



A PROGRESS REPORT
ON THE
COASTAL FUTURES
COMMITTEE'S
RECOMMENDATIONS FOR
COASTAL MANAGEMENT



INTRODUCTION

The 1974 NC Coastal Area Management Act (CAMA) established the NC Coastal Management Program as the planning and regulatory program for the state's coastal region. CAMA establishes a guide for developing land use plans in the 20 coastal counties, identifies Areas of Environmental Concern (AECs) and gives the Coastal Resources Commission (CRC) authority to develop policies and guidelines for development activities in these critical areas. Other significant components of the program include public waterfront access and the Coastal Reserve Program. The Division of Coastal Management staffs the CRC and implements other provisions of CAMA.

Governor Hunt declared 1994, the 20th anniversary of CAMA, as the "Year of the Coast" and created the Coastal Futures Committee (CFC), a group of 15 charged with reviewing progress made since 1974, and with preparing recommendations for future action. The committee's findings, published in 1994, include 203 recommendations to strengthen land use planning, protect water quality and public trust rights, preserve the coast's natural heritage, encourage sound economic development and promote environmental education.

In 1995, Governor Hunt announced his Coastal Agenda, based primarily on recommendations from the CFC and the Albemarle-Pamlico Estuarine Study. The agenda's broad goals were to: protect and improve water quality; protect and restore natural areas and vital habitats; strengthen state and local partnership to improve coastal management; and protect and restore marine fisheries.

Many CFC recommendations for the NC Coastal Management Program incorporated into the Coastal Agenda have been enacted successfully over the past five years, or are currently being reviewed by the CRC. These initiatives include: expanding the Coastal Reserve; re-evaluating the shoreline area of environmental concern along the estuaries; improving CAMA land use planning and assistance to local governments; and reviewing and streamlining the CAMA permit process.

1999 marks the 25th anniversary of CAMA and gives the state, the Department of Environment and Natural Resources (DENR), the Division of Coastal Management and the CRC an opportunity once again to celebrate and reflect on accomplishments of CAMA. It is also a time to focus renewed energy on CFC recommendations that are still timely and pertinent.

The CFC acknowledged that some recommendations could be accomplished within a relatively short period, while others might take 10 or more years to accomplish. Some recommendations are general and directed toward the state as a whole; some are directed toward key departments, such as Environment and Natural Resources, Transportation or Commerce, while others are more specifically directed toward Coastal Management/CRC. It is the latter recommendations — those over which DCM or the CRC have some authority — that this progress report addresses. However, the report also notes areas where DCM has worked with other agencies to achieve results.

This progress report is organized by topics, following the same order as the CFC's report. For each section, there is brief background information and a summary of key recommendations and results. Appended to the report is a list of recommendations that have not yet been wholly accomplished, but are still being reviewed by DENR, the Division of Coastal Management or the CRC.

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TOPIC: LAND USE AND GROWTH MANAGEMENT

BACKGROUND

The Coastal Futures Committee noted that a successful land use program depends on a strong state-local partnership. To meet this goal, the committee made recommendations for improving the quality, implementation and coordination of local plans through changes in state guidelines and increased state support to local governments. In 1995, new planning guidelines were approved that addressed many of the CFC's concerns. After a cycle of updates under these guidelines, new concerns arose on how to improve the planning process and strengthen the state-local partnership that the CFC identified as crucial.

In November 1998, the CRC initiated a land use plan moratorium for the 1999-2000 planning update schedule, and appointed a Land Use Planning Review Team to review the current guidelines and suggest possible improvements. This newly formed review team will consider the CFC recommendations during its review.

IMPROVING PLANNING QUALITY AND TECHNICAL AND FINANCIAL ASSISTANCE

Recommendation:

Improve technical assistance for local planning.

Result:

Coastal Management has been producing land use planning notebooks with data for local governments since 1995. These notebooks contain background information specifically tailored to the local government on demographics, economic development, natural and cultural resources, and community facilities, as well as GIS maps to show the information in relation to small watershed boundaries.

In addition to the intensive, day-to-day assistance available from the four District Planners, the Division of Coastal Management established another planning position (Morehead City) to provide technical and research support.

Recommendation:

Improve financial support for local planning.

Result:

The 1995 General Assembly expanded the Division of Coastal Management's budget to include an additional \$300,000 for the Local Planning and Management Grant Program. With the additional funds, the Division of Coastal Management has increased by 50 percent the amount of grants available for local land use plan updates. Funds are also now available each year for local and regional planning and management projects. The balance funds planning tools designed to help local governments implement their land use plans through zoning and subdivision ordinances, stormwater management plans, waterfront access plans and storm hazard mitigation plans.

SUBSTANCE OF PLANS

Recommendation:

Include carrying capacity and cumulative and secondary impact information in local land use plans.

Result:

The 1995 revised land use planning guidelines require local governments to examine their ability to provide community services to meet anticipated demand. The guidelines require analysis of wastewater management, drinking water supply, transportation, and other community facilities and services. The new guidelines also encourage local governments to study: problems of multiple water uses; impacts of unplanned development on water quality; and the relationships between land use and water quality. The Land Use Plan Review Team will address the level of analysis that should be conducted by local governments.

PLANNING PROCESS

Recommendation:

Increase public participation in land use planning.

Result:

The revised guidelines require that meetings be advertised in multiple ways (not just through a legal notice), encourage the involvement of nonresident property owners and require an assessment of the effectiveness of the citizen participation effort. District planners encourage local governments to hold additional public hearings especially when controversial issues are being discussed or when substantial changes are made to a final draft. The Division of Coastal Management is developing a brochure on land use planning and public involvement.

Recommendation:

Educate local officials and increase their role in land use planning.

Result:

District planners generally make a presentation to local officials at the beginning of the planning process, with continued informal discussions throughout the process. The 1995 guidelines require that the final land use plan include a description of how local elected officials were involved in all aspects of plan development. In the next two years, the Division of Coastal Management plans to develop audiovisual tools and other public information materials to help district and local planners involve local officials and the public in the land use planning process.

Recommendation:

Increase the Coastal Resources Advisory Council's (CRAC) role in land use planning. Improve the plan review process by identifying major changes in a plan to the CRC.

Result:

Prior to 1996, CRAC (and CRC) member participation was generally limited to reviewing and commenting on final draft plans as members of the CRC's Planning & Special Issues Committee. The land use planning guidelines were amended to involve the CRC earlier in the process and to designate a CRAC or CRC member to monitor the plan process for the committee. The CRAC members often act as CRC designees during the process, meeting with district planners to review a draft plan and submit comments to insure the plan meets the guidelines. When a plan is being considered for approval, CRC members are informed of significant changes in two ways: a memo in their meeting packets; and a presentation by the district planner before the Planning and Special Issues Committee.

IMPLEMENTATION BY LOCAL GOVERNMENTS

Recommendation:

Require implementation provisions in plans. Provide financial assistance for developing and carrying out implementation programs.

Result:

The 1995 rules require that implementation strategies and time lines be included in each land use plan. The increase in funding in 1995-1996 for the Local Planning and Management Grant Program allowed the Division of Coastal Management to fund the development of implementation tools. During the 1997-1998 fiscal year, \$243,007 from this program funded 22 local or regional planning and management projects. These projects include a stormwater ordinance for Craven County, feasibility study for a proposed regional solid waste recovery facility for eight northeastern coastal counties, growth management and development ordinances for Hyde County and a model storm hazard mitigation plan for Nags Head.

Recommendation:

Perform periodic performance audits of plan implementation.

Result:

Staff has developed an instrument to assess past land use plan implementation and to gauge a local government's need for technical assistance. A pilot project with a few local governments will be tested in 1999.

IMPLEMENTATION BY STATE AGENCIES

Recommendation:

Require that state statutes and CAMA land use plans are consistent. Provide opportunity for state agencies to comment on local land use plans during the planning process.

