary duplication. [78]

All council regulations must be reviewed by the National Marine Fisheries Service and approved by the secretary of commerce before becoming law. The optimum yield concept is applied to each species for which a plan is developed.

The South Atlantic Fishery Management Council (SAFMC) manages fish stocks in the Atlantic Ocean from three to 200 miles off the coasts of North Carolina, South Carolina, Georgia and east Florida to Key West. Because the North Carolina coast is a dividing line between northern and southern fish species, effort is underway in the U.S. Congress to gain legal representation for the state on the Mid-Atlantic Fishery Management Council.

The SAFMC has prepared fishery management plans for the following species: billfish, bluefish, coral, king and Spanish mackerel, red drum, sea scallops, shrimp, snapper-grouper, spiny lobster, summer flounder and swordfish. [79] With respect to each plan, the council has developed federal commercial and recreational regulations. As allowed by Section 1853 of the act, these regulations may: designate zones where, and periods when, fishing shall be limited or shall be permitted only by specified types of fishing vessels or with specified types and quantities of fishing gear; establish specified limitations on the catch of fish (based on area, species, size, number, weight, sex, incidental catch, total biomass or other factors), which are necessary and appropriate for the conservation and management of the fishery; prohibit, limit, condition or require the use of specified types and quantities of fishing gear, fishing vessels or equipment for such vessels, including devices to facilitate enforcement of the provisions of this act.

The National Marine Fisheries Service — a branch of the National Oceanic and Atmospheric Administration within the Department of Commerce — is the federal agency that administers the Magnuson Act and develops fishery data to support management decisions. For the most part, the Magnuson Act does not diminish the rights of coastal states to manage fisheries within their jurisdictional waters. An important exception are instances where the secretary of the Department of Commerce determines that: (1) fishing for a particular resource takes place predominately within or beyond the Exclusive Economic Zone, (2) a fishery management plan exists for the fishery and (3) the state has taken an action or failed to take an action, the result of which will substantially and

adversely affect the implementation of the fishery management plan. [80]

And what about a state's right to regulate activities beyond state waters from three to 200 miles? Section 306(a) of the Magnuson Act provides, in part, that "no state may directly or indirectly regulate any fishing which is engaged in by any fishing vessel outside its boundaries, unless the vessel is registered under the laws of such state." There has been some conflict over the interpretation of this section. A federal court interpreted Section 306(a) in the following fashion:

... We do not believe Congress intended to leave the door open for state regulation in the Exclusive Economic Zone; rather, we read this subsection to allow state regulation of vessels registered under state law and fishing in state territorial waters ... We think Congress outlined a fairly complete and pervasive federal scheme in the Magnuson Act and believe Congress must have intended to occupy the field of fishery management within the Exclusive Economic Zone ... Congress thus established a federal fishery zone; provided the states with an active role in managing the resources of the EEZ through their voting positions on a council; granted the ultimate responsibility for overseeing the program to the secretary of commerce; and left nothing pertaining to the EEZ for the states to regulate. South-eastern Fisheries Association Inc. v. Chiles, 979 F. 2d 1504 (11th Cir. 1992), vacating and remanding 772 F. Supp. 1263 (S.D. Fla. 1991).

Some fisheries management scholars see this interpretation as incorrect since many fisheries in the Exclusive Economic Zone have no federal fishery management plan and the adjacent state continues to manage them. They suggest, at the very least, in the absence of a relevant federal plan, that coastal states have jurisdiction to manage a fishery throughout the territorial sea (out to 12 miles) and even the 200-mile Exclusive Economic Zone, subject to relevant federal constitutional constraints. [81] State fisheries managers would likely accept this line of reasoning so long as it was not in the form of a requirement — a requirement that many managers think would burden their already overwhelmed staffs. This and other issues will likely be addressed this year as Congress considers reauthorization of the Magnuson Act.

Some Evolving Issues

In addition to the Magnuson Act, both the Marine Mammal Protection Act and the Endangered Species Act are scheduled for reauthorization this year. Both acts could be modified to have a significant impact on fisheries management.

To date, the Endangered Species Act's principal impact on fishing has come from its federal agency consultation requirements and incidental take restrictions protecting marine mammals and sea turtles. A reauthorized version of the Endangered Species Act and/or the Magnuson Act could bring a greater focus on designating critical habitat and implementing recovery plans. The result may be a Magnuson Act that is more ecosystem-focused. Fishery management plans could be required to designate and protect habitat essential to achieving optimum yield of a species or a species complex. Also, multispecies plans may be required when there is a significant relationship among several species within a defined ecosystem.

In the ocean waters off North Carolina's coast, there are some new issues that might be better addressed by a more comprehensive/holistic management approach. For example, some contend that through mismanagement, the reef fisher is in trouble. To address the issue, it is suggested that such options as marine reserves be considered to replenish stocks by protecting breeding grounds. [82] Another issue involves sargassum harvest and its potential impact on habitat. This issue has been considered by the SAFMC's habitat and environmental protection committee.

Finally, there has been concern recently about removing live rock from the state's southern coast. This activity involves the harvest of rock from the tidal zone evidently for commercial purposes. Live rock is generally considered a limited resource in North Carolina since much of the state's ocean floor is composed of sand with little substrate to which living organisms can attach. Even though current excavation efforts appear small in scale, activity could grow as bans on removing live rock from federal and some state waters go into effect. Current removal activities, coupled with concern that they may increase in intensity, has generated interest among DEHNR officials. [83]

The issue points to the need for coordination and communication among several of the state's agencies. Excavation and removal of live rock is a development activity that could be regulated by the Division of Coastal Management under CAMA [see Section 3]. It also falls under jurisdiction of the

Division of Marine Fisheries since it is the removal/harvest of a living resource from the marine environment. Finally, if the activity involves more than 1 acre, it could be regulated by the Division of Land Resources as a mining activity.

Conclusion

Fisheries management is a complex topic involving management relationships among a host of jurisdictions, each with competing interest groups. It involves the noble and difficult goals of protecting the resource and refereeing conflicts among a growing number of resource users. It invokes a process that involves the art of compromise — a search for solutions that must, above all, ensure the continued health of fishery stocks and appear equitable to those who depend on stocks for their livelihood or enjoyment. If North Carolinians fail in this endeavor, we will lament the demise of our fishery as the author did 100 years ago. We will find ourselves "attempting to retrace the steps of past waste and neglect (that) invariably follows in locking the stable door after the horse has gone — vain regrets and fruitless self-reproach."

Recommendations

The task force should suggest to the Marine Fisheries Commission that it:

I. Define commercial fishers more restrictively. The fisheries committee of the Ocean Resources Task Force recognizes there is a large amount of commercial and fishing gear in coastal and ocean waters. This quantity of gear is threatening the resource and creating conflict on state waters. The committee sees a need to limit commercial licenses to only those who depend on fishing for their livelihood. This action would restrict recreational fishers from using commercial gear. It may require an individual — rather than a vessel — license and would likely require legislative action.

The recently enacted moratorium on new commercial licenses should give the Marine Fisheries Commission time to analyze the situation and examine the feasibility of defining commercial fishers more restrictively.

II. Develop and require a saltwater recreational fishing license. Revenue collected should go into a dedicated fund for marine resources management, enhancement, enforcement and administration rather than the state's general fund.

The fisheries committee agreed that additional revenue generated by a saltwater license should not be a rationale for reducing current state-appropriated funds for fishery management.

III. Work with the Coastal Resources Commission and Environmental Management Commission to develop guidelines, policies or rules for water zoning and investigate innovative ways to improve ocean management. A management committee should be seated [see Section 3 of this report, recommendation IIA] by the heads of agencies and commissions responsible for major programs that affect coastal and ocean management. The committee should integrate and coordinate agency and commission policies and coastal activities, identifying and resolving jurisdictional conflict and overlap and recommending legislation, rules and memoranda of understanding. This would be helpful in resolving issues such as the removal of live rock.

IV. Investigate state marine reserves as part of an integrated management scheme.

V. Work with the Department of Administration to adopt policies regarding private uses of the ocean's public trust waters and resources.

In developing a policy, current leasing schemes for the state's public trust lands and waters should be considered. These include the fee charged by the Marine Fisheries Commission to ocean pier owners for their use of land and water, the lease fee charged to shellfish aquaculturists for their use of submerged lands and the water column, and the Department of Administration's ability to levy fees on mining and other uses of state submerged land.

Footnotes

[1] North Carolina and its Resources, State Board of Agriculture, 1896.

[2] GS 113-133.

[3] Id.

[4] Id.

[5] Id.

[6] GS 113-134.1. Also see GS 113-131.

[7] GS 113-132 and 15A NCAC 3Q.0104. The dividing lines between waters managed by the Marine

Fisheries Commission and waters managed by the Wildlife Resources Commission are marked on all major water bodies insofar as practicable. 15A NCAC 3Q.0105.

[8] GS 113-132(e).

[9] GS 143B-289.4.

[10] GS 143B-289.4(1)(b).

[11] GS 143B-289.4(2)(h) and GS 143B-289.4(1)(d).

[12] GS 113-224.

[13] GS 143B-289.4(1)(h).

[14] GS 143B-289.4(1)(f).

[15] GS 143B-289.4(1)(g) and GS 113-228.

[16] GS 143B-289.4(1)(e) and GS 113-221(e). All proclamations must state the hour and date upon which they become effective. They must be issued at least 48 hours before the effective date and time, except when the proclamation prohibits the taking of certain fishery resources for reasons of public health. In these situations, the proclamation is effective immediately.

[17] 15A NCAC 7H .0003(b).

[18] GS 143B-289.5.

[19] GS 113-152 and 15A NCAC 3O .0102. North Carolina vessels are those that have their primary situs in the state. Motorboats with North Carolina numbers under the provisions of Chapter 75A of the General Statutes are deemed to have their primary situs in North Carolina. This includes documented vessels that list a North Carolina port as home port. GS 113-152(a)(2). Commercial fishing operations are defined as all operations preparatory to, during and subsequent to the taking of fish: (1) with the use of commercial fishing equipment or (2) by any means, if a primary purpose of the taking is to sell the fish. Commercial fishing also includes operations that take people fishing for hire.

[20] GS 113-152(a)(3) and GS 113-161. These licenses may be restricted in terms of area, gear and fishery so that nonresidents are licensed to engage in North Carolina fisheries on the same or similar terms that North Carolina residents can be licensed to engage in the fisheries of such other jurisdiction.

[21] GS 75A-4.

[22] GS 75A-2(5).

[23] A study committee of the Marine Fisheries Commission is assessing the feasibility of a saltwater recreational fishing license. Commission member Mike Orbach chairs this committee, which will report its findings to the Joint Legislative Commission on Seafood and Aquaculture.

[24] GS 113-271.

[25] GS 113-154.

[26] GS 113-152(f).

[27] 15 NCAC 3K .0303.

[28] GS 113-154.1. (Effective until July 1, 1996.)

[29] GS 113-156. (Effective until July 1, 1996.)

[30] GS 113-156.1.

[31] GS 113-167.

[32] GS 113-167(b)(1).

[33] 15A NCAC 3J .0105.

[34] 15A NCAC 3I .0006.

[35] 15A NCAC 3I .0012.

[36] 15A NCAC 3N .0002(a).

[37] 15A NCAC 3R .0003.

[38] 15A NCAC 3N .0004.

[39] 15A NCAC 3N .0002(c).

[40] 15A NCAC 3N .0005(a).

[41] 15A NCAC 3N .0005(b).

[42] 15A NCAC 3I .0010(a).

[43] 15A NCAC 3R .0002.

[44] 15A NCAC 3R .0002(a)(5).

[45] 15A NCAC 3R .0001.

[46] 15A NCAC 3I .0007(c).

[47] 15A NCAC 3R .0010.

[48] 15A NCAC 3L .0205.

[49] GS 113-185 and 15A NCAC 3I .0008.

[50] 15A NCAC 3J .0401. The proclamation authority allowed under this regulation can be exercised anytime between the Friday before Easter and Dec. 31.

[51] For example, conflict in the Bogue Banks area between mullet fishers and pier owners led to a proclamation that requires stop nets to be set one-half mile from piers.

[52] 15A NCAC 3I .0009.

[53] 15A NCAC 3J .0105.

[54] 15A NCAC 3R .0011.

[55] 15A NCAC 3R .0011.

[56] 15A NCAC 3J .0202(2). It is unlawful to use trawls within one-half mile of the beach between the Virginia line and Oregon Inlet.

[57] 15A NCAC 3I .0007. This rule allows the fisheries director to proclaim any coastal waters closed or restricted to taking or attempting to take when the method (equipment) used is a serious threat to an endangered or threatened species listed pursuant to 16 U.S.C. 1533(c) Endangered Species Act.

[58] Telephone conversation with Katie West, N.C. Division of Marine Fisheries.

[59] Murray, James D.; James J. Bahen; and Roger A. Rulifson. "Management Considerations for Bycatch in the North Carolina and Southeast Shrimp Fishery." *Fisheries*, Vol. 17, No. 1, 1992.

[60] Id. Although the biological impact of bycatch on finfish stocks is uncertain for many species, there is evidence it may already be affecting red snapper, mackerel and weakfish stocks.

[61] 15A NCAC 3J .0104(a)(2).

[62] 15A NCAC 3J .0104(d).

[63] 15A NCAC 3M .0102.

[64] 15A NCAC 3L .0102.

[65] Murray.

[66] 15A NCAC 3J .0101 - .0400,

[67] 15A NCAC 3I .0005.

[68] 15A NCAC 3J .0400.

[69] Public Law 539, 77th Congress, 1942.

[70] GS 113-252.

[71] Public Law 712, 81st Congress, 1950.

[72] In 1984, the U.S. Congress passed the Striped Bass Conservation Act (P.L. 98-613), which provided incentives for states to comply with the ASMFC Interstate Fishery Management Plan for Striped Bass. This was the only case in which the ASMFC was given enforcement tools. This act was repealed with the passage of the Atlantic Coastal Fisheries Cooperative Management Act.

[73] Atlantic States Marine Fisheries Commission, Interstate Fisheries of the Atlantic Coast, ISBN 0-9630072-0-3, 1991.

[74] Public Law 103-206, 1993.

[75] Atlantic States Marine Fisheries Commission, Interstate Fisheries of the Atlantic Coast, ISBN 0-9630072-0-3, 1991.

[76] 16 U.S.C.A. 1801-1882.

[77] 16 U.S.C.A. 1852 (a).

[78] 16 U.S.C.A. 1851 (a)(1)-(7).

[79] In North Carolina, the Marine Fisheries Commission has given the fisheries director broad proclamation authority over most of these fisheries. This power enables the director to monitor the federal fishery management plans and coordinate state and federal regulation.

[80] 16 U.S.C.A. 1856.

[81] Ballweber, Jeffrey A. and Richard Hildreth, "Fishery Management Implications of the U.S. Territorial Sea Extension," Proceedings of Coastal Zone 91 at 1388.

[82] Huntsman, Gene. Address to the conference on Managing the Coastal Ocean for the 21st Century: North Carolina's Role. May 20, 1993.

[83] Memorandum from Kim Crawford, N.C. Division of Coastal Management, to John Hedrick, N.C. Division of Coastal Management, June 29, 1994.

MARINE POLLUTION

7 Section

Marine pollution can result, incidentally, from the variety of activities discussed in previous sections — the extraction of hard minerals, oil and gas exploration and exploitation, marine fisheries and recreational activities. However, other activities have as their primary purpose the introduction of potentially polluting substances into the marine environment. Some — ocean outfall discharges, ocean dumping and marine littering — are discussed in this section.

Ocean Outfalls for Domestic Wastewater

The idea of discharging domestic wastewater directly into the ocean may be a novelty for North Carolinians, but it's an established practice in other coastal regions of the United States. Urban areas with limited capacity to dispose of sewage waste have been discharging directly into the ocean for years.

Depending on their locations and local oceanographic conditions, ocean outfalls have met with varying success. [1] In North Carolina, the wide dispersal of the coastal population makes the cost of an extensive collection and disposal system a serious consideration. There are also questions about the suitability of the local oceanography for effective and safe disposal of large quantities of effluent. Variables such as longshore drift, upwellings, downwellings, the Gulf Stream and currents in the nearshore ocean would have a bearing on the success of an outfall. [2]

Waste in North Carolina's coastal region is disposed of by centralized collection and treatment facilities or by underground septic systems. Centralized systems discharge directly into coastal rivers, contributing to nutrient enrichment. In recent years, enriched waters have spawned algae blooms that have lowered the quality of some of the state's most productive coastal waters. Septic systems often fail in coastal soils, and even in optimum conditions their use must be limited to sparsely populated areas — areas that are rapidly disappearing in the state's coastal region.

Alternatives are being considered in light of the increasing demands for wastewater treatment and disposal. Even though outfalls seem to be viable, there are concerns. There is concern regarding the effluent and its effect on the marine environment and water quality. There is also concern about greater nonpoint source pollution from increased development. Increased development could result if current growth constraints, such as inad-

equate wastewater disposal capability, are removed.

These and other issues were discussed in detail at an April 1993 forum in Atlantic Beach, N.C. The forum focused on the technical considerations of ocean outfalls and the growth management implications of centralized wastewater treatment. Two case studies, from Virginia and New Jersey, offered practical evidence for planning, building and operating an ocean outfall. For a thorough discussion of these issues, see the proceedings of the North Carolina Ocean Outfall Conference. Write the Neuse River Council of Governments at P.O. Box 1717, 233 Middle Street, New Bern, NC 28563, or call 919/638-3185.

The Clean Water Act and State Water Quality Law

The Water Pollution Control Act, more commonly called the Clean Water Act, is the leading federal law addressing water quality, including point source discharges from ocean outfalls and nonpoint source pollution from increased development. [3] To limit point source pollution, the act requires that: (1) the waters of the country be classified according to their highest and best use; (2) for each classification, water quality standards be developed; and (3) point source discharges be allowed only if the discharge does not violate the water quality standards of the receiving waters. Point source discharges are defined as "any discernible, confined and discrete conveyance, including but not limited to any pipe ... from which pollutants are or may be discharged." [4] Wastewater from an ocean outfall would be a point source discharge. The act creates a permit process to assess the impact of discharges. These permits are issued or denied through a process established by Section 402 of the Clean Water Act. The permits are often referred to as NPDES (National Pollution Discharge Elimination System) permits.

The Clean Water Act is administered by the U.S. Environmental Protection Agency (EPA). As a general rule, EPA develops the regulatory standards to fulfill the act's broad directives. However, the act also requires other federal agencies to participate in implementing the law. For example, the U.S. Army Corps of Engineers executes the permit program that regulates placement of fill material into navigable waters. This program is often called the 404 Program after the section of the act that created it. [5] Dredging and filling operations associated with the construction of an ocean outfall would likely require a 404 permit.

