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UNITED STATES DEPARTMENT OF COMMERCE  
FINAL ENVIRONMENTAL IMPACT STATEMENT  
PREPARED ON AMENDMENT TO THE  
NORTH CAROLINA COASTAL ZONE MANAGEMENT PROGRAM

Prepared by:  
Office of Coastal Zone Management  
National Oceanic and Atmospheric  
Administration  
Department of Commerce  
3300 Whitehaven Street, N.W.  
Washington, D.C. 20235

and

North Carolina Coastal Management  
Program  
North Carolina Department of Natural  
Resources and Community Dev.  
Archdale State Office Building  
Raleigh, North Carolina

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March 1980

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DESIGNATION: FINAL ENVIRONMENTAL IMPACT STATEMENT

TITLE: PROPOSED FEDERAL APPROVAL OF AN AMENDMENT TO THE  
NORTH CAROLINA COASTAL ZONE MANAGEMENT PROGRAM

ABSTRACT: It is proposed that the Assistant Administrator for Coastal Zone Management approve three planning elements as an amendment to the North Carolina Coastal Zone Management Program. The three elements are: 1) Shorefront Access and Protection Planning Process, 2) Energy Facility Siting Planning Process, 3) Shoreline Erosion Mitigation Planning Process. This amendment meets the requirements of Section 305 (b)(7), (8), and (9) of the Coastal Zone Management Act of 1972.

The Office of Coastal Zone Management prepared a Draft Environmental Impact Statement (DEIS) on the proposed amendment of the North Carolina Coastal Zone Management Program in April 1979.

In order to reduce paperwork, and in accordance with Section 1503.4(c) of the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, we are responding to the comments that were received on the DEIS by writing errata sheets which can be inserted into the DEIS. We are including in this package the comments received on the DEIS, our responses, and the appropriate changes to the document.

APPLICANT: North Carolina Department of Natural Resources and  
Community Development

LEAD AGENCY: U.S. Department of Commerce  
National Oceanic and Atmospheric Administration  
Office of Coastal Zone Management

CONTACT: John Phillips  
South Atlantic Regional Manager  
Office of Coastal Zone Management  
3300 Whitehaven Street, N.W.  
Washington, D.C. 20235  
(202) 634-7494

COMMENTS RECEIVED ON THE DEIS AND OCZM'S RESPONSES

Comments

1. The statement on p. 55, "All potential hydrosites are presently in use" is incorrect. There are 29 undeveloped hydroelectric sites in North Carolina. In addition, there are numerous retired small hydroelectric power plants in North Carolina which could be reactivated or redeveloped to provide electric energy needs.

2. Energy policies are presented under the heading of "Coastal Management Policies" (p. 79). In addition, general coastal energy policies are presented under the heading "Coastal Energy Policies" (p. 84). Such presentations are somewhat confusing. These should be combined under one heading for the scope of comprehensiveness of State policies.

3. No planning process for hydroelectric power plants is presented in the amendment. It is assumed that this is because all potential hydroelectric sites are located outside the coastal zone and would not significantly affect the coastal zone.

4. Miscellaneous comments include:
- The sum of the capacity of the 4 hydroelectric plants does not equal the total capacity shown.
  - The numbers for Weatherspoon and Cape Fear appear to be in error.
  - Explain the unit-type symbols in the third column.

Responses

1. The statement is somewhat misleading and has been revised to reflect the fact that there are potential hydroelectric development sites in North Carolina, however, these identified sites are all presently located outside North Carolina's defined coastal zone.

2. Although the two sub-headings are separate, they both deal with policies relative to coastal energy facilities, and as such they both will be used by the state in review of future energy projects locating in the coastal zone. The section entitled "Coastal Management Policies" are policies drawn from existing State law or regulation. The "Coastal Energy Policies" section was developed by the Coastal Resources Commission pursuant to authority granted in G.S. 113A-102(b)(4) of the North Carolina Coastal Area Management Act. For clarity, they have been combined under one heading entitled, "Coastal Energy Policies."

3. This assumption is correct.

4. Please refer to the revised chart in Section One of the Energy Facility Planning Amendment.

United States Department of Agriculture  
(R.M. Davis) (5/23/79)

Comments

1. The comparison of peat mining in North Carolina to coal extraction is not a valid comparison. Removing peat to a depth of six feet below the ground is a form of strip mining and is the depletion of a non-renewable resource. Additionally, these lands are important to agriculture and forestry resource values in their present state.

2. Define the words "recreational, rural and conservational" on p. 138, as these are rather broad terms.

3. There is no mention of prime farm or forest lands in the coastal zone management area.

United States Department of Agriculture  
(R.M. Davis) (5/23/79)

Responses

1. It is agreed that the comparison between peat mining and coal mining is not valid and the paragraph has been changed accordingly. Although peat varies from location to location, the peat found in coastal North Carolina is of high organic content, mucky in consistency and filled with large tree stumps and debris, etc. Harvesting is still in the experimental stages. Although it is agreed that peat deposits can be important to agriculture and silviculture resource values, First Colony Farms believes the peat on its land has greater potential value for energy utilization because of its peculiar makeup.

2. These terms are used in a general sense to denote types of activities which will be encouraged in shoreline areas exhibiting a significant erosion rate. Since significant erosion is known to exist and would be a threat to permanent structures maintained for either public or private purposes, the CRC wished to encourage (and give priority to) only those types of development projects which would be able to utilize the area in virtually its unaltered condition. Basically, it was felt that the terms "recreational," "rural" or "conservational" would best reflect this philosophy.

3. While these amendments do not specifically address this issue, it is covered in the coastal management plan document. See Chapter 3 of the management plan. Also, local governments were required to prepare land use plans and classify land into five categories. One of these categories is "Rural," and this category emphasizes classifying areas presently utilized for agriculture and forestry purposes as well as areas which may be used for such in the future.

U.S. Army Corps of Engineers  
(Boone) (5/10/79)

Comments

1. We disagree with the statement under Energy Generating Facilities (p. 55) that "all potential hydroelectric sites are presently in use."
2. The discussion on harbors should be rewritten to deal with deeper harbors than those stated.
3. Clarification should be provided regarding air and water quality standards. Is the facility siting preference due to a difference in quality standards or a difference in ambient polluted concentrations?

Department of Transportation  
(Lewis) (5/21/79)

Comments

1. We note that a central theme is freedom of access to the beaches and estuarine areas, while observing that privately owned beaches are increasing in number and popularity. Showing a land use planning and land classification system would be of benefit here.

U.S. Army Corps of Engineers  
(Boone) (5/10/79)

Responses

1. Please refer to responses #1 and #3 of the Federal Energy Regulatory Commission comment section.
2. Please refer to this same section on harbors for revisions made.
3. Although siting preferences could be attributable to both, the major emphasis is due to a difference in quality standards imposed. Depending upon amount and type of discharges, water quality (for example) could conceivably be violated, and thus a permit could not be issued. Since siting decisions in North Carolina are largely based on the applicant's ability to acquire all the necessary permits involved, siting decisions and preferences are largely tied to meeting prescribed quality standards for air and water and other concerns of the State.

Department of Transportation  
(Lewis) (5/21/79)

Responses

1. This information is not contained in the amendment itself; however, it is available in the individual land use plans developed by the coastal counties and municipalities. These plans compose a substantial part of the North Carolina Program and can be obtained from the North Carolina Office of Coastal Management.

Department of Energy  
(Kalter) (5/7/79)

Comments

1. Our review confirms the general assessment of coastal program energy policies as stated in our letter of May 16, 1978, commenting on the North Carolina Program. North Carolina will rely primarily upon authority to designate proposed sites for major energy facilities as Areas of Environmental Concern and to establish State level regulation through required applications for Major Development Permits. These authorities allow the State to recognize energy facilities sites as uses of regional and national benefit and provide procedures to ensure that they are not unreasonably excluded from the coastal zone.

State procedures for Preliminary Site Analysis should be a constructive method of identifying energy issues at an early planning stage and/or assisting energy interests in the location of environmentally and socially acceptable sites. The program provides for utilization of a variety of State authorities, full consideration of relevant Federal authorities, and availability of contested case hearing procedures to assure an objective and fully developed regulatory process for proposed energy projects.

We will be pleased to assist the State in implementation of its approved coastal energy planning and regulatory procedures.

Department of Energy  
(Kalter) (5/7/79)

Responses

1. No response necessary.

Department of the Interior  
(Lee) (5/10/79)

Comments

1. The "Shorefront Access and Protection Planning Process" elements have been addressed in a very comprehensive manner, and we feel that approval and implementation of this element will improve the North Carolina Coastal Management Program. We are pleased that the North Carolina State Comprehensive Outdoor Recreation Plan objectives have been included as part of this element.

2. The Department of the Interior recommends that the entire barrier islands be designated as Areas of Environmental Concern. We disagree with the concept of coastal zone management which addresses only parts of the system while failing to recognize spillover effects from unregulated portions of the coastal ecosystem.

3. Visual access, like physical access should not be "left to the discretion of local land use plans." This approach is woefully inadequate in that it fails to guarantee protection of regional and national interests in this regard.

Department of the Interior  
(Lee) (5/10/79)

Responses

1. No response necessary.

2. The authority and decision to designate the entire Outer Banks as an Area of Environmental Concern rests solely with the CRC. It was their decision to designate only a critical portion for AEC status. At the time of program approval, OCZM found this to be an adequate approach under the Federal CZMA. The Commission does have the authority, however, to review and revise AEC's. Should it become apparent that development on unregulated portions of the bank has an adverse effect, the Commission has the ability to respond through enlarging its scope of jurisdiction.

3. Although it is agreed that visual access is an important aspect of the total access issue, the policy decision made by the Coastal Resources Commission was to give local governments the major leadership role in this regard. OCZM, at the time of program approval, found this to be an adequate approach under the Federal CZMA. It is expected that the next round of local land use planning will focus more on this issue, especially since the CRC has the ability to require local governments with access problems to address specially identified issues such as visual access.

Department of the Interior (continued)  
(Lee) (5/10/79)

Comments

4. The determination and acquisition of physical access should be the function of the Coastal Resources Commission with assistance from local governments. The CRC has no means of assuring adequate land and access acquisition. Further, the CRC can not enforce or modify local land use plans which do not provide adequate access.
  
5. The feasibility of funding for beach access and acquisition should be fully developed and presented in the final environmental impact statement.
  
6. We totally disagree with the CRC's determination that "beach access is for the most part a local responsibility and the State should not take an overbearing position on forcing access". We believe this paragraph should either be deleted or revised to indicate that beach access is the direct responsibility of the State and CRC.
  
7. The comment "peat mining has associated impacts on the water table and water quality" does not take into account possible salt water intrusion. The plan should discuss this potential impact.

Department of the Interior (continued)  
(Lee) (5/10/79)

Responses

4. This assertion is not entirely accurate since the CRC develops the planning guidelines under which local governments must address access. Also, the CRC must approve the plan. In developing the first set of land use plans, the CRC sent more than half of the plans back to local governments for greater depth and more information. The CRC will take a hard look at this issue during the next plan updates (scheduled to begin this year) and will require local governments with known access problems to specifically address this issue.
  
5. Most funding projects will be made through SCORP/BOR channels. The feasibility for funding is set under a priority formula with shore-front access receiving a high priority.
  
6. The CRC is stating on p. 50, paragraph 3 that access is a local responsibility that can not be ignored. The CRC intends to insure that the responsibility is met through local land use plans. The information secured through the SCORP process (p. 23) will be used as criteria to determine whether or not local governments have met their responsibility.
  
7. Please refer to the section on peat mining for a discussion of this impact.

Department of the Interior (continued)  
(Lee) (5/10/79)

8. This paragraph should be expanded to state that if mitigation is not feasible or possible in those ocean and estuarine areas that sustain substantial habitat for fish and wildlife, a CAMA permit will not be issued.

9. We view the overall management scheme for "Shoreline Erosion Mitigation Planning" as being somewhat passive in that it does not adequately address critical needs for setback planning and low density development within the transition zone of the state's barrier islands.

10. The problem of wind erosion has not been adequately addressed in this document. The effects of destroying overstory, shrubs and groundcover should be addressed along with the need to investigate the role of plant life in erosion protection.

11. On page 22 this paragraph should be rewritten to include: Wet Sand Cape Hatteras National Seashore was conveyed to the United States by State deeds in 1953 and 1958 (Section 8). Some dry sand is owned by the state and some by the Federal government.

12. The section on page 33 should be expanded to include references to villages located south of Nags Head. Public access to Federal beaches east of the unincorporated villages of Rodanthe, Waves, Salvo, Avon, North Buxton and Hatteras is limited to the extent that private landowners will permit free access across their property.

Department of the Interior (continued)  
(Lee) (5/10/79)

8. It is the policy of the State that development or alteration in areas supporting substantial habitat for fish and wildlife will be conducted in a manner that will minimize adverse effects. It is therefore safe to assume that if mitigation is not feasible, permits will not be issued.

9. We agree that setback zoning and low density development should be addressed; however, it is felt that the most proper place for their consideration is through the individual local land use plans and zoning ordinances. To this end, financial and technical assistance is made available to local governments to address and refine these issues.

10. The CRC has adopted erosion policies specifically supporting non-structural erosion control measures which utilize natural retardants such as vegetation. The CRC and DNRCO has also supported and encouraged such programs as Sea Grant in research efforts on the feasibility of using vegetation for protection against erosion.

11. Although this is a true statement, it is an exception to the rule and therefore should not be included. This exception deviates from this rule through conveyed title.

12. This fact is correct; however, planning information shows that access is not an issue in these communities. Local planning updates will include reassessments of beach access needs.