Result:

State agencies have the opportunity to review preliminary drafts of land use plans for consistency with their statutes. The Division of Coastal Management district planners and CRC/CRAC delegates review these comments and send them to local governments to make their revisions. The newly formed Land Use Planning Review Team will examine

the role of Executive Order 15 to see if consistency between state agencies and CAMA plans can be strengthened. Draft legislation has also been developed to amend CAMA to require state agency actions to be consistent to the maximum extent feasible with CAMA land use plans and guidelines.

STATE GRANTS AND LAND USE PLANS

Recommendation:

Tie local government eligibility for growth-related state and federal grants to the adoption of a land use plan and implementation program.

Result:

The Department of Environment and Natural Resources offers bonus points to local governments applying for wastewater treatment funds that have acceptable land use plans. Local governments get additional bonus points if their plans list implementation strategies. The Division of Coastal Management funds implementation tools for local governments that have land use plans. The Division of Coastal Management and other state agencies are currently considering strategies to link financial assistance for growth-inducing facilities to land use plan development and implementation.

COORDINATION WITHIN COUNTIES

Recommendation:

Require that all municipal plans within a county be updated the same year as the county plan.

Result:

Starting in 1995, plans within a single county are all updated at the same time. District planners encourage counties and municipal governments to work on joint plans to increase intergovernmental coordination. Some examples of joint plans are: the New Hanover County/Wilmington plan; the Chowan County/Edenton plan; and the Tyrrell County/Columbia plan.

REGIONAL COORDINATION

Recommendation:

Revise the land use planning schedule so that all local governments within a river basin update their plans soon after the Division of Water Quality basinwide plan is released. Require that local plans consider findings and recommendations of the basinwide plans.

Result:

The update schedule was revised so that most land use plan updates follow the basinwide planning process. The Division of Coastal Management and the Division of Water Quality planning staff are currently working together to explore how these two planning programs can be better integrated. This will be discussed by the Land Use Planning Review Team.

Recommendation:

Identify key regional issues, and encourage regional cooperation on these issues.

Result:

1995-1996 was the first time funds were made available to address land use issues on a regional basis. The Division of Coastal Management district planners encourage local governments to apply for funds for projects that improve basinwide water quality protection, economic development, regional transportation and solid waste and waste water disposal, all regional issues identified by the Coastal Futures Committee. The Division of Coastal Management has funded nine regional planning projects since 1996, including the Cape Fear River Corridor Study and the Carteret County regional wastewater management plan.

TOPIC: COASTAL WATER QUALITY

BACKGROUND

The Coastal Futures Committee found that, despite substantial efforts to protect coastal water quality during the first 20 years of CAMA, water quality problems persist in coastal North Carolina. In some locations they are becoming worse. The Coastal Futures Committee found that these problems have persisted, in part, because existing water quality protection programs are spread among regulatory agencies.

The Coastal Futures Committee recommended that the state take a comprehensive regional approach to review all sources of pollution throughout the river basins that drain to the coast. It also recommended that the state focus on localized coastal pollution sources that can critically affect fragile shoreline habitats such as shellfish beds and sea grass meadows and pay particular attention to developing a coordinated, comprehensive approach to water quality protection.

MANAGING DEVELOPMENT AND LAND USE TO PROTECT WATER QUALITY AND BASINWIDE WATER QUALITY PLANNING

Recommendation:

The CRC should amend CAMA land use planning guidelines to require incorporation of basinwide goals for water quality protection.

Result:

The CAMA land use planning schedule has been revised so that most land use plan updates will follow the Division of Water Quality basinwide planning process. As a result, when a local government updates its land use plan, it can use information from the recently updated basinwide plan. The Division of Coastal Management district planners encourage local governments to apply for funds for projects to enhance basinwide water quality protection.

The 1995 revisions to the land use planning guidelines encourage planning on a regional or watershed basis. The revised guidelines encourage local governments to consider watersheds as they develop local policies for future growth. The Division of Coastal Management provides additional technical assistance to local governments for local watershed-based planning. This complements other state agency efforts to address resource protection from a basinwide approach.

COMPREHENSIVE MANAGEMENT OF NONPOINT SOURCE POLLUTION

Recommendation:

DENR should seek to meet or exceed the requirements of Section 6217 of the Coastal Zone Reauthorization Act of 1990.

Result:

The Division of Coastal Management and the Division of Water Quality took the lead in developing a coastal nonpoint source pollution control program on behalf of DENR. The program provides detailed information on the enforceable policies in place and the management measures used to control pollution from nonpoint sources in coastal North Carolina.

Much of DENR's work to follow-up on Coastal Zone Management Act Section 6217 was delayed while federal agencies reviewed the state's plan. In addition, federal funds for 6217 ended in June 1996, and the Division of Coastal Management's two positions were eliminated. Funding to re-create a 6217 coordinator position resumed in July 1998 and the position is expected to be created in 1999. That position will be located at the Division of Water Quality to work as part of the state's nonpoint source control program.

Recommendation:

The CRC should amend the CAMA land use planning guidelines to include development of comprehensive local strategies for preventing nonpoint source pollution from entering coastal waters.

Result:

Although the current land use planning guidelines do not specifically mention nonpoint source pollution, they do require a policy on water quality management, and management measures to reduce or eliminate local sources of surface water quality problems.

WATER QUALITY PROTECTION IN SHORELINE AREAS

Recommendation:

The CRC should amend its rules to expand Areas of Environmental Concern (AECs) along Estuarine Waters, Outstanding Resource Waters and Public Trust Waters. Within these expanded AECs, the CRC should designate buffers where non water-dependent land disturbing activities are prohibited.

Result:

Over the past year, the CRC has been drafting rule changes that include expanding its permitting area in the 20 coastal counties upstream along inland waters. The potential new permit area along with the existing Estuarine Shoreline AEC would be called the Coastal Shoreline AEC. The new shoreline areas would extend 30 feet along all navigable waters in the coastal counties. The CRC is also proposing a 30-foot buffer along all estuarine and public trust water. This buffer would only allow for the development of water-dependent structures within 30 feet of the water.

Recommendation:

The CRC should amend the CAMA land use planning guidelines and use standards to promote the use of natural filtration, appropriate low density development and source reduction over engineered stormwater controls.

Result:

This recommendation will be considered during the current review and revision of the CRC's land use planning guidelines and implementation process.

MARINAS

Recommendation:

DENR should issue an environmental guide for boat owners that includes information on the importance of using pumpout facilities and sealed heads.

Result:

In 1996, the Division of Coastal Management produced *A Guide to Marine Sewage Pumpout Stations in Coastal North Carolina*. This guide lists the name, location, telephone number, hours and fees for 46 pumpout stations. The guide, which includes maps of locations, was partially funded under the federal Clean Vessel Act.

CONSTRUCTION

Recommendation:

DENR should develop a guidance document for golf course architects, superintendents and government agencies.

Result:

Although a guidance document has not yet been developed, the research coordinator for the NC Coastal Reserve has conducted a study on the effects of nonpoint source pollution from a golf course on a tidal creek in New Hanover County. The study involved a comparison of management practices, such as the use of a retention pond versus direct drainage. More information on this project can be obtained from the NC Coastal Reserve Research Office at (910) 395-3905.

MINING

Recommendation:

The NC Mining Commission should collaborate with the CRC and the Environmental Management Commission to assure the protection of coastal resources from mining operations.

Result:

In 1996, the CRC adopted specific use standards for submerged lands mining in estuarine and ocean waters. Development standards require that the biological productivity and significance of mine sites or borrow sites be evaluated and that protection strategies be provided. Sensitive areas, such as reefs and significant biological communities, must be avoided. Procedures for restoration and mitigation are also outlined.

WASTEWATER MANAGEMENT PLANNING

Recommendation:

The CRC should amend the CAMA land use planning guidelines to require comprehensive wastewater management protection strategies in local land use plans.