The Clean Water Act allows individual states to set up their own water quality programs so long as they are consistent with federal guidelines. [6] Among other things, these guidelines require that the state adopt an anti-degradation policy and implement procedures to conserve, maintain and protect existing uses and water quality. [7] In 1974, EPA gave North Carolina the authority to implement its own management program. Consequently, the General Assembly adopted laws that outline the state's water quality strategy. Most of these laws can be found in Chapter 143, Article 21, Part I of the N.C. General Statutes. These laws establish the Environmental Management Commission (staffed by the Division of Environmental Management) and authorize it to adopt and establish standards for water quality classifications of state waters. [8] The commission has developed classifications and standards for both fresh and tidal waters. [9] In accordance with the federal act, discharges are only allowed if they do not violate water quality standards. A state permit process determines the impact of a discharge. [10] It should be noted that Section 401 of the Clean Water Act requires all applicants for federal licenses or permits to obtain a state water quality certification for any activity that may discharge into state waters. [11]

Under state law, any discharge into the ocean is prohibited unless permitted by Environmental Management Commission regulation. [12] North Carolina has not developed a classification system or standards for ocean waters other than those in place for tidal salt waters. Instead, the commission in 1983 adopted EPA's standards for the discharge of wastewaters to the Atlantic Ocean.

Under the Clean Water Act, no permit may be issued for discharge into the territorial sea, contiguous zone or ocean without complying with Section 403 as administered by NPDES. [13] Regulations that implement this section provide the criteria that EPA or state permit writer must use when evaluating NPDES applications for ocean discharges. [14] The criteria address ocean water quality impacts as well as human health and biological impacts and transportive pollutants. More specifically, the criteria prohibit any discharge into the ocean if it leads to the "unreasonable degradation" of the marine environment. Unreasonable degradation is defined as: (1) significant adverse changes in ecosystem diversity, productivity and stability of the biological community within the area of discharge and surrounding biological communities; (2) threats to human health through direct exposure to pollutants or through consumption of exposed aquatic organisms; or (3)

loss of aesthetic, recreational, scientific or economic values that is unreasonable in relation to the benefits of the discharge. [15] If information is insufficient to make a reasonable judgment on any of these criteria, no permit may be issued. The criteria are sufficiently general to leave a great deal of discretion as to the limitations that may be imposed. North Carolina is free to adopt more restrictive standards, but it may not weaken federal standards.

Normally, a wastewater discharge into the ocean must meet the Clean Water Act's technology-based secondary treatment requirements. A permit applicant can, however, seek a waiver from these requirements under Section 301(h) of the act. To obtain a waiver, the applicant must demonstrate that less-than-secondary treatment will allow for the protection and propagation of a balanced indigenous population of fish, shellfish and wildlife and allow for water-based recreation. In addition, the applicant must develop satisfactory toxin controls and monitoring programs. Waivers must be renewed every five years.

It should be noted that the federal government has a systematic check over all state permits for ocean discharges. In other words, notwithstanding a federally approved state program, the EPA must be notified of a state permit for ocean discharge; if the EPA administrator objects, the permit must be modified by the state or denied. [16]

CAMA and the Development of an Ocean Outfall

As discussed in Section 3 of this report, the N.C. Coastal Area Management Act (CAMA) requires a permit for development activities within areas of environmental concern (AECs). An ocean outfall would be a development activity in the public trust and estuarine waters AECs. It would also be an activity requiring "permission, licensing, approval, certification or authorization from another state or federal agency" and would consequently require a CAMA major development permit. Major development applications are reviewed by the Division of Coastal Management using information from the applicant, applicable AEC standards, comments by other state and federal agencies and comments from third parties. When a development activity occurs both inside and outside of an AEC, the Division of Coastal Management often requires information about the entire project — not just those activities proposed for the AEC. This practice, referred to as the total development concept, is intended to look at the full range of potential impacts to the AEC.

This raises an interesting question about ocean outfalls. Since the construction of an ocean outfall would require a CAMA permit, could the Division of Coastal Management and the Coastal Resources Commission play a role in growth management by looking at the entire system and its potential impacts on the public trust and estuarine waters AECs? Could the division place growth management conditions on a permit for an ocean outfall? By removing constraints on growth, an ocean outfall has the potential to negatively affect the quality of estuarine waters. On the other hand, it could help estuarine waters by removing wastewater from the sluggish circulation patterns of the enclosed estuarine system and placing it into ocean waters. These are questions that must be jointly considered by the Coastal Resources Commission and Environmental Management Commission.

Ocean Dumping and Marine Litter

For years, the oceans have been used as dumping grounds — a place to discard sewage sludge, garbage and other solid waste or simply a convenient place to toss litter from a boat. The remainder of this section looks at the myriad of state, federal and international law that has developed in response.

Federal Law

Section 407 of the Rivers and Harbors Act of 1899, referred to as the Refuse Act, prohibits the discharge from vessels and piers "any refuse matter of any kind or description whatever ... into any navigable water of the United States" [17] Exempted from this provision are wastes incidental to the improvement of navigable waters and the construction of public works (the main rationales for the Rivers and Harbors Act). The Rivers and Harbors Act applies to state and federal waters.

Chapter 27 of the Marine Protection, Research and Sanctuaries Act of 1972, commonly referred to as the Ocean Dumping Act, governs dumping at sea. [18] This act, implemented primarily by EPA, was designed to prohibit most ocean dumping and regulate by permit the acceptable types and quantities of waste. Section 1411 states that material cannot be transported for the purpose of dumping into ocean waters by any person from the United States or any U.S. vessel from any location. Ocean waters include both state and federal waters. This section also prohibits dumping into the U.S. territorial sea and its contiguous zone any material that has been transported from a location outside the United States "to the extent that (the material) may affect the territorial sea of

the United States." The act defines material as:

... matter of any kind or description, including, but not limited to, dredged material; solid waste; incinerator residue; garbage; sewage; sewage sludge; munitions; radiological, chemical and biological warfare agents; radioactive materials; chemical, biological and laboratory waste; wrecked or discarded equipment; rock; sand; excavation debris; and industrial, municipal, agricultural and other waste ... [19]

This definition does not include sewage from watercraft (covered by the Marine Sanitation Device provisions of the Clean Water Act), and it covers oil only to the extent that it is being transported to the ocean for dumping. Dumping is defined as a "disposition of material" with certain caveats. It does not mean a disposition of effluent governed by the Clean Water Act, such as wastewater discharged from a permitted ocean outfall. The act is also not meant to impinge on the construction of certain fixed structures or artificial reefs used for fisheries management.

Notwithstanding the caveats, the definition is quite broad and will prohibit the vast majority of dumping activities. Even so, the act does contemplate the possibility of some dumping and establishes a permit program. [20] For example, Section 1413 establishes a permit program for dumping dredged material. Permits to dump this material are administered jointly by the EPA and the secretary of the Army (who controls the Corps of Engineers, which has primary authority over the dredging of navigable waters). Before dredged spoil can be dumped at sea, the secretary of the Army must find that there is no other economically feasible alternative, and the administrator of EPA must determine that the dumping will not "result in an unacceptable adverse impact on municipal water supplies, shellfish beds, wildlife, fisheries (including spawning and breeding areas) or recreational areas." [21]

No permits may be granted for the disposal of radiological, chemical and biological warfare agents, high level radioactive waste and medical waste. It is also unlawful to dump sewage sludge and industrial waste. [22]

The act allows states to develop criteria — subject to a finding by the EPA administrator that they are consistent with the federal program — to

govern ocean dumping in their waters, and that may affect their jurisdictional waters. [23] Even though North Carolina has not developed a comprehensive ocean dumping program, it does have several statutes (discussed in this section) that are designed to control dumping and littering in state waters.

Federal law also regulates pollution discharged from ships. The Prevention of Pollution from Ships Act is the U.S. Congress' incorporation of the 1973 International Convention for the Prevention of Pollution from Ships, commonly known as MARPOL. [24] The act specifically incorporates Annex V of the international treaty, which covers garbage disposal. [25] Garbage is defined as:

... all kinds of victual, domestic and operational waste, excluding fresh fish and parts thereof, generated during the normal operation of ships and liable to be disposed of continuously or periodically ... [26]

The regulations of Annex V outline the types of garbage that are prohibited. Plastics are prohibited altogether. They include synthetic ropes, fishing nets and bags. Other wastes are regulated and may be disposed of at varying distances from the shoreline (depending on the type of waste).

There are exceptions to these rules. For example, Annex V does not apply to:

- (a) the disposal of garbage from a ship necessary for the purpose of securing the safety of a ship, the health of its personnel or saving life at sea;
- (b) the escape of garbage resulting from the damage to a ship or its equipment, provided all reasonable precautions have been taken before and after the damage to prevent or minimize the escape; and
- (c) the accidental loss of synthetic fishing nets or synthetic material incidental to the repair of such nets, provided that all reasonable precautions have been taken to prevent such loss.

The Coast Guard has primary enforcement responsibility under the act in U.S. waters.

The attorney general of North Carolina has issued an opinion finding the state's laws compatible with Annex V and, thus, not pre-empted by the federal act.

North Carolina Law

In 1991, the N.C. Marine Science Council published "Debris in the Sea," a report that discusses the causes of marine litter and the laws and programs to combat the problem. [27] It also makes recommendations to ameliorate the shortcomings in law and policy, proposing the following state policy:

It shall be the policy of the state of North Carolina to eliminate all litter and debris from the waters of North Carolina and to cooperate with other public and private entities in the elimination of litter and debris from the state's marine environment.

The report recommends that the state: (1) consolidate its responsibilities for litter control in a single state department/commission; (2) adopt a law similar to MARPOL (the report refers to the federal act, which incorporates Annex V of MARPOL); (3) increase fines for violation of the state's litter laws; (4) require the reduction of waste and encourage reusable and biodegradable packaging; and (5) provide economic incentives for litter control. The report also recommends that the state formulate an extensive education and public awareness campaign to influence attitudes about the need for a clean marine environment. The state's Big Sweep Program continues to make great strides toward this recommendation.

Although most recommendations in the report are valid, few have been thoroughly carried out.

Finally, the report recognizes that North Carolina has a maze of laws and regulations dealing with the disposal of litter and other solid wastes in the marine environment. These laws are complex and often confuse people who use the marine environment or who enforce the state's laws and regulations. Following is a summary of state law.

I. Solid waste management

Reducing waste should lead to a reduction in the amounts of waste that require disposal. General Statute 130A-309.04 sets out the state's solid waste management policies and goals. Basically, they are designed to promote alternatives to solid waste disposal. The statute sets out a hierarchy of methods for managing solid waste, in descending order of preference:

- (a) waste volume reduction at the source,
- (b) recycling and reuse,
- (c) composting,
- (d) incineration with energy production,
- (e) incineration for volume reduction,
- (f) disposal in landfills.

Each county in the state, either individually or in cooperation with its municipalities, must develop a comprehensive solid waste management plan. Plans must address the disposal methods listed above and must be consistent with other state guidelines for solid waste management. Plans are submitted for approval to the Division of Solid Waste Management in the Department of Environment, Health and Natural Resources (DEHNR). Once these goals and policies are fully implemented, the state is likely to see a reduction in the amount of solid waste finding its way into ocean waters.

II. North Carolina's litter laws

North Carolina's statutes contain provisions that make it unlawful to dispose of solid waste or litter in its waters. For example, General Statute 14-399(a) states that:

No person ... shall intentionally or recklessly throw, scatter, spill or place, or intentionally or recklessly cause to be blown, scattered, spilled, thrown or placed or otherwise dispose of any litter upon any public property or private property not owned by him within this state or in the waters of this state ... (emphasis added)

Litter is defined broadly as:

... any garbage, rubbish, trash, refuse, can, bottle, box, container, wrapper, paper, paper product, tire, appliance, mechanical equipment, tool, machinery, wood, motor vehicle or motor vehicle part, vessel, aircraft, farm machinery or equipment, sludge from a waste treatment facility, water supply treatment plant, or air pollution control facility, dead animal, or discarded material in any form resulting from domestic, industrial, commercial, mining, agricultural or governmental operations ... [28]

On its face, this statute appears to concede that accidental littering may reasonably occur. Even so, any violation under this statute will

depend on individual issues of intent, recklessness and causation. The burden of proof is on the operator of the littering vehicle or watercraft to show that it was not an intentional or reckless act. Penalties for violating the statute range from a misdemeanor with a \$100 fine (for disposing of less than 15 pounds of litter) to a felony punishable by up to three years in prison (for disposing of more than 500 pounds or for disposing of litter from commercial operations). [29]

It should be noted that the penalties outlined in this statute are criminal, not civil. Many state and federal environmental statutes provide for civil penalties. Typically, the criminal penalties are reserved for the most egregious cases, such as knowing violations.

There are advantages to civil penalties. First, fines collected from civil penalties can be allocated to programs that address litter and solid waste problems. Criminal fines collected in North Carolina, by direction of the Constitution, "belong to and remain in the several counties, and shall be faithfully appropriated and used exclusively for maintaining free public schools." [30] Consequently, all fines collected for illegally disposing of solid waste and litter in North Carolina remain in each county and must be used for public education. This creates an interesting issue when criminal penalties are collected on activities in the state's ocean waters, since these areas do not appear to be within the boundaries of any county [see Section 2 of this report on Ocean Jurisdiction].

A second advantage to civil penalties is that they open the possibility of another outlet for enforcement — the administrative process. Most civil cases are handled within state agencies. Criminal cases are addressed by the judicial process unless the alleged violator concedes guilt and pays the fine. By limiting penalties to criminal enforcement, the state is constrained in its enforcement ability.

It is interesting to note that a motor vehicle operator who violates this statute has a one-point penalty assigned to his or her driving license record by the Division of Motor Vehicles. [31] This type of penalty could be extended to include boating, fishing and hunting licenses. Those state-granted privileges are necessarily conditioned on prescribed behaviors. Abstaining from littering should be one of them.

North Carolina's Boating Safety Act also regulates the dumping of waste in the state's navigable waters. The act states:

No person shall place, throw, deposit or discharge, or cause to be placed, thrown, deposited or discharged on the waters of this state or into the inland lake waters of this state, any litter, raw sewage, bottles, cans, papers or other liquid or solid materials that render the waters unsightly, noxious or otherwise unwholesome so as to be detrimental to the public health or welfare or to the enjoyment and safety of the water for recreational purposes. [32]

Arguably, this statute is stronger than the preceding litter law because it does not include language about intent or reckless behavior. It simply requires that the articulated wastes not be deposited into state waters. However, some of the statute's language poses an interesting question. For example, what criteria should be used to determine a noxious rendering of state waters?

The act also prohibits the discharge of medical wastes. Medical waste is defined as:

... any solid waste that is generated in the diagnosis, treatment or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals ... [33]

DEHNR enforces these provisions and is authorized to enter into agreement with the N.C. Wildlife Resources Commission to share manpower and expenses to "secure broader enforcement of the provisions of this (act)" [34] As with the state's litter law, only criminal penalties are allowed for violations. There is also no provision for registration/license revocation for violations.

The prohibition against dumping medical waste is reinforced by GS 143-214.2A, which states that it is "unlawful for any person to engage in conduct that causes or results in the dumping, discharging or disposal, directly or indirectly, of any medical waste to the open waters of the Atlantic Ocean over which the state has jurisdiction or to any waters of the state." Under this statute, both civil and criminal penalties are allowed. The civil penalties include a fine of no more than \$25,000 for a first offense and no more than \$50,000 for a subsequent offense. Criminal penalties are imposed for willful violations. [35] Under this statute, the Division of Environmental Management, DEHNR, has primary enforcement power. [36]

In addition to these laws, the state has another statute regulating certain practices in navigable waters, including solid waste disposal. General Statute 76-40(a) states that:

It shall be unlawful for any person, firm or corporation to place, deposit, leave or cause to be placed, deposited or left, either temporarily or permanently, any trash, refuse, rubbish, garbage, debris, rubble, scrapped vehicle or equipment or other similar waste material in or upon any body of navigable water in this state; ... violation of this section shall constitute a misdemeanor, punishable by a fine of up to five hundred dollars or imprisonment for up to six months, or both, in the discretion of the court.

Penalties for violating this statute are criminal. Enforcement is a unified effort by the Wildlife Resources Commission, DEHNR and the Environmental Management Commission. [37]

Finally, it should be noted that General Statute 143-214.2B requires that vessel operators in state waters take precautions to ensure that certain contaminants do not enter state waters. Vessel operators shall "store fuel, oil, paint, varnish, solvent, pesticide, insecticide, fungicide, algicide or any other hazardous liquid in one or more closed containers that are adequate to prevent the release of the items into the waters of the state."

Recommendations

I. Ocean outfall

A. The task force should ask the Environmental Management Commission and Division of Environmental Management to review the EPA ocean discharge criteria. The commission and the division may want to assess the ability of these criteria to protect the ocean off North Carolina's coast should an outfall be proposed. The state may wish to continue to use EPA's criteria or add more stringent criteria to protect the unique characteristics of its coastal ocean.

B. The task force should ask the Coastal Resources Commission and Division of Coastal Management to assess their abilities to place growth management requirements on a CAMA major development permit for ocean outfall construction [see Section 3 of this report, recommendation ID]. The Coastal Resources and Environmental Man-

agement commissions should assess their roles and responsibilities in issuing ocean outfall permits. This task could be performed by the management committee proposed by recommendation IIA, Section 3 of this report.

II. Marine debris and litter

A. The task force should review the recommendations in the Marine Science Council's 1991 "Debris in the Sea" [see Appendix 8]. The task force should suggest that all state laws regarding the disposal of solid waste in navigable waters be consolidated with any new legislation providing for both civil and criminal penalties.

B. The task force should recommend a violation point system for boats and other vessels similar to that of the state's Division of Motor Vehicles. License and registration should be revoked after numerous violations.

Footnotes

[1] Copeland, B.J. "Coastal Waste Disposal and Ocean Outfalls," *WaterWise*, Vol. 1, No.1, N.C. Sea Grant College Program, Spring 1993.

[2] Id.

[3] 33 U.S.C.A. 1251 et seq.

[4] 33 U.S.C.A. 1362(14).

[5] 33 U.S.C.A. 1344.

[6] 33 U.S.C.A. 1342.

[7] 15 NCAC 2B.0201. (For North Carolina's anti-degradation policy.)

[8] GS 143-214.1.

[9] 15A NCAC 2B.0211-.0212.

[10] GS 143-215.1.

[11] 33 U.S.C.A. 1341.

[12] GS 143-214.2(c).

[13] 33 U.S.C.A. 1343.

[14] 40 CFR 125.120-125.124.

[15] Id.