Comments

Energy Facility Siting

1. NRDC does not believe that there is a clear enumeration of a broader identification process for energy facilities in the presently existing program. It does seem that, as mentioned in the fourth paragraph on page 69 of the DEIS, the informal agreement existing between the Department of Commerce and the Department of Natural Resources and Community Development needs to be formalized and the procedures made a part of the management program.

1. The State has not formally pre-designated "acceptable" sites for energy facilities locating within the coastal zone, therefore it would not be appropriate to define specific areas which are "acceptable". Instead, the State requires that each facility adhere to certain performance standards through the various permit processes. Finally, certain areas are discouraged specifically through AEC regulations or coastal energy policies.

Section 923.13(b)(1) states that each program identify energy facilities likely to locate in the coastal zone. Although the State has no formal reporting procedure (exclusive of electric generating facilities) it is felt that the linkage between the State Department of Natural Resources and Community Development and the Department of Commerce is adequate for identifying potential energy facilities early on.

Although formal procedures have not been set up to formalize existing working relationships with the State Department of Commerce, this issue is presently being explored.

2. The proposed planning process for energy facilities contained in the North Carolina Program does not directly address the problems associated with "weak policy and planning linkages and, relatedly, fragmented and overlapping jurisdictions." No comprehensive planning process is enumerated. The responsibility for permitting a facility is diffuse and several permits are required from different agencies at different levels of government. Different permit processes are required for different types of energy facilities. There is a strong likelihood that these differences may result in inconsistent application of coastal management policies.

2. The energy facility planning process outlined for North Carolina recognizes that the state, for the most part, does not have a comprehensive siting process, therefore, that there can be the likelihood of "weak policy and planning linkages and fragmented and overlapping jurisdictions." In light of this, the coastal management program is using its available tools to effect consistent application of coastal management policies. Especially important tools are Federal consistency, the coastal management permit, and state consistency. Also important are local land use plans. Localities are in the process of updating land use plans and will be required to develop

3. The Executive Order standing alone is inadequate to insure that a "process" exists for the coordination and consultation between State agencies with regard to the siting of facilities. The CRC should be designated by the Governor as the lead management agency making decisions related to siting and conditions of development for energy facilities in the coastal zone. There should be clear assurance that coastal management policies will be considered as the basis for the threshold decision in siting and energy facility rather than an afterthought. If it is impossible for the Coastal Resources Commission to be designated as the lead agency in energy facility siting planning in the coastal zone, then a specific agreement should be entered into with the Department of Commerce pursuant to G.S. 143B-437 which sets out the joint responsibility of each department with regard to the effect of a new energy facility on the "natural and economic environment of" the coastal zone. In addition, the energy facility planning process of the program could effectively employ the State Environmental Policy Act, specifically 113A-4 and 113A-6.

4. The State should specifically outline its timetable for accomplishing the "Directives to Staff" contained on pp. 36-37 of the DEIS.

more specific coastal energy policies. These policies must be consistent with overall policy and will be used in making state/Federal permit and consistency decisions.

3. The Executive Order offers a clear assurance that coastal management policies will be considered in the siting of energy facilities within the coastal zone. In addition to this consistency requirement, the coastal management agency is pursuing a formalized agreement with the State Department of Commerce regarding joint responsibilities pursuant to G.S. 143B-437.

The State Environmental Policy Act (specifically 113A-4 and 6) will be employed when state agencies are involved in the siting of an energy facility.

4. The coastal management agency is still in the process of trying to formalize a working arrangement with the State Department of Commerce; however, no specific deadline for reaching an understanding has been given. In light of this, other measures are being pursued. They are as follows: 1) AEC guidelines have been revised to permit only activities that are water-dependent

(including energy facilities) in certain AEC's; i.e. estuarine waters, estuarine shorelines. 2) local governments are presently being encouraged to plan for major energy facilities through the land use planning process. In September, 1977, local governments will begin to update local land use plans. The revised State Guidelines (15 NCAC 7B .0203(a)(3)(B)(vii)) require localities to discuss energy facilities and to develop policies for siting. Also, CEIP funds are in the process of being disbursed to affected local governments to plan for specific energy facilities.

### Erosion Planning

5. NRDC believes that the standards for AECs within ocean hazard areas and within estuarine shoreline areas constitute a significant improvement over the previously used standards taken together with policies set forth on page 127 of the DEIS comply with the requirements of Section 923.25 of the regulations. The program standards and policies are especially deficient in requiring that the costs of alternative solutions of erosion mitigation methods be assessed and that such assessments include the costs of operation and maintenance.

6. One major omission from the legal authorities beginning at page 133 of the DEIS is failure to note that the Environmental Policy Act G.S. 113A-1 through 10 should necessitate the preparation of an environmental impact statement in compliance with G.S. 113A-4 in those instances where State funds are to be expended for erosion control measures.

5. As stated in the DEIS, the standards were in the formation state; hence, revisions were necessary and have been completed. The recently adopted standards should reflect those concerns you have noticed and are included in the revised text.

6. We agree that the costs of alternative solutions of erosion mitigation methods be assessed and that such assessments include the costs of operation and maintenance. However, since both NEPA and SEPA require this assessment in the preparation of both the Environmental Assessment and Impact Statement, it is not necessary to restate this requirement in the Program's Policies and Standards on erosion.

We agree with the comment that the legal authorities section beginning at page 133 of the DEIS should include the Environmental Policy Act (G.S. 113A-1 through 10). The appropriate inclusion will be made.

Natural Resources Defense Council  
(John Curry) (5/21/79)

Comments

Beach Access

1. In view of the special importance of barrier islands as coastal resources in North Carolina and also in view of comment (ii) in §923.24(c)(1), NRCD feels that the DEIS should include a more definitive explanation of how the ocean hazard area and estuarine system regulations will effectively protect barrier island resources. There also should be a more complete consideration of the "need and priority for the protection" of barrier islands as requested in comment (ii).

Natural Resources Defense Council  
(John Curry) (5/21/79)

Responses

1. With the approval of the North Carolina Coastal Management Program the requirements contained in §923.24(c)(1) were satisfied and are adequately described in the Final Environmental Impact Statement on pages 249-254. To specifically translate this into terms applying to Shorefront Access and Protection Planning, the regulations contain a number of provisions for the protection of the beach front and insurances for access planning. The State Guidelines for development within Areas of Environmental Concern contain regulations that; 1) Do not allow the development of any permanent structures oceanward of the crest of the frontal dune; 2) Do not allow development to interfere with legal access corridors; 3) Insures that sand held in storage in the frontal dunes can freely nourish the beaches at times of rapid erosion by a) not allowing the construction of oceanfront bulkheads (except in cases of "threatened structures" which are those built prior to March 1, 1978 and where the foundation is within 20 feet of the erosion scarp) and, b) encourage the construction of structural access ways over dunes and requiring that they be elevated and not damage stabilizing vegetation; and 4) By allowing developers to propose mitigation measures such as public access to offset adverse impacts of a project.

The local land use planning guidelines, another element of the approved coastal management program, require that shorefront access be addressed in the current revision of the land use plans (7 NCAC 7B .0203 viii - revised September 1, 1979).

COMPENDIUM OF COMMENTS RECEIVED ON THE DEIS

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D.C. 20425

June 1, 1979

Mr. Robert W. Knecht  
Assistant Administrator for  
Coastal Zone Management  
National Oceanic and Atmospheric  
Administration  
3300 Whitshaven Street, N. W.  
Washington, D. C. 20235.

Dear Mr. Knecht:

The North Carolina Draft Environmental Impact Statement prepared on the Amendments to the North Carolina Coastal Management Program has been reviewed by the staff of the Federal Energy Regulatory Commission (FERC). You may recall that our April 25 letter to you indicated that we would likely be late on many responses because of the unusually heavy workload for OCZM activities.

Our review surfaced a concern about hydroelectric generating facilities, energy policies, planning process for hydroelectric generating facilities, and some miscellaneous observations.

Hydroelectric Generating Facilities

There are a great number of existing hydroelectric powerplants and potential hydroelectric development sites in North Carolina, all of which are located outside of the coastal zone. Many of the existing hydroelectric plants are licensed by the FERC. For example, the four hydroelectric plants listed on page 57 are under FERC license.

The statement of page 55, "All potential hydro sites are presently in use," is incorrect. There are 29 undeveloped hydroelectric plant sites in North Carolina, which are listed in the Commission's publication, Hydroelectric Power Resources of the United States, Developed and Undeveloped, January 1, 1976. In addition, there are numerous retired small hydroelectric powerplants in North Carolina, which could be reactivated or redeveloped to provide electric energy needs. The President's National Energy Plan includes installation of small hydroelectric generating facilities at existing dam sites.

Mr. Robert W. Knecht

If North Carolina needs information concerning potential hydroelectric development sites in the State, coordination should be made with Mr. Aarne O. Kauranen, Regional Engineer, Federal Energy Regulatory Commission, 730 Peachtree Street, N.E., Atlanta, Georgia, 30308. His telephone number is (404)881-4134.

#### Energy Policies

Energy policies are presented under the hearing of "Coastal Management Policies" (page 79). In addition, general coastal energy policies are presented under the hearing of "Coastal Energy Policies" (page 84). Such presentations are somewhat confusing. These policies should be combined under one hearing for the scope of comprehensiveness of State policies.

#### Planning Process for Hydroelectric Generating Facilities

The approval of the energy facility planning process amendment would require that applications for FERC licenses for non-Federal hydroelectric projects significantly affecting the North Carolina coastal zone would require North Carolina's consistency certification. Because no planning process for hydroelectric powerplants is presented in the amendment, we assume that hydroelectric powerplants in North Carolina, which are located outside of the coastal zone, would not significantly affect the coastal zone. If this assumption is incorrect, North Carolina must discuss planning process for hydroelectric powerplants in the amendment.

#### Miscellaneous

1. Table on page 57.
  - a. The sum of the capacity of the four hydroelectric plants does not equal to the total hydroelectric capacity shown. A clarification is needed.
  - b. The numbers shown on the second column for Cape Fear and Weatherspoon appear to be in error. A check with the original data is necessary.
  - c. Explain the unit-type symbols on the third column.

Mr. Robert W. Knecht

2. Page 80 duplicates the statement on page 79 and should be deleted.

We wish to thank you for the opportunity to review the Draft Environmental Impact Statement prepared on Amendments to the North Carolina Coastal Management Program and look forward to examining the final document.

Sincerely,



Carl N. Shuster, Jr. - Ph.D.  
Coordinator, Coastal Zone Affairs

cc: Honorable Charles Warren  
Mr. Howard Lee  
Dr. Sidney R. Galler



United States  
Department of  
Agriculture

Soil  
Conservation  
Service

P.O. Box 2890  
Washington, D.C.  
20013

South Atlantic Regional Manager  
Office of Coastal Zone Management  
3300 Whitehaven Street, NW.  
Washington, D.C. 20235

Dear Sir:

The agencies of the U.S. Department of Agriculture (USDA) have reviewed the Draft Environmental Impact Statement on the proposed amendments to the North Carolina Coastal Management Program. The following represents their combined comments.

Page 65, Paragraph 2 - The comparison of peat mining in North Carolina to coal extraction is not a valid comparison and could be considered in conflict with the statement on "Mining Activities" on Pages 75 and 128, Item 8, I, a. This area is not subject to coal extraction. Removing peat to a depth of 6 feet below the surface is a form of strip mining and is the depletion of a nonrenewable resource. Additionally, these lands are important to agriculture and forestry resource values in their present state. What are the research references to support the last sentence in this paragraph?

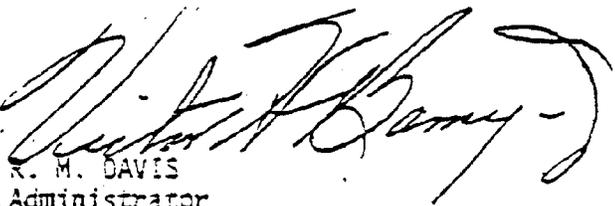
Page 90, Paragraph 2, Item 6 - Should read "Wildlife habitat destruction or . . . ."

Page 138, Item 2 - Define the words "recreational, rural, and conservational," as these are rather broad general terms.

General - No mention of prime farm or forest lands in coastal zone management area. These lands are highly important to forestry and agricultural values.

USDA appreciates the opportunity to review these amendments to the North Carolina Program.

Sincerely,



Acting Fog

R. M. DAVIS  
Administrator

cc:  
M. Rupert Cutler, Assistant Secretary for Conservation, Research and Education, SEC  
John R. McGuire, Chief, Forest Service





DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF ENGINEERS  
WASHINGTON, D.C. 20314

REPLY TO  
ATTENTION OF

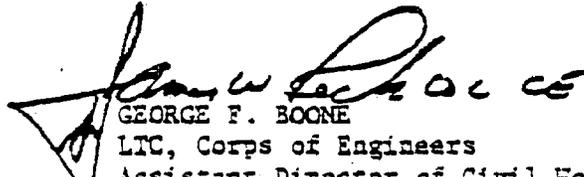
DAEN-CWP-9

Mr. Robert W. Knecht  
Assistant Administrator for Coastal Zone Management  
National Oceanic and Atmospheric Administration  
Department of Commerce  
3300 Whitehaven Street, NW  
Washington, DC 20235

Dear Mr. Knecht:

We have reviewed the Draft Environmental Impact Statement Prepared on Amendments to the North Carolina Coastal Management Program. A number of discrepancies were identified and are described in the inclosure.