Result:

The Coastal Futures Committee included eight specific provisions in the revised CAMA land use planning guidelines. The guidelines require a comprehensive analysis projecting all wastewater treatment needs. This analysis should include, among other things, an estimation of projected sewage treatment needs, which may not exceed the capacity of coastal lands, wetlands and waters to absorb point and nonpoint source pollution. The plan should also consider water conservation and pollution prevention planning to reduce wastewater volume and pollutant concentration at public and private treatment facilities. The Land Use Planning Review Team will assess the level of analysis required for wastewater management protection.

Recommendation:

DENR should develop a comprehensive policy for ocean outfalls used for wastewater disposal.

Result:

Although a comprehensive policy on ocean outfalls has not been developed, the NC Ocean Resources Task Force was formed in 1993 to advise the Division of Coastal Management on the development of a state ocean plan. The task force's final report, presented to the CRC in early 1996, included an analysis of resource issues and recommendations concerning ocean outfalls. It also included seven recommendations regarding scientific needs for ocean outfall proposals.

WATER SUPPLY PLANNING

Recommendation:

Updates of water supply plans should be coordinated to occur simultaneously with updates of the appropriate local land use plans.

Result:

The 1995 land use planning guidelines state that updates of water supply plans should be coordinated to occur simultaneously with updates of CAMA Land Use Plans. The Division of Coastal Management coordinates with the Division of Water Resources so that the plans are developed at the same time. The revised guidelines also recommend that the conclusions of these water supply plans be summarized, and that the local government's capacity to provide an adequate supply of drinking water be evaluated.

MONITORING, RESEARCH AND STANDARDS / DATA MANAGEMENT

Recommendation:

DENR should strengthen Geographic Information System (GIS) capabilities to assist with environmental management decisions and to enhance program capabilities.

Result:

The Division of Coastal Management has developed strong GIS and analytical capabilities over the past five years. Coastal Management staff work closely with other agencies to develop new data or amend existing data. By pooling resources, the Division of Coastal Management has been able to obtain data that would be too expensive to purchase on its own. In turn, whenever staff alter data, they contact the staff of other agencies to see if additional changes need to be made. Such cooperation reduces duplication of effort and fosters strong partnerships between GIS users throughout the state. The Division of Coastal Management provides GIS data free to local governments for land use planning.

TOPIC: PROTECTION OF NATURAL AREAS

BACKGROUND

The Coastal Futures Committee found that, despite major efforts to preserve the natural heritage of the state's coast, population growth and the increased demand for private use of public waters require additional steps to improve the protection of ocean resources, estuarine shorelines, fisheries habitats, wetlands, maritime forests, ocean beaches and barrier islands.

CONSERVATION PLANNING

While there are a wide variety of programs concerned with the conservation of natural areas in North Carolina, these programs do not currently approach conservation with coordinated, regional planning. These programs aim to protect high-quality examples of important coastal ecosystems but do not provide a comprehensive approach to maintaining the region's natural heritage.

Recommendation:

DENR should set conservation priorities, concentrating efforts on the areas with the highest value and that offer the best opportunities for restoration.

Result:

The Division of Coastal Management is developing a Wetlands Conservation Plan to improve the management and protection of freshwater wetlands in North Carolina's 20 coastal counties. The plan will promote improved management and protection in six ways:

- *Mapping and Inventory* - identify the type, location and acreage of wetlands and provide the maps to the general public.
- *Functional Assessment* - a GIS-based procedure to rank wetlands according to important functions (e.g., water storage, wildlife habitat and water quality functions). The Division of Coastal Management is still developing the procedure and maps for the land use planning process.
- *Recommended Policies* - The Division of Coastal Management is working with local governments and others to develop appropriate land use policies for ecologically significant wetlands.
- *Restoration* - The Division of Coastal Management is using a modified procedure to identify and rank the best potential restoration sites.
- *Monitoring Status* - The Division of Coastal Management is improving the permit monitoring process by developing a computer tracking system for permits.

- *Education* - The Division of Coastal Management provides businesses, local governments and the public with information on non-regulatory protection methods and best management practices for wetlands.

Recommendation:

DENR and other government agencies that acquire lands should target regional conservation priorities identified in regional conservation plans.

Result:

The Division of Coastal Management consults with The Nature Conservancy and the NC Natural Heritage Program to identify suitable sites for inclusion in the NC Coastal Reserve. Through the Coastal Reserve Program, the Division of Coastal Management has acquired the Buckridge Tract along the Alligator River in Tyrrell County. This 18,000-acre swamp forest was identified as an acquisition priority by the NC Natural Heritage Program, the Pasquotank River Basinwide Water Quality Management Plan and the APES Comprehensive Conservation Management Plan.

Recommendation:

The CRC should exercise its authority to designate unique natural Areas of Environmental Concern.

Result:

As outlined in North Carolina Administrative Code 7H .0505 and .0506, the CRC has a procedure for sites to be nominated as complex natural areas of environmental concern. The CRC continues to receive and evaluate nominations to determine whether a site qualifies and if AEC designation is appropriate. The most recent nominations received by the Commission were for complex natural areas of environmental concern in Brunswick County -- an inland site as well as Bird Island. Neither site was designated after preliminary evaluations conducted by the CRC determined that an AEC designation would not provide the sites additional protection over existing development standards.

ACCESS TO BEACHES AND COASTAL WATERS

Coastal development and population growth have increased the need for public access and also resulted in the loss of traditional accessways. Despite substantial needs, state funding has not been available to provide facilities. There is no state-required comprehensive plan to provide access to coastal waters. Significant action is needed by both the state and local governments to increase public access to beaches and coastal waters.

Recommendation:

CAMA should be amended to require minimum public access to the state's ocean beaches and coastal waters.

Result:

With the exception of publicly funded beach nourishment projects, local governments are not required to provide public access to beaches and coastal waters. However, the NC Public Beach and Coastal Waterfront Access Program continues to be successful. Since 1994, the Division of Coastal Management took several steps to increase the number of access sites. In 1995, CAMA was amended to allow state funds to be used to construct estuarine and riverine coastal access sites.

In 1996, the Division of Coastal Management supported the creation of the NC Parks and Recreation Trust Fund, which created a dedicated source of state funding available for the access program. The Trust Fund has more than tripled the amount of money available for access projects in the coastal area. In Fiscal Year 98-99, the Division of Coastal Management was able to fund projects for 20 local governments.

Over the past year, the state has also provided a strong defense to a lawsuit filed by plaintiffs in Currituck County who are attempting to prohibit the public from access to the dry sand beach between the ocean and the first line of vegetation. The NC General Assembly also weighed in, unanimously passing a bill expressing the public's historic right of access to the dry sand beach.

Recommendation:

Provide incentives for private sectors to meet public access needs and establish public/private partnerships, such as private management of publicly owned access sites.

Result:

In 1997, the General Assembly appropriated funding to conduct an Adopt-A-Beach pilot program. The Division of Coastal Management contracted with NC Big Sweep, a private, non-profit waterway clean up organization, to administer the program. Seven access sites were "adopted" by civic groups or local associations that agreed to pick up litter within a half mile of each access. Because the pilot project was so popular with local governments and organizations, the Division of Coastal Management is working with NC Big Sweep to expand the project.

Recommendation:

The CRC should develop an overall state beach and coastal waterfront access plan to direct funds to areas with the greatest need.

Result:

While the Division of Coastal Management has not completed a state beach and coastal waterfront access plan, the CRC has amended its rules relative to funding criteria. Criteria for funding are demonstrated need due to high demand and limited opportunities for water access.

PUBLIC ACQUISITION PROGRAMS

The integration of the Coastal Reserve Program into the NC Coastal Management Program has been a substantial benefit to the state, allowing full coordination of education, research and land management objectives. However, all of the state's major coastal habitats are not represented, and there is inadequate management in some parts of the system.