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- [16] 33 U.S.C.A. 1342(d).
- [17] 33 U.S.C.A. 401 et seq.
- [18] 33 U.S.C.A. 1401-1445.
- [19] 33 U.S.C.A. 1402(c).
- [20] The criteria for this permit program can be found at 33 U.S.C.A. 1412.
- [21] 33 U.S.C.A. 1413(d).
- [22] 33 U.S.C.A. 1414(b), also known as the Ocean Dumping Ban Act of 1988.
- [23] 33 U.S.C.A. 1416(d).
- [24] 33 U.S.C.A. 1901.
- [25] 33 U.S.C.A. 1901(b).
- [26] 33 U.S.C.A. 1901(a)(3).
- [27] N.C. Marine Science Council, "Debris in the Sea," 1991.
- [28] GS 14-399(i)(4).
- [29] GS 14-399(c) - (k).
- [30] Article IX, Section 7.
- [31] GS 14-399(f1).
- [32] GS 75A-10(c).
- [33] GS 130A-290(18).
- [34] GS 75-17(b).
- [35] GS 143-214.2A(b) and (c).
- [36] GS 143-214.2A(b)(6).
- [37] GS 76-40(c).

RECREATIONAL USES

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As the population of coastal towns and counties has grown over the years, so too have the recreational uses of North Carolina's marine waters. People fish, boat, ski, surf, swim and dive there. But these competing uses create conflict, which governments are consequently trying to prevent, mediate and resolve through regulation.

Local governments are often best suited to regulate nearshore uses, such as swimming and surfing. However, as pointed out in Section 2, they are limited to the power granted to them by the state Legislature. This is particularly true when it comes to ocean waters, which are usually beyond local jurisdiction. As uses and conflicts have heightened, the Legislature has granted local governments the power to regulate some nearshore uses. Of course, in exercising this power, local government must be aware of state and federal law that applies concurrently with any local ordinance.

As discussed in Section 3, the state has stewardship responsibilities over resources and uses within its ocean waters. The public has rights to use state lands and waters. And the state has the responsibility of protecting these public trust rights — a task that must be balanced with its responsibility to protect state resources. In 1985, the General Assembly codified a list of public trust rights and recognized that the courts may continue to define and expand them. The legislation provides:

... "public trust right" means those rights held in trust by the state for the use and benefit of the people of the state in common. They are established by common law as interpreted by the courts of this state. They include, but are not limited to, the right to navigate, swim, hunt, fish and enjoy all recreational activities in the water courses of the state and the right to freely use and enjoy the state's ocean and estuarine beaches and public access to the beaches. [1]

Specific legislation gives the state stewardship responsibilities. For example, General Statute 113-131 recognizes that marine and estuarine wildlife resources belong to the people of the state; it then gives the responsibility of managing these resources to the N.C. Department of Environment, Health and Natural Resources (DEHNR) and the Wildlife Resources Commission. Consequently, as discussed in Section 6 of this report, the Division of Marine Fisheries in DEHNR is responsible for implementing and enforcing recreational fishing

regulations (developed by the Marine Fisheries Commission) in the state's ocean waters. Unless the state has deferred its responsibility to local government or the federal government recognizes a paramount right (to protect navigation, for example) in state waters, the state regulates most recreational activities.

This section discusses some of the primary recreational uses of state waters and how they are regulated.

Recreational Boating

North Carolina's Boating Safety Act promotes the "safety for persons and property in and connected with the use, operation and equipment of vessels" [2] A vessel is "every description of watercraft or structure, other than a seaplane on the water, used or capable of being used as a means of transportation or habitation" [3] State waters are defined as "any waters within the territorial limits of this state, and the marginal sea adjacent to this state and the high seas when navigated as a part of a journey or ride to or from the shore of this state" [4]

The Wildlife Resources Commission implements the act through a three-member motorboat committee appointed by the commission chair. Committee members are selected from the commission. [5]

The act establishes an identification system that requires all vessels to acquire and display an identification number unless exempted by the statute. [6] It also establishes a classification scheme for motorboats and lists the type of equipment and lights each class is required to maintain. [7]

The act makes certain practices unlawful:

- (a) operat(ing) any motorboat or vessel or manipulat(ing) any water skis, surfboard or similar device on the waters of this state in a reckless or negligent manner so as to endanger the life, limb or property of any person;
- (b) manipulat(ing) any water skis, surfboard, nonmotorized vessel or similar device on the waters of this state while under the influence of an impairing substance [8]

Subsections (c) and (d) outlaw the discharge of noxious litter and medical waste [see Section 7 for a discussion of waste discharges].

Motorboat (a subunit of vessel) is defined "as any vessel equipped with propulsion machinery of any type, whether or not such machinery is the principal source of propulsion" [9]

In addition to its general powers over unlawful activities within its jurisdiction, the commission can develop safety rules for specific bodies of water (local waters). These rules can: (1) regulate the operation of vessels, including speed zones; (2) promote boating and water safety for boaters, swimmers, fishermen and others; and (3) control the placement and maintenance of navigation aids and markers, conforming with governing provisions of law. [10] The U.S. Coast Guard's Uniform State Waterway Marking System is used on North Carolina waters.

More specifically, the commission can prohibit vessels from public swimming areas and establish speed zones at public boat ramps, marinas, boat service areas and other congested waters where safety hazards have been demonstrated.

Before making any rules, the commission must investigate the recreational and safety needs of the water body in question. It may hold public hearings as part of that investigation. [11]

The commission can adopt rules on its own initiative or act at the request of a state subdivision (local government). A rule request from local government is limited to waters "within the subdivision's territorial limits." [12] This is a substantial limitation to regulating ocean waters since most local government territory does not extend into the ocean.

A violation of the commission's rules is generally a misdemeanor punishable by a fine not to exceed \$250. [13]

In recent years, the use of jet skis (sometimes referred to as personal watercraft or thrill craft) and airboats has increased in the state's estuarine and ocean waters. With this increase has come conflict and attempts by state and local government to regulate solutions. The Wildlife Resources Commission has the power to regulate jet skis and airboats in the state's estuarine and ocean waters. And local governments clearly have the authority to request commission regulation of activities within their jurisdictional waters. However, the commission has not become involved in regulating these types of boating activities, and the trend has been for local governments to attempt regulation at the local level rather than request commission action.

Because of the uncertainty surrounding oceanfront cities' ability to regulate ocean activities, the state Legislature passed General Statute 160A-176.2 authorizing some towns to regulate "personal watercraft" in the Atlantic Ocean. As of early 1994, the Legislature had given this authority to Atlantic Beach, Cape Carteret, Carolina Beach, Caswell Beach, Emerald Isle, Holden Beach, Long Beach, Ocean Isle Beach, Southport, Sunset Beach, Topsail Beach, Wrightsville Beach and Yaupon Beach. Additional oceanfront communities will likely be added as conflicts grow. It is important to note that the legislation sets no oceanward limit to which the cities can regulate.

Local ordinances passed under the authority of GS 160A-176.2 must be consistent with the Boating Safety Act. In general, local ordinances can be more restrictive so long as they do not prohibit the regulated activities. [14]

Surfing, Swimming, Skiing and Scuba Diving

Many oceanfront towns have adopted ordinances to regulate swimming and surfing through the authority granted them by General Statute 160A-176.1. Unlike GS 160A-176.2, this statute grants regulatory power to all oceanfront towns. It sets no oceanward limit to which they can regulate.

In addition to local power, the state's Boating Safety Act gives the Wildlife Resources Commission power to regulate these activities. The act prohibits reckless or negligent skiing, surfing or similar activities. [15] It also forbids a boater from towing anyone on skis, surfboard or a similar device without an onboard observer or rearview mirror for monitoring that person or equipping the skier or surfer with a life preserver. [16] The act further prohibits water skiing, surfboarding or similar activities from one hour after sunset to one hour before sunrise. [17] Local ordinances passed under authority of GS 160A-176.1 must be consistent with the Boating Safety Act. In general, local ordinances can be more restrictive so long as they do not altogether prohibit or outlaw swimming or surfing. [18]

Local governments likely have the authority under GS 160A-176.1 to regulate scuba diving, since it involves swimming. The Boating Safety Act regulates skin and scuba diving in state waters. For example, it states that "no person shall engage in skin or scuba diving ... without displaying a diver's flag from a mast, buoy or other structure" [19] Anyone operating a vessel in state

waters "shall (not) permit such vessel to approach closer than 50 feet to any structure from which a diver's flag is then being displayed." [20] Violators are guilty of a misdemeanor and subject to a fine of no more than \$25. [21]

Recreational Fishing

Fishing activities, including recreational fishing, are discussed in Section 6 of this report. The saltwater fishing license is a leading recreational fishing issue.

Recommendations

I. Because of the increasing ocean water conflicts, the task force should encourage the General Assembly to consider authorizing local governments to regulate a broad range of activities out to one mile seaward of the mean low tide. This power must be consistent with state and federal law [see Section 2, recommendation III].

Cities and counties should have authority to regulate jet skiing, airboating, surfing, swimming, diving and commercial activities originating from the public beach (such as porpoise-watching expeditions). The ability to regulate, however, should not include the ability to prohibit these activities. Instead, local governments should be encouraged to accommodate as many uses as possible through water-use zoning.

Current law allows coastal towns to regulate swimming, surfing (and probably diving) in ocean waters. Jet skis can be regulated in some coastal towns. The law does not establish an oceanward regulatory limit, and counties are not included in the legislation.

II. The task force should recommend that the Wildlife Resources Commission comprehensively evaluate jet skis and airboats, considering nuisance and safety concerns.

III. The task force should recommend that the Marine Fisheries Commission consider a saltwater recreational fishing license. Revenue collected should go into a dedicated fund for marine resources management, enhancement, enforcement and administration rather than the state's general fund [see Section 6, recommendation II].

Footnotes

- [1] GS 1-45.1.
- [2] GS 75A-1.
- [3] GS 75A-2(5).
- [4] GS 75A-2(6).
- [5] GS 75A-3.
- [6] GS 75A-7.
- [7] GS 75A-6.
- [8] GS 75A-10.
- [9] GS 75A-2(1).
- [10] GS 75A-15.
- [11] GS 75A-15(a).
- [12] GS 75A-15(b).
- [13] GS 15A-18(a).
- [14] GS 160A-176.2(a).
- [15] GS 75A-10(a).
- [16] GS 75A-13(a).
- [17] GS 75A-13(b).
- [18] GS 75A-176.1(a).
- [19] GS 75A-13.1(a).
- [20] GS 75A-13.1(c).
- [21] GS 75A-18(b).

**MARINE PROTECTED
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Introduction

Over the years, as living and nonliving resources have been harvested and land has been developed, areas have been recognized as special because of ecological, cultural or historical qualities. To protect these areas, laws have established national and state parks, wild and scenic rivers and preserved the archeological and historical sites that map history and our cultural heritage. Even though there is a tradition of protecting these special places on land, the idea of doing so in the ocean is relatively new. In recent years, however, new legislation has been passed and existing legislation manipulated to protect special sites in the marine environment. The most notable of these efforts — the National Marine Protection, Research and Sanctuaries Act; the Abandoned Shipwreck Act; and North Carolina's Archaeological Resources Protection Act — are discussed in this section.

The Marine Protection, Research and Sanctuaries Act

The Marine Protection, Research and Sanctuaries Act attempts to extend the rationale for protecting most national parks to ocean areas with similar qualities. Section 1431 of the act reads:

The U.S. Congress finds that:

- (1) this nation historically has recognized the importance of protecting special areas of its public domain, but these efforts have been directed almost exclusively to land areas above the high watermark;
- (2) certain areas of the marine environment possess conservation, recreational, ecological, historical, research, educational or aesthetic qualities that give them special national, and in some cases, international significance;
- (3) while the need to control the effects of particular activities has led to enactment of resource-specific legislation, these laws cannot in all cases provide a coordinated and comprehensive approach to the conservation and management of special areas of the marine environment;
- (4) a federal program that identifies special areas of the marine environment will contribute positively to marine resources conservation research and management;

- (5) such a federal program will also serve to enhance public awareness, understanding, appreciation and wise use of the marine environment; and
- (6) protection of these special areas can contribute to maintaining a natural assemblage of living resources for future generations. [1]

To address the above findings, the act lays out a series of purposes or goals. They are:

- (1) to identify and designate as national marine sanctuaries areas of the marine environment which are of special national significance;
- (2) to provide authority for comprehensive and coordinated conservation and management of these marine areas, and activities affecting them, in a manner that complements existing regulatory authorities;
- (3) to support, promote and coordinate scientific research on, and monitoring of, the resources of these marine areas, especially long-term monitoring and research of these areas;
- (4) to enhance public awareness, understanding, appreciation and wise use of the marine environment;
- (5) to facilitate to the extent compatible with the primary objective of resource protection all public and private uses of the resources of these marine areas not prohibited pursuant to other authorities;
- (6) to develop and implement coordinated plans for the protection and management of these areas with appropriate federal agencies, state and local governments, Native American tribes and organizations, and other public and private interests concerned with the continuing health and resilience of these marine areas;
- (7) to create models of, and incentives for, ways to conserve and manage these areas;
- (8) to cooperate with global programs encouraging conservation of marine resources; and
- (9) to maintain, restore and enhance living resources by providing places for species that depend upon these marine areas to survive and propagate. [2]

The act gives the secretary of the U.S. Department of Commerce the authority to identify areas for sanctuary status. In reviewing an area for designation, the secretary must consider:

- (1) the area's natural resource and ecological qualities, including its contribution to biological productivity, maintenance of ecosystem structure, maintenance of ecologically or commercially important or threatened species or species assemblages, maintenance of critical habitat of endangered species and the biogeographic representation of the site;
- (2) the area's historical, cultural, archaeological or paleontological significance;
- (3) the present and potential uses of the area that depend on maintenance of the area's resources, including commercial and recreational fishing, subsistence uses, other commercial and recreational activities, and research and education ... ;
- (4) the existing state and federal regulatory and management authorities applicable to the area and the adequacy of those authorities to fulfill the purposes and policies of this chapter;
- (5) the manageability of the area;
- (6) the public benefits to be derived from sanctuary status ... ;
- (7) the negative impacts produced by management restrictions on income-generating activities such as living and nonliving resources development; and
- (8) the socioeconomic effect of sanctuary designation. [3]

As a prerequisite to designating a specific site, the secretary must list all potential marine sites that may be considered for designation. [4] This evaluation list is an attempt to categorize sites that meet the initial threshold of special area. The secretary can select from the list certain sites worthy of active candidate status. [5] To be listed as active, the site must fulfill the purposes of the act and be "of special national significance due to its resources or human-use values" [6] The secretary must also find that existing federal and state laws are insufficient for a comprehensive and coordinated conservation effort of the site and that the site in question is manageable. Selection as an active candidate begins the formal sanctuary designation-evaluation process.

For active candidate sites, the secretary must prepare a resource assessment report as part of the designation process. [7] This report must document all present and potential uses of the area, including commercial and recreational fishing and other commercial or governmental uses.

The secretary is also required to notify a host of parties that could be affected by the designation. In addition to providing notice through publication in the Federal Register, the secretary must contact the media in directly affected communities. The secretary must also submit notice to the appropriate committees of both the House and Senate of the U.S. Congress. [8] Finally, the secretary must hold at least one public hearing in the coastal area that will be affected by the designation.

A draft environmental impact statement and management plan must also be prepared as part of the designation process.

In the case of a sanctuary that is to be located partially or entirely within the seaward boundary of a state, the governor of that state can find the designation unacceptable. In this case, the designation will not take effect in the area of the sanctuary lying within the seaward boundary of the state. [9]

The culmination of the designation process is the issuance of the final environmental impact statement and management plan. The management plan is published in the Code of Federal Regulations and describes the sanctuary. It also lists activities that are permissible and prohibited and describes the permitting process for permissible activities.

Each sanctuary has its own special characteristics; consequently, the management plans are individually tailored. For example, the *USS Monitor* sanctuary off North Carolina's coast has its own list of prohibited activities to protect the historic nature of the site. They include a prohibition of the following activities:

- (1) anchoring in any manner, stopping, remaining or drifting without power at any time;
- (2) any type of subsurface salvage or recovery operation;
- (3) any type of diving, whether by an individual or by a submersible;
- (4) lowering below the surface of the water any grappling, suction, conveyor, dredging or wrecking device;

- (5) detonation below the surface of the water of any explosive mechanism;
- (6) seabed drilling or coring ... [10]

Even though each sanctuary has specifically tailored plans, there are certain similarities among activities prohibited in most areas. One is the prohibition against extracting minerals (mining) and drilling for oil or gas.

In 1988 and 1992, the sanctuary program was substantially amended. The National Atmospheric and Oceanic Administration was given authority to review federal agency actions that may affect a sanctuary resource. Important provisions for enforcement and liability were added to give greater authority to sanctuary designation and management plans. [11] The amendments state that it is unlawful to:

- (1) destroy, cause the loss of or injure any sanctuary resource managed under law or regulations for that sanctuary;
- (2) possess, sell, deliver, carry, transport or ship by any means any sanctuary resource taken in violation of this section ... [12]

A sanctuary resource is "any living or nonliving resource ... that contributes to the ... value of the sanctuary." [13] The amendments create a rebuttable presumption that all sanctuary resources onboard a vessel were taken in violation of the act or regulations. [14] Enforcement authorities are granted broad powers to board, search and seize vessels and to impose penalties of up to \$100,000 per violation per day. [15]

To date, 13 marine sanctuaries have been designated in two phases. The first phase began with the *USS Monitor* in 1975 and included the additional designations of Key Largo and Looe Key off Florida; Gray's Reef off Georgia; the Channel Islands, Point Reyes and Cordell Banks in California; and Fagatele Bay in the American Samoas. The second and more recent phase designated the Florida Keys, Monterey Bay, Stellwagen Bank, the Hawaiian Humpback Whale and the Flower Garden Banks. Two sites are proposed off Washington state's shoreline — Olympic Coast and Northwest Straits sanctuaries. The second phase of sanctuaries differs from the first in that it encompasses extensive ocean areas of both federal and state jurisdiction. Designation of large ocean areas allows management of more activities that affect sanctuary resources and provides the opportunity to develop an ecosystem approach to resource management. [16]

Conclusion

One of the primary reasons that Congress passed the Marine Protection, Research and Sanctuaries Act was the belief that existing laws were not sufficient to manage vital marine resources in a coordinated and comprehensive way. The National Marine Sanctuary Program creates marine parks where important ecological and historical resources can be preserved and protected. The act also promotes multiple uses of sanctuaries. Finding a balance between protection and use is presenting the program one of its greatest challenges.

Abandoned Shipwrecks — Special Archaeological Sites

Many ships have been lost trying to navigate through North Carolina's treacherous capes. As a consequence, this stretch of ocean shoreline is known as the "Graveyard of the Atlantic."