1 Incl  
As stated

  
GEORGE F. BOONE  
LTC, Corps of Engineers  
Assistant Director of Civil Works  
Environmental Programs

COMMENTS ON THE DEIS ON THE AMENDMENTS  
TO THE NORTH CAROLINA COASTAL MANAGEMENT  
PROGRAM

1. Page 45 - The Hyde County map is accompanied by no discussion of shore-front access.
2. Page 48 - The section title for Currituck County is inconsistent with the previous page. Also, Holden Beach is in Brunswick County, not Currituck County.
3. Page 55 - We disagree with the statement under Energy Generating Facilities that "all potential hydro sites are presently in use."
4. Page 59 - The statement that North Carolina produces none of its petroleum requirements is incorrect. A refinery in Wilmington, N.C. currently processes approximately 10,000 barrels per day.
5. Page 60 - The statistics for Wilmington and Morehead City are all pre-Arab-embargo (1973) and are not realistic. Statistics are available for 1977, and they should be used. Also, the discussion should include the recent closings of Texaco and Shell terminals in Wilmington and the possible closings of others due to the greater cost-effectiveness of pipeline products over waterborne products.
6. Page 61 - The storage capacity of the proposed LPG facility at Morehead City is stated as 31 million gallons, whereas page 63 states 21 million gallons. Plans for that facility have essentially been abandoned, and future development of such a facility in that area is unlikely.

The statement that "the State lacks any refinery capacity" is incorrect as is explained above for Page 59.

"The need for products in the South Atlantic area has been met by transporting oil via pipelines" and waterborne vessels.

Future location of refineries in North Carolina is no longer "highly speculative."

7. Page 62 - The statement that ". . . neither the port at Wilmington or Morehead City is capable of handling tankers with a draft greater than 32 feet MLW without extensive dredging. . ." is incorrect. Wilmington Harbor is 38 feet deep, and ships drawing 38 feet MLW have been using the harbor on about a weekly basis for several years. Morehead City harbor was deepened to 40 feet in 1978.
8. Page 63 - The first sentence and entire discussion should be written in light of deeper harbors than stated.

The "significant savings" of a deepwater port system should be explained given the pipeline costs and the need for a 250,000 barrel per day refinery instead of a "medium-sized" one.

Plans for the LPG facility at Radio island are no longer viable.

9. Clarification should be provided regarding air and water quality standards. Is the facility siting preference due to a difference in quality standards or a difference in ambient pollutant concentration?

10. Page 65 - The last sentence states that nuclear fuel processing facilities are not expected to locate within the coastal zone. The GE plant in Wilmington is a major nuclear fuel processing facility.

11. Page 73 - Paragraphs 2 and 3 state that permits can be denied if water quality standards would be violated. The assumption should be that they will be denied under those circumstances.

12. Page 75 - "Larval species" is inaccurate terminology. Many species have larval stages. However, these organisms must mature and reproduce to perpetuate the species. Hence, a species does not remain larval.

13. Page 106 - The summary of erosion rates includes only 15 of the 20 coastal counties although the preceding sentence indicates that figures are available for each county.

14. Pages 130, 141, and 162 - Experimental utilization of offshore sills and breakwaters is justified, but caution should be used since these structures interfere with shore processes and may contribute to downdrift erosion.

15. Page 131 - The last sentence in paragraph "o." should refer to "Standard j, above."



Department of Energy  
Washington, D.C. 20461

Mr. Robert Knecht  
Assistant Administrator for  
Coastal Zone Management  
National Oceanic and Atmospheric  
Administration  
3300 Whitehaven Street, NW.  
Washington, D.C. 20235

MAY 7 - 1979

Dear Mr. Knecht:

In response to your memorandum of March 27, 1979, the Department of Energy has reviewed the Energy Facility Siting Planning Process proposed as an amendment to the North Carolina Coastal Management Program. We concur in the proposed approval of this amendment.

Our review confirms the general assessment of coastal program energy policies as stated in our letter of May 16, 1978, commenting on the North Carolina Coastal Program. North Carolina will rely primarily upon authority to designate proposed sites for major energy facilities as Areas of Environmental Concern and to establish State level regulation through required applications for Major Development Permits. These authorities allow the State to recognize energy facility sites as uses of regional and national benefit and provide procedures to ensure that they are not unreasonably excluded from the coastal zone.

State procedures for Preliminary Site Analysis should be a constructive method of identifying energy issues at an early planning stage and of assisting energy interests in the location of environmentally and socially acceptable sites. The program provides for utilization of a variety of State authorities, full consideration of relevant Federal authorities, and availability of contested case hearing procedures to assure an objective and fully developed regulatory process for purposed energy projects.

We will be pleased to assist the State in implementation of its approved coastal energy planning and regulatory procedures.

Sincerely,

Robert J. Kallert  
Director

Leasing Policy Development



# United States Department of the Interior

## OFFICE OF THE SECRETARY

*Southeast Region / 148 International Blvd., N.E. / Atlanta, Ga. 30303*

May 10, 1979

ER-78/253

South Atlantic Regional Manager  
Office of Coastal Zone Management  
3300 Whitehaven St., NW  
Washington, D. C. 20235

Dear Sir:

The Department of the Interior has reviewed the draft environmental impact statement on the Proposed Amendments to the North Carolina Coastal Management Program as requested in your letter of March 27, 1979.

### General Comments

We find that the program elements for shorefront access and protection, energy facility siting, and shoreline erosion and mitigation establish a good framework for planning although they do not provide detailed plans by which measurable and predictable results can be obtained.

The "Shorefront Access and Protection Planning Process" element has been addressed in a very comprehensive manner, and we feel that approval and implementation of this element will improve the North Carolina Coastal Management Program. We are pleased that North Carolina State Comprehensive Outdoor Recreation Plan objectives have been included as part of this element.

The "Shoreline Erosion and Mitigation Planning" element seems to reflect a realistic outlook which adequately addresses environmental concerns. We do, however, view the overall management scheme as being somewhat passive in that it does not adequately address critical needs for setback zoning and low density development within the transition zone of the State's barrier islands. Regulation of coastal zone development through the CAMA permit process and other regulatory programs is a reactionary approach and is a poor substitute for meaningful and enforceable front-end planning. It is obvious that considerable development has occurred and continues to occur in areas which could be totally devastated during the next major hurricane. As pointed out on page 100, "the incompatibility of development patterns with the movement of the barrier islands and coastal shorelines has become obvious." It is hoped and recommended that the CRC will take an aggressive role in developing setback lines, establishing and re-evaluating construction standards, and controlling the density of development.

The problem of wind erosion has not been adequately addressed in this document. The effects of destroying overstory, shrubs, and ground cover should be addressed along with the need to investigate the role of plant life in erosion protection. Such an investigation should address isolated plant communities (dune vegetation, shrub thickets, maritime forests, etc.) as well as the entire barrier island ecosystem.

The effects and regulation of off-the-road-vehicles should be addressed.

#### Specific Comments

Page 16, paragraph 2 As stated in comments on the draft environmental impact statement for the North Carolina Coastal Management Program, the Department of the Interior recommends that entire barrier islands be designated as Areas of Environmental Concern. We continue to disagree with the concept of coastal zone management which addresses only parts of the system while failing to recognize and control spillover effects from unregulated portions of the coastal ecosystem. For example, we do not believe that barrier island wetlands, beaches, and fragile coastal natural resource areas can be adequately managed if the State does not control development and other activities on "developed" and "transition" portions of the island.

Page 17, paragraph 4 Visual access, like physical access should not be "left to the discretion of local land use plans". This approach is woefully inadequate in that it fails to guarantee protection of regional and national interests in this regard. Further, it is our understanding that the local plans are not enforceable and are therefore not reliable management tools.

Page 17, paragraph 5 The determination and acquisition of physical access should be the function of the Coastal Resources Commission (CRC) with assistance from local governments. The CRC has no means of assuring adequate land and access acquisition. Further, the CRC cannot enforce or modify local land use plans which do not provide adequate access.

Page 22, last paragraph This paragraph contains misleading information. It should be rewritten to include: Wet sand at Cape Hatteras National Seashore was conveyed to the United States by state deeds in 1953 and 1958 (Section 8). Some dry sand is owned by the state and some by the Federal Government.

Page 33 This section should be expanded to include references to villages located south of Nags Head. Public access to federal beaches east of the unincorporated communities of Rodanthe, Waves, Salvo, Avon, North Buxton and Hatteras is limited to the extent that private landowners will permit free access across their property. Over 12 miles of federal beach has limited access due to this factor.

Page 35 Cape Lookout National Seashore should be noted.

Page 45 The section of Hyde County labeled "Cape Lookout National Seashore" should read "Cape Hatteras National Seashore".

There is no written description of Hyde County resources.

Page 47 Dare County-Nags Head's ordinance concerning beach vehicle use should be included.

Page 49, paragraph 5 We strongly support recommendation of a feasibility study concerning the need for an ocean and/or sound front park in the southern coastal zone. We question, however, the determination that such an action would be "uneconomical". We contend that fishing, swimming, surfing, sunbathing, etc. are activities of substantial public benefit, intangible as well as tangible.

Page 49, paragraph 6 The feasibility of funding for beach access and acquisition should be fully developed and presented in the final environmental impact statement.

Page 50, paragraph 3 We totally disagree with CRC's determination that "beach access is for the most part a local responsibility and that the State should not take an overbearing position in forcing access". We believe this paragraph should either be deleted or revised to indicate that beach access is the direct responsibility of the State and of the CRC. This statement appears to conflict with statements on page 23 regarding development of a State position on beach access.

Page 59, Transmission Routes It should be noted that increasing voltage or available electricity into minimally served areas can have as far reaching and as great or greater impacts (secondary effects) than plant siting.

Page 63, fourth paragraph, last sentence Please note that "propane" and "residual or distillate fuels" are petroleum products and not synthetic substitutes.

Page 65, paragraph 2 The comment, "peat mining has associated impacts on the water table and water quality. . .not substantially different from those caused by coal extraction", does not take into account possible salt water intrusion. The plan should discuss this potential impact.

Page 68, paragraph 4 The "North Carolina Water Resources Framework Study" referred to in this section should be included as an appendix to the final environmental impact statement.

Pages 82 and 83 We commend North Carolina for the State Policy items regarding mining. However, if items (3), (4), and (5) are based on State authorities applicable only to State waters within the three-mile limit of the territorial sea, then they should be put under a different main heading from the "Outer Continental Shelf" which is under Federal jurisdiction.

Page 108, National Shoreline Inventory, North Carolina Figures for Dare County must be in error.

Page 109, Tidal Inlets The list should include Oregon Inlet.

Page 109, paragraph 2 The meaning of this paragraph is not clear as written.

Page 114, paragraph 4 Land use management through the CAMA permit process, through regulatory programs that deal with the cause and effect of erosion and federal consistency provisions will have little effect on lands located outside of AEC's which are subject to erosion. As written, it erroneously appears that non-structural erosion control is possible in the entire coastal zone using the aforementioned processes.

Page 119, paragraph 3 The proposed shoreline erosion control criteria are exemplary of sound environmental planning. We are particularly supportive of items 2 and 3 which align bulkheads and revetments at or near the high or normal water level and require that those structures be located landward of marshes.

Page 121, paragraph 3 We strongly support the use of flood prone areas as parks and natural areas. Unfortunately, we are not aware of any such parks or "open spaces" being developed in the coastal zone as a result of this policy. Specifically, we are concerned over the fate of such erodible areas as Masonboro Island, traditional public access lands at Bogue Inlet, New River Inlet, New Topsail Inlet and other sites which we believe the State should be actively seeking to acquire and preserve as public lands.

Page 126 Economic justification should not be a limiting factor when the purchase or erosion protection of relatively undeveloped or natural areas is involved provided such protection is in the public interest. It is not likely that undeveloped natural areas can justifiably be protected from an economic viewpoint, however, their intangible natural values may warrant sizeable expenditures for erosion protection.

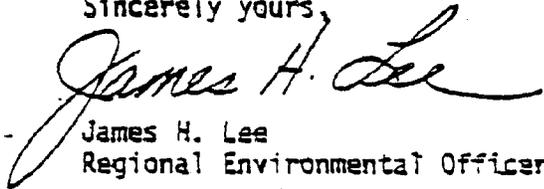
Page 128, paragraph 3 This paragraph should be expanded to state that if mitigation is not feasible or possible in those ocean and estuarine areas that sustain substantial habitat for fish and wildlife, a CAMA permit will not be issued.

Page 132, paragraph 3 This paragraph should be revised to state that only those lands lost to erosion within the past year may be reclaimed and that reclamation shall be permitted only when failure to do so would endanger life or impose severe hardship on property owners.

Page 141, paragraph 2 Should the word "mitigation" read "migration"?

Thank you for the opportunity to provide comments on this document.

Sincerely yours,



James H. Lee  
Regional Environmental Officer

cc: Sidney R. Galler  
Deputy Assistant Secretary for Environmental Affairs  
Room 3425  
U. S. Department of Commerce  
Washington, D. C. 20230



DEPARTMENT OF TRANSPORTATION  
REGIONAL REPRESENTATIVE OF THE SECRETARY  
1770 PEACHTREE ROAD, NORTHWEST  
SUITE 515  
ATLANTA, GEORGIA 30309

May 18, 1979

South Atlantic Regional Manager  
Office of Coastal Zone Management  
3300 Whitehaven St., NW  
Washington, D.C. 20235

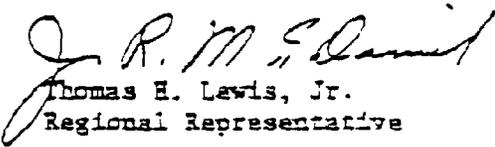
Dear Sir:

We have reviewed the Draft Environmental Impact Statement Prepared on Amendments to the North Carolina Coastal Management Program and offer the following comments.

We note that the central theme is freedom of access to the beaches and estuarine areas, while observing that privately owned areas are increasing in number and popularity. Showing a land use planning and land classification system would be of benefit here, pointing out the more likely areas for development.