Recommendation:

DENR should apply for federal authorization and funding for a new National Estuarine Research Reserve that targets riverine areas in the Albemarle-Pamlico estuarine system. This effort should be coordinated with the Partnership for the Sounds and the US Fish & Wildlife Service national wildlife refuges in the area.

Result:

In 1998, the Division of Coastal Management received funding from the NC Clean Water Management Trust Fund, the NC Natural Heritage Trust Fund and the US Fish & Wildlife Service for the acquisition of the Buckridge Tract in Tyrrell County. This 18,000-acre swamp forest along the Alligator River is the ninth Coastal Reserve site and the first riverine component of the Coastal Reserve Program. The site will be managed cooperatively with the US Fish & Wildlife Service.

The Division of Coastal Management has a strong commitment to environmental education. Educational partnerships have been established through the NC Association of Environmental Education Centers. The following Association members are adjacent to the Buckridge Tract: The Partnership for the Sounds, Pocosin Lakes National Wildlife Refuge and the Alligator River National Wildlife Refuge. The Association's member organizations and other agencies have expressed interest in using this unique habitat for environmental education. The Division of Coastal Management will work with Tyrrell County to promote ecotourism in the area.

Recommendation:

The General Assembly should appropriate sufficient funds to place Coastal Reserve staff in permanent state-funded positions.

Result:

In 1995, the NC General Assembly created an additional state-funded position for the Coastal Reserve, raising the number of state positions to three out of four. Since 1995, the General Assembly has also increased the operating budget of the Reserve Program by \$35,000 annually.

Recommendation:

The state should acquire land where long-term inlet migration has created areas suitable for public access or wildlife preservation.

Result:

The NC Public Beach and Coastal Waterfront Access Program makes funding available to local governments to acquire property for public access. In FY 1998-99, the Town of Long Beach received a \$100,000 grant from the Division of Coastal Management to acquire 30 acres of The Point at Lockwood Folly Inlet.

Recommendation:

DENR and other agencies that acquire lands for conservation should develop management strategies to balance the conservation and use of those lands. DENR should also develop partnerships with local public and private organizations to plan for sustainable uses of public lands.

Result:

Upon the inclusion of acquired lands in the Coastal Reserve system, a management plan is developed and a local advisory committee is established for local participation in management issues. The committee generally comprises representatives from state and local governments, conservation groups, traditional users, adjacent landowners and private citizens.

Several Coastal Reserve sites are also used by private enterprises for activities such as horseback riding and kayaking. The Division of Coastal Management works with local governments to promote ecotourism associated with Reserve lands.

FUNDING FOR ACQUISITION PROGRAMS

The lack of adequate state funding significantly hampers the state's ability to provide access to beaches and coastal waters, and to acquire and manage unique natural areas.

Recommendation:

The General Assembly should establish a dedicated source of funds for beach and waterfront access.

Result:

In 1996, the General Assembly created the NC Parks and Recreation Trust Fund to create a dedicated source of state funding available for the access program. The Trust Fund has more than tripled the amount of money available for access projects in the coastal area. In Fiscal Year 1998-99, the Division of Coastal Management was able to fund projects for 20 local governments that submitted final applications for access projects.

Recommendation:

Priority should be given to user-generated revenue to finance acquisition programs. Other potential sources should be examined, including the dedication of a substantial portion of the real estate transfer tax.

Result:

Since July 1996, the General Assembly has appropriated 75 percent of the state's share of the deed stamp tax to the Parks and Recreation Trust Fund. The NC Natural Heritage Trust Fund receives 25 percent of the Trust Fund to be used for natural area acquisition. Since 1988, the Division of Coastal Management has received grants totaling \$6,250,850 for the acquisition of 7,009 acres of natural areas for the Coastal Reserve.

Also in 1996, the General Assembly created the NC Clean Water Management Trust Fund, which receives 6.5 percent of the unreserved credit balance in the General Fund, or a minimum of \$30 million. In 1998, the Division of Coastal Management received a grant for \$3,858,500 to acquire and restore 18,000 acres of swamp forest in Tyrrell County.

PRIVATE CONSERVATION EFFORTS

Conservation efforts by nonprofit groups, individuals and corporations are vital to the protection of natural areas in coastal North Carolina. Statewide groups such as The Nature Conservancy and local land trusts are often partners with the state in individual conservation efforts. The voluntary efforts of individual landowners, such as the donation of conservation easements, also play an important role in an overall natural area conservation program.

Recommendation:

The General Assembly should provide incentives for land donations for public uses as natural areas or water access sites. The cap on the state Conservation Tax Credit Program should also be raised.

Result:

In 1997, the General Assembly raised the limit of the Conservation Tax Credit Program from \$25,000 to \$100,000 for individuals and to \$250,000 for corporations.

Recommendation:

DENR should increase outreach efforts relative to tax credits for conservation donations.

Result:

The department has created a brochure and generated more interest in the tax credit program. This has resulted in several donations of land for public beach access as well as wetlands preservation.

FISHERIES HABITAT DESIGNATION

Coastal growth and development increases stresses on important fisheries habitat areas that are vital to maintaining healthy fish and shellfish stocks. The state does not adequately protect finfish and shellfish nursery areas, and there is a lack of effective communication and coordination of regulatory agencies in the monitoring and enforcement of existing regulations.

Recommendation:

The Marine Fisheries Commission, Environmental Management Commission and CRC should apply specific protection measures similar to primary nursery area protection for submerged aquatic vegetation, shellfish beds and anadromous fish spawning areas.

Result:

Since 1997, the CRC has been developing a proposal to expand its permit jurisdiction to cover all public trust waters, creating a Coastal Shoreline AEC. This upstream expansion would encompass many of the anadromous fish spawning areas. The CRC is also trying to include a buffer, to afford additional Primary Nursery Areas. The Marine Fisheries Commission passed a resolution in 1998 endorsing the CRC's efforts. These proposals are still under consideration.

LAND AND WATER USE STANDARDS

Existing regulations do not adequately protect submerged aquatic vegetation, nursery areas, shellfish beds and anadromous fish spawning areas from the impacts of land and water activities. Designation of fisheries habitats creates a suitable framework for applying specific regulations to each type of important fisheries habitat.

Recommendation:

The CRC and Marine Fisheries Commission should coordinate their efforts to protect fisheries habitats.

Result:

In 1997, the General Assembly passed the Fisheries Reform Act, which requires the Marine Fisheries Commission, the Environmental Management Commission and CRC to develop and approve Coastal Habitat Protection Plans for wetlands, spawning areas, threatened/endangered species habitat, primary and secondary nursery areas, shellfish beds, submerged aquatic vegetation and Outstanding Resource Waters. These plans are to be completed by July 1, 2003.

Recommendation:

The CRC should develop regulations to address the cumulative impacts of development to protect the water quality of fisheries habitats.

Result:

The CRC has been working on amending its shoreline development regulations to address the cumulative impacts of development. The Division of Coastal Management is also developing a computer permit tracking system to help address cumulative impacts.

RESTORATION OF FISHERIES HABITATS

Many fisheries habitats have been degraded as a result of the impacts of coastal development; however, there are presently no mechanisms to restore functioning systems.

Recommendation:

The Division of Marine Fisheries and the Division of Coastal Management, in conjunction with the National Marine Fisheries Service, should evaluate the potential for the restoration of submerged aquatic vegetation.

Result:

In 1997, the General Assembly passed the Fisheries Reform Act which requires the Marine Fisheries Commission, the Environmental Management Commission and CRC to jointly develop and approve Coastal Habitat Protection Plans for wetlands, spawning areas, threatened/endangered species habitats, primary and secondary nursery areas, shellfish beds, submerged aquatic vegetation and Outstanding Resource Waters. The plans will identify and evaluate habitats and make recommendations for restoration.