It is estimated that over 3,700 sunken vessels lie off the North Carolina coast — the majority within five miles of shore. [17] Most of the seafaring ships are thought to be off the Outer Banks or near the mouth of the Cape Fear River near Wilmington. Following is a description of how the federal government and North Carolina have addressed issues of shipwreck ownership, exploration and recovery, and the preservation of the often vital history represented by many of these wrecks.

The Abandoned Shipwreck Act of 1987

In passing the Abandoned Shipwreck Act, Congress found that states are responsible for managing certain shipwrecks that have been deserted and to which the owner has relinquished ownership rights. [18] The act first gives title of abandoned wrecks to the federal government and then to the states if the wreck is:

- (1) embedded in submerged lands of a state;
- (2) embedded in coralline formations protected by a state on submerged lands of a state; or
- (3) on submerged lands of a state and is included in or determined eligible for inclusion in the National Register (of Historic Places as determined under the National Historic Preservation Act of 1966). [19]

Consequently, North Carolina has title to all embedded abandoned shipwrecks within its territorial waters. Wrecks that are not embedded must either be on the National Register or eligible for the register in order to be state-owned. The United States retains title to any abandoned shipwreck in or on (embedded or not) its lands. The act defines embedded as:

... firmly affixed in the submerged lands or in coralline formations such that the use of tools of excavation is required in order to move the bottom sediments to gain access to the shipwreck, its cargo and any part thereof ... [20]

Congress did not define "abandoned," although it is defined by a regulation of the U.S. Department of Interior's National Park Service, the agency responsible for implementing the act. Abandoned is defined in the Code of Federal Regulations as:

Any shipwreck to which title voluntarily has been given up by the owner with the intent of never claiming a right or interest in the future without vesting ownership in any other person. By not taking any action after a wreck incident either to mark and subsequently remove the wrecked vessel and its cargo or to provide legal notice of abandonment to the U.S. Coast Guard and the U.S. Army Corps of Engineers, as required under provisions in the Rivers and Harbors Act (33 U.S.C. 409), an owner shows intent to give up title. Such shipwrecks ordinarily are treated as being abandoned after the expiration of 30 days from the sinking. [21]

The definition also states that if a wreck owner is paid the full value of the vessel (such as an insurance company indemnifying a loss), the paying party possesses title for purposes of the act. Any sunken warship or other vessel entitled to sovereign immunity remains the property of its flag nation without formal action to the contrary. This sovereign immunity standard also applies to any cargo, unless it was unlawfully captured, whereby title is vested in the nation or person from which it was illegitimately taken. Shipwrecks entitled to sovereign immunity are warships and other vessels used for military or governmental, noncommercial purposes at the time of sinking. Many shipwrecks off North Carolina's coast are

foreign vessels, although relatively few are warships. Even so, some historical data is needed to determine if a particular ship was used for purposes at the time of its sinking that would entitle it to sovereign immunity.

Absent such sovereign immunity, it appears from the statutory and regulatory language that most of North Carolina's shipwrecks are abandoned. It is interesting to note that many of the wrecks off the Outer Banks occurred before the United States existed, let alone before the federal Rivers and Harbors Act.

Practically, the persons, companies or nations that owned these vessels had no means to mark their locations or seek their recovery since most went down before technology allowed for such processes. With regard to shipwrecks whose cargo contained bullion or other valuable resources, there may be contention over what constitutes the voluntary release of title with the intent of never claiming a future interest.

Even so, the act cannot apply to a shipwreck — classified as abandoned or not — unless it is actually located. The National Geographic Society studied North Carolina's shipwrecks in 1970 with the help of Outer Banks historian David Stick. Although they identified more than 500 wrecks, their information is not accurate enough to find the remains of most of those vessels. The Underwater Archaeology Unit of the N.C. Division of Archives and History has disclosed that there are about 3,700 shipwrecks in North Carolina territorial waters or off its coast. [22] Yet the division estimates that only a small percentage of the state's bottomlands have been surveyed for submerged archaeological sites, leaving the vast majority of these shipwrecks unaccounted for.

Recognizing that nonembedded, abandoned shipwrecks may have historical significance, Congress provided that title to these wrecks could also be claimed and transferred to the states if they qualified for the National Register. The act states the following:

... The secretary of the interior, after consultation with the appropriate state historic preservation officer, shall make a written determination that an abandoned shipwreck meets the criteria for eligibility for inclusion in the National Register of Historic Places ... [23]

The criteria for eligibility are outlined in the federal regulations.

To qualify, districts, sites, buildings, structures and objects must possess integrity of location, design, setting, materials, workmanship, feeling and association. They must be significant in American history, architecture, archaeology and culture, and they must:

- (a) be associated with events that have made significant contribution to the broad patterns of our history;
- (b) be associated with the lives of persons significant in our past;
- (c) embody the distinctive characteristics of a type, period or method of construction; represent the work of a master; possess high artistic values or; represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) have yielded, or may be likely to yield, information important in prehistory or history. [24]

The National Park Service monitors the National Register, but nominations are submitted by the state historic preservation officer. In North Carolina, the director of the Division of Archives and History is also the state historic preservation officer. The N.C. National Register Advisory Committee reviews potential nominations and provides the state historic preservation officer with information about prospective properties and sites. [25] With regard to shipwrecks, the National Register Advisory Committee is aided by the Underwater Archaeological Unit and its divers and researchers. As mentioned already, locating a shipwreck is often the most challenging concern. It must still be explored and studied to determine its eligibility. This takes time and resources. The National Park Service has final authority in listing sites in the National Register. North Carolina has 57 shipwrecks listed in the National Register, the most for any state. New York ranks second with 17 listings. [26]

The Abandoned Shipwreck Act recognizes that shipwrecks offer adjacent states recreational and educational opportunities, biological sanctuaries and possibilities for historical research. [27] States are charged with protecting natural resources and habitat areas, guaranteeing recreational exploration of shipwreck sites and allowing for appropriate public and private sector recovery of wrecks consistent with the protection of histori-

cal values and environmental integrity. [28] The act encourages states to create underwater parks for additional protection and provides funds under the National Historic Preservation Act for the "study, interpretation, protection and preservation of historic shipwrecks and properties." [29] Federal guidelines assist states in developing legislation and management programs for shipwreck sites covered by the legislation. [30] However, the federal government is not authorized to review state programs, and transfer of ownership is not dependent on federal approval of state management schemes.

North Carolina's Law of Abandoned Shipwrecks and Other Underwater Archaeological Sites

The state Legislature has passed law specifically for abandoned shipwrecks and other underwater archaeological sites. General Statute 121-22 et seq. recognizes that federal law (including the Abandoned Shipwreck Act and the Submerged Lands Act) establishes the conditions for asserting state ownership over abandoned wrecks within the state's jurisdictional waters. However, in addition to federal law, the state statute establishes a 10-year threshold for which a shipwreck must remain unclaimed before its rules and regulations become operable (under federal law, there is a presumption of abandonment after 30 days).

Under the act, the Department of Cultural Resources (which contains the Division of Archives and History and the Underwater Archaeological Unit) is the custodian of all of North Carolina's abandoned shipwrecks and underwater archaeological artifacts. The law establishes a permit/license process to control exploration, recovery or salvage operations for shipwrecks that have remained unclaimed for 10 years. Permit applications may be granted if the department finds they are in the best interest of the state. Permits may include, but need not be limited to, the following terms:

- (1) payment of monetary fees to the department;
- (2) that a portion or all of such relics or artifacts be delivered to the custody and possession of the department;
- (3) that a portion or all of such relics or artifacts may be sold or retained by the licensee;
- (4) that a portion or all of such relics or artifacts may be sold or traded by the department ...

Holders of permits or licenses shall be responsible for obtaining permission of any federal agencies having jurisdiction, including the U.S. Coast Guard, the U.S. Department of the Navy and the U.S. Army Corps of Engineers prior to conducting any salvage operations. [31]

If a shipwreck or other archaeological site is more than 50 years old, it becomes an archaeological resource eligible for more protection under the state's Archaeological Resources Protection Act.

North Carolina's Archaeological Resources Protection Act

North Carolina passed the Archaeological Resources Protection Act in 1981, stating as its primary purpose "securing, for the present and future benefit of the people of North Carolina, the protection of archaeological resources and sites that are on state lands" [32] The law was drafted to control the illegitimate use and exploitation of the state's archaeological resources.

An archaeological resource is defined by the act as "any material remains of past human life or activities that are at least 50 years old and that are of archaeological interest" [33] Under this definition, any shipwreck 50 or more years old that is of interest to archaeologists would be considered a "resource" to be regulated by this act. In line with the act's intent to protect archaeological resources and allow for research, the statute establishes a permit process. [34] Permit applications are received and reviewed by the Department of Cultural Resources (which contains the Division of Archives and History) in consultation with the N.C. Department of Administration. [35] Permits may be issued if it is found that:

- (1) the applicant is qualified to carry out the permitted activity;
- (2) the proposed activity is undertaken for the purposes of furthering archaeological knowledge in the public interest;
- (3) the currently available technology and the technology the applicant proposes to use are such that the significant information contained in the archaeological resource can be retrieved;
- (4) the funds and the time the applicant proposes to commit are such that the significant information contained in

the archaeological resources can be retrieved;

- (5) the archaeological resources that are collected, excavated or removed from state lands and associated records and data will be preserved by a suitable university, museum, or other scientific or educational institution;
- (6) the activity pursuant to the permit is not inconsistent with any management plan applicable to the state lands concerned; and
- (7) the applicant shall bear the financial responsibility for the reinternment of any human burials or human skeletal remains excavated or removed as a result of the permitted activities. [36]

In addition, the Department of Cultural Resources can add to the permit "any terms, conditions or limitations ... deem(ed) necessary" [37]

It should be noted that the permit criteria do not allow these resources to be used for private interests. This is important for shipwrecks with valuable metals as cargo that could represent a great source of wealth. A shipwreck that is considered an archaeological resource may not be legally used for personal gain by salvagers. The shipwreck and its cargo are treated as state property to be used for the public interest.

The statute lists prohibited acts and civil penalties. For example, it is unlawful to excavate, remove, damage or otherwise alter or deface any archaeological resource on state lands without a permit. It is also unlawful to sell, purchase, exchange, transport or receive any archeological resource excavated or removed from state lands. [38] Any person who knowingly and willfully violates these provisions can be fined up to \$2,000 and/or imprisoned up to six months. [39] Also, civil penalties of up to \$5,000 may be assessed by the Department of Administration in consultation with the Department of Cultural Resources. [40]

In formulating a comprehensive ocean policy for North Carolina, it is important to know whether development activities can be regulated by this act. The act's permit criteria are designed to control only the direct exploitation of a resource, to ensure that divers and salvagers are not damaging or removing archaeological resources. However, it also prohibits any unpermitted activity that damages or alters these resources. It could be argued that the act applies to anyone damaging archaeological resources, either directly through unpermitted salvage operations or indirectly

through development activities (ocean mining).

As North Carolina looks to its ocean waters for more resources and development opportunities, it is likely that such development, exploration and exploitation will adversely affect an archaeologically significant site. This is especially true given the large number of shipwrecks within the state's territorial sea.

North Carolina's Underwater Archaeological Site Inventory

North Carolina's Underwater Archaeological Unit, Division of Archives and History, keeps an inventory of state sites. As of May 1991, there were about 500 underwater archaeological sites recorded. These sites are divided into the following five categories with the number of sites notated:

- (1) small craft — 158 sites; less than 40 feet long and built for daytime use;
- (2) steamships — 72 sites; 40 of Civil War vintage, including 21 on the National Register;
- (3) sailing vessels — 92 sites;
- (4) unpowered vessels (barges)— 70 sites;
- (5) miscellaneous — remains of wharves and piers on predominantly nearshore sites that lend historical information on commerce and local trade. [41]

CAMA and Natural and Cultural Resource Areas

As discussed in Section 3 of this report, North Carolina's Coastal Area Management Act (CAMA) empowers the Coastal Resources Commission to designate areas of environmental concern (AECs). [42] Several general areas in the ocean — such as public trust and estuarine waters — have been established as AECs. However, the process allows for additional (and more specific) AECs to be nominated. [43] AEC nominations can be made for coastal complex natural areas, areas that sustain remnant species, unique geologic formations, significant architectural resources and significant archaeological resources. [44] For example, Permuda Island, a former barrier island located within Stump Sound in Onslow County, was successfully nominated and designated as an AEC because of archaeological resources. [45] Once an AEC is established, the Coastal Resources Commission can protect the resources of the area by writing specific standards to control development. AEC nomination and designation is possible for special resource areas in the state's ocean.

It should be noted, however, that archaeological resources and fragile ecological areas in North Carolina's ocean waters already fall within CAMA's public trust and estuarine waters AECs. Consequently, proposed development activities (such as ocean mining or the extraction of oil and gas) in these areas would fall under CAMA's review process and would need to meet those regulatory standards before being allowed. Part of the review process circulates permit applications to other state and federal agencies, including those responsible for protecting critical environmental and archeological resources. Comments and/or objections from these agencies are considered in the permit review process. However, as noted in Section 3 of this report, CAMA standards have a land or nearshore focus and were not developed with ocean resources in mind.

Recommendations

I. With regard to the Marine Protection, Research and Sanctuaries Act, the task force should review the secretary of commerce's site evaluation list for sites off North Carolina's coast. Further, it should determine if any sites lie in the state's territorial waters. Sites that are eligible for active candidate status should be noted.

For sites that are listed, the state should monitor the designation process and participate in future management plans.

For sites that may involve state territorial waters, the Coastal Resources Commission should consider AEC designation and joint management plans with the secretary of the U.S. Department of Commerce.

II. With regard to CAMA, the task force should recommend that the Division of Coastal Management and Coastal Resources Commission:

A. review current standards for the public trust and estuarine waters AECs to ascertain their adequacy in protecting important natural and archaeological resources from development in the state's ocean; and

B. conduct an inventory of the state's ocean waters to ascertain whether any areas should be nominated as a natural or cultural resource AEC.

III. With regard to North Carolina's Archaeological Resources Protection Act, the task force should recommend that the Department of

Cultural Resources clarify the act's application to activities (such as ocean mining) that may indirectly affect archaeological resources. At a minimum, the department should clarify the act to more powerfully apply it in the CAMA review process.

Footnotes

- [1] 16 U.S.C.A. 1431.
- [2] 16 U.S.C.A. 1431(b).
- [3] 16 U.S.C.A. 1433(b).
- [4] 15 CFR 922.20.
- [5] 15 CFR 922.30.
- [6] 15 CFR 922.33(a)(2)(i).
- [7] 16 U.S.C.A. 1433(b).
- [8] 16 U.S.C.A. 1434(a).
- [9] 16 U.S.C.A. 1434(b)(1).
- [10] 15 CFR 924.3.
- [11] Christie, Donna. Coastal and Ocean Management Law. West Publishing Co., 1994.
- [12] 16 U.S.C.A. 1436.
- [13] 16 U.S.C.A. 1432(8).
- [14] 16 U.S.C.A. 1437(d)(4).
- [15] 16 U.S.C.A. 1437(b).
- [16] Christie, Donna.
- [17] Information provided by Richard Lawrence, Underwater Archaeological Unit, Division of Archives and History, Department of Cultural Resources, June 1994.
- [18] 43 U.S.C.A. 2101.
- [19] 43 U.S.C.A. 2105(a).
- [20] 43 U.S.C.A. 2102(a).
- [21] 55 CFR 50,120 (1990).
- [22] The number of shipwrecks within the three-mile territorial waters is not precisely known, but

this information is important since North Carolina is only entitled to ownership rights over those abandoned shipwrecks within its territorial waters.

[23] 43 U.S.C.A. 2105(b).

[24] 56 CFR 60.

[25] 7 NCAC 4R .0304.

[26] Information provided by Richard Lawrence, Underwater Archaeological Unit, Division of Archives and History, Department of Cultural Resources, June 1994.

[27] 43 U.S.C.A. 2103.

[28] 43 U.S.C.A. 2103(a)(2).

[29] 43 U.S.C.A. 2103(b).

[30] 43 U.S.C.A. 2104.

[31] GS 121-25.

[32] GS 70-11.

[33] GS 70-12(2).

[34] GS 70-13.

[35] GS 70-13(b).

[36] Id.

[37] GS 70-13(c).

[38] GS 70-15(a) and (b).

[39] GS 70-15(c).

[40] GS 70-16.

[41] This information will be updated in August 1994.

[42] GS 113A-113.

[43] GS 113A-115.

[44] 15 NCAC 7H .0500.

[45] 15 NCAC 7H .0509(e).