The report should indicate the presence of flora and fauna communities, including threatened or endangered species.

Sincerely,

  
Thomas E. Lewis, Jr.  
Regional Representative

Copy to: Sidney R. Galler  
Deputy Asst. Secretary  
for Environmental Affairs  
Room 3425  
U.S. Dept. of Commerce  
Washington, D.C. 20230

P-20, U.S. DOT

NORTH  
CAROLINA  
DEPARTMENT  
OF  
CULTURAL  
RESOURCES

Raleigh,  
North Carolina  
27611

Division of  
Archives and History  
Larry E. Tise, Director

Sara W. Hoagins,  
Secretary  
James B. Hunt, Jr.  
Governor



May 24, 1979

South Atlantic Regional Manager  
Office of Coastal Zone Management  
3300 Whitehaven Street, N.W.  
Washington, D.C. 20235

Re: Draft Environmental Impact Statement Prepared  
on Amendments to the North Carolina Coastal  
Management Program

Dear Sir:

The staff of the Archaeology and Historic Preservation  
Section of the North Carolina Department of Cultural Resources  
has reviewed the above document. As the proposed amendment  
will not affect cultural resources, we have no comments.

Thank you for your cooperation and consideration. If you  
have questions concerning this comment, please contact  
Ms. F. Langdon Edmunds, Environmental Review Coordinator,  
919/733-4763.

Sincerely,

Larry E. Tise  
State Historic Preservation Officer

LET:slw

cc: Mr. Sidney R. Galler, Deputy Assistant  
Secretary for Environmental Affairs  
Room 3425  
U.S. Department of Commerce  
Washington, D.C. 20230

JOHN S. CURRY  
ATTORNEY AT LAW  
138 EAST MAIN STREET  
P. O. BOX 138  
CARRBORO, NORTH CAROLINA 27510  
919/ 947-4814

May 21, 1979

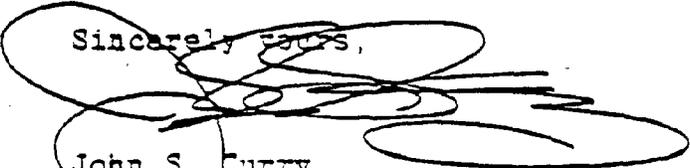
South Atlantic Regional Manager  
Office of Coastal Zone Management  
3300 Whitehaven Street, N.W.  
Washington, D. C. 20235

Dear Sir:

Enclosed you will find a copy of the comments of the Natural Resources Defense Council on the Amendments to the Draft Environmental Impact Statement prepared on the Proposed Amendments to the North Carolina Coastal Zone Management Program.

Thank you very much for your consideration.

Sincerely yours,

  
John S. Curry  
Cooperating Attorney for NRDC

JSC:jwr

Enclosure

The Natural Resources Defense Council (hereinafter NRDC) is a national non-profit organization, with a membership of over 35,000, dedicated to the wise use of the Nation's natural resources and the protection of the human environment. Because of the accelerated destruction of the Nation's coastal resources by short sighted development, the elimination of wildlife habitat, marine and estuarine pollution, and loss of public access to beaches, NRDC has formed the Atlantic Coast Project dedicated to the protection and wise use of these resources. As part of this project, NRDC staff has undertaken a review of the coastal zone management programs developed by various states pursuant to the Coastal Zone Management Act (hereinafter CZMA), the key national legislation for the protection of coastal areas. NRDC has commented upon the previous drafts of the North Carolina program and welcomes the opportunity to comment upon the proposed amendments.

Throughout these comments, NRDC has made two assumptions. The first is that the Regulations which will be applicable to the Amendments to the North Carolina Program are the Final Regulations for 15 CFR Part 923 as published in the March 28, 1979 federal register the effective date of which was April 30, 1979. Wherever reference in these comments is made to sections of Part 923, that reference is intended to apply to that version of the Regulations. Also, the North Carolina Coastal Resources Commission has adopted and implemented shoreline erosion policies, shorefront access policies, and coastal energy policies which differ somewhat from the proposed

versions contained in the DEIS. In those instances where those policies are commented upon herein, reference is intended to be made to the policies adopted by the CRC which presumably will be the version contained in the FEIS.

#### SHOREFRONT ACCESS AND PROTECTION PLANNING PROCESS

Section 923.24 of the Coastal Zone Management Program Development and Approval Regulations contains three basic requirements. These are, first, that the management program contain a procedure for assessing public beaches and other public areas which require access or protection and a description of appropriate types of access and protection; second, that the program include a definition of the term "beach" and an identification of public areas meeting that definition; and third, the program must include an identification and description of enforceable policies, legal authorities, funding programs and other techniques that will be used to provide shorefront access and protection.

Because beaches and other public areas are designated as AEC's in the North Carolina Program, it appears that a "procedure" for assessing these areas has been established. In addition, the N.C. SCORP referenced in the DEIS, further recognizes the importance of public access to these areas. In Appendix 3 beginning at page 29 of the DEIS, there appears a county by county analysis of

existing public facilities and areas. There does not appear to be any definitive hard data included in the Appendix estimating the anticipated future demand for use of these facilities. Nor does there appear a clear explanation of the capability and suitability of these areas to support increased access as mentioned in the comment to Sec. 923.24 (c) (1).

In each set of comments NRDC has submitted on the North Carolina Coastal Management Program it has strongly recommended that all barrier islands be designated as AEC's. The organization continues to feel strongly that barrier islands within the North Carolina Coastal Zone deserve the protection afforded by the AEC mechanism. In view of the special importance of barrier islands as coastal resources in North Carolina and also in view of comment (ii) in Sec. 923.24 (c)(1), NRDC feels that the DEIS should include a more definitive explanation of how the ocean hazard area and estuarine system regulations will effectively protect barrier island resources. There also should be a more complete consideration of the "need and priority for the protection" of barrier islands as requested in comment (ii).

Throughout the section in the DEIS on shorefront access and protection planning, there is an emphasis on local governments determining their public access needs and thereafter implementing steps to insure the existence of public access. At the bottom of page 17 of the DEIS, for instance, the final paragraph states:

Physical access requirements will be determined by local governments through the land use planning

process, by the CRC through the development of the planning guidelines, and local plans approval and by the Division of Parks and Recreation through grants for acquiring public access rights and site facilities. Local governments will determine their public access needs in the context of the land use plan based on the guidelines developed by the CRC. The CRC will, in turn, review the plans individually and as a region to insure that the public demand for access is met. This review will focus particularly on the needs of seasonal/day visitors from nearby urban areas and balance these needs with the availability of local resources. Finally, the Division of Parks and Recreation in cooperation with CRC efforts will award access funds.

This paragraph seems to indicate that the need for access will be determined at the local level subject to CRC approval. NRDC questions whether a comprehensive access plan can be assured under these circumstances. There needs to be some attempt made to address the issue of beach access from a broader perspective than that provided by local government interests. One of the most significant shortcomings of this section of the DEIS is that it does not clearly set forth in reasonably definitive terms the estimated future demand for beach use nor does it estimate the amount of beach area that will be needed to satisfy these future demands. Nor does this section of the DEIS clearly outline the means to be used for the "provision" of physical access to the beach.

With regard to the second requirement contained in Sec. 923.24, this section of the proposed amendments does contain an adequate definition of "beach".

With regard to the third requirement, NRDC does not believe that the program contains an adequate "identification and description" of enforceable policies, legal authorities, funding programs and other

techniques that will be used to provide such shorefront access...".

At page 18 of the DEIS, the statement is made that, there are three sets of enforceable State policies including the protection policies as expressed through the AEC Regulatory Guidelines and the access policies expressed in the N. C. SCORP and in the N. C. Water Resources Framework Study. The additional statement is made that, "Each of these policy sets have clear lines of enforceability.". NRDC questions whether the N. C. SCORP and the N. C. Water Resources Framework Study are enforceable documents. It would appear that both of these documents are exactly what they say they are, that is, plans and studies.

The shorefront access policies adopted by the CRC, on the other hand, clearly have legal enforceability within AEC's. An examination of these policies seems to indicate that one technique the State will use to provide beach access is linking the funding of "public beach area projects" with a requirement for provision for adequate public access. This certainly is a worthwhile and useful tool. NRDC does feel, however, that the policy set forth in paragraph 3 on page 19 of the DEIS needs to define "public beach area projects" more specifically in order that all parties concerned will know exactly what is meant by that term. The other legal means of acquiring access mentioned in the program is eminent domain. NRDC feels that there needs to be a more thorough discussion of the legal authorities available to assure and obtain access. For example, there should be an indication of the extent to which eminent domain has been used in the past as a means of obtaining access. There should be a more thorough discussion of other techniques, including

funding techniques available for the acquisition of access. Are local "beach taxes" or local sales taxes to fund beach access feasible? Does the CRC intend to establish or encourage the establishment of special beach access trust funds? Will all land use plans approved have to contain provisions that all approved subdivisions adjoining or including beaches incorporate provisions for public access? To what extent will major and minor permittees within AEC's be required to provide public access? Will major public facilities and uses of regional benefit such as convention facilities, energy production facilities and so on be required to incorporate public access into their site plans where feasible? Will recreational uses requiring beach access have priority over other recreational uses in beach areas?

In other words, in order to fully comply with Sec. 923.24, the State must include more specific data about the demand for beach access and a more detailed explanation of the techniques including funding programs and legal authorities which will be used to insure that the policy set forth under "declaration" on page 18 of the DEIS is, in fact, implemented.

## ENERGY FACILITY SITING PLANNING PROCESS

In order to comply with Subsection 305(b)(8) of CZMA and Section 923.13 of the Regulations, North Carolina must: 1) Identify energy facilities which are likely to locate in, or which may significantly affect, the State's coastal zone; 2) Set forth procedures for assessing the suitability of sites for such facilities; 3) articulate and identify enforceable State policies, authorities and techniques for managing energy facilities and their impacts; 4) Identify how interested and affected public and private parties will be involved in the planning process.

The DEIS indicates that North Carolina has done a good job of identifying facilities which have the potential to locate in or significantly affect the State's coastal zone. Subsection (b) of Section 923.13 appears to envision, however, a broader process than identification alone. That is, comments (1), (2), and (3) suggest that the program should include a discussion not only of the types of facilities but also of their probable or acceptable location, provisions for sufficient lead time in licensing processes applying to energy facilities to insure consideration of the coastal management program and a regular reporting requirement for other agencies regarding the likelihood of the siting of future energy facilities within the coastal zone. NRDC does not believe that there is a clear enumeration of such procedures in the presently existing program. It does seem that, as mentioned in the fourth paragraph on page 69 of the DEIS, the informal agreement existing between the Department of Commerce and the Department of Natural Resources and Community Development needs to be formalized and the

procedures set forth in the management program. In addition, there should be some more formal understanding reached with the other major energy permitting agency, the Utilities Commission.

As is indicated in the DEIS, North Carolina does not have comprehensive energy facility siting legislation. The requirements contained in the "coastal energy policies" adopted by the Coastal Resources Commission and set out in draft form in the DEIS beginning at page 84, do address, to a considerable extent, the costs and benefits of alternative sites. There is no provision, however, for predesignation of sites or analysis of alternative sites before the site is actually selected. These policies anticipate that the applicant for an energy facility permit will have already selected the site and perhaps even have purchased the land.

It should be noted that in the DEIS at several locations including pages 71 and 77 reference is made to oil refinery facility permit regulations promulgated pursuant to G.S. 143-215.100. It should be noted that these regulations have not yet been adopted by the Department of Natural Resources and Community Development and, in their present form, do not assure that the issuance or denial of such a permit will be based on a comprehensive assessment of all impacts. The Secretary under the regulations as proposed must deny a permit only if State air and water regulations cannot be met by the facility. As far as adverse impacts on wildlife, fisheries resources and publicly owned parks, forests or recreation areas, the Secretary may deny a permit if such conditions exist but he is not legally obligated to do so. Nor is there in the proposed

regulations any clear indication that the oil refinery permit will be issued after other relevant permits including air, water and CAMA are issued as suggested in the second paragraph on page 77 of the DEIS. In general, because of the limited scope of G.S. 143-215.100 these regulations are unlikely to serve as a comprehensive means of dealing with the likely impacts of the siting of an oil refinery facility.

Before discussing and commenting upon the State policies relating to energy facilities included in the DEIS, it seems appropriate to make a general comment which is applicable ~~to the~~ effectiveness of the policies, authorities and techniques. NRDC believes that the "General Comments" contained in Subparagraph (c) of Section 923.13 are most pertinent to the entire portion of the North Carolina Program relating to energy facilities. Clearly, the proposed planning process for energy facilities contained in the North Carolina Program does not directly address the problems associated with "weak policy and planning linkages and, relatedly, fragmented and overlapping jurisdictions." No comprehensive planning process is enumerated. The responsibility for permitting a facility is diffuse and several permits are required from different agencies at different levels of government. Different permit processes are required for different types of energy facilities. There is a strong likelihood that these differences may result in inconsistent application of coastal management policies.

NRDC believes that the importance of the State's taking a more comprehensive approach cannot be underemphasized, and believes that the energy facility planning program should not be approved

until it more closely complies with those suggestions contained in Section 923.13(c)(3). The Executive Order standing alone is inadequate to insure that a "process" exists for the coordination and consultation between State agencies with regard to the siting of facilities. The CRC should be designated by the Governor as the lead management agency making decisions related to siting and conditions of development for energy facilities in the coastal zone. There should be clear assurance that coastal management policies will be considered as the basis for the threshold decision in siting and energy facility rather than an after thought. If it is impossible for the Coastal Resources Commission to be designated as the lead agency in energy facility siting planning in the coastal zone, then a specific agreement should be entered into with the Department of Commerce pursuant to G.S. 143B-437 which sets out the joint responsibility of each department with regard to the effect of a new energy facility on the "natural and economic environment of" the coastal zone. In addition, the energy facility planning process portion of the program could effectively employ the State Environmental Policy Act, specifically 113A-4 and 113A-6.