WETLANDS AND ESTUARINE SHORELINE REGULATIONS

More than one-third of the state's wetlands have been degraded or destroyed, with one-third of the losses occurring between 1950 and 1980. One of the chief problems is that wetlands are regulated on a permit-by-permit basis, which hinders the evaluation of regional and cumulative impacts of wetland alteration. In addition, wetland mitigation and enforcement efforts are insufficient.

Recommendation:

The Environmental Management Commission should adopt a mitigation requirements program based on acreage and ecological functions of affected wetlands.

Result:

The CRC's rules require that adverse impacts to coastal wetlands be mitigated or minimized through proper planning and design. The rules also define whether a project is eligible for mitigation. In February 1999, the Division of Coastal Management was awarded a NOAA Coastal Services Center Fellowship to improve the CRC's mitigation policy. The Division of Coastal Management's wetland restoration specialist also reviews mitigation plans for wetland impacts in the CAMA counties and comments as part of team reviews of mitigation banks.

Recommendation:

DENR and the Army Corps of Engineers should increase state and federal enforcement of existing wetlands regulations and should use aerial compliance monitoring.

Result:

The Division of Coastal Management has been mapping wetlands in coastal areas by type and has produced functional assessment and potential restoration site maps. These maps will help protect freshwater wetlands by identifying the most functionally significant ones that should be protected from development. The Division of Coastal Management also conducts aerial compliance monitoring about every six to eight weeks.

Recommendation:

The Division of Coastal Management should improve coordination with the Army Corps of Engineers to expand the review of wetland permits, reduce regulatory overlap, accelerate permit issuance and provide additional protection for wetlands.

Result:

The Division of Coastal Management has worked with the Division of Water Quality and the Army Corps of Engineers to streamline the multi-agency permit review process. This has allowed permits to be issued in a more timely manner.

Recommendation:

The state should enact a freshwater wetland statute that offers incentives for private landowner conservation of these areas.

Result:

The state Conservation Tax Credit Program now allows the donation of fresh and saltwater wetlands.

WETLANDS RESTORATION AND MITIGATION

Current mitigation and restoration efforts are insufficient to restore wetland functioning on a regional basis. Mitigation projects are also not targeted at regional priorities.

Recommendation:

The Division of Water Quality and the Division of Coastal Management should accelerate work to establish a state Wetlands Enhancement, Restoration and Creation Program.

Result:

The Division of Coastal Management was instrumental in the formation of the NC Wetlands Restoration Program. This program is an innovative, nonregulatory program that was established in 1996 by the General Assembly to restore wetlands, streams and streamside areas throughout the state. In 1998, the Division of Coastal Management became a member of the NC Wetlands Partnership, which has brought more than 20 governmental and non-governmental groups together to coordinate wetland activities.

Recommendation:

The Division of Coastal Management should coordinate with the Army Corps of Engineers to ensure the enforcement of mitigation requirements.

Result:

The Division of Coastal Management now often makes mitigation a condition of favorable consistency determinations. It also requires up-front mitigation for Army Corps of Engineers' projects requiring a state consistency determination.

ESTUARINE SHORELINE PROTECTION

Bulkheads and similar "hard" structures block the exchange of sediment between the estuary and the shoreline, causing erosion of the adjacent bottom and shoreline areas. This exchange is especially important to protect shoreline habitats as sea level rises.

Recommendation:

The CRC should develop policies and regulations to discourage the use of hard stabilization on estuarine shorelines.

Result:

The CRC is in the process of reviewing its estuarine shoreline regulations to tailor stabilization methods to site conditions.

PUBLIC TRUST WATERS

Navigable water and regularly flooded marshes are owned by the state and are held in trust for the use and enjoyment of all citizens. While the environmental impacts of the private uses of these areas are reviewed through regulatory programs, the state has not established an easement program to carry out its public trust management responsibilities.

Recommendation:

The state should develop a public trust easement program that includes a fee for the private use of public waters.

Result:

In 1995, the General Assembly began requiring easements for state-owned lands covered by navigable waters. The terms of the easement specify that the holder shall not exclude or prevent the public from exercising public trust rights, including commercial and recreational fishing, shellfishing, seine netting, pound netting and other fishing rights. The easements are for a term of 50 years at a cost of \$1,000 per acre (minimum payment of \$500). The easements are eligible for an additional 50-year renewal.

OCEAN RESOURCES PLANNING

Stresses on the marine environment are steadily increasing, including pollution and habitat degradation. Additional stresses to the state's coastal environment could result from Outer Continental Shelf oil and gas exploration and production, transportation accidents and spills, hard mineral mining and waste disposal. To date, there have been few attempts to coordinate planning among the various state, local and federal agencies and commissions that have responsibilities for ocean resources.

Recommendation:

The Division of Coastal Management should expand its efforts to develop a comprehensive state ocean management plan that includes specific use standards for development.

Result:

In 1996, the Ocean Resources Task Force, which was staffed by the Division of Coastal Management, delivered its recommendations to the CRC. The task force recommended rules for hard mineral mining in public trust waters and revisions to the state's coastal energy policies to more adequately address Outer Continental Shelf oil and gas activities. The CRC adopted the recommended changes to its rules in 1998. The task force also made recommendations for ocean jurisdiction and stewardship, marine fisheries, ocean outfalls, marine debris and marine protected areas.

The CRC adopted a resolution asking the General Assembly to clarify the oceanward jurisdiction of municipalities as extending from mean low tide to one mile offshore. The CRC has also supported task force recommendations and Marine Fisheries Commission efforts to amend its rules to better protect fishery resources, such as a ban on the harvesting of "live rock" in state waters.

Recommendation:

The General Assembly should provide specific funding for the Division of Coastal Management to administer the Outer Continental Shelf program.

Result:

While there has been no specific funding for the general Outer Continental Shelf program, the 1998 legislature appropriated more than \$300,000 for the Division of Coastal Management to hire staff, conduct studies and review a proposal from Chevron to drill an exploratory well 39 miles east of Cape Hatteras. Chevron has postponed its plans to submit an exploration plan.

Recommendation:

The Division of Coastal Management should be the primary custodian of GIS data on ocean resources.

Result:

The Division of Coastal Management has worked with other state agencies, such as the Underwater Archaeology Unit of the Department of Cultural Resources, and has contracted with university scientists in an effort to acquire and create GIS data layers for North Carolina's coastal ocean. The Division of Coastal Management now maintains data that includes shipwrecks, artificial reefs, bathymetry, Outer Continental Shelf lease blocks, hard bottoms and phosphate deposits. Coastal Management has also worked with several southeast states and NOAA's Coastal Services Center to develop a GIS web site that compiles all available ocean GIS information for regional ocean planning projects.

MARITIME FORESTS

Rapid development on the barrier islands has left very few remaining stands of undisturbed maritime forest. Management and regulation of any remaining tracts must ensure protection of the natural functioning of this important barrier island ecosystem.

Recommendation:

The Division of Coastal Management should accelerate efforts to acquire remaining tracts of maritime forests where possible.

Result:

Since 1994, the Division of Coastal Management has acquired 173 acres of Bald Head Woods and 844 acres of Kitty Hawk Woods. The Division of Coastal Management has continued the acquisition of Buxton Woods, with 825 acres now in public ownership.

Recommendation:

The Division of Coastal Management should accelerate development of management plans for maritime forests in the Coastal Reserve system.

Result:

The Division of Coastal Management has completed management plans for all Coastal Reserve sites and formally included the maritime forests in the Coastal Reserve system.

Recommendation:

Local governments should evaluate the effectiveness of local ordinances aimed at protecting maritime forests.

Result:

The CRC's Land Use Planning Guidelines require local governments to develop a policy for maritime forest protection in their land use plans, which are updated every five years.