APPENDIX I

N.C. Ocean Resources Task Force

APPENDIX I

N.C. OCEAN RESOURCES TASK FORCE

Science

Dr. Larry Cahoon, Chair
Department of Biological Sciences
UNC-Wilmington
Wilmington, NC 28403
910/395-3706
910/350-4066 (fax)
ocean ecology

Richard Lawrence
Cultural Resources/Underwater Archaeology
P.O. Box 58 -- Hwy. 421 S
Kure Beach, NC 28449
910/458-9042
910/458-4093 (fax)

Dr. Len Pietrafesa
Marine, Earth & Atmosph. Sciences
N.C. State University
Box 8208
Raleigh, NC 27695-8208
919/515-3717
919/515-7802 (fax)
physical oceanography

Charles Gardner
Division of Land Resources
Archdale Building
512 N. Salisbury Street
Raleigh, NC 27604-1148
919/733-3833
919/733-4407 (fax)

Dr. Stan Riggs
Department of Geology
East Carolina University
Greenville, NC 27858
919/757-6360
919/757-4391 (fax)
geology

Roger Schecter
Division of Coastal Management
P.O. Box 27687
Raleigh, NC 27611-7687
919/733-2293
919/733-1495 (fax)

State Resource Agencies

Beth McGee
Div. of Env't. Mgmt.
Water Quality Section
P.O. Box 29535
Raleigh, NC 27626-0535
919/733-7015

Gail Miller
N.C. Aquarium at Ft. Fisher
P.O. Box 130
Kure Beach, NC 28449
910/458-8259
910/458-6812 (fax)
marine education

Fentress Munden
Division of Marine Fisheries
P.O. Box 769
Morehead City, NC 28557
919/726-7021
919/726-0254 (fax)

Federal Resource Agencies

Tony Giordano
Minerals Management Service
Atlantic OCS Region
381 Elden Street, MS 4030
Herndon, VA 22070-4817
703/787-1283
703/787-1284 (fax)

Jack Wilson
N.C. State Ports Authority
P.O. Box 9002
Wilmington, NC 28402
910/343-6232
910/343-6237 (fax)

Donna Wieting
Nat. Oceanic & Atmosph. Admin.
Ecology & Env. Conservation
Room 6222 -- Herbert Hoover Bldg.
14th & Constitution Ave., NW
Washington, DC 20230
202/482-5181
202/482-1156 (fax)

Dr. Alex Chester
National Marine Fisheries Service
Beaufort Laboratory
101 Pivers Island Road
Beaufort, NC 28516-9722
919/728-8724
919/728-8784 (fax)

George Matthews
U.S. Coast Guard
Environmental Protection Branch
431 Crawford Street
Portsmouth, VA 23704-5004
804/398-6638
804/398-6503 (fax)

Phillip Payonk
Environmental Resources Branch
U.S. Army Corps of Engineers
P.O. Box 1890
Wilmington, NC 28402-1890
910/251-4589
910/251-4653 (fax)

Lynn Phillips
Community Liaison
c/o Commanding General
Box 8003
MCAS Cherry Point, NC 28533-003
919/466-3041
919/466-3635 (fax)

Other

Walter Clark
NC Sea Grant
Box 8605, N.C. State Univ.
Raleigh, NC 27695
919/515-2454
919/515-7095 (fax)
legal

Melvin Shepard
Southeastern Waterman's Assoc.
P.O. Box 0015
Sneads Ferry, NC 28460
919/327-1231
commercial fishing

Bo Nowell
Atlantic Coast Conservation Assoc.
212 Leckford Way
Cary, NC 27511
919/733-3590
recreational fishing

Todd Miller
N.C. Coastal Federation
Hadnot Creek Farm
3223-4 Hwy. 58
Swansboro, NC 28584
919/393-8185
environmental

Webb Fuller
Town Manager
P.O. Box 99
Nags Head, NC 27959
919/441-5508
919/441-4680 (fax)
local government

Dave Weaver
New Hanover Co. Planning Dept.
414 Chestnut St., Room 101
Wilmington, NC 28401
910/341-7139
910/341-4035 (fax)
local government

Staff

Kim Crawford
Division of Coastal Management
P.O. Box 27687
Raleigh, NC 27611-7687
919/733-2293
919/733-1495 (fax)

APPENDIX 2

North Carolina Marine Science Council

Report on State-Federal Relations

NORTH CAROLINA MARINE SCIENCE COUNCIL

REPORT OF THE COMMITTEE ON STATE-FEDERAL RELATIONS

April 1991

CONCLUSION

At the September 1990 Marine Science Council meeting, the committee on state-federal relations was instructed to investigate and to provide the council with a report on whether North Carolina should actively support federal legislation that would extend the jurisdiction of all coastal states over submerged lands and waters from three geographical miles seaward of their coastal baselines to twelve nautical miles.¹ The committee's opinion is that seeking such an extension of state jurisdiction would not, at this time, be in the best interests of the state. The committee believes that the October 1990 amendments to the consistency provisions of the federal Coastal Zone Management Act of 1972 provide the state with a tool to protect its citizens' interests in the conservation, management and use of coastal lands, offshore waters and natural resources without the disadvantages of extending state jurisdiction.

REPORT

A. Introduction

The committee's conclusion that North Carolina should not actively support an extension of its offshore jurisdiction from three to twelve miles is predicated upon an examination of what benefits North Carolina would receive as a result of such an extension, and whether those benefits outweigh the burdens that such an extension would impose on the state. A number of coastal states believe that, absent such an extension, they are being deprived of sources of revenue that are rightly theirs, not the federal government's, and that they are unable to adequately protect the legitimate interests of their citizens, coastal

¹ On January 16, 1991, H.R. 536 was introduced in the 102nd Congress. This bill, if enacted, would extend all coastal states' jurisdiction over offshore lands and waters seaward to twelve nautical miles. This would be accomplished by amending the Submerged Lands Act of 1953, which is discussed in this report. [The special circumstances of two states -- Texas and Florida -- already allow them to exercise jurisdiction in excess of three miles over Gulf of Mexico lands and waters.]

communities and coastal economies. In the case of North Carolina, the committee disagrees with this position.

In order to put the committee's conclusion in proper perspective, it is necessary to understand the legal currents that have shaped the relationship of coastal states and the federal government and to identify the precise interests, if any, that the State of North Carolina has in extending its offshore jurisdiction. Toward this end, the report first discusses the traditional three-mile territorial sea and the coastal states' authority over this area. Second, the report examines the impact of the CZMA on the coastal states' power to influence activities of federal agencies and permittees -- both within and beyond the traditional three mile territorial sea. Third, the impact of the 1988 extension of the United States territorial sea upon state claims to additional offshore jurisdiction and upon the states' authority under the CZMA is discussed. Fourth, the effect of the recent 1990 amendments to the CZMA on state authority is explored. Finally, in light of these developments, the question of what state interests, if any, would be advanced by the extension of its offshore jurisdiction is examined.

B. Federal and State Claims to the Traditional Territorial Sea

Early in our nation's history, the United States claimed a three-mile territorial sea. Until recently, three miles was the distance that, as a matter of international law, was generally accepted as the maximum width of a coastal nation's territorial sea and jurisdiction. Although the federal government traditionally acted to protect our national security, commercial and navigation interests in these waters, until the 1940s the federal government had little interest in regulating the exploitation of the natural resources lying in or under these coastal ocean waters. Indeed, until the 1940s, it was generally assumed that these offshore natural resources belonged to, and were under the control of, the adjacent coastal states.

In the 1940s the federal government asserted its claim of ownership and the right to control all natural resources seaward of the low-tide line of any coastal state. However, the only real resource of interest to the federal government at that time was the potential oil and gas reserves of the continental shelf. The federal government had little interest in the conservation and management of coastal fisheries, and was more than willing to leave their management to the individual adjacent coastal states.

Understandably, the coastal states resisted the federal government's claim. But, initially, the federal government prevailed. In a landmark decision, United States v. California, 464 U.S. 312 (1983), the U.S. Supreme Court held that the coastal states did not own or have primary authority over the natural resources lying within three miles of the coastline of the United States. The "Federal Government rather than the state has paramount rights in and power

over that belt, an incident to which is full dominion over the resources of the soil underlying that water area, including oil." (emphasis added). The states, however, did not give up in the face of this adverse decision. They continued to assert their traditional claim to the natural resources of this three-mile belt, especially the oil reserves and their potential revenues, through their congressional delegations.

The states' efforts finally bore fruit in 1953. In that year, Congress passed two related pieces of legislation: The Submerged Lands Act of 1953 and The Outer Continental Shelf Lands Act of 1953 (OCSLA). The first of these in essence turned over to the individual adjacent coastal states ownership of and control over all natural resources within and under the waters comprising the three-mile belt of coastal waters. This returned the coastal states' authority over these resources to what the coastal states thought existed prior to the 1948 United States v. California decision. The second piece of legislation, however, firmly asserted the authority of the federal government to the vast resources lying on or under the outer continental shelf (OCS), that is everything seaward of the three-mile belt that comprises the traditional territorial sea.

At that time, most offshore oil drilling was limited to shallow continental shelf waters subject to state control. Under these circumstances, if oil or gas existed, the coastal state received both the benefits and bore the burdens of offshore oil and gas operations. To the extent conflicts developed between these operations and other water uses, such as commercial fishing operations or tourism, the people of the state, through their state representatives, could make the choices they believed most appropriate for them.²

C. The Coastal Zone Management Act of 1972

1. Background

As offshore oil and gas drilling technology improved, it became feasible to drill in the deeper OCS waters that lie beyond three miles from shore -- waters under exclusive federal control. Both coastal states with oil and gas reserves within the three-mile belt and coastal states lacking any such reserves viewed the development of OCS oil and gas reserves with alarm. The coastal states believed that the OCSLA gave them little voice in OCS leasing and development decisions, even though they and their citizens bore the brunt of the economic and environmental burdens of these decisions. The financial burden of providing services for onshore OCS support facilities was placed upon state and local

² Even within the three-mile belt, the Submerged Lands Act of 1953 expressly left final authority over matters of navigation, commerce, national defense and international affairs in the hands of the federal government. 43 U.S.C. Sec. 1314(a). In addition, the act did not affect the continuing existence of the federal government's navigation servitude in this area.

governments. They did not receive any significant share of the revenues derived from OCS activities, but they and their citizens suffered from the adverse economic and environmental impacts of these onshore and offshore OCS facilities and activities on thriving commercial fishing and tourism industries. Commercial fishers in particular worried about potential interferences with fishing gear and fishing operations. In addition, after the 1969 Santa Barbara Channel oil rig blowout, there was heightened state and local concern about the potentially devastating economic and environmental effects of accidents associated with offshore drilling operations.

During the same period of time that these concerns were growing, Congress recognized the need to encourage states to engage in comprehensive coastal land and water use planning. The Coastal Zone Management Act of 1972 provided two incentives to coastal states to do such planning. The act provided participating coastal states with money for program development, through a system of federal grants, and imposed a requirement that all federal agency and permitted activities within a state's coastal zone must be "consistent" with a participating state's federally approved coastal zone management program. This "consistency" requirement was important because it meant that a state's efforts to protect its constituents' coastal land and water interests through comprehensive planning would not be lightly upset by activities of federal agencies and federal permittees in the coastal zone. Absent "consistency," neither the federal agencies' nor federal permitted activities could go forward. The act even gave coastal states some voice in OCS oil and gas drilling operations because it also imposed a consistency requirement on OCS federal permittees. However, despite the promise of the CZMA, state authorities' hopes of requiring federal agencies and permittees to act in conformity with the interests reflected in the state's approved coastal zone management plan were soon dashed by the limiting language of the CZMA consistency provisions and the even more limiting interpretation given that language by the U.S. Supreme Court.

2. Pre-1990 CZMA consistency provisions

Prior to 1990, the CZMA consistency provisions provided:

(c)(1) Each federal agency conducting or supporting activities directly affecting the coastal zone shall conduct or support those activities in a manner which is, to the maximum extent practicable, consistent with approved state management programs.

(c)(2) Any federal agency which shall undertake any development project in the coastal zone of a state shall insure that the project is, to the maximum extent practicable, consistent with approved state programs.

(c)(3)(A)...any applicant for a required Federal license or permit to conduct an activity affecting land or water uses in the coastal zone of that state shall provide...a certification that the proposed activity complies with the state's approved state management program and that such activity shall be conducted in a manner consistent with the program. ...

(B)...any person who submits... any plan for the exploration or development of, or production from, any area which has been leased under the Outer Continental Shelf Lands Act... shall... attach... a certification that each activity... complies with... [the state's] approved management plan and will be carried out in a manner consistent with such program...(emphasis added)

Both subparts (c)(3)(A) and (c)(3)(B) contain provisions allowing the issuance of any required federal permit or granting the necessary federal approval despite the lack of consistency with an approved state management program if, on appeal to the Secretary of Commerce, the Secretary finds that the "activity is consistent with the objectives of...[the CZMA] or otherwise necessary in the interests of national security."

3. State Dissatisfaction With CZMA Consistency Provisions

A coastal state's ability to limit the actions of federal entities, such as the United States Marine Corps, United States Air Force, or National Park Service, was limited in part by the definition of "coastal zone." The statutory definition of "coastal zone" expressly excluded "lands the use of which is by law subject solely to the discretion of or which is held in trust by the Federal Government, its officers or agents." Thus, development activities taking place on military bases, national forests, national seashores or other federal property located physically in the geographic area designated as the state's coastal zone did not have to be conducted in a manner consistent with an approved state coastal zone management program as long as the direct effects were confined to the federal lands. Even if the effects of such activities spilled over into what was defined as a state's coastal zone, such activities needed to be consistent with the state's approved management program only if two conditions were satisfied. The activities must (1) "directly affect" (2) "land or water uses" in the coastal zone itself.

The key phrase "directly affect" arguably covers only those activities that have a direct, identifiable impact. Using this interpretation, only those aspects of a federal project that can be shown to have such an impact are subject to the consistency requirement. Other aspects of the project could not be reviewed, no matter how otherwise inconsistent with the state's comprehensive attempt to manage its coastal zone through a federally approved management plan. Even

more significant was the limitation that the direct effects be on land or water uses. Adverse impacts upon a natural resource within the coastal zone were not covered absent an impact on a protected land or water use. As a result of these limitations on the consistency requirement, coastal states, such as North Carolina, found some of their attempts to compel federal entities to conform with the state management plan frustrated.

Seaward of the three-mile belt, subject to state jurisdiction, the states faced similar frustrations. The U.S. Supreme Court in Secretary of the Interior v. California, 464 U.S. 312 (1984), held that subpart (1) applied only to federal activities conducted or supported on federal lands physically situated in a state's coastal zone but excluded from the zone as formally defined by the CZMA. Thus, subpart (1) did not include proposed federal lease sales of oil and gas tracts located on the outer continental shelf, thereby foreclosing coastal states' efforts to assure that, from the very beginning of the formulation of a federal plan to develop OCS resources, the exploration for and development of OCS resources would be consistent with the state's efforts to protect land and water uses in its coastal zone. Furthermore, federal activity, other than oil and gas leasing, involving the waters of the OCS seemed to be excluded from the consistency requirements of subpart (c)(1) even if such activities might directly affect land or water uses in the coastal zone.

Finally, subpart (c)(3)(B), the only provision that speaks directly to OCS oil and gas activities, limited consistency to those OCS oil and gas exploration, development, and production activities that affected coastal zone land and water uses. The provision did not speak to effects upon natural resources within the coastal zone.

In the 1980s coastal states unsuccessfully attempted to have the CZMA amended to specifically require consistency for those federal entity and permittee activities that were exempt, or arguably exempt, from this consistency requirement. But, in late 1988 the coastal states saw a new opportunity to extend the size of their individual coastal zones and garner for themselves the benefits of natural resources within the enlarged coastal zone.

D. Extension of United States Territorial Sea and State Claims

On December 27, 1988, President Reagan, by presidential proclamation, declared that the United States was formally extending its territorial sea to twelve nautical miles. The coastal states responded to that proclamation with claims that: (1) their offshore jurisdiction was also extended from three to twelve miles and (2) the CZMA coastal zone now extended seaward twelve miles.

In light of the 1948 United States Supreme Court decision in United States v. California, the first contention -- that an expansion of the territorial sea of the

United States necessarily expanded the jurisdiction of the individual coastal states -- did not appear legally defensible. The only rights the individual coastal states had to the submerged lands and waters of the traditional three-mile belt were those given to them by congressional action through the Submerged Lands Act of 1953, an act that set a specific geographical mileage distance for the area subject to state ownership and jurisdiction. Recognizing the weakness of their legal arguments, the congressional representatives of coastal states offered legislation that would extend the authority of the individual coastal states seaward to the outer limits of the new twelve-mile territorial sea of the United States.

The argument that the coastal zone of a state with an approved coastal zone management program now extended to the outer limits of the new territorial sea was legally plausible. The CZMA's definition of coastal zone stated that "the zone... extends seaward to the outer limit of the United States territorial sea." Thus, if the territorial sea expanded, the coastal zone necessarily expanded also. The federal government's response to this argument was that the phrase "territorial sea," as used in the CZMA, meant the territorial sea as it existed at the time the act was passed by Congress, and that sea was a three mile one.

E. The 1990 Amendments to the CZMA

When the CZMA came up for reauthorization, these heated debates and the unaddressed concerns of the coastal states were at the center of congressional consideration of amendments to the CZMA. In the closing hours of the 101st Congress, major amendments to the CZMA were included in the Budget Reconciliation Act. These major amendments expand the scope of the consistency requirement and clarify the CZMA definition of the seaward limit of a state's coastal zone. The amended consistency provisions mandate:

(c)(1)(A) Each federal agency activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner consistent to the maximum extent practicable with the enforceable policies of approved State management programs. A Federal agency activity shall be subject to this paragraph unless it is subject to paragraph (2) or (3).

This amendment achieves a major goal of the coastal states. All federal agency activities, including oil and gas lease sales, are subject to the CZMA consistency requirement if the necessary relationship is shown. That nexus no longer requires a "direct affect," but it is sufficient if the activity simply "affects." In addition, activities that affect natural resources, not just land or water uses of the coastal zone, are covered. This amendment greatly enhances the ability of a coastal state to influence the design and implementation of federal activities that adversely affect the legitimate coastal zone interests of a state and its citizens.

In addition to the amendments to subparts (c)(1)(A), subparts (c)(3)(A) and (B) were amended. Activities affecting natural resources of the coastal zone were also included within their parameters. Thus, the 1990 amendments represent a significant legislative victory for coastal states.

The coastal states were less successful in having the seaward limits of the coastal zone extended to the outer limits of the new territorial sea. The amendments to the definition of "coastal zone" restrict the seaward limits to three geographic miles. However, given the expanded nature of the consistency requirement, the state will be able to require most federal activities that would affect the three to twelve-mile belt of waters to be done in a manner that is consistent with the state's coastal zone management plan. It is unlikely that a federal activity of significance to most states could take place within that belt and not "affect" a land or water use or natural resource of the state's coastal zone.

F. An Evaluation of Whether North Carolina Should Support An Extension of Coastal States' Offshore Jurisdiction To Twelve Miles

North Carolina's position on the proposal to extend state jurisdiction to the outer (twelve-mile) limits of the new United States territorial sea must be evaluated against this background. The core questions are: (1) What would North Carolina gain if its jurisdiction were extended to twelve nautical miles? (2) What burdens would such an extension impose on the state? and (3) Would the benefits outweigh the associated burdens?

Although a number of coastal states are advocating an extension of state territorial waters, the committee's view is that North Carolina's situation differs substantially from the proponents of an extension and, in light of North Carolina's situation, the state would gain little by such an action. In addition, any gains would be significantly offset by the additional fiscal and regulatory burdens associated with the management of this new water area.

A major force behind the proposal to extend coastal state offshore jurisdiction is the prospect of acquiring ownership and control over the natural resources, and their associated revenues, that may be present in the three to twelve-mile belt. For some states this is important; for North Carolina it is not.

The most important natural resources that might be found seaward of the traditional three-mile belt offshore are oil and gas, hard minerals, and fisheries. Coastal states such as California, Alabama, Mississippi, and Florida have such resources located three to twelve miles off their coasts. Currently the revenues derived from oil and gas production in that area go to the federal government, but if the states' jurisdiction were extended, the revenues would pass to the states.³

³ Any rights that the coastal states may have to revenues derived from development and exploitation of offshore resources depend on federal legislation

However, there is no evidence that oil and gas in any commercially significant amount is located under the continental shelf within twelve miles of North Carolina's coastline. What oil and gas may exist, as evidenced by the Mobil Oil project, lies much farther off our coast. Therefore, this particular benefit of an extension is not available to North Carolina.