The section of the DEIS entitled "Directives to Staff" contained on pages 86 and 87 accurately outlines some of the steps that need to be taken in order to bring the program into full compliance with the applicable sections of the NOAA regulations. All of the proposals contained in this section should be implemented or substantially implemented in much greater detail than is presently the case before the program is approved. Accomplishing the goals

set forth in this section would go a long way toward making the procedures set forth in the program a comprehensive and predictable process rather than simply a compendium of already existing, fragmented authorities and policies.

The DEIS says little or nothing about how interested and affected public and private parties will be involved in the energy facility siting and planning process. It is assumed that such a discussion will be contained in the FEIS. It is hoped, because of the significance and magnitude of energy facility siting decisions that the State will deem it appropriate to incorporate the provisions of the Administrative Procedures Act relating to "contested cases" and "persons aggrieved" into the hearing processes associated with planning for such facilities. Parties representing the public interest including governmental agencies and local citizens groups should be given an opportunity to formally intervene in the decision making process.

## SHORELINE EROSION AND MITIGATION PLANNING

The requirements of Section 305(b)(9) of CZMA and Section 923.25 of the NOAA Regulations are accurately outlined at pages 98 and 99 of the DEIS as well as on page 100.

It appears that North Carolina has done a very good job of studying and assessing the effects of shoreline erosion. The summary of findings indicates that there is an abundance of information regarding the location, extent and type of erosion throughout the coastal zone. The Natural Resources Defense Council commends North Carolina on its clear statement of policy that non-structural means of controlling erosion are preferred to structural means. This presumably indicates a recognition on the part of the State that allowing construction and development to take place in areas subject to erosion more often than not results in pressures for the expenditure of public funds for the temporary protection of those structures.

While NRDC believes that the standards for AEC's within ocean hazard areas and within estuarine shoreline areas constitute a significant improvement over the previously used standards, there is still some question as to whether these standards taken together with the policies set forth on page 127 of the DEIS comply with the requirements of Section 923.25 of the Regulations. For example, there is no discussion of the impact of shoreline erosion control means upon adjacent shorelines, land and water uses, literal drift and other natural processes such as accretion. The program standards and policies are especially deficient in requiring that the costs

of alternative solutions of erosion mitigation methods be assessed and that such assessments include the costs of operation and maintenance. It is certainly in the spirit of the requirements of the NOAA Regulations that some assessment be made of the impact of a structural erosion control measure upon erosion rates in the vicinity of the site where the means is to be installed.

One major omission from the legal authorities section beginning at page 133 of the DEIS is the failure to note that the Environmental Policy Act G.S. 113A-1 through 10 should necessitate the preparation of an environmental impact statement in compliance with G.S. 113A-4 in those instances where State funds are to be expended for erosion control measures.

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General Services Administration  
Marine Mammal Commission  
Nuclear Regulatory Commission

Other Interested Parties (who commented on the DEIS):

Natural Resources Defense Council  
North Carolina Department of Administration  
North Carolina Department of Cultural Resources  
Division of Archives and History  
Division of Environmental Management

\* = Federal agencies that commented on the DEIS

Note: Further distribution of this document will be made on a request basis.

ERRATTA SHEETS TO BE INSERTED IN THE DEIS

Add the following as a new subheading (c):

- (c) Cape Lookout National Seashore is owned by the Federal government and is available for public use. The beach is used for fishing, camping, sunbathing and hiking. Most of the swimming activities occur in the "bight" area at the cape. Entry to the seashore is provided by a jitney service or private, shallow-draft ferries.

1. Change the map to read Cape Hatteras National Seashore.
2. The Hyde County map is not accompanied by a discussion of shorefront access because it is part of the Cape Hatteras National Seashore and no further information is needed.

1. The section title for Currituck County should be changed to read as follows: "Local Ordinances Regulating Beach Use - Currituck County."
2. The section relating to Holden Beach on p. 48 should be deleted from p. 48 and placed in the Brunswick County section on p. 47.

Under the "Electric Generating Facilities" section, change the first paragraph to read as follows:

Electric generating facilities in North Carolina consist of oil, gas and coal fired fossil fuel facilities, plus hydro and nuclear facilities. Most plants contain several units. Plants deliver electricity to the consumer through a grid system of transmission lines with capacities ranging from 69-530 KV. Current plant sizes emphasize a capacity of 2000 MW for coal burning and nuclear. Although there are numerous hydroelectric sites available in North Carolina, there are no identified sites located in the North Carolina coastal zone. Oil and gas fired facilities, except where used to meet peak demand, are not being considered.

Page 57: Replace Chart With The Following:

EXISTING GENERATING CAPABILITY

<u>Station</u>	<u>Unit Type</u>	<u>Net Capability - MW</u>	
		<u>Summer</u>	<u>Winter</u>
Walters-1,2,3	HY	105	100
Blewett-1,2,3	HY	22	25
Blewett-1,2,3,4	IC	52	68
Cape Fear-3,4,5,6	ST	381	386
Cape Fear-1A, 1B, 2A, 2B	IC	56	72
Cape Fear-1-s, 2-s	CW	28	34
Darlington-1-11	IC	572	704
Lee-1,2,3,4	IC	91	114
Lee-1,2,3	ST	407	421
Morehead City-1	IC	15	18
H. B. Robinson-1	IC	15	18
H. B. Robinson-1	ST	174	185
H. B. Robinson-2	NP	665	700
Roxboro-1	IC	15	18
Roxboro-1,2,3	ST	1705	1715
L. V. Sutton-2A, 2B	IC	51	66
L. V. Sutton-1,2,3	ST	588	598
W. H. Weatherspoon-1,2,3,4	IC	138	168
W. H. Weatherspoon-1,2,3	ST	176	177
Asheville-1,2	ST	392	394
Brunswick-1, 2	NB	1580	1580
Marshall-1,2	HY	1	0.5
Tillery-1,2,3,4	HY	86	86
<b>Total</b>		<b>7328</b>	<b>7667.5</b>

TOTALS:	ST - 3823	3878
	N(NB+NP) - 2245	2280
	IC+CW - 1046	1298
	HY - 214	211.5
	<u>7328</u>	<u>7667.5</u>

KEY:

- ST - Steam
- NP - Nuclear, Press. H<sub>2</sub>O Reactor
- NB - Nuclear, Boiling Water
- HY - Hydroelectric
- IC - Internal Combustion
- CW - Combined Cycle, Waste Heat Portion

Under "Oil Terminals", change as follows:

North Carolina produces virtually none of its requirements. There is, however, a small 10,000 bpd refinery located in Wilmington. In contrast to this lack of refinery capacity, the demand for petroleum products from 1960-1972 increased 77%...

The "Wilmington and Morehead City 1973" chart should be deleted and replaced with the following figures:

Wilmington and Morehead City (1977)

<u>Product</u>	<u>Amount (short tons)</u>
Crude (all foreign oil)	568,785
Refined	
Gas	1,231,222
Jet fuel	39,108
Kerosene	89,923
Distillate fuel oil	630,998
Residual fuel oil	1,815,360

1. Change paragraph 2 as follows:

The state has met the demand for petroleum by importing through marine terminals and pipelines. Capacity to meet demand appears adequate. Since natural gas supplies were curtailed up to 65% in 1976, many natural gas users have been forced to switch to petroleum products, primarily residual fuels and propane. In addition, terminals operated by Texaco and Shell in Wilmington have recently closed, with the possibility of others closing due to greater cost effectiveness of pipeline products over waterborne products. These factors could cause a strain on present port and terminal capabilities.

2. Change paragraph 3 as follows: 31 should be changed to 21 million gallons.
3. Change the first sentence of paragraph 5 (under Petroleum Refineries) as follows:

Although approximately 53% of N.C.'s energy requirements are met by petroleum products, the state has only nominal refinery capacity (10,000 bpd refinery in Wilmington).

4. Change the second sentence of paragraph 6 as follows:

The need for products in the South Atlantic area has been met by transporting oil via pipelines and waterborne vessels.

The entire discussion under "Deep Water Port" should be changed to read as follows:

One factor in attracting an oil refinery to the coastal zone of North Carolina is development of a deep water port in the offshore waters of the same general vicinity. In most cases, development of an offshore port is especially critical to development of a large scale refinery since one of the major requirements in refinery siting involves the ability to assure a stable and continual supply of crude oil. Although Wilmington Harbor is capable of handling ships drawing 38 feet MLW and Morehead City Harbor was recently deepened to 40 feet, neither is capable of handling very large tankers (VLCC's in the 100-500,000 DWT range). On the other hand, tankers of this size can be accommodated by a deep water port.

Studies conducted on the feasibility for accommodating deep water port development for the four-state southeast region concluded that several sites are available that would fulfill the needed siting parameters. Of these sites, one was located in the southern part of North Carolina, 41 miles offshore in approximately 110 feet of water. Whether a deep water port actually becomes a reality for North Carolina is highly speculative. At present, there are no proposals pending to develop such a facility; however, on a regional basis, there has been a demonstrated need for a deepwater terminal, in the gulf or Atlantic coast region.

The facility proposed for use in the Coastal Plains region would be the single point mooring (SPM) system. This system consists of a buoy securely anchored to the ocean floor, incorporating a swivel arrangement which allows the buoy complete freedom to rotate in a full circle. A specially designed hose would extend to the surface from a rigid submarine pipeline on the ocean floor, which is coupled to piping manifold connections on board the moored tanker. This pipeline would connect the pumping station to an onshore facility which would include a storage tank farm.

As stated previously, channel depths in North Carolina limit tanker size. However, development of an offshore system such as the one described above would allow VLCC's to unload crude oil without necessitating extensive dredging or increasing harbor congestion.

Under "LPG Receiving Terminal" section, change paragraph 6 to read as follows:

With the coastal region requiring increased amounts of alternate fuels such as propane, the state has attempted to recruit additional facilities into the coastal area. Although it appears that the plans are no longer viable, an LPG receiving terminal and storage facility was proposed for Radio Island (near Morehead City).

Replace the entire "Peat Mining" section with the following section:

Vast acres of the North Carolina coastal zone are devoted to farming endeavors. Recently, however, it was discovered that portions of these farmlands contained potentially valuable peat deposits. In an effort to help supply energy needs, a corporate farming company has embarked upon an experimental mining (or harvesting) program. If peat mining is successful, North Carolina could supply a portion of its own energy requirements.

A majority of the deposits are found in the north central portion of North Carolina's coastal zone (see figure 4). According to preliminary estimates, there are approximately 407,000,000 tons of harvestable peat on about 146,000 acres of land. This is enough peat to fuel a 400 megawatt electric generating plant for over 150 years, or an 80,000,000 cubic foot per day gassification plant for over 48 years. Translated to barrels of oil, the reserves are roughly equivalent to 700 million barrels.

The extraction, production and subsequent burning of peat in coastal North Carolina is still in the experimental stages. The deposits lie on the surface of the ground and seldom extend to a depth below 6 feet; however, the deposits are highly organic in their content and contain considerable amounts of debris (tree stumps, etc.). These features necessitate different removal and drying techniques from other peat mining processes.

There are several impacts associated with the operation. First, harvesting the peat involves a "strip mining" operation. Second, removal of the peat could have a variety of impacts on the water table, since the area now acts as a "sponge." Once removed, there could be problems from runoff, increased fresh water flows into estuarine areas, and the possibility of lowering surrounding lake levels. Although the possibility for salt water intrusion is minimal since the peat lies above sea level, there could be impacts associated with shallow groundwater supplies and quality. On a positive side, there should be no sulfur dioxide problems associated with the operation.

The success of peat mining is reliant upon the cost effectiveness and technological ability. If harvesting operations prove successful, North Carolina Electric Membership Corporation has expressed an interest in building a small peat-fueled power plant in the coastal area.

Under facilities not expected to locate within or significantly affect the North Carolina coastal zone, change as follows:

1. gassification plants
2. power plants involving direct solar energy
3. power plants involving ocean thermal energy conversion, tidal or wave power or geothermal
4. facilities used for the transportation, conversion, treatment, transfer or storage of LNG
5. drilling rigs, platforms and exploration rigs, pipe loading yards, bases supporting platforms and pipeline installation and crew and supply bases
6. facilities to separate oil, water and gas
- ~~7. oil and gas storage in salt domes~~
8. marine pipeline systems including pressure source, gathering lines, pipelines intermediate pressure boosting facilities and landfall sites
9. facilities for geopressurized gas

Delete paragraph 2 in its entirety.

Change the wording in paragraph 3 as follows:

"...As in NPDES application, a permit to discharge oil will be denied if it would contravene either established effluent standards/limitations or water quality standards. Also, when a permit is issued, monitoring requirements are mandatory. Continual monitoring will determine actual stream quality so that discharge permits can be revised as needed to protect water quality standards. Public hearings and..."

Change the wording in paragraph 4 as follows:

"The State will also need to certify that a major facility will not violate water quality. This certification..."

Change the paragraph at the top of the page as follows:

"...However, the State also has the ability to designate critical water use areas through the EMC acting pursuant to G.S. 143-215.13. The EMC may conduct a hearing in any area of the State, and if it determines that withdrawals of water from or discharges to the waters have resulted or will result in a generalized condition of water depletion, it may issue an order that can limit the capacity of new groundwater or surface water withdrawal facilities or discharge facilities. When done, a facility must conform..."