SAND MANAGEMENT

Current management practices by the Department of Transportation and the Army Corps of Engineers do not adequately protect the elevation of the whole island or allow natural overwash of sand, which is important to prevent erosion and inundation of wetlands on the sound side of a barrier island.

Recommendation:

The state should develop a long-range transportation plan for the Outer Banks and other barrier islands. The plan should involve sand management, including the importance of allowing sand to overwash the islands. The state should address transportation issues through the Outer Banks Task Force.

Result:

The Division of Coastal Management continues to be an active participant in meetings of the Department of Transportation's Outer Banks Task Force, which is exploring options and strategies for protecting Highway 12.

COASTAL HAZARD AREAS

Although CAMA construction setbacks and prohibitions against the use of “hard” stabilization ensure beach preservation, relocation and retreat from eroding shorelines offer the best long-term protection of beaches, dunes, lives and property. North Carolina’s average sea level has risen 2.3 feet over the past century and, unless better provision is made for future shoreline position, buildings and infrastructure will continue to be endangered.

Recommendation:

The CRC should study the impacts of sea level rise and develop appropriate policies.

Result:

The CRC’s land use planning guidelines require local governments to adopt polices to address sea level rise. The level of analysis required will be assessed by the Land Use Planning Review Team.

Recommendation:

The General Assembly should require that disclosure of known coastal hazards and regulatory requirements be made to all purchasers of waterfront property.

Result:

The Division of Coastal Management worked with NC Sea Grant, NOAA and the NC Real Estate Commission to develop an informational pamphlet for purchasing coastal real estate. The CRC has petitioned the Real Estate Commission to add hazards information to its disclosure requirements.

PROHIBITION OF HARD STABILIZATION

The CAMA provision against the construction of “hard” stabilization structures on the oceanfront is the best way to protect the state’s public beaches and dunes.

Recommendation:

The CRC should require that sandbags be removed by the property owner after two years.

Result:

In 1995, the CRC amended its rules on the use of sandbags as a temporary erosion control method. The amendment requires that sandbag structures be removed within two years if the structure being protected is 5,000 square feet or less, or within five years if the structure being protected is greater than 5,000 square feet.

TOPIC: CAMA REGULATORY PROGRAM AND ORGANIZATION

BACKGROUND

Since 1978, when permits were first issued, more than 35,000 development projects have been reviewed through the CAMA permit program. Approximately 10% were major permit reviews, 50% were minor permit reviews and 40% were general permit reviews. The Coastal Futures Committee noted that the application process can be confusing and time-consuming, and that the resolution of conflicts arising over some permit decisions can be lengthy and costly.

CAMA PERMIT PROCESS & STANDARDS

Recommendation:

Simplify and shorten the permit review process. Review major permits to determine if more general permits can be developed.

Result:

Several new general permits, which are typically issued in one or two days, have been developed, amended or recently proposed. These new general permits are for mooring buoys, bridge replacements, underwater utility lines, marsh enhancement breakwaters, riprap in front of eroding marsh and emergency bulldozing.

Recommendation:

Make application forms more user-friendly.

Result:

The major permit application form was revised in early 1995 to make it easier to complete, and a checklist was developed to help complete the application process. Major permit applications can also be downloaded from the Division of Coastal Management's web site.

Recommendation:

Raise fees for major permits.

Result:

The CRC and Division of Coastal Management staff have reviewed the permit fee schedule numerous times, and will consider raising the maximum fee for major permits.

Recommendation:

Conduct an independent objective review of the permit process. Contact applicants to secure views.

Result:

In 1996, the Division of Coastal Management began developing a permit process reform plan. This included surveying permit applicants and review agencies to obtain their views on the permit process. Coastal Management surveyed major, minor and general permit applicants, as well as state and federal agencies. It also held two focus group meetings with consultants and developers. Staff has continued to use the survey and focus meeting data to improve its permit process and customer service.

Recommendation:

Develop reference guides, informational materials for applicants, local permit officers and the Division of Coastal Management staff.

Result:

In addition to the checklist and new application form, an updated developer's handbook is scheduled to be published in 1999. The Division of Coastal Management also developed a State Environmental Policy Act guidance document in 1997. Coastal Management provides program guidance materials to local permit officers at two workshops held each year.

Recommendation:

Encourage pre-application consultations.

Result:

The Division of Coastal Management staff has continued to encourage pre-application consultations and to provide technical assistance on development projects — before an application is submitted. An on-site visit is conducted for all permits.

Recommendation:

Improve training of staff and local permit officers. Conduct workshops.

Result:

The Division of Coastal Management staff continue to make improvements to the annual training workshops that local permit officers are required to attend. It has also requested funding for a position to coordinate the minor permit program. All regulatory staff now meet on a regular basis with the assistant director for permitting to ensure that there is consistent interpretation and application of the rules.

Recommendation:

Develop and employ a methodology to assess the costs and benefits of development.

Result:

The computerized permits tracking system will help staff assess the cumulative and secondary impacts of development. Over the past few years, DENR has developed a process for conducting fiscal analyses of rules — to assess the costs of implementing rules. However, there is no economist on the Division of Coastal Management staff, so it must rely on departmental guidance and guidance from Office of State Budget and Management.

Recommendation:

Develop a new staff unit for compliance, monitoring and enforcement.

Result:

The Division of Coastal Management field staff's workload has continued to grow without additional staff resources. Since 1991, the annual number of permits issued has increased by 56%, with only one regulatory position having been added in that time. The Division of Coastal Management has requested funding for an additional staff person responsible solely for monitoring and enforcement.

RESOLUTION OF REGULATORY DISPUTES

Recommendation:

To the extent possible, use mediation and arbitration to resolve contested cases.

Result:

The Division of Coastal Management staff try to work with applicants, and often adjacent property owners, to resolve potential disputes or conflicts. Many cases are resolved without the need to go before the CRC to appeal a permit decision or request a variance. The Division of Coastal Management staff will continue to explore innovative ways to resolve permit disputes before they become costly and lengthy.

TECHNOLOGICAL ADVANCEMENTS

Recommendation:

Develop a permits-tracking database.

Result:

Although the Division of Coastal Management has had a permits database for more than 10 years, it has become very outdated. Over the past several years, a Coastal Management team has been developing a new computerized permit tracking system, with a test version planned in 2000.

Recommendation:

Establish e-mail and GIS mapping links between the Division of Coastal Management and other review agencies and local governments.

Results:

The Division of Coastal Management field offices all have computers and e-mail capability. The GIS staff is working to make GIS data available to all staff for desktop viewing. The GIS and planning staff provide GIS data and/or maps to local governments for use in planning and economic development. Communications by staff are frequently handled by e-mail.

ROLE OF COASTAL RESOURCES ADVISORY COUNCIL (CRAC)

Recommendation:

The CRAC's role should be enhanced, especially in relation to land use planning. CRAC members should serve as citizen liaisons with local governments.

Result:

Over the past several years, many vacancies on the CRAC have been filled and CRAC leadership has encouraged the members to become more active participants. CRAC members serve on the two CRC standing committees and are responsible for relaying news on CRC issues to their respective commissions or councils.

STAFF RESOURCES

Recommendation:

Review the Division of Coastal Management staff resources since the demand for staff resources has grown.

Result:

The Division of Coastal Management has requested additional staff to coordinate enforcement and the minor permit program. In 1998, the Department of Transportation agreed to fund a new permit processing position in the Raleigh office.

TOPIC: ENVIRONMENTAL EDUCATION

BACKGROUND

The Coastal Futures Committee stated its belief that environmental education is essential to the success of coastal resource management, and that environmental education must be incorporated into formal education programs from kindergarten through college. Efforts should also be made to reach citizens, public officials and coastal resource users.

SCHOOL CURRICULA

Environmental education in the schools is an effective mechanism to develop environmental stewardship in young people and their families. Excellent environmental curricula are readily available for incorporation by the Department of Public Instruction, yet only a small number of students graduate with formal exposure to its basic principles.