There is also little evidence of any significant mineral deposits within twelve miles of North Carolina's coastline. There are phosphate deposits farther offshore, but there is no reason to believe that the offshore deposits that may exist will be the subject of any significant mining operations, and little chance that the state would derive any significant revenues from leasing such mining sites.

If such mining, on any limited scale, were ever proposed for areas of the continental shelf lying within twelve miles of North Carolina's coastline, the state could protect its coastal fisheries, tourism, water quality and similar activities through the consistency requirements of the amended CZMA. It is unlikely that any mining activity could take place in the three to twelve-mile belt that would not affect a land or water use or natural resource of the state's CZMA coastal zone. Thus, the state's regulatory concerns can be satisfied without making the three to twelve-mile offshore area part of the state's territorial jurisdiction.

The third, and most significant, natural resource in the three to twelve-mile belt is the coastal fisheries. At present fisheries beyond the current three-mile state belt are managed by the regional fishery councils, established by the Magnuson Fishery Conservation and Management Act of 1976. Although there may be dissatisfaction with some MFCMA regulations and a belief that, despite the intensive MFCMA management efforts, some of our offshore fisheries are in trouble, there is no reason to believe that the state can manage these resources more effectively. Furthermore, the state has neither the financial resources nor the personnel to manage fisheries or regulate fishing operations in the three to twelve-mile belt. Available information suggests that the North Carolina Division of Marine Fisheries' resources are already strained performing the division's present duties. With little additional revenues to be derived from any extension of North Carolina's offshore jurisdiction and the state's current fiscal crisis, the state simply does not have the money to undertake the responsibility for managing and regulating the coastal fisheries of the three to twelve-mile belt. Thus, gaining control of these fisheries is a major factor in any decision to advocate extension of North Carolina's offshore jurisdiction.

The Abandoned Shipwreck Act of 1987 gives coastal states title to most shipwrecks lying within offshore waters. For some states, perhaps the Gulf states, an extension of their jurisdiction might give them control over a larger number of wrecks, with either the power to protect such wrecks as historical sites

specifically granting them such rights. See footnote 1 for an example of such legislation.

or the prospect of additional revenues from any treasure that might be recovered. But few wrecks exist in the three to twelve-mile belt off the coast of North Carolina. Thus, North Carolina would not derive any significant shipwreck benefits from such an extension.

Extension of the state's jurisdiction would make the new area part of the State of North Carolina, subject to all of North Carolina's criminal and civil laws. Once again, the question must be asked whether North Carolina wishes to take on the burdens associated with the enforcement of state laws in this area. The committee does not see any benefit to the state in doing so.

There are other federal activities that take place beyond the outer limits of the United States territorial sea that legitimately concern the state. These activities, such as ocean dumping and oil and gas exploration and development, may adversely affect offshore fisheries outside the area subject to the state's present jurisdiction, or pose threats to water quality. These activities deeply concern the state because of the potential negative effects on commercial and recreational fisheries, tourism, or the environment. But extension of state jurisdiction to twelve miles will not give the state a stronger voice in the conduct of these activities. Instead, the state's best tool for influencing these activities is through the effective use of the new CZMA consistency requirements.

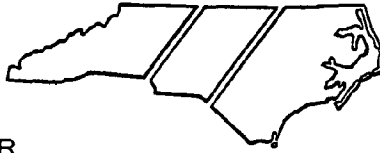
Thus, the committee concludes that, absent some evidence that an extension of North Carolina's offshore jurisdiction would significantly benefit the state, the state should not actively support such legislation. Instead, North Carolina's efforts should be directed toward identifying those offshore federal activities that conflict with the state's coastal interests, and determine which conflicts are not effectively addressed by the new CZMA consistency provisions. The state could then support additional CZMA consistency provisions or other federal laws to assure adequate state input into such federal activities.

APPENDIX 3

State of North Carolina

Executive Order Number 15

State of North Carolina



JAMES B. HUNT, JR.
GOVERNOR

EXECUTIVE ORDER NUMBER 15

WHEREAS, the General Assembly of North Carolina, in passing the Coastal Area Management Act, has expressed its desire for a comprehensive, coordinated management system for the protection and orderly development of the coastal area; and,

WHEREAS, the stated goals of the Coastal Area Management Act are:

(1) To preserve and manage the natural ecological conditions of the estuarine system, the barrier dune system, and the beaches, so as to safeguard and perpetuate their natural productivity and their biological, economic and aesthetic values;

(2) To insure that the development or preservation of the land and water resources of the coastal area proceeds in a manner consistent with the capability of the land and water for development, use, or preservation based on ecological considerations;

(3) To insure the orderly and balanced use and preservation of our coastal resources on behalf of the people of North Carolina and the nation;

(4) To establish policies, guidelines and standards for:

(1) Protection, preservation, and conservation of natural resources, including, but not limited to, water use, scenic vistas, and fish and wildlife; and management of transitional or intensely developed areas and areas especially suited to intensive use or development, as well as areas of significant natural value;

(ii) The economic development of the coastal area, including, but not limited to, conservation, location

- and design of industries, port facilities,
commercial establishments and other developments;
- (iii) Recreation and tourist facilities and parklands;
 - (iv) Transportation and circulation patterns for the coastal area, including major thoroughfares, transportation routes, navigation channels and harbors, and other utilities and facilities;
 - (v) Preservation and enhancement of the historic, cultural and scientific aspects of the coastal area;
 - (vi) Protection of present common law and statutory public rights in the lands and waters of the coastal area;
 - (vii) Any other purposes deemed necessary or appropriate to effectuate the policy of The Coastal Area Management Act; and

WHEREAS, the Coastal Resources Commission shall be responsible for the preparation, adoption, and amendment of the State guidelines for the coastal area, which shall consist of statements of objectives, policies, and standards to be followed in public and private use of land and water areas within the coastal area; and

WHEREAS, all local land use plans adopted pursuant to The Coastal Area Management Act within the coastal area shall be consistent with the State guidelines; and

WHEREAS, any State land policies governing the acquisition, use and disposition of land by State departments and agencies shall take account of and be consistent with guidelines adopted under The Coastal Area Management Act, insofar as lands within the coastal area are concerned; and

WHEREAS, from and after the "permit changeover" date; all existing regulatory permits within the coastal area shall be administered in coordination and consultation with (but not subject to the veto of) the Coastal Resources Commission. No such existing permits within the coastal area shall be issued, modified, renewed or terminated except after consultation with the Commission;

NOW, THEREFORE, IT IS HEREBY ORDERED THAT:

Section 1. All State agencies shall take account of and be consistent to the maximum extent possible with the coastal policies, guidelines and standards contained in the State guidelines, with the local land use plans developed under the mandate of The Coastal Area Management Act, and with the North Carolina Coastal Plan prepared under the Federal Coastal Zone Management Act of 1972 in all regulatory programs, use and disposition of state-owned lands, financial assistance for public facilities, and encouragement and location of major public and private growth-inducing facilities.

Section 2. The Secretary of Natural Resources and Community Development and the Coastal Resources Commission shall ensure the opportunity for full participation by affected State agencies in the development of policies and guidelines for the coastal area prior to their adoption.

Section 3. All conflicts arising from the implementation of this order within the Department of Natural Resources and Community Development shall be resolved by the Secretary of that Department, and all conflicts over consistency between the administering coastal management agency (Department of Natural Resources and Community Development) and another department of State government shall be resolved by the Governor.

Section 4. This Executive Order shall be effective immediately.

Done in Raleigh, North Carolina, this the 27th day of October, 1977.


GOVERNOR OF NORTH CAROLINA

SEAL

APPENDIX 4

North Carolina Coastal Management Program

**Enforceable and Advisory Policies for
OCRM Files and General Circulation**

NORTH CAROLINA
ATTORNEY GENERAL'S OFFICE

APR 13 1989

OCEANIC UNIT
RECEIVED



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEANIC SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Washington, D.C. 20235

APR 7 1989

North Carolina Coastal Management Program
Enforceable and Advisory Policies for
OCRM Files and General Circulation

Enforceable Policies

Enforceable policies are those constitutional provisions, laws, regulations, local Land Use Plans (LUPs) and ordinances, and judicial decisions by which states exert control over private and public land and water uses in the coastal zone (16 USC 1454 (b)(4)). Enforceable policies "must be sufficiently comprehensive and specific to regulate land and water uses..." (15 CFR 923.40 (a)).

Enforceable policies are those policies that a state or local government adopt "by legislation, rulemaking, memoranda of understanding, executive order or other legally sufficient means" (15 CFR 923.102 (b)(1)). However, in order for these policies to be enforceable they must be binding on and applied equally to all private, local and state government entities.

All policies found to be enforceable against private entities and state and local governments by a state and incorporated into a states coastal zone management program (CZMP) are the enforceable policies of a states CZMP and may be used for federal consistency reviews.

Advisory Policies

Advisory policies are those policies that enhance a states coastal program or are "in the nature of recommendations" (15 CFR 930.58 (a)(4)). For example, broad general statements and legislative goals are not usually considered enforceable policies unless those statements are enforced equally to all entities without further clarification. Other examples are general statements such as "tourism should be developed as the major economic sector in the coastal zone." Advisory policies only require that an entity "should" rather than "must" do something. Advisory, or enhancement, policies are "binding for consistency purposes...only to the extent binding on the state and its agencies" (15 Section 923.3 (b)(3)[Comment (B)], Federal Register, March 28, 1979, p. 18597). Thus, an advisory policy may be used for consistency purposes only to the extent that that policy has been applied to all private, local and state entities.



North Carolina Coastal Management Program Enforceable Policies, Authorities, Laws, and Regulations

The following is a list of the enforceable policies, authorities, laws and regulations of the North Carolina Coastal Management Program (NCCMP) as defined in the 1978 NCCMP Federal Approval Findings and the 1978 NCCMP Program Document.

Enforceable Policies of the NCCMP

The following five categories of enforceable policies are described on pages 13 - 15 of the NCCMP Approval Findings signed September 1, 1978:

1. The goals set forth in the North Carolina Coastal Area Management Act (CAMA) Section 102(b).
2. State Guidelines for Local Planning set forth on pages 31 - 86 of Appendix B of the 1978 NCCMP Program Document (substantive standards are set forth on pages 60 - 66 of the Program Document).
3. The 52 LUPs adopted under CAMA Part 2 and the State Guidelines for Local Planning.
4. The State Guidelines for Areas of Environmental Concern (AEC) set forth on pages 87 - 127 of Appendix B of the Program Document.
5. The State Policies Concerning Coastal Management in North Carolina set forth on pages 133 - 163 of the Program Document to the extent that they are prescribed by existing statutes and regulations other than the North Carolina Land Policy Act and regulations of the State Land Policy Council (see section on advisory policies below).

In addition, the following North Carolina authorities, found on pages 209 and 210 of the NCCMP Program Document, are also enforceable policies of the NCCMP so long as they are "consistent to the maximum extent possible with the State Guidelines for Local Planning, set forth on pages 31 - 86 of Appendix B for uses outside any AEC, and also with the State Guidelines on AECs for uses within AECs" (NCCMP 1978 Approval Findings, pp. 12 - 13).

1. Water Quality Control Statutes
2. Water Use Act
3. Federal Water Resources Development Act
4. Floodway Regulations
5. Oil Pollution Control Act
6. Air Quality Statutes
7. Well Construction Act
8. Regional Water Supply Planning Act
9. Regional Sewage Disposal Planning Act
10. Development and Improvement of Harbors
11. Dredge and Fill Act
12. Wetland Protection Orders

13. Fisheries Statutes
14. Registration of Grants in Navigable Waters
15. Dam Construction Act
16. Mining Act
17. Oil and Gas Conservation Act
18. Sedimentation Pollution Control Act
19. Acquisition and Management of State Parks
20. Natural and Scenic Rivers Act
21. NC Trails System Act
22. Acquisition and Development of State Forests
23. Investigation of Impact of New and Expanded Industry
24. Easements to Fill
25. Easements, Leases, Sale of State Land
26. Acquisition of Land for Public Purposes
27. Pesticide Application
28. Public Utilities Act
29. State Ports Authority
30. Acquisition and Management of Historic Properties
31. Ground Absorption Sewage Disposal Act
32. Solid Waste Disposal Act
33. Sewer and Sanitation Act
34. Highway Safety Act
35. Streets and Highways in and around Municipalities
36. Roadside Advertising
37. Atlantic States Marine Fisheries Compact
38. Executive Order #15, October 27, 1977 (p.210)

North Carolina Advisory Policies

Any of the enforceable policies identified on pages 136 - 163 of the NCCMP Program Document "set forth by the Land Policy Council and which are not shown to be implemented under some authority other than the Land Policy Act are considered to be advisory or enhancement policies" (1978 NCCMP Program Document, p. 136)

Changes to the Enforceable Policies of the NCCMP

Since the Program Document and Approval Findings were published there have been several changes to the NCCMP. These changes include: (1) Local Land Use Plans (LUPs) and subsequent updates, (2) the three planning elements required by Section 305 (b)(7), (8), and (9) of the Coastal Zone Management Act (CZMA), (3) legislative changes to the North Carolina Coastal Area Management Act (CAMA) and the North Carolina Dredge and Fill Act, and (4) various changes to CAMA regulations 15 NCAC 7A - 7N.

1. Local Land Use Plans and Updates

All LUPs and updates through 1984 have been incorporated

into the NCCMP as Routine Program Implementations (RPIs). The most recent updates (after 1984) have been approved by the North Carolina Coastal Resources Commission but have not yet been incorporated into the NCCMP. The North Carolina Division of Coastal Management (DCM) submitted these updates in January 1988 but the submission was denied by OCRM due to insufficient information.

2. Three Planning Elements

In 1978 all states with federally approved CZMPs were required to amend their programs by including (1) a Shorefront Access and Protection Planning Process, (2) an Energy Facility Siting Planning Process, and (3) a Shoreline Erosion and Mitigation Planning Process. These three additional planning elements were incorporated as an amendment into the NCCMP in 1979. These elements contained the following new enforceable policies: 15 NCAC 7M Section .0100 et seq - Purpose and Authority, Section .0200 et seq - Shoreline Erosion Policies, Section .0300 et seq - Shorefront Access Policies, and Section .0400 et seq - Coastal Energy Policies.

3. CAMA and Dredge & Fill Legislative Changes

In 1984, 21 changes to CAMA and 5 changes to the State Dredge and Fill Law, enacted by the State legislature since 1978, were incorporated into the NCCMP as an RPI. All changes were minor and included a new general permit authority, refined appeals process, deletion from the review process of minor permits, changes to councils memberships, and measures to improve the permitting process. Any legislative changes to these laws after 1984 have not been incorporated into the NCCMP.

4. CAMA Regulation Changes

All changes to the CAMA regulations, 15 NCAC 7A through 7N, prior to February, 1987 have been incorporated into the NCCMP as RPIs. Changes were incorporated in 1979, February, 1984 and another in March, 1987. Any CAMA regulations amended or promulgated after February, 1987 are not part of the federally approved NCCMP.

Changes to any of the enforceable or advisory policies not noted in this section are not incorporated into the NCCMP.

APPENDIX 5

Endangered Wildlife of North Carolina

ENDANGERED WILDLIFE OF NORTH CAROLINA

July 31, 1992

The species listed below have been granted protection by the United States Fish and Wildlife Service, under the Federal Endangered Species Act (16 U.S.C. 1531-1543) and/or the North Carolina Wildlife Resources Commission, under the State Endangered Species Act (G.S. 113-331 to 113-337). Species proposed for federal or state listing are denoted as PE, PT or PSC. Proposed species are not currently protected under the federal or state endangered species acts.

SPECIES	FEDERAL STATUS	N.C. STATUS
MAMMALS		
Brazilian free-tailed bat (<u>Tadarida brasiliensis cynocephala</u>)		SC ¹
Carolina northern flying squirrel (<u>Glaucomys sabrinus coloratus</u>)	E ²	E
Dismal Swamp southern shrew (<u>Sorex longirostris fisheri</u>)	T ³	T
Eastern Cougar (<u>Felis concolor cougar</u>)	E	E
Eastern wood rat (<u>Neotoma f. floridana</u>)		T
(<u>N. f. haemitoreia</u>)		SC
(<u>N. f. magister</u>)		SC
Gray Bat (<u>Myotis grisecens</u>)	E	E
Indiana Bat (<u>Myotis sodalis</u>)	E	E
Keen's bat (<u>Myotis keenii septentrionalis</u>)		SC
Long-tailed shrew (<u>Sorex dispar blitchi</u>)		SC
Pigmy shrew (<u>Sorex hoyi winnemana</u>)		SC
Rafinesque's big-eared bat (<u>Plecotus r. rafinesquii</u>)		SC
(<u>P. r. macrotis</u>)		SC
Rock vole (<u>Microtus chrotorrhinus carolinensis</u>)		SC
Small-footed bat (<u>Myotis l. leibi</u>)		SC
Southeastern bat (<u>Myotis austroriparius</u>)		SC
Star-nosed mole (<u>Condylura cristata parva</u>)		SC
Virginia big-eared bat (<u>Plecotus townsendii virginianus</u>)	E	E

SPECIES	FEDERAL STATUS	N.C. STATUS
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MAMMALS

Water shrew (<u>Sorex palustris punctulatus</u>)		SC
West Indian manatee (<u>Trichechus manatus</u>)	E	E

BIRDS

American eastern peregrine falcon (<u>Falco peregrinus anatum</u>)	E	E
Artic peregrine falcon (<u>Falco peregrinus tundrius</u>)	T	T
Bachman's warbler (<u>Vermivora bachmanii</u>)	E	E
Bachman's sparrow (<u>Aimophila aestivalis</u>)		SC
Bewick's wren (<u>Thryomanes bewickii</u>)		E
Black-capped chickadee (<u>Parus atricapillus</u>)		SC
Black skimmer (<u>Rhynchops niger</u>)		SC
Black vulture (<u>Coragyps atratus</u>)		SC
Brown pelican (<u>Pelecanus occidentalis</u>)		SC
Cooper's hawk (<u>Accipiter cooperii</u>)		SC
Glossy ibis (<u>Plegadis falcinellus</u>)		SC
Golden-crowned kinglet (<u>Regulus satrapa</u>)		SC
Gull-billed tern (<u>Gelochelidon nilotica aranea</u>)		T
Ivory-billed woodpecker (<u>Campephilus principalis</u>)	E	E
Kirtland's warbler (<u>Dendroica kirtlandii</u>)	E	E
Little blue heron (<u>Egretta caerulea</u>)		SC
Loggerhead shrike (<u>Lanius ludovicianus</u>)		SC
Northern saw-whet owl (<u>Aegolius acadicus</u>)		SC
Olive-sided flycatcher (<u>Contopus borealis</u>)		SC
Piping plover (<u>Charadrius melodus</u>)	T	T