Under "Air Quality Concerns," change the first paragraph as follows:

"Industrial facilities can be major contributions to air pollution through their emission of particulates, sulfur dioxide, nitrogen dioxide, carbon monoxide, hydrocarbons, and acid mists. Control of such impacts is primarily through emission control regulations placed on the discharger by the EMC pursuant to G.S. 143-214.107. The air quality system parallels the water quality system in that the regulation speaks to ambient air quality and performance standards; however, there are numerous differences. Ambient quality standards are based on Federally promulgated standards designed to protect health and welfare. Currently, there are two non-attainment areas in North Carolina. An applicant for a permit to emit pollutants in the State will have to satisfy the State that he will not cause ambient quality standards or PSD increments to be exceeded. Current ambient quality addresses concentrations of particulates, sulfur dioxide, nitrogen oxide, hydrocarbons, carbon dioxide and ozone. The decision concerning exceeding ambient air quality must be made through monitoring similar to that used in water quality."

Under "Dredge and Fill Activities," change

"estuarine fish and larval species"

to

"estuarine fish and larval stages of numerous fish and shellfish species."

Under "Implementation," add the following to the list:

- Water Use Act of 1967 (G.S. 143-215.13)

NEW SECTION 3: COASTAL ENERGY POLICIES

- to be inserted in the DEIS

## Section 3: Coastal Energy Policies

### Policies Relative to Energy Facilities

Section 923.14(a)(3) of the Federal regulations requires the State to articulate policies for managing energy facilities and their impacts, including an articulation of conditions that may be imposed on site location and facility development. To fulfill this requirement the coastal management agency has compiled a listing of existing policies that guide energy facility siting decisions in North Carolina.

Additionally, the CAMA gives the Coastal Resources Commission authority to continue the development of coastal policies for North Carolina. Pursuant to this authority the CRC is formulating additional policies with regard to energy facilities. Before incorporation into the CZM Program, policies will be subjected to numerous reviews as provided in Chapter 6 of the Program.

### DECLARATION OF GENERAL POLICY

It is hereby declared that the general welfare and public interest require that a reliable source of energy be made available to the citizens of North Carolina. It is further declared that the development of energy facilities within the state can serve important regional and national interests. However, unwise development of energy facilities 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 shall assure that the development of energy facilities shall avoid significant adverse impact upon vital physical resources.

### DEFINITIONS

(a) Assessment - An analysis which fully discusses the environmental, economic and social consequences of a proposed project. At a minimum, the assessment should include the following information:

- (1) A full discussion of the preferred site for the project. 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 2-3 below) of the reasons why the chosen location was deemed more suitable than another feasible alternate site. 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. 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, alternate 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. This discussion should focus on economic impacts to the public sector and shall not be deemed to include matters that are purely internal to the corporate operation of the applicant, and no proprietary or confidential economic data will be required. 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) Likely or probable adverse impacts on estuarine or coastal resources based on industry experience.
- (4) Likely or probable adverse impacts on existing industry or probable unreasonable limitations on the availability of natural resources, particularly water, for future industrial development, based on industry experience.
- (5) Likely or probable significant adverse impacts on recreational uses and scenic resources, based on industry experience.
- (6) 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 areas of environmental concern.

An EIS required under NEPA provisions or an EIA required under existing state regulations will satisfy this definition of "assessment" if all issues listed above are addressed and is submitted in sufficient time to be used to review subsequent state permit applications for the project.

(b) Major Energy Facility - Those energy facilities which because of their size, magnitude and scope of impacts, have the potential to significantly affect 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) LPG-LNG-SNG terminals and associated storage, handling or processing facilities;
- (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 MW or larger.
- (5) Thermal energy generation
- (6) Major pipelines 13" or more in diameter that carry crude petroleum, natural gas, LNG-LPG or synthetic gas.

History Note: Statutory Authority G. S. 113A-102(b); 113-107; 113A-124

#### GENERAL ENERGY POLICIES

(a) The placement and operation of major energy facilities in the North Carolina coastal zone 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.

(b) Applicants for major energy facilities to be located in the North Carolina coastal zone shall, prior to construction, make 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 those siting measures that will minimize impacts to local resources.

(d) In coastal shoreline areas which have recognized recreational benefits or with identified access problems, those major energy facilities that do not require shorefront access shall be sited inland of the coastal zone. In other instances when shoreline portions of the coastal zone are necessary or preferred locations, shoreline siting will be acceptable only if it can be demonstrated that coastal waters will be adequately protected, the public's rights to access will not be unreasonably restricted, and all reasonable mitigating measures have been taken to minimize impacts to AECs.

#### SPECIFIC ENERGY POLICIES

##### Energy Generating Facilities

It is State policy:

- (1) To provide fair regulation of public utilities (including energy generating facilities) in the interest of the public to promote adequate, economical and efficient utility services to all of the citizens and residents of the State, to foster a Statewide planning and coordinating program to promote continued growth of economical public utility services and to cooperate with other States and with the Federal Government in promoting and coordinating interstate and intrastate public utility services. As set forth and implemented under the authority of the Public Utilities Act (G.S. 62.2).
- (2) That construction of a facility for generating electricity to be used for furnishing public utility service shall not begin until a determination has been made that public convenience and necessity requires, or will require, such a facility. As set forth and implemented under the authority of the Public Utilities Act (G.S. 62-110.1).
- (3) No energy generating facility will be permitted until it receives appropriate permits from DNRCD and from any other State agency with applicable permitting authority. Necessary permits will in most instances include dredge and fill permits, air quality permits, NPDES permits, and sediment and erosion control permits. Criteria and standards which guide the issuance of these permits are included in Appendix C.

##### Petroleum Refineries

It is State policy:

- (1) To promote the health, safety, and welfare of the citizens of this State by protecting the land and the waters which this State has jurisdiction from pollution by oil, oil products and

oil by-products. As set forth and implemented under authority of the Oil Pollution Control Act (G.S. 143-213.75 et seq).

- (2) That local governments shall be encouraged to use land classification plans to guide the location of oil refineries, as set forth by the Land Policy Council under authority of the Land Policy Act (G.S. 113A-150).
- (3) That no facility for refining oil shall be constructed without a permit from the Secretary of Natural Resources and Community Development. As set forth and implemented under authority of the Oil Pollution Control Act of 1973 (G.S. 143-213.99).
- (4) That the DNRCD will conduct an evaluation in conjunction with other agencies having environmental responsibilities of the effects on the State's natural and economic environment of any new or expanding industry or manufacturing plant (including petroleum refineries) locating in the coastal zone of North Carolina. As set forth and implemented under authority of G.S. 143B-437, Investigation of Impact of Proposed New and Expanding Industry.

#### Outer Continental Shelf

It is State policy:

- (1) To support an approach to offshore oil and gas exploration which will provide an adequate supply of energy while protecting the public environmental, social and economic interests in our coastal and offshore areas. As set forth by the Secretary of Administration in a special letter concerning the possible impacts associated with OCS lease sale #43 in April 1977.
- (2) That the State will take an active role in the OCS decision process in the review and comment on all OCS lease stipulations and operating orders prior to their approval. As set forth by the Secretary of Administration in a special letter concerning the possible impacts associated with OCS lease sale #43 in April 1977.
- (3) It is State policy to protect the public interest in natural oil and/or gas by establishing regulations to prohibit waste, compel rateable production, and protect the environment (G.S. 62-110).
- (4) That the DNRCD must be contacted and a permit issued before any oil or gas well drilling may proceed. Each abandoned well and dry hole must be plugged according to DNRCD rules. Allowing a gas or oil well to go wild or out of control is prohibited. As set forth and implemented under authority of the Oil and Gas Conservation Act (G.S. 113-381, et seq.). This authority extends only to the three mile State jurisdiction.

- (5) That discharges of oil upon any waters, tidal flats, beaches, or lands, or into any sewer, surface water drain, or other waters that drain into State waters is prohibited. As set forth and implemented under authority of the Oil Pollution Control Act (G.S. 143-215.75, et seq).

#### Mining

It is State policy:

- (1) That before land is committed to high density urban development, a study of mineral resources be made. Land areas found to contain significant mineral resources should not be committed to urban development unless other reasonable alternatives are not available. As set forth by the Land Policy Council under authority of the Land Policy Act (G.S. 113A-150).
- (2) That lands with potentially valuable mineral deposits should be managed for productive resource utilization and provided with limited public services. Only development that is compatible with mineral production should be encouraged. These lands should be classified as rural under the land classification system. As set forth by the CRC's "State Guidelines for Local Planning" and implemented under authority of the CAMA.
- (3) That the usefulness, productivity, and scenic values of all lands and water involved in mining within the State will receive the greatest practical degree of protection and restoration. No mining shall be carried on in the State unless plans for such mining include reasonable provisions for protection of the environment and reclamation of the affected area of land. As set forth and implemented under authority of the Mining Act (G.S. 74-48).
- (4) To prevent mining operations from: causing long-term adverse affect on wildlife, fisheries, public parks, forests, or recreation areas; violating air or water quality standards; creating a substantial physical hazard to neighboring structures; or resulting in landslides or sedimentation or pollution of waters. As set forth and implemented under authority of the Mining Act (G.S. 74-48).
- (5) To prevent mining activities from causing contamination of subsurface water supplies and/or salt water intrusion. As set forth and implemented under authority of the Water Use Act (G.S. 215-11).

REVISION TO APPENDIX A: NORTH CAROLINA ADMINISTRATIVE  
CODE TITLE 15, CHAPTER 7 - NEW AREA OF ENVIRONMENTAL  
CONCERN GUIDELINES (AEC's)

NORTE CAROLINA ADMINISTRATIVE CODE

TITLE 15

DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

CHAPTER 7  
COASTAL RESOURCES COMMISSION

SUBCHAPTER 7M - GENERAL POLICY GUIDELINES FOR THE COASTAL AREA

SECTION .0100 - PURPOSE AND AUTHORITY

.0101 AUTHORITY

.0102 PURPOSE

SECTION .0200 - SEORELINE EROSION POLICIES

.0201 DECLARATION OF GENERAL POLICY

.0202 POLICY STATEMENTS

SECTION .0300 - SEOREFRONT ACCESS POLICIES

.0301 DECLARATION OF GENERAL POLICY

.0302 DEFINITIONS

.0303 POLICY STATEMENTS

SECTION .0400 - COASTAL ENERGY POLICIES

.0401 DECLARATION OF GENERAL POLICY

.0402 DEFINITIONS

.0403 POLICY STATEMENTS

SECTION .0100 - PURPOSE AND AUTHORITY

.0101 AUTHORITY

These rules are promulgated pursuant to G.S. 113A-102(b), G.S. 113A-107 and G.S. 113A-124 by the North Carolina Coastal Resources Commission.

History Note: Statutory Authority G.S. 113A-102(b); 113A-107;  
113A-124;  
Eff. March 1, 1979

.0102 PURPOSE

The purpose of these rules is to establish generally applicable objectives and policies to be followed in the public and private use of land and water areas within the coastal area of North Carolina.

History Note: Statutory Authority G.S. 113A-102(b); 113A-107;  
113A-124;  
Eff. March 1, 1979

## SECTION .0200 - SHORELINE EROSION POLICIES

## .0201 DECLARATION OF GENERAL POLICY

It is hereby declared that the general welfare and public interest require that development along the ocean and estuarine shorelines be conducted in a manner that avoids loss of life, property and amenities. It is also declared that protection of the recreational use of the shorelines of the state is in the public interest. In order to accomplish these public purposes, the planning of future land uses, reasonable regulations and public expenditures should be created or accomplished in a coordinated manner so as to minimize the likelihood of damage to private and public resources resulting from recognized coastal hazards.

History Note: Statutory Authority G.S. 113A-102(b); 113A-107;  
113A-124;  
Eff. March 1, 1979

## .0202 POLICY STATEMENTS

(a) Pursuant to Section 5, Article 14 of the North Carolina Constitution, proposals for shoreline erosion control projects shall avoid losses to North Carolina's natural heritage. All means should be taken to identify and develop control measures that will not adversely affect estuarine and marine productivity.

(b) Nonstructural measures designed to minimize the loss of private and public resources to erosion are preferred solutions to erosion problems provided such measures are economically, socially, or environmentally justified. Preferred non-structural control measures for shoreline erosion shall include but not be limited to AEC regulation, land use planning and land classification, establishment of building setback lines, subdivision regulations and management of vegetation. When structural controls are selected in developing alternative plans for erosion control a clear rationale should be presented and those structural control measures which have the least effect on natural processes should be given prime consideration. (Note: for the purpose of this policy beach nourishment projects are included with traditional structural control measures such as revetments. The reason for this is that beach nourishment projects are land disturbing activities that can drastically alter the estuary (as a borrow area), the barrier island (through which pipelines will be laid) and the beach and nearshore (through the replacement of aquatic bottoms with dry sand).

(c) The State of North Carolina will encourage innovative institutional programs and scientific research that will provide for effective management of coastal shorelines.

(d) The planning, development, and implementation of erosion control projects will be coordinated with appropriate planning agencies, affected governments and the interested public. Maximum efforts will be made by the state to accommodate the interest of each interested party consistent with the project's objectives.

(e) The State will promote education of the public on the dynamic nature of the coastal zone and on effective measures to cope with our ever changing shorelines.

History Note: Statutory Authority G.S. 113A-102(b); 113A-107;  
113A-124;  
Eff. March 1, 1979

## SECTION .0300 - SHOREFRONT ACCESS POLICIES

## .0301 DECLARATION OF GENERAL POLICY

It is hereby declared to be the policy of the State of North Carolina to foster, protect, improve and ensure optimum access to recreational opportunities at beach areas consistent with public rights, rights of private property owners and the need to protect natural resources from overuse. These policies reflect the position that in areas other than State parks, the responsibility of providing adequate beach access rests primarily with local units of government. Thus, the following policies are intended to supplement and strengthen any local efforts.