Recommendation:

DENR should work with the Department of Public Instruction and other agencies to integrate environmental education into all K-12 curricula.

Result:

The Division of Coastal Management's Coastal Reserve Program has produced curricula and workshops that are provided to schools and teachers through Estuary-Net. The classroom activities in Estuary-Net are divided into three levels in order to provide various degrees of involvement in the subject, ranging from lab experiments to single field experiences to long-term monitoring. Each level contains 14 activities, which are divided among four quadrants representing different learning styles. Teachers are encouraged to do a minimum of eight activities by selecting at least one of the disciplines (e.g., earth science, biology, physics or chemistry) in the third quadrant. Each activity includes a telecommunications network component.

Recommendation:

DENR and the Department of Public Instruction should take a strong role in coordinating environmental education programs, materials and data for teachers throughout the state.

Result:

The Division of Coastal Management's Coastal Reserve Program has produced curricula and workshops that are provided to schools and teachers, such as the Estuary-Net Water Quality Monitoring Program. The Estuary-Net project has multiple components to assist citizen volunteer water quality monitors, and classroom teachers and students in understanding regional water quality issues. The Coastal Reserve Program also coordinates student monitoring sites at the Rachel Carson component of the North Carolina National Estuarine Research Reserve.

Recommendation:

DENR and the Department of Public Instruction should increase the accessibility of environmental curricula and education materials through better marketing and emphasis on electronic mediums.

Result:

The Coastal Reserve education office is located at 216 Front Street, Beaufort, on the waterfront opposite the Rachel Carson component of the Reserve. Although the public is welcome to visit any Reserve site, group tours are presented on the Rachel Carson component. Reserve educators lead school field trips while the Rachel Carson Interpretive Volunteers provide field excursions for the public. In 1998, the Coastal Reserve also organized a live audio/video field trip to the Rachel Carson Reserve (Live at the Estuary) via the Internet, which reached 2,000 students in more than 30 schools.

Publications prepared by the educators include topical brochures, trail guides, field guides, posters, curricula, interpretations of research findings and the "The Tidal Flat" Reserve newsletter. The Coastal Aquatic Lending Library in the Beaufort office provides free resource materials to educators requiring curricula and information for program development.

Recommendation:

DENR and the Department of Public Instruction should promote curricula materials focused on the environment and natural resources of North Carolina.

Result:

Estuary-Net was developed by the National Estuarine Research Reserve System in response to water quality issues arising in coastal areas. This project strives to develop collaborations among high schools, community volunteer water quality monitoring groups, local officials, state Coastal Zone Management programs and National Estuarine Research Reserves to solve nonpoint source pollution problems in estuaries and watersheds.

TEACHER TRAINING IN ENVIRONMENTAL EDUCATION

Educators currently do not have enough opportunities or incentives to understand environmental principles and to experience environmental activities that will enhance teaching in this area.

Recommendation:

DENR and the Department of Public Instruction should expand opportunities for teachers to attend formal, in-service environmental education courses for renewal credit and for environmental education endorsement certificates.

Result:

The Coastal Reserve Education Office offers two teacher workshops: Project Estuary for middle school; and Sound Ideas for elementary school teachers. Both workshops offer renewal credit and NC Environmental Certification.

TEACHING RESOURCES

Currently, students lack opportunities for hands-on environmental learning because of inadequate funding and a shortage of in-school programs, outdoor classrooms and volunteers.

Recommendation:

DENR should promote programs that complement and enhance environmental education curricula with in-school programs that use environmental education and resource experts from state agencies and universities.

Result:

The Coastal Reserve staff lead a workshop called Coastal Explorations for the Class and Field. This workshop, which teaches students about estuarine processes, can be used on-site or in classrooms away from the coast.

Recommendation:

DENR should promote the development of community partnerships to create outdoor classrooms.

Result:

During the summer months, public field trips to the Rachel Carson site are led by the Rachel Carson Interpretive Volunteers. This group escorts visitors around the Rachel Carson Site and describes the local and natural history of the area. Although these volunteers provide other services to the reserve, they are especially recruited for this outdoor task.

OUTREACH TO THE PUBLIC

Currently, state environmental agencies do not adequately address needs for outreach to the general public.

Recommendation:

DENR and other state agencies should expand efforts to provide environmental education to citizens.

Result:

Since 1994, there has been an increase in the number of people reached by Reserve education efforts through:

- Teacher workshops held on the coast and in other parts of the state using curriculum guides developed by the Reserve for school teachers for school science programs.
- Temporary and volunteer staff in Beaufort.
- Increased partnering with other institutions (aquariums, NC Maritime Museum, universities).

During 1998, nearly 60,000 people participated in on and off-site education programs associated with the Coastal Reserve Program. The Coastal Reserve also organized a live audio/video field trip to the Rachel Carson site (Live at the Estuary) via the Internet that reached 2,000 students in over 30 schools.

In 1998, the Division of Coastal Management developed a brochure, *The Coast is Cool*, for elementary and middle school grades. The Division of Coastal Management's web site also includes information on coastal resource protection and management.

OUTREACH TO PUBLIC OFFICIALS

Local government officials in the coastal region are not provided with adequate opportunities to become familiar with coastal environmental principles, policies and issues related to coastal resource protection.

Recommendation:

DENR should work with the League of Municipalities, the Association of County Commissioners, the Institute of Government and other agencies to help train local officials in coastal environmental policies and issues.

Result:

During 1999 the Coastal Reserve education staff will hold Coastal Decision Makers workshops aimed at increasing local government officials' awareness of estuaries and estuarine processes.

TOPIC: THE COASTAL ECONOMY

BACKGROUND

The Coastal Futures Committee stated that, to offset the increasing costs of government services and to ensure future economic prosperity, North Carolina's coastal counties need a comprehensive economic development strategy to create high-wage employment, while retaining traditional industries. The Coastal Futures Committee further claimed that the greatest assets for economic development in coastal North Carolina are the region's natural and cultural resources. The committee concluded that the long-term health of the region's economy depends on the development of a diverse economy that makes careful use of shared resources and continues to support industries that are dependent on those resources.

Recommendation:

DENR should establish a liaison with the business and environmental community on environmental matters in the coastal region.

Result:

The Division of Coastal Management has improved its ability to communicate with the business and environmental community through the Division of Coastal Management web site, the *CAMAggram* newsletter, public meetings about rule changes and targeted mailings. DENR holds quarterly environmental and business leader meetings in which Coastal Management often has topics on the agenda.

Recommendation:

The CRC, Environmental Management Commission and other regulatory bodies should give careful legal and economic analysis to all proposed regulations that significantly restrict the use of private property.

Result:

Amendments to the Administrative Procedure Act in 1996 require that a fiscal note be prepared before an agency publishes the proposed text of a permanent rule change. The fiscal note must state the amount of funds that would be expended or distributed as a result of the proposed rule change and explain how the amount was computed. DENR further requires that a simple fiscal analysis be conducted before completing the fiscal note.

The Environmental Division of the Attorney General's Office provides legal assistance and representation to the Coastal Resources Commission. The Attorney General's office works closely with the CRC to ensure that proposed new regulations that might restrict the use of private property do not exceed the constitutional limits of the state's regulatory authority.

Recommendation:

The Departments of Transportation and Commerce, in consultation with DENR, should analyze the environmental impacts of their major projects in the coastal region.

Result:

In recent years, the Departments of Transportation, Commerce and DENR have invested significantly more time and resources on interdepartmental coordination and planning for the construction of new highways and bridges and the location of large industries. Increased communication and coordination early in the planning process means that project plans can be modified if necessary to reduce or eliminate environmental impacts. The Department of Transportation has provided funding for a the Division of Coastal Management position, to be filled in Spring 1999, to focus primarily on permits for road and bridge projects.