SPECIES	FEDERAL STATUS	N.C. STATUS
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BIRDS

Red-cockaded woodpecker (<u>Picoides borealis</u>)	E	E
Roseate tern (<u>Sterna d. dougallii</u>)	E	E
Snowy egret (<u>Egretta thula</u>)		SC
Southeastern bald eagle (<u>Haliaeetus leucocephalus</u>)	E	E
Tricolor heron (<u>Egretta tricolor</u>)		SC
Wood stork (<u>Mycteria americana</u>)	E	E

REPTILES

American alligator (<u>Alligator mississippiensis</u>)	T(S/A)	T
Bog turtle (<u>Clemmys muhlenbergii</u>)		T
Carolina salt marsh snake (<u>Nerodia sipedon williamogensi</u>)		SC
Diamondback terrapin (<u>Malaclemys terrapin</u>)		SC
Eastern smooth green snake (<u>Opheodrys v. vernalis</u>)		SC
Eastern spiny softshell turtle (<u>Apalone s. spinifera</u>)		SC
Green (Atlantic) turtle (<u>Chelonia m. mydas</u>)	T	T
Hawksbill (Atlantic) turtle (<u>Eretmochelys i. imbricata</u>)	E	E
Kemp's (Atlantic) ridley turtle (<u>Lepidochelys kempii</u>)	E	E
Leatherback turtle (<u>Dermochelys coriacea</u>)	E	E
Loggerhead turtle (<u>Caretta caretta</u>)	T	T
Mimic glass lizard (<u>Ophisaurus mimicus</u>)		SC
Northern pine snake (<u>Pituophis m. melanoleucus</u>)		SC
Outer Banks kingsnake (<u>Lampropeltis getulus sticticeps</u>)		SC
Stripeneck musk turtle (<u>Sternotherus minor peltifer</u>)		SC

SPECIES	FEDERAL STATUS	N.C. STATUS
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AMPHIBIANS

Carolina crawfish frog (<u>Rana areolata capito</u>)		SC
Crevice salamander (<u>Plethodon longicrus</u>)		SC
Dwarf salamander [silver morph] (<u>Eurycea quadridigitata</u>)		SC
Eastern hellbender (<u>Cryptobranchus a. alleganiensis</u>)		SC
Eastern tiger salamander (<u>Ambystoma t. tigrinum</u>)		T
Four-toed salamander (<u>Hemidactylium scutatum</u>)		SC
Green salamander (<u>Aneides aeneus</u>)		E
Junaluska salamander (<u>Eurycea junaluska</u>)		SC
Longtail salamander (<u>Eurycea l. longicauda</u>)		SC
Mole salamander (<u>Ambystoma talpoideum</u>)		SC
Mountain chorus frog (<u>Pseudacris brachyphona</u>)		SC
Mudpuppy (<u>Necturus maculosus</u>)		SC
Neuse River waterdog (<u>Necturus lewisi</u>)		SC
River frog (<u>Rana heckscheri</u>)		SC
Wehrle's salamander (<u>Plethodon wehrlei</u>)		T
Weller's salamander (<u>Plethodon welleri</u>)		SC
Zigzag salamander (<u>Plethodon dorsalis</u>)		SC

FISHES

American brook lamprey (<u>Lampetra appendix</u>)		T
Atlantic sturgeon (<u>Acipenser oxyrhynchus</u>)		SC
Banded sculpin (<u>Cottus carolinae</u>)		T
Bigeye jumprock (<u>Moxostoma ariommum</u>)		SC
Blotchside logperch (<u>Percina burtoni</u>)		E
Bluefin killifish (<u>Lucania goodei</u>)		SC

SPECIES	FEDERAL STATUS	N.C. STATUS
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FISHES

Blueside darter (<u>Etheostoma jessiae</u>)		SC
Bridle shiner (<u>Notropis bifrenatus</u>)		SC
Broadtail madtom (<u>Noturus n. sp.</u>)		SC
Cape Fear chub (<u>Hybopsis sp.</u>) (Lum, CFe)		SC
Cape Fear shiner (<u>Notropis mekistocholas</u>)	E	E
Carolina darter (<u>Etheostoma collis</u>)		SC
Carolina madtom (<u>Noturus furiosus</u>)		SC
Carolina pygmy sunfish (<u>Elassona boehlkei</u>)		T
Cutlips minnow (<u>Exoglossum maxillingua</u>)		E
Dusky darter (<u>Percina sciera</u>)		E
Freshwater drum (<u>Aplodinotus grunniens</u>)		T
Highfin carpsucker (<u>Carpionodes velifer</u>)		SC
Kanawha minnow (<u>Phenacobius teretulus</u>)		SC
Lake sturgeon (<u>Acipenser fulvescens</u>)		SC
Least brook lamprey (<u>Lampetra aepyptera</u>)		SC
Least killifish (<u>Heterandria formosa</u>)		SC
Logperch (<u>Percina caprodes</u>)		T
Longear sunfish (<u>Lepomis megalotis</u>)		SC
Longhead darter (<u>Percina macrocephala</u>)		SC
Mooneye (<u>Hiodon tergisus</u>)		SC
Mountain madtom (<u>Noturus eleutherus</u>)		SC
Olive darter (<u>Percina squamata</u>)		SC
Orange-fin madtom (<u>Noturus gilberti</u>)		E
Paddlefish (<u>Polyodon spatula</u>)		E

SPECIES	FEDERAL STATUS	N.C. STATUS
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FISHES

Pinewoods darter (<u>Etheostoma mariae</u>)		SC
River carpsucker (<u>Carpionodes carpio</u>)		SC
Riverweed darter (<u>Etheostoma podostemone</u>)		SC
River redhorse (<u>Moxostoma carinatum</u>)		SC
Rosyface chub (<u>Hybopsis rubifrons</u>)		T
Rosyside dace (<u>Clinostomus funduloides ssp.</u>)		SC
Rustyside sucker (<u>Moxostoma hamiltoni</u>)		E
Sandhills chub (<u>Semotilus lumbee</u>)		SC
Sharphead darter (<u>Etheostoma acuticeps</u>)		T
Sharpnose darter (<u>Percina oxyrhyncha</u>)		SC
Shortnose sturgeon (<u>Acipenser brevirostrum</u>)	E	E
Spotfin chub (<u>Hybopsis monacha</u>)	T	T
Stonecat (<u>Noturus flavus</u>)		E
Striped shiner (<u>Notropis chrysocephalus</u>)		T
Tennessee snubnose darter (<u>Etheostoma simoterum</u>)		SC
Turquoise darter (<u>Etheostoma inscriptum</u>)		SC
Waccamaw darter (<u>Etheostoma perlongum</u>)		T
Waccamaw killifish (<u>Fundulus waccamensis</u>)		SC
Waccamaw silverside (<u>Menidia extensa</u>)	T	T
Wounded darter (<u>Etheostoma maculatum vulneratum</u>)		SC

SPECIES	FEDERAL STATUS	N.C. STATUS
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MOLLUSKS

Alabama rainbow (<u>Villosa nebulosa</u>)		SC
Alewite floater (<u>Anodonta implicata</u>)		SC
Appalachian elktoe (<u>Alasmidonta ravenliana</u>)		E
Appalachian gloss (<u>Zonitoides patuloides</u>)		SC
Atlantic pigtoe (<u>Fusconaia masoni</u>)		T
Bidentate dome (<u>Ventridens coeaxis</u>)		SC
Big-tooth covert (<u>Mesodon jonesianus</u>)		T
Blackwater ancyliid (<u>Ferrissia hendersoni</u>)		SC
Blue-foot lancetooth (<u>Haplotrema kendeighi</u>)		SC
Brook floater (<u>Alasmidonta varicosa</u>)		T
Cape Fear spike (<u>Elliptio marsupiobesa</u>)		T
Cape Fear threetooth (<u>Triodopsis soelneri</u>)		T
Carolina creekshell (<u>Villosa vaughaniana</u>)		SC
Carolina heelsplitter (<u>Lasmigona decorata</u>)		E
Cinnamon covert (<u>Mesodon wheatleyi</u>)		T
Dark glyph (<u>Glyphyalinia junaluskana</u>)		SC
Dwarf proud globe (<u>Mesodon clarki</u>)		SC
Dwarf threetooth (<u>Triodopsis fulciden</u>)		SC
Dwarf wedge mussel (<u>Alasmidonta heterodon</u>)	E	E
E. lampmussel (<u>Lampsilis radiata</u>)		SC
E. pondmussel (<u>Ligumia nasuta</u>)		SC
Engraved covert (<u>Mesodon orestes</u>)		T
Fragile glyph (<u>Glyphyalinia clingmani</u>)		E
Fringed coil (<u>Helicodiscus fimbriatus</u>)		SC

SPECIES	FEDERAL STATUS	N.C. STATUS
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MOLLUSKS

Glossy supercoil (<u>Paravitrea placentula</u>)		SC
Great Smoky slitmouth (<u>Stenotrema depilatum</u>)		SC
Green floater (<u>Lasmigona subviridus</u>)		E
High mountain supercoil (<u>Paravitrea andrewsae</u>)		SC
Honey glyph (<u>Glyphyalinia vanattai</u>)		SC
Knotty elimia (<u>Elimia interrupta</u>)		E
Lamellate supercoil (<u>Paravitrea lamellidens</u>)		SC
Little-wing pearly mussel (<u>Pegias fabula</u>)	E	E
Magnificent rams-horn (<u>Planorbella magnifica</u>)		E
Marsh sprite (<u>Micromenetus alabamensis</u>)		E
Mirey Ridge supercoil (<u>Paravitrea clappi</u>)		SC
Mountain creekshell (<u>Villosa vanuxemensis</u>)		T
Noonday snail (<u>Mesodon clarki nantahala</u>)	T	T
Neuse spike (<u>Elliptio judithae</u>)		E
Open supercoil (<u>Paravitrea umbilicaris</u>)		SC
Pink glyph (<u>Glyphyalinia pentadelphia</u>)		SC
Pistolgrip (<u>Tritigonia verrucosa</u>)		E
Pod lance (<u>Elliptio folliculata</u>)		SC
Queen crater (<u>Mesodon chilhoweensis</u>)		SC
Ramp Cove supercoil (<u>Paravitrea lacteodens</u>)		SC
Roan supercoil (<u>Paravitrea varidens</u>)		T
Roanoke slabshell (<u>Elliptio roanokensis</u>)		SC
Savannah lilliput (<u>Toxolasma pullus</u>)		T
Saw-tooth disc (<u>Discus bryanti</u>)		SC

SPECIES	FEDERAL STATUS	N.C. STATUS
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MOLLUSKS

Sculpted supercoil (<u>Paravitrea ternaria</u>)		T
Seep mudalia (<u>Leptoxis dilatata</u>)		E
Slippershell mussel (<u>Alasmidonta viridis</u>)		E
Smoky Mountain covert (<u>Mesodon ferrissi</u>)		T
Smooth mudalia (<u>Leptoxis virgata</u>)		E
Spike (<u>Elliptio dilatata</u>)		SC
Spiral coil (<u>Helicodiscus bonamicus</u>)		SC
Squawfoot (<u>Strophitus undulatus</u>)		T
Tar River Spiny mussel (<u>Elliptio [Canthyria] steinstansana</u>)	E	E
Tennessee heelsplitter (<u>Lasmigona holstonia</u>)		E
Tennessee pigtoe (<u>Fusconaia barnesiana</u>)		E
Tidewater mucket (<u>Lampsilis ochracea</u>)		SC
Triangle floater (<u>Alasmidonta undulata</u>)		T
Velvet covert (<u>Mesodon subpalliatu</u> s)		SC
Waccamaw ambersnail (<u>Catinella waccamawensis</u>)		T
Waccamaw amnicola (<u>Amnicola sp.</u>)		SC
Waccamaw fatmucket (<u>Lampsilis fullerhati</u>)		T
Waccamaw lampmussel (<u>Lampsilis crocata</u>)		SC
Waccamaw siltsnail (<u>Cincinnatia sp.</u>)		SC
Waccamaw spike (<u>Elliptio waccamawensis</u>)		T
Wavy-rayed lampmussel (<u>Lampsilis fasciola</u>)		SC
Yellow lampmussel (<u>Lampsilis cariosa</u>)		T
Yellow lance (<u>Elliptio lanceolata</u>)		T

- 1SC - State listed as special concern.
2E - Listed federally and/or state as endangered.
3T - Listed federally and/or state as threatened.

APPENDIX 6

Draft OCS Policy for Incorporation into 7M .0400 - 10/28/91

Section .0400 - Coastal Energy Policies

DRAFT OCS POLICY FOR INCORPORATION INTO 7M .0400 - 10/28/91

SECTION .0400 - COASTAL ENERGY POLICIES

.0401 DECLARATION OF GENERAL POLICY

It is hereby declared that the general welfare and public interest require that a reliable sources of energy be made available to the citizens of North Carolina. It is further declared that the development of energy facilities and resources within the state and in offshore waters can serve important regional and national interests. However, unwise development of energy facilities or resources can conflict with the recognized and equally important public interest that rests in conserving and protecting the valuable land and water resources of the state and nation, particularly coastal lands and waters. Therefore, in order to balance the public benefits attached to necessary energy development against the need to protect valuable coastal resources, the planning of future land uses, and the exercise of regulatory authority, and determinations of consistency with the North Carolina Coastal Management Program shall assure that the development of energy facilities and resources shall avoid significant adverse impact upon vital physical coastal resources, public trust areas, and public access rights.

Exploration for and development of offshore and Outer Continental Shelf (OCS) energy resources provides the potential for significant impacts on coastal resources. The Federal Coastal Zone Management Act of 1972, as amended, requires that federal oil and gas leasing actions of the U.S. Department of the Interior be consistent to the maximum extent practicable with the enforceable policies of the federally-approved North Carolina Coastal Management Program. Plans submitted to the Department of the Interior for exploration, development, or production in an OCS lease area that include actions that may affect any land or water use or natural resource of the coastal area shall be consistent with enforceable policies. For the purposes of such required consistency, enforceable policies applicable to OCS activities include all the provisions and policies of this Rule, as well as any other applicable federally-approved components of the North Carolina Coastal Management Program. All permit applications, plans, and assessments related to exploration or development of OCS resources must contain adequate information to allow in-depth analysis of the consistency of all proposed activities with these rules and policies.

.0402 DEFINITIONS

(a) "Assessment" is an analysis which fully discusses the environmental, economic and social consequences of a proposed project. At a minimum, the assessment should shall include the following information:

- (1) a full discussion of the preferred sites for those elements of the project affecting the land or water uses or natural resources of the coastal area.
 - (a) In all cases where the preferred site is located within an AEC or on a barrier island, the applicant shall identify alternative sites considered and present a full discussion [in terms of (2) through (8) of this Subsection] of the reasons why the chosen location was deemed more suitable than another feasible alternate site.
 - (b) If the preferred site is not located within an AEC or on a barrier island, the applicant shall present reasonable evidence to support the proposed location over a feasible alternate site.
 - (c) In those cases where an applicant chooses a site previously identified by the state as suitable for such development and the site is outside an AEC or not on a barrier island, alternative site considerations will not be required as part of this assessment procedure.

- (2) a full discussion of the economic impacts, both positive and negative, of the proposed project;
 - (a) This discussion should focus on economic impacts to the public, ~~sector and shall not on be deemed to include~~ matters that are purely internal to the corporate operation of the applicant, ~~and a~~ No proprietary or confidential economic data will be required.
 - (b) This discussion shall include analysis of likely adverse impacts upon the ability of any governmental unit to furnish necessary services or facilities as well as other secondary impacts of significance.
- (3) a full discussion of potential likely or probable adverse impacts on estuarine or coastal resources and of specific actions proposed to mitigate any adverse impacts based on industry experience;
- (4) a full discussion of potential likely or probable adverse impacts on existing industry or probable and potential unreasonable limitations on the availability of natural resources, particularly water, for future industrial development, based on industry experience;
- (5) a full discussion of potential likely or probable significant adverse impacts on recreational uses and scenic, archaeological and historic resources, based on industry experience;
- (6) a full discussion of potential likely or probable risks of danger to human life or property;
- (7) other specific data necessary for the various state and federal agencies and commissions with jurisdiction to evaluate the consistency of the proposed project with relevant standards and guidelines;
- (8) a specific demonstration that the proposed project is consistent with relevant local land use plans and with guidelines governing land uses in AECs;

If appropriate environmental documents are prepared and reviewed under the provisions of the National Environmental Policy Act (NEPA) and/or the North Carolina Environmental Policy Act (NCEPA), this review will satisfy this definition of "assessment" if all issues listed in this Subsection are addressed and these documents are submitted in sufficient time to be used to review consistency determinations and subsequent state permit applications for the project.

(b) "Major energy facilities" are those energy facilities which because of their size, magnitude or ~~and~~ scope of impacts, have the potential to significantly affect the land or water uses or natural resources of the coastal area, the coastal zone. For purposes of this definition, major energy facilities shall include, but are not necessarily limited to, the following:

- (1) any facility capable of refining oil;
- (2) any terminals (and associated facilities) capable of handling, processing, or storing liquid propane gas, liquid natural gas, or synthetic natural gas;
- (3) any oil or gas storage facility that is capable of storing 15 million gallons or more on a single site;
- (4) electric generating facilities 300 MGW or larger;
- (5) thermal energy generation;
- (6) major pipelines 12 inches or more in diameter that carry crude petroleum, natural gas, liquid natural gas, liquid propane gas, or synthetic gas;
- (7) structures, including drillships and floating platforms and structures relocated from other states or countries, located in offshore waters for the purposes of exploration for, or development or production of, oil or natural gas;
- (8) on-shore support or staging facilities related to exploration for, or development or production of, oil or natural gas.

(c) "Offshore waters" - definition referencing Submerged Lands Act and Outer Cont. Shelf Lands Act.

.0403 POLICY STATEMENTS

(a) The placement and operations of major energy facilities in or affecting any land or water use or natural resource of the North Carolina coastal zone area shall be done in a manner that allows for protection of the environment and local and regional socio-economic goals. The placement and operation of such facilities shall be consistent with established state standards and regulations and shall comply with local land use plans and with guidelines for land uses in ~~areas of environmental concern~~ AECs.

(b) ~~Applicants~~ Proposals, plans, and permit applications for major energy facilities to be located in or affecting any land or water use or natural resource of the North Carolina coastal zone area shall, ~~prior to construction,~~ make include a full disclosure of all costs and benefits associated with the project. This disclosure shall be prepared at the earliest feasible stage in planning for the project and shall be in the form of an impact assessment.

(c) Local governments shall not unreasonably restrict the development of necessary energy facilities; however, they shall be encouraged to develop ~~these~~ siting measures that will minimize impacts to local resources and to identify potential sites suitable for energy facilities.