History Note: Statutory Authority G.S. 113A-102(b); 113A-107;  
113A-124;  
Eff. March 1, 1979

## .0302 DEFINITIONS

The term "Beach" as used in these policies is defined as areas extending from the mean low to the mean high water line and beyond this line to where either the growth of vegetation occurs, or a distinct change in slope or elevation occurs, or riparian owners have specifically and legally restricted access above the mean high water line.

This definition is intended to describe those shorefront areas historically used by the public. Whether or not the public has rights in the defined areas above the MEW mark can only be answered by the courts. The public does have clear rights below the MEW mark. The following policies recognize public use rights in the beach areas as defined but do not in any way require private property owners to provide public access to the beach.

History Note: Statutory Authority G.S. 113A-102(b); 113A-107;  
113A-124;  
Eff. March 1, 1979

## .0303 POLICY STATEMENTS

(a) Development shall not interfere with the public's right of access to the shorefront where acquired through public acquisition, dedication, or customary use as established by the courts.

(b) The responsibility of insuring that the public can obtain adequate access to public trust resources or the ocean, sounds, rivers and tributaries is primarily that of local governments to be shared and assisted by state and federal government.

(c) Public beach area projects funded by the state and federal government will not receive initial or additional funds unless provisions are made for adequate public access. This must include access rights, adequate identification and adequate parking.

(d) Policies regarding State and Federal properties with shorefront areas intended to be used by the public must encourage, permit and provide public access and adequate parking so as to

achieve maximum public use and benefit of these areas consistent with establishing legislation.

(e) State and Federal funds for beach access will be provided only to localities that also provide protection of the frontal dunes.

(f) The state should continue in its efforts to supplement and improve highway, bridge and ferry access to and within the twenty county coastal area consistent with the approved local land use plans. Further, the state should wherever practical work to add public fishing catwalks to appropriate highway bridges and should incorporate catwalks in all plans for new construction and for remodeling bridges. It is the policy of the state to seek repeal of ordinances preventing fishing from bridges except where public safety would be comprised.

(g) In order to avoid weakening the protective nature of frontal dunes, no development will be permitted which would involve the removal or relocation of frontal dune sand or frontal dune vegetation. 15 NCAC .7E.0306 (c). The sands held in the frontal dune are recognized as vital for the nourishment and protection of ocean beaches.

(h) All land use plans and state actions to provide additional shorefront access must recognize the need of providing access to all socio-economic groups.

History Note: Statutory Authority G.S. 113A-102(b); 113A-107;  
113A-124;  
Eff. March 1, 1979

## 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 source of energy be made available to the citizens of North Carolina. It is further declared that the development of energy facilities within the state can serve important regional and national interests. However, unwise development of energy facilities 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 shall assure that the development of energy facilities shall avoid significant adverse impact upon vital physical resources.

History Note: Statutory Authority G.S. 113A-102(b); 113A-107;  
113A-124;  
Eff. March 1, 1979

## .0402 DEFINITIONS

(a) Assessment - An analysis which fully discusses the environmental, economic and social consequences of a proposed project. At a minimum, the assessment should include the following information:

- (1) A full discussion of the preferred site for the project. 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 2-8 below) of the reasons why the chosen location was deemed more suitable than another feasible alternate site. 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. 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, alternate 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. This discussion should focus on economic impacts to the public sector and shall not be deemed to include matters that are purely internal to the corporate operation of the applicant, and no proprietary or confidential economic data will be required. 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) Likely or probable adverse impacts on estuarine or coastal resources based on industry experience.
  - (4) Likely or probable adverse impacts on existing industry or probable unreasonable limitations on the availability of natural resources, particularly water, for future industrial development, based on industry experience.
  - (5) Likely or probable significant adverse impacts on recreational uses and scenic resources, based on industry experience.
  - (6) 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 areas of environmental concern.

An EIS required under NEPA provisions or an EIA required under existing state regulations will satisfy this definition of "assessment" if all issues listed above are addressed and is submitted in sufficient time to be used to review subsequent state permit applications for the project.

(b) Major Energy Facility - Those energy facilities which because of their size, magnitude and scope of impacts, have the potential to significantly affect 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) LPG-LNG-SNG terminals and associated storage, handling or processing facilities;
- (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 MW or larger.
- (5) Thermal energy generation
- (6) Major pipelines 12" or more in diameter that carry crude petroleum, natural gas, LNG-LPG or synthetic gas.

History Note: Statutory Authority G.S. 113A-102(b); 113-107;  
113A-124  
Eff. March 1, 1979

#### .0403 POLICY STATEMENTS

(a) The placement and operation of major energy facilities in the North Carolina coastal zone 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.

(b) Applicants for major energy facilities to be located in the North Carolina coastal zone shall, prior to construction, make 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 those siting measures that will minimize impacts to local resources.

(d) In coastal shoreline areas which have recognized recreational benefits or with identified access problems, those major energy facilities that do not require shorefront access shall be sited inland of the coastal zone. In other instances when shoreline portions of the coastal zone are necessary or preferred locations, shoreline siting will be acceptable only if it can be demonstrated that coastal waters will be adequately protected, the public's rights to access will not be unreasonably restricted, and all reasonable mitigating measures have been taken to minimize impacts to AECs.

History Note: Statutory Authority G.S. 113A-102(b); 113A-107;  
113A-124;  
Eff. March 1, 1979

## SECTION .0200 - THE ESTUARINE SYSTEM

## .0201 ESTUARINE SYSTEM CATEGORIES

The first AECs discussed collectively are those water and land areas of the coast that contribute enormous economic, social, and biological values to North Carolina as components of the estuarine system. Included within the estuarine system are the following AEC categories: estuarine waters, coastal wetlands, public trust areas, and estuarine shorelines. Each of the AECs is either geographically within the estuary or, because of its location and nature, may significantly affect the estuary.

History Note: Statutory Authority G.S. 113A-113(b) (1);  
113A-113(b) (2); 113A-113(b) (5); 113A-113(b) (6) b;  
Eff. September 9, 1977.

## .0202 SIGNIFICANCE OF THE SYSTEMS APPROACH IN ESTUARIES

The management program must embrace all characteristics, processes, and features of the whole system and not characterize individually any one component of an estuary. The AECs are interdependent and ultimately require management as a unit. Any alteration, however slight, in a given component of the estuarine system may result in unforeseen consequences in what may appear as totally unrelated areas of the estuary. For example, destruction of wetlands may have harmful effects on estuarine waters which are also areas within the public trust. As a unified system, changes in one AEC category may affect the function and use within another category.

History Note: Statutory Authority G.S. 113A-107(a);  
113A-107(b);  
Eff. September 9, 1977.

## .0203 MANAGEMENT OBJECTIVE OF THE ESTUARINE SYSTEM

It is the objective of the Coastal Resources Commission to give high priority to the protection and coordinated management of estuarine waters, coastal wetlands, public trust areas, and estuarine shorelines, as an interrelated group of AECs, so as to safeguard and perpetuate their biological, social, economic, and aesthetic values and to ensure that development occurring within these AECs is compatible with natural characteristics so as to minimize the likelihood of significant loss of private property and public resources.

History Note: Statutory Authority G.S. 102(b) (1); 102(b) (4);  
113A-107(a); 113A-107(b);

Eff. September 9, 1977.

.0204. AECs WITHIN THE ESTUARINE SYSTEM

The following regulations in this Section define each AEC within the estuarine system, describe its significance, articulate the policies regarding development, and state the standards for development within each AEC.

History Note: Statutory Authority G.S. 113A-107(a);  
113A-107(b);  
Eff. September 9, 1977.

.0205 COASTAL WETLANDS

(a) Description. Coastal wetlands are defined as any salt marsh or other marsh subject to regular or occasional flooding by tides, including wind tides (whether or not the tide waters reach the marshland areas through natural or artificial watercourses), provided this shall not include hurricane or tropical storm tides.

Coastal wetlands contain some, but not necessarily all, of the following marsh plant species:

- (1) Cord Grass (*Spartina alterniflora*),
- (2) Black Needlerush (*Juncus roemerianus*),
- (3) Glasswort (*Salicornia* spp.),
- (4) Salt Grass (*Distichlis spicata*),
- (5) Sea Lavender (*Limonium* spp.),
- (6) Bulrush (*Scirpus* spp.),
- (7) Saw Grass (*Cladium jamaicense*),
- (8) Cat-tail (*Typha* spp.),
- (9) Salt Meadow Grass (*Spartina patens*),
- (10) Salt Reed Grass (*Spartina cynosuroides*).

Included in this definition of coastal wetlands is "such contiguous land as the Secretary of NR&CD reasonably deems necessary to affect by any such order in carrying out the purposes of this Section." [G.S. 113-230(a)]

(b) Significance. The unique productivity of the estuarine system is supported by detritus (decayed plant material) and nutrients that are exported from the coastal marshlands. The amount of exportation and degree of importance appears to be variable from marsh to marsh, depending primarily upon its frequency of inundation and inherent characteristics of the various plant species. Without the marsh, the high productivity levels and complex food chains typically found in the estuaries could not be maintained.

Man harvests various aspects of this productivity when he fishes, hunts, and gathers shellfish from the estuary. Estuarine dependent species of fish and shellfish such as menhaden, shrimp,

flounder, oysters, and crabs currently make up over 90 percent of the total value of North Carolina's commercial catch. The marshlands, therefore, support an enormous amount of commercial and recreational businesses along the seacoast.

The roots, rhizomes, stems, and seeds of coastal wetlands act as good quality waterfowl and wildlife feeding and nesting materials. In addition, coastal wetlands serve as the first line of defense in retarding estuarine shoreline erosion. The plant stems and leaves tend to dissipate wave action, while the vast network of roots and rhizomes resists soil erosion. In this way, the coastal wetlands serve as barriers against flood damage and control erosion between the estuary and the uplands.

Marshlands also act as nutrient and sediment traps by slowing the water which flows over them and causing suspended organic and inorganic particles to settle out. In this manner, the nutrient storehouse is maintained, and sediment harmful to marine organisms is removed. Also, pollutants and excessive nutrients are absorbed by the marsh plants, thus providing an inexpensive water treatment service.

(c) Management Objective. To give highest priority to the protection and management of coastal wetlands so as to safeguard and perpetuate their biological, social, economic and aesthetic values; to coordinate and establish a management system capable of conserving and utilizing coastal wetlands as a natural resource essential to the functioning of the entire estuarine system.

(d) Use Standards. Suitable land uses shall be those consistent with the management objective in this Rule. Highest priority of use shall be allocated to the conservation of existing coastal wetlands. Second priority of coastal wetland use shall be given to those types of development activities that require water access and cannot function elsewhere.

Unacceptable land uses may include, but would not be limited to, the following examples: restaurants and businesses; residences, apartments, motels, hotels, and trailer parks; parking lots and private roads and highways; and factories. Examples of acceptable land uses may include utility easements, fishing piers, docks, and agricultural uses, such as farming and forestry drainage, as permitted under North Carolina's Dredge and Fill Act and/or other applicable laws.

In every instance, the particular location, use, and design characteristics shall be in accord with the general use standards for coastal wetlands, estuarine waters, and public trust areas described in Rule .0208 of this Section.

History Note: Statutory Authority G.S. 113A-107(a);  
113A-107(b); 113A-113(b)(1);

Eff. September 9, 1977;  
Amended Eff. January 24, 1978.

.0206 ESTUARINE WATERS

(a) Description. Estuarine waters are defined in G.S. 113A-113(b) (2) as "all the water of the Atlantic Ocean within the boundary of North Carolina and all the waters of the bays, sounds, rivers, and tributaries thereto seaward of the dividing line between coastal fishing waters and inland fishing waters, as set forth in an agreement adopted by the Wildlife Resources Commission and the Department of Natural Resources and Community Development filed with the Secretary of State, entitled 'Boundary Lines, North Carolina Commercial Fishing -- Inland Fishing Waters,' Revised to March 1, 1965."

(b) Significance. Estuarine waters are the dominant component and bonding element of the entire estuarine system, integrating aquatic influences from both the land and the sea. Estuaries are among the most productive natural environments of North Carolina. They support the valuable commercial and sports fisheries of the coastal area which are comprised of estuarine dependent species such as menhaden, flounder, shrimp, crabs, and oysters. These species must spend all or some part of their life cycle within the estuarine waters to mature and reproduce. Of the 10 leading species in the commercial catch, all but one are dependent on the estuary.

This high productivity associated with the estuary results from its unique circulation patterns caused by tidal energy, fresh water flow, and shallow depth; nutrient trapping mechanisms; and protection to the many organisms. The circulation of estuarine waters transports nutrients, propels plankton, spreads seed stages of fish and shellfish, flushes wastes from animal and plant life, cleanses the system of pollutants, controls salinity, shifts sediments, and mixes the water to create a multitude of habitats. Some important features of the estuary include mud and sand flats, eel grass beds, salt marshes, submerged vegetation flats, clam and oyster beds, and important nursery areas.

Secondary benefits include the stimulation of the coastal economy from the spin off operations required to service commercial and sports fisheries, waterfowl hunting, marinas, boatyards, repairs and supplies, processing operations, and tourist related industries. In addition, there is considerable nonmonetary value associated with aesthetics, recreation, and education.

(c) Management Objective. To give the highest priority to the conservation and management of the important features of estuarine waters so as to safeguard and perpetuate their biological, social, aesthetic, and economic values; to coordinate

and establish a management system capable of conserving and utilizing estuarine waters so as to maximize their benefits to man and the estuarine system.