Recommendation:

The CRC should amend CAMA land use planning guidelines to include preferred locations for new business and industry. The Division of Coastal Management and the Department of Commerce's Division of Community Assistance should provide technical and financial assistance for development of areas identified for industrial development.

Result:

The land use planning guidelines require that land use plans contain policy statements on the types and locations of industries it favors (including discussion of specific sites or standards for sites in general) and describe local assets desirable to such industries. The land use planning guidelines also provide a mechanism for local governments to designate land classification subclasses of Developed/Commercial and Developed/Industrial. In applying the Developed class or subclasses, the local government should discuss how, when and where it will provide the services necessary to support the needs of an urban area.

The Division of Community Assistance helps local governments develop zoning ordinances, strategic plans and other management tools that address industrial development. The agency also awards Entrepreneurial Empowerment and Economic Development grants to help communities attract or create economic opportunities.

Recommendation:

DENR should increase the development and use of geographic information systems (GIS) and improve monitoring of natural and cultural resources, paying specific attention to constraints and opportunities for economic activity.

Result:

The Division of Coastal Management has dramatically increased its use of GIS over the past several years to improve its monitoring of natural resources, especially wetlands. The Division of Coastal Management is using GIS to develop a wetlands conservation plan for the North Carolina coastal area. This plan will be provided to local governments for local land use planning. The Division of Coastal Management anticipates that local governments will use the wetlands conservation plan to direct economic activity to areas that will have the least amount of harm to wetlands. GIS data is provided to local governments at no charge.

APPENDIX

Other Coastal Futures Committee Recommendations for the Division of Coastal Management

On the following pages are recommendations that the Department of Environment and Natural Resources and the Division of Coastal Management/CRC will continue to review.

There has been some progress on recommendations marked with an asterisk (*).

LAND USE AND GROWTH MANAGEMENT

- Require a professionally prepared objective survey to property owners at the beginning of the planning process.
- Make eligibility for special plan implementation funding contingent upon adequate involvement of elected officials.
- General Assembly should amend CAMA to require that all local ordinances be consistent with the local land use plan.
- Conduct a legal and political analysis of whether state agencies should be allowed to seek a variance to actions not consistent with local land use plans. (This is assuming action by the General Assembly to require state agency actions to be consistent with land use plans.) *
- Create a CRAC regional advisory group. Identify regional issues and establish ways to obtain regional cooperation. Establish sub-regions of the coast that correspond to river basins. All plan updates should be reviewed by a CRAC regional advisory group.
- Hold regional assemblies for CRAC advisory group. Identify regional issues and develop coordinated policy responses before plan updates.

COASTAL WATER QUALITY

- DENR should expand its basinwide approach to water quality protection and incorporate basinwide management into other water quality protection strategies. *
- DENR should evaluate ways to increase local involvement in the basinwide planning process. *
- DENR should develop a comprehensive marina policy to address appropriate design, siting, and operation and maintenance procedures.
- DENR should issue a guide for marina developers and owners that describes how to build and operate a marina in compliance with the department's marina policy. *
- The CRC should revise its public trust, coastal wetlands and estuarine waters AEC use standards concerning marinas to improve protection of the quality of coastal waters and aquatic communities.
- The Division of Water Quality, the Division of Coastal Management, the Division of Soil and Water Conservation, and the Division of Marine Fisheries should work together to prioritize and target channelized streams. They can provide water quality improvements for the protection of water quality standards and uses, including the issuance of control permits where appropriate. *
- The Environmental Management Commission and the CRC should collaborate with the Mining Commission to ensure that appropriate regulations are in place to address de-watering of groundwater aquifers and wastewater management by mining operations.
- Local governments should be required to adopt ordinances implementing wastewater management strategies to be eligible for Construction Grants funding for wastewater treatment facilities. *
- Local governments should pursue central collection as a first alternative to septic systems in areas with poor soils. The preference for central collection should be reflected in local land use plans and ordinances. *

- DENR should coordinate the nonpoint source enforcement activities of its various divisions to ensure that corrective actions are implemented in a timely and effective manner. *
- DENR should modernize and coordinate its data management systems to allow for efficient and effective access to, and utilization of, environmental information. *
- DENR's GIS information should be periodically evaluated and reported as a "status and trends" document for use by scientists, rule-making commissions and citizens in furthering environmental quality goals.

PROTECTION OF NATURAL AREAS

- To ensure that designations are accurate and up to date, the Division of Marine Fisheries should certify, maintain and update Submerged Aquatic Vegetation, shellfish beds, nursery areas, spawning areas and habitat for endangered aquatic species on a 5 to 10-year basis. The Center for Geographic Information and Analysis should ensure that maps of these areas are available through the state GIS. *
- The Environmental Management Commission and the Marine Fisheries Commission should strengthen their efforts to work together to evaluate and strengthen water quality classifications and standards to protect designated fisheries habitats areas. *
- When reviewing permits for proposed construction projects, DENR and the Department of Transportation should ensure that access to anadromous fish spawning runs is not blocked by dams, road culverts or other obstructions. *
- The Division of Coastal Management should develop Best Management Practices that aim to protect designated fisheries habitats from the impact of development on adjacent lands. The Best Management Practices should be required in CAMA permits.
- The Environmental Management Commission should apply a supplemental water quality classification to fisheries habitats that have been degraded by water quality impacts. The Division of Water Quality should develop recovery plans for these areas.
- The Environmental Management Commission should adopt wetland rules that wetland impacts be avoided where practicable, unavoidable losses be minimized and that any remaining losses be compensated. *
- The Department of Transportation and the Army Corps of Engineers should adopt management practices that allow sand to overwash naturally and remain in island interiors.
- The CRC should seek legislative authority to require relocation or demolition of existing structures when they are threatened by erosion or become inhabitable.
- The CRC should develop additional standards for inlet hazard areas, including restricting development in areas of inlet migration. *
- The state should not provide funds for new development within designated areas of the federal COBRA system.

CAMA REGULATORY PROGRAM AND ORGANIZATION

- The Division of Coastal Management should conduct regular workshops on its permit processes and requirements. *
- A single point of contact at the local level should be established for permit applicants. Local permit officer training should be enhanced using local funds. *
- The General Assembly and CRC should consider delegating greater CAMA enforcement authority to local governments that have approved land use plans and plan implementation programs. The CRAC should be considered for monitoring local implementation.
- Regular reports should be made to the CRC on the permitting processes, tracking and enforcement. *
- CAMA should be amended to ensure that one CRC member has expertise in ocean resource management, and to simplify the process by which local governments make recommendations for appointments.

THE COASTAL ECONOMY

- (Very few of these recommendations were directed toward the Division of Coastal Management or DENR.)
- To increase the value of its fisheries products, the state should seek to attract seafood processing companies to the coastal region and should consider assisting private industry in the development of seafood processing infrastructure. The state should also evaluate the availability of waterfront property for water-dependent industries. Where waterfront access is a problem for these industries, the state should purchase waterfront property and assist in the construction of public docks.
- The state should strengthen efforts to develop environmental education centers to expand nature-based tourism opportunities throughout the coastal region. The state should also continue to promote cultural and historical tourist attractions in the coastal region. *
- The state should aggressively support the Morehead City and Wilmington ports as magnets for attracting new businesses to eastern North Carolina. Specifically, the state should pursue flexibility in tariffs, port expansion and improved rail service to each port. *
- The state should assist local governments and involve itself directly in facilitating and guiding the development associated with the expected expansion of military bases in eastern North Carolina.
- The design and implementation of major local, state and federal projects should involve both site-specific design standards and a process for regional coordination and full consideration of secondary and cumulative impacts. *



North Carolina Division of Coastal Management
Donna D. Moffitt, Director



North Carolina Department of Environment and Natural Resources
Wayne McDevitt, Secretary



State of North Carolina
James B. Hunt Jr., Governor