(d) ~~In coastal shoreline areas which have recognized recreational benefits or with identified access problems, these major~~ Energy facilities that do not require shorefront access shall be sited inland of ~~the coastal zone shoreline areas.~~ In other instances when shoreline portions of the coastal zone area are necessary or preferred locations, shoreline siting will be acceptable only if it can be demonstrated that coastal water resources and public trust waters will be adequately protected, the public's right to access and passage will not be unreasonably restricted, and all reasonable mitigating measures have been taken to minimize impacts to AECs.

(e) The scenic and visual qualities of coastal areas shall be considered and protected as important public resources. Energy facility development shall be sited and designed to protect views to and along the ocean, sounds, and scenic coastal areas, to minimize the alteration of natural land forms, and to be visually compatible with the character of surrounding areas.

(f) All major energy facilities in or affecting the land or water uses or natural resources of the coastal area shall be sited and operated so as to be consistent with the following criteria to the maximum extent practicable.

- (1) Risks of environmental harm to fish spawning areas shall be assessed and minimized.
- (2) For facilities requiring an Oil Spill Contingency Plan (Plan) pursuant to 30 CFR 250.42 or other Federal or State regulations, the Plan must be approved by the State prior to permit or consistency decisions. The Plan shall completely assess the risks of spills, evaluate possible trajectories, and enumerate response and mitigation measures employing the best available technology to be followed in the event of a spill. The Plan must adequately demonstrate that the potential for oil spills and ensuing damage to coastal resources has been minimized.
- (3) Dredging, spoil disposal and construction of related structures that can be reasonably expected to affect the land or water uses or natural resources of the coastal area shall be minimized, and any unavoidable actions of this sort shall minimize damage to the marine environment.
- (4) Damage to or interference with existing or traditional uses, such as fishing, navigation, and access to public trust areas, and areas with high biological and/or recreational value shall be avoided to the extent that such damage or interference could be reasonably expected to significantly affect the land or water uses or natural resources of the coastal area.
- (5) Placement of structures in geologically unstable areas such as unstable sediments and active faults shall be avoided to the extent that damage to such structures resulting from geological phenomena could be reasonably expected to significantly affect the land or water uses or natural resources

- of the coastal area.
- (6) Wildlife destruction or relocation shall be assessed and minimized to the extent that such destruction or relocation could be reasonably expected to significantly affect the land or water uses or natural resources of the coastal area.
- (7) Adverse impacts on species identified as threatened or endangered on Federal or State lists shall be avoided.
- (8) No energy facilities will be sited in components of the North Carolina Coastal Reserve; in State-owned parks, recreation areas or historic sites; in Federal or State wildlife refuges; or in National Parks or Seashores.
- (9) No energy facilities will be sited in areas that pose a threat to the integrity of the facility, such as oceanfront areas with high historic erosion rates, areas having a history of overwash or inlet formation, and areas in the vicinity of existing inlets.
- (10) Offshore reefs, rock outcrops and live bottom areas shall be avoided to the extent that impacts on such areas could be reasonably expected to significantly affect the land or water uses or natural resources of the coastal area.
- (11) In the siting of energy facilities and related structures, the following areas shall be avoided to the maximum extent possible:
- (a) areas of high biological significance, including sea turtle nesting beaches, freshwater and saltwater wetlands, primary nursery areas, submerged aquatic vegetation beds, shellfish beds, anadromous fish spawning and nursery areas, and colonial bird nesting colonies;
 - (b) major tracts of maritime forest and other important natural areas as identified by the North Carolina Natural Heritage Program;
 - (c) crossings of streams, rivers, and lakes except for existing readily accessible corridors;
 - (d) designated National Historic Landmarks and sites listed in or determined eligible for the National Register of Historic Places;
 - (e) anchorage areas and congested port areas;
 - (f) artificial reefs, shipwrecks, and submerged archaeological resources;
 - (g) dump sites;
 - (h) areas of large dunes or well-developed frontal dune systems;
 - (i) heavily developed and heavily used recreation areas.
- Where impacts on these areas cannot be avoided, damage shall be mitigated to the maximum extent practicable, and affected areas shall be restored to their original functions as soon as possible.
- (12) Construction of energy facilities shall occur only during periods of lowest biological vulnerability. Nesting and spawning periods shall be avoided.
- (13) If facilities located in the coastal area are abandoned, habitat of value equal to or greater than that existing prior to construction shall be restored as soon as practicable following abandonment. For abandoned facilities outside the coastal area, habitat in the area shall be restored to its preconstruction state and functions as soon as practicable if the abandonment of the structures could be reasonably expected to affect the land or water uses or natural resources of the coastal area.

APPENDIX 7

North Carolina Emergency Operations Plan

Oil Spill Contingency Plan

Annex N
Oil Spill Contingency Plan

I. PURPOSE AND OVERVIEW

A. Purpose

This plan identifies actions to be taken by State and local government agencies and private organizations within North Carolina when a spill of oil or petroleum products threatens the inland, coastal and offshore waters of the State. The purpose of the plan is to minimize the risk posed by the spill to the public, its property and to the environment. This plan provides coordination for a multi-organizational response and recovery effort in order to minimize the impact of oil spills on the waters of North Carolina.

B. Interface with Federal Jurisdiction

Under Federal law [Clean Water Act as well as the Comprehensive Environmental Response Compensation and Liability Act, (CERCLA)], Federal agencies respond to oil and hazardous material spills in accordance with a National Contingency Plan which establishes a structure for the exercise of Federal jurisdiction over spills involving waters within the United States. Generally speaking, the Environmental Protection Agency (E.P.A.) has lead responsibility for spills into fresh water while the United States Coast Guard (U.S.C.G.) is in charge of spills in the coastal and marine waters. Section 1300 of the EPA/Federal Region IV Oil and Hazardous Substance Pollution Contingency Plan delineates geographical areas of responsibility. In some areas the U.S.C.G. has responsibility. In other areas the United States Environmental Protection Agency has responsibility. These various areas of responsibility are shown on Appendix 7 to this annex.

This annex is the North Carolina State Oil Spill Plan which integrates oil spill emergency response by North Carolina State and local government agencies into the framework established by the National Contingency Plan. This Annex is a part of the North Carolina Emergency Operations Plan (NCEOP) which guides response by North Carolina State and local government agencies to a variety of emergencies. Leadership under that plan rests with the State Director of Emergency Management who as the State Emergency Response Team (SERT) Leader has access to all resources of State government during an emergency. The roles, responsibilities and procedures of State agencies identified elsewhere in the North Carolina

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Emergency Operations Plan (NCEOP) may also be applicable to this annex. These are therefore incorporated by reference into this annex.

C. State Interests

The waters of the State comprise an essential resource for human existence as well as for marine, aquatic and wildlife. Oil spills can pose significant threats to human life and health, other organisms and to the economy of the State. Although the Federal government has primary legal jurisdiction for response under Federal environmental laws, the State of North Carolina also has substantial interest in protecting the waters of the State because of their economic, aesthetic and life-supporting qualities. This Annex provides for the mobilization and coordination of a network of State and local resources as needed in order to protect the public, to respond to State interests and to support the Federal efforts in environmental protection, spill containment and cleanup.

II. SITUATION AND ASSUMPTIONS

A. SITUATION

1. Accidents or emergencies involving oil can occur anywhere within the State as well as within the near and offshore waters of the State.
2. Oil spills can adversely impact the citizens of the State due to:
 - a. Risks of fire and explosion.
 - b. Threats to human health.
 - c. Damage to surface and ground water quality.
 - d. Harm to marine and aquatic ecosystems.
 - e. Damage to property.
 - f. Adverse economic impacts due to losses to tourism, fisheries, and natural resources.
3. North Carolina has an affirmative legal responsibility to protect the State's natural resources.
4. The state has legal jurisdiction over activities within the waters lying three miles off the state's coast, and substantial interest in those activities beyond three miles that could affect the State's

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coastal waters and land areas. Under the authority of the Federal Coastal Zone Management Act of 1972, as amended, the state views activities requiring Federal permits to assure consistency with State coastal management policies.

5. North Carolina is located adjacent to major shipping lanes in the Atlantic Ocean serving as corridors for approximately 70% of the ocean-going oil and petroleum products on the east coast of the United States.
6. There will be increased risk to the State's natural environment caused by natural gas and oil exploration on the outer continental shelf. These risks will substantially escalate if production wells are drilled.
7. Because oil and petroleum products are used throughout the State, a significant risk exists for transportation accidents as well as for spills at fixed sites.
8. Past experience has shown that oil spills can have effects which range from the highly localized to those which involve hundreds of miles of coastal area.
9. North Carolina has highly sensitive areas and species of organisms which could be adversely affected by a major oil spill.

B. ASSUMPTIONS

1. The product spilled is most likely to be diesel fuel or heating oil, with a maximum probable release of 1,000,000 gallons or less, and a typical release of 10,000 gallons. However, a credible worst case scenario would involve a spill of up to 15 million gallons of crude oil in the coastal waters of the State.
2. Responsible parties will comply with the State's regulations regarding accidental releases of oil and other hazardous materials.

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3. The party responsible for the release will voluntarily utilize all resources available to it in its response to the release, under the supervision of the Federal OSC or, if necessary, the North Carolina Division of Environmental Management.
4. Circumstances may arise in which there is not an identified responsible party to assume containment and/or clean-up operations, and prompt exercise of Federal control, with State and local support, may be necessary.
5. An accidental release could occur during severe weather, making control and clean up operations dangerous and/or ineffective.
6. Initial efforts at containment and control of spilled material may fail or be unfeasible and the response activity may be limited to clean-up of the material and restoration of the affected human and natural resources.
7. State, local and volunteer personnel who have been properly equipped and trained in hazardous material emergency response will be to utilized by the SERT Leader in the implementation of this plan.
8. There will be substantial interest by the public and the press in the circumstances surrounding a major incident and the emergency response and recovery efforts.
9. Timely deployment of a network of State, local and volunteer personnel, equipment and other resources may be required in order to protect sensitive environmental areas of the State.
10. A major oil spill into the waters of the State is very likely to necessitate a long-term recovery program to restore the well-being of the impacted area's economy.
11. The State will institute appropriate actions to recover from the responsible party compensation for the damages done to the State's natural resources and for the economic losses suffered by the State and its citizens.

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III. CONCEPT OF OPERATIONS

A. GENERAL

1. A multi-organizational oil spill response network will be deployed when oil poses a threat to the public health and welfare on the environment. Included in this network are resources of the Federal, State, and local governments, the responsible party, oil spill response contractors and cooperatives, and volunteer groups and individuals.
2. Federal statutes provide that the U.S. Coast Guard and/or the U.S. Environmental Protection Agency be given immediate notification of accidental releases of oil and other hazardous substances. If a discharge, or substantial threat of a discharge of oil or hazardous substance from a vessel, offshore facility, or onshore facility is of such a size or nature as to be a substantial threat to the public health or welfare or the environment (including, but not limited to, fish, shellfish, wildlife, other natural resources, and the public and private beaches and shorelines of the United States) the President shall direct all Federal, State, and private actions to remove the discharge or to mitigate or prevent the threat of the discharge.
3. When the responsible party, the U.S.C.G. or the Federal EPA respond to an accidental release within or potentially affecting the waters of North Carolina, the State will assume a position of support to this response. In this capacity, State agencies and other involved organizations will, through the Division of Emergency Management, prepare to undertake and/or will undertake actions described in section IV.B of this Annex (Organization and Assignment of Responsibilities - State).
4. The State will consider the Federal authorities and/or the party responsible for the release as the first tier of response to an accidental release. However, for an accidental release in which the party responsible is unable or unwilling to respond effectively, and the Federal government does not have authority to coordinate the response or cannot respond in a timely manner, the North Carolina

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Division of Environmental Management will upon determination that funding is available coordinate with the Federal On-Scene Coordinator and commit resources consistent with approved response strategies and priorities.

If the Division of Environmental Management is the first agency notified of a spill, the Division shall notify the Division of Emergency Management of the incident, and provide timely updated information regarding the status of the release. The Division of Emergency Management will immediately notify the appropriate U.S. Coast Guard Marine Safety Office [USCG-MSO] or the Regional Environment Protection Agency Office (EPA). (See Appendix 7 to this Annex. Following notification, the Division of Emergency Management will prepare to undertake the tasks listed in Section IV.B.2 of this Annex.

5. The State will provide coordination of all measures taken on the land with respect to public safety and protection.
6. The priorities for use of State resources in the response shall be in the following order:
 - (a) First: Protection of the health and safety of the general public.
 - (b) Second: Protection of emergency worker safety.
 - (c) Third: Protection of valuable environmental, cultural and archaeological resources.
 - (d) Fourth: Protection of business and commerce.
7. If initial efforts to contain and control the release or spill are unsuccessful, the State's efforts will be principally directed toward supporting rapid and safe clean-up of the spilled material and the restoration of damaged natural and man-made resources to their normal State.
8. Only properly equipped and trained personnel will be permitted to engage in containment, control or clean-up activities, whether such personnel are from Federal, State, or local agencies or from

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private contractors, cooperatives or volunteer organizations.

If circumstances require, appropriate and/or specialized training may be given on-scene.

9. Through the Division of Emergency Management Area Coordinators, the State will provide guidance and assistance to local government and volunteer agencies engaged in the response activities.
10. Damage assessments will be conducted by Federal, State and local personnel within their areas of expertise or responsibility to determine the value of property and resources damaged or destroyed by the effects of an oil spill.
11. The State will seek compensation for expenses and damages from the party responsible for the spill, and all such expenses and damages will be documented from the outset of the incident.
12. There will be a recovery program to assist affected individuals, families, and communities as outlined in Annex J to Part II of this plan.

APPENDIX 8

**N.C. Marine Science Council's 1991 Report
Debris in the Sea**

Summary and Recommendations

SUMMARY AND RECOMMENDATIONS

Summary

Litter and debris are visible environmental problems for all residents of North Carolina, not just the coastal population. Solving this problem will require everyone — individual citizens as well as government agencies, businesses and volunteer organizations — to work cooperatively toward a solution. The perception of the problem is widely shared. Energy, desire, leadership and resources are required to devise workable solutions.

Conclusions

- The problem of litter and debris in the marine environment is substantial and growing. The problem has aesthetic, economic, public health and environmental dimensions. To date, efforts to address the issue have made only a small dent in the problem.
- Although many laws and policies deal with litter and debris disposal, most either do not clearly distinguish authority or responsibility or they are not supported with sufficient resources for implementation. Important opportunities exist for new legislation, most notably legislation creating incentives for reducing the waste stream and increasing waste recovery, such as container laws currently in place in other states.
- Public and private initiatives are paramount to solving the litter and debris problem. The public must perceive this as an important issue. Business and industry — in

SUMMARY AND RECOMMENDATIONS

particular those that significantly contribute to the litter and debris problem — must be convinced that it is economically smart and a civic responsibility to help reduce and manage the waste stream.

- Information disseminated about litter and debris must be based on science. For example, problems have arisen from the erroneous belief that photodegradability is a “solution,” when in many cases it may actually exacerbate the litter and debris problem. Public support and government actions must be based on accurate information for management strategies to be truly effective.

Recommendations

1. North Carolina Should Adopt the Following Policy:

It shall be the policy of the state of North Carolina to eliminate all litter and debris from the waters of North Carolina and to cooperate with other public and private entities in the elimination of litter and debris from the marine environment.

2. Consolidation and Coordination of Responsibility and Authority

Public sector responsibilities for litter and debris should be consolidated as much as possible, ideally in a single office or agency. In North Carolina, the Department of Environment, Health and Natural Resources may be the most appropriate agency for the regulatory portions of this consolidation and coordination. Consolidation should occur not only in the areas of law, policy and enforcement, but also in the area of education.

Whether any consolidation of responsibility and authority occurs, the division of labor among agencies and organizations should be clarified. Enforcement personnel in different state agencies, for example, should be empowered — and instructed — to enforce all marine litter and debris regulations, or a very clear and specific division of labor should be developed. This effort should include informing the public which agency should be contacted to assist in detecting and reporting violations. All efforts should receive additional resources, and enforcement should be a priority.

SUMMARY AND RECOMMENDATIONS

3. Cooperation Among Different Levels of Government

Since the litter and debris problem crosses local, state, national and international boundaries, cooperation among all levels of government is required. North Carolina should consider legislation adopting the principles of the MARPOL Protocol, which the United States has signed. Like Mississippi, North Carolina could adopt legislation that authorizes the appropriate state regulatory body to adopt compatible provisions of the treaty into state law and policy. Since the litter problem is statewide, some form of revenue sharing between state and local governments may also be appropriate. To avoid confusion, local governments should also ensure that municipal and county regulations and programs are as consistent and compatible as possible.

4. Incentives for Reducing Litter and Debris

Economic incentives for reducing the waste stream should be given serious consideration. Container laws, the most successful option currently used by other states, create incentives for reusing potential litter and debris. A study of public policy options for potential legislative action, such as tax incentives for recycling activities and the production of biodegradable materials, should be initiated by the governor in cooperation with the General Assembly.

5. Management of Litter and Debris

Management of litter and debris should be guided more strongly by public policy. For example, all water-related development activities permitted by the state, such as marinas and coastal development projects, including construction sites, should be required to have adequate facilities for litter and debris disposal.

6. Penalties for Violators

Penalties for violating laws regulating the disposal of litter and debris should be raised to a level that would provide a significant deterrent. This includes costs both to individuals for violating litter laws as well as to businesses for violating waste stream management laws. Penalties should be consistent across jurisdictions.

SUMMARY AND RECOMMENDATIONS

7. Education and Information

The problem of litter and debris in the marine environment should be stressed to students in grades K-12 and in post-secondary schools through the regular curriculum and to the public at large through adult education. Responsibility for education and information should be consolidated as much as possible in an entity that can oversee the coordination of the educational effort. Because of its vast influence, the media should be included in this far-reaching effort.

8. Resources

Three sources of financial support for public education and for management of waste should be strengthened:

- Direct appropriations from state and federal government, as appropriate, for activities necessary to address portions of the solid waste problem that affect public health and safety and the environment;
- Mandated user fees on certain activities in the marine environment to be used in education and management efforts; and
- Contributions by individuals, organizations and industry, either in the form of direct contributions to particular activities or in the form of an endowment fund, to assist public and private efforts in solid waste management.

Even in the absence of new resources, existing public and private resources should be redirected toward this problem.

9. A North Carolina Conference on Litter and Debris in the Marine Environment

The N.C. Marine Science Council should sponsor or co-sponsor a conference on litter and debris in the marine environment. The conference should involve both public and private sector participants and sponsors and should address all dimensions of the litter and debris problem. The conference should draw upon state and national expertise and experience and should provide an educational forum for North Carolina residents and policy-makers.

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