(d) Use Standards. Suitable land/water uses shall be those consistent with the management objectives in this Rule. Highest priority of use shall be allocated to the conservation of estuarine waters and its vital components. Second priority of estuarine waters use shall be given to those types of development activities that require water access and use which cannot function elsewhere such as simple access channels; structures to prevent erosion; navigation channels; boat docks, marinas, piers, wharfs, and mooring pilings.

In every instance, the particular location, use, and design characteristics shall be in accord with the general use standards for coastal wetlands, estuarine waters, and public trust areas described in Regulation .0208 of this Section.

History Note: Statutory Authority G.S. 113A-107(a);  
113A-107(b); 113A-113(b)(2);  
Eff. September 9, 1977;  
Amended Eff. January 24, 1978.

#### .0207 PUBLIC TRUST AREAS

(a) Description. Public trust areas are all waters of the Atlantic Ocean and the lands thereunder from the mean high water mark to the seaward limit of state jurisdiction; all natural bodies of water subject to measurable lunar tides and lands thereunder to the mean high water mark; all navigable natural bodies of water and lands thereunder to the mean high water level or mean water level as the case may be, except privately-owned lakes to which the public has no right of access; all water in artificially created bodies of water containing significant public fishing resources or other public resources which are accessible to the public by navigation from bodies of water in which the public has rights of navigation; and all waters in artificially created bodies of water in which the public has acquired rights by prescription, custom, usage, dedication, or any other means. In determining whether the public has acquired rights in artificially created bodies of water, the following factors shall be considered:

- (1) the use of the body of water by the public,
- (2) the length of time the public has used the area,
- (3) the value of public resources in the body of water,
- (4) whether the public resources in the body of water are mobile to the extent that they can move into natural bodies of water,

(5) whether the creation of the artificial body of water required permission from the state, and

(6) the value of the body of water to the public for navigation from one public area to another public area.

(b) Significance. The public has rights in these areas, including navigation and recreation. In addition, these areas support valuable commercial and sports fisheries, have aesthetic value, and are important resources for economic development.

(c) Management Objective. To protect public rights for navigation and recreation and to preserve and manage the public trust areas so as to safeguard and perpetuate their biological, economic and aesthetic value.

(d) Use Standards. Acceptable uses shall be those consistent with the management objectives in (c) of this Rule. In the absence of overriding public benefit, any use which significantly interferes with the public right of navigation or other public trust rights which the public may be found to have in these areas shall not be allowed. The development of navigational channels or drainage ditches, the use of bulkheads to prevent erosion, and the building of piers, wharfs, or marinas are examples of uses that may be acceptable within public trust areas, provided that such uses will not be detrimental to the public trust rights and the biological and physical functions of the estuary. Projects which would directly or indirectly block or impair existing navigation channels, increase shoreline erosion, deposit spoils below mean high tide, cause adverse water circulation patterns, violate water quality standards, or cause degradation of shellfish waters are generally considered incompatible with the management policies of public trust areas. In every instance, the particular location, use, and design characteristics shall be in accord with the general use standards for coastal wetlands, estuarine waters, and public trust areas.

History Note: Statutory Authority G.S. 113A-107(a);  
 113A-107(b); 113A-113(b) (5);  
 Eff. September 9, 1977.

Regulation 15 NCAC 7H .0208; GENERAL USE STANDARDS FOR ESTUARINE SYSTEM AECs; has been amended to read as follows:

.0208 USE STANDARDS

(a) General Use Standards

- (1) Uses which are not water dependent will not be permitted in coastal wetlands, estuarine waters, and public trust waters. Restaurants, residences, apartments, motels, hotels, trailer parks, private roads, factories, and parking lots are examples of uses that are not water dependent. Uses that are water dependent may include: utility easements; docks; wharfs; boat ramps; dredging; bridges and bridge approaches; revetments, bulkheads; culverts; groins; navigational aids; mooring pilings; navigational channels; simple access channels and drainage ditches.
- (2) Before being granted a permit by the CRC or local permitting authority, there shall be a finding that the applicant has complied with the following standards:
  - (A) The location, design, and need for development, as well as the construction activities involved must be consistent with the stated management objective.
  - (B) Before receiving approval for location of a use or development within these AECs, the permitting authority shall find that no suitable alternative site or location outside of the AEC exists for the use or development and, further, that the applicant has selected a combination of sites and design that will have a minimum adverse impact upon the productivity and biologic integrity of coastal marshland, shellfish beds, submerged grass beds, spawning and nursery areas, important nesting and wintering sites for waterfowl and wildlife, and important natural erosion barriers (cypress fringes, marshes, clay soils).
  - (C) Development shall not violate water and air quality standards.
  - (D) Development shall not cause major or irreversible damage to valuable documented archaeological or historic resources.
  - (E) Development shall not measurably increase siltation.
  - (F) Development shall not create stagnant water bodies.
  - (G) Development shall be timed to have minimum adverse significant affect on life cycles of estuarine resources.
  - (H) Development shall not impede navigation or create undue interference with access to, or use of, public trust or estuarine waters.

- (I) Development proposed in estuarine waters must also be consistent with the standards for the ocean hazard system AECs set forth in Section .0300 of this Subchapter.
- (3) When the proposed development is in conflict with the general or specific use standards set forth in this Rule, the CRC may approve the development if the applicant can demonstrate that the activity associated with the proposed project will have public benefits as identified in the findings and goals of the Coastal Area Management Act, that the public benefits 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 of the project on natural systems in the area have been incorporated into the project design and will be implemented at the applicant's expense. These measures taken to mitigate adverse impacts may include actions that will:
  - (A) minimize or avoid adverse impacts by limiting the magnitude or degree of the action;
  - (B) restore the affected environment; or
  - (C) compensate for the adverse impacts by replacing or providing substitute resources.
- (b) Specific Use Standards
  - (1) Navigation Channels, Canals, and Boat Basins. Navigation channels, canals and boat basins must be aligned or located so as to avoid highly productive shellfish beds, beds of submergent vegetation, or regularly and irregularly flooded marshes.
  - (2) Hydraulic Dredging
    - (A) The terminal end of the dredge pipeline should be positioned at least 50 feet from any part of a containment dike and a maximum distance from spillways to allow adequate settlement of suspended solids.
    - (B) Dredge spoil must be either confined on high ground by adequate retaining structures or if the material is suitable, deposited on beaches for purposes of renourishment, with the exception of (G) of this Subsection (b)(2).
    - (C) Confinement of excavated materials shall be on high ground landward of regularly and irregularly flooded marshland and with adequate soil stabilization measures to prevent entry of sediments into the adjacent water bodies or marsh.
    - (D) Effluent from diked areas receiving disposal from hydraulic dredging operations must be contained by pipe, trough, or similar device to a point waterward of emergent vegetation or, where local conditions require, below mean low water.
    - (E) When possible, effluent from diked disposal areas shall be returned to the area being dredged.

- (F) A water control structure must be installed at the intake end of the effluent pipe.
  - (G) Publicly funded projects will be considered by review agencies on a case by case basis with respect to dredging methods and spoil disposal.
  - (H) Dredge spoil and effluent from closed shell fish waters and effluent from diked disposal area used when dredging in closed shellfish waters shall be returned to the closed shellfish waters.
- (3) Drainage Ditches
- (A) Drainage ditches located through any marshland shall not exceed six feet wide by four feet deep (from ground surface) unless the applicant can show that larger ditches are necessary for adequate drainage.
  - (B) Spoil derived from the construction or maintenance of drainage ditches through regularly flooded marsh must be placed landward of these marsh areas in a manner that will insure that entry of sediment into the water or marsh will not occur.  
Spoil derived from the construction or maintenance of drainage ditches through irregularly flooded marshes shall be placed on non-wetlands wherever feasible. Non-wetland areas include relic disposal sites.
  - (C) Excavation of new ditches through high ground shall take place landward of a temporary earthen plug or other methods to minimize siltation to adjacent water bodies.
  - (D) Drainage ditches shall not adversely affect officially designated primary nursery areas, productive shellfish beds, submerged grass beds, or other documented important estuarine habitat. Particular attention should be placed on the effects of freshwater inflows, sediment, and nutrient introduction. Settling basins, water gates, retention structures are examples of design alternatives that may be used to minimize sediment introduction.
- (4) Nonagricultural Drainage
- (A) Drainage ditches must be designed, when practical, so that restrictions in the volume or diversions of flow are minimized to both surface and ground water.
  - (B) Drainage ditches shall provide for the passage of migratory organisms by allowing free passage of water of sufficient depth.
  - (C) Drainage ditches shall not create stagnant water pools or significant changes in the velocity of flow.
  - (D) Drainage ditches shall not divert or restrict water flow to important wetlands or marine habitats.

(5) Marinas

- (A) Marinas shall be developed on non-wetland sites or in deep waters (areas not requiring dredging) and shall not disturb valuable shallow water and wetland habitat, except for dredging necessary for access to high ground sites.
- (B) Privately-owned marinas which involve use of public bottoms and waters shall not be permitted unless adequate compensation is made to the public by purchase of an easement from the state. These easements should be for a limited period. This requirement shall be met by showing compliance with state laws and regulations regarding easements over public waters.
- (C) Marinas shall (i) be designed to minimize use of public waters by encouraging an appropriate mix of dry storage areas, public launching facilities, and berthing spaces (ii) provide adequate pump-out stations for wastewater disposal from boats; and (iii) demonstrate the implementation of all necessary means and measures to minimize the impact of pollutants likely to be emitted by the operation of the marina and attendant vessels upon the natural systems.
- (D) Marinas shall be designed to minimize adverse effects on navigation and public use of waters while allowing the applicant adequate access to deep waters.

(6) Docks and Piers

- (A) Docks and piers shall not significantly interfere with waterflows.
- (B) To preclude the adverse effects of shading marsh vegetation, structures which are built over vegetated marsh shall not exceed six feet in width, except that "T"s or platforms at the waterward end are not restricted to these dimensions but cannot have a total area of more than 500 square feet.
- (C) The structure must not present a navigational hazard and must not extend any closer than 30 feet from the edge of a federally maintained channel. Piers shall be designed to minimize adverse effects on navigation and public use of waters, while allowing the applicant adequate access to deep waters.

(7) Bulkheads and Shore Stabilization Measures

- (A) Bulkhead alignment, for the purpose of shoreline stabilization, must approximate mean high water or normal water level.
- (B) Bulkheads shall be constructed landward of significant marshland or marshgrass fringes.
- (C) Bulkhead fill material shall be obtained from an approved upland source, or if the bulkhead is a part of a permitted project involving excavation from a non-upland source, the material so obtained may be contained behind the bulkhead.

- (D) Bulkheads or other structures below approximate mean high water or normal water level for the purpose of reclaiming land lost to erosion shall be permitted only where there is an identifiable erosion problem. Where such a problem is shown to exist, only the area shown to have eroded in the previous year from time of application may be bulkheaded and filled.
- (E) Where possible, sloping rip-rap, gabions, or vegetation may be used rather than vertical seawalls.

History Note: Statutory Authority G.S. 113A-107(a);  
113A-107(b); 113A-113(b);  
Eff. September 9, 1977;  
Amended Eff. June 1, 1979.

**.0209 ESTUARINE SHORELINES**

(a) Rationale. As an AEC, estuarine shorelines, although characterized as dry land, are considered a component of the estuarine system because of the close association with the adjacent estuarine waters. This Section defines estuarine shorelines, describes the significance, and articulates standards for development.

(b) Description. Estuarine shorelines are those non-ocean shorelines which are especially vulnerable to erosion, flooding, or other adverse effects of wind and water and are intimately connected to the estuary. This area extends from the mean high water level or normal water level along the estuaries, sounds, bays, and brackish waters as set forth in an agreement adopted by the Wildlife Resources Commission and the Department of Natural Resources and Community Development [described in Regulation .0206(a) of this Section] for a distance of 75 feet landward.

(c) Significance. Development within estuarine shorelines influences the quality of estuarine life and is subject to the damaging processes of shore front erosion and flooding.

(d) Management Objective. To ensure shoreline development is compatible with both the dynamic nature of estuarine shorelines and the values of the estuarine system.

Regulation 15 NCAC 7H .0209(e); ESTUARINE SHORELINES; has been amended to read as follows:

(e) Use Standards

- (1) All development projects, proposals, and designs shall substantially preserve and not weaken or eliminate natural barriers to erosion, including, but not limited to, peat marshland, resistant clay shorelines, cypress-gum protective fringe areas adjacent to vulnerable shorelines.
- (2) All development projects, proposals, and designs shall limit the construction of impervious surfaces and areas not experiencing natural drainage to only so much as is necessary to adequately service the major purpose or use for which the lot is to be developed. Impervious surfaces should not exceed 30 percent of the AEC area of the lot, unless the applicant can show that such a limitation will allow no practical use to be made of the lot.
- (3) All development projects, proposals, and designs shall comply with the following mandatory standards of the North Carolina Sedimentation Pollution Control Act of 1973:
  - (A) All development projects, proposals, and designs shall provide for a buffer zone along the margin of the estuarine water which is sufficient to confine visible siltation within 25 percent of the buffer zone nearest the land disturbing development.
  - (B) No development project proposal or design shall permit an angle for graded slopes or fill which is greater than an angle which can be retained by vegetative cover or other adequate erosion-control devices or structures.
  - (C) All development projects, proposals, and designs which involve uncovering more than one acre of land shall plant a ground cover sufficient to restrain erosion within 30 working days of completion of the grading; provided that this shall not apply to clearing land for the purpose of forming a reservoir later to be inundated.
- (4) Development shall not have a significant adverse impact on estuarine resources.
- (5) Development shall not significantly interfere with existing public rights of access to, or use of, navigable waters or public resources.
- (6) No major public facility shall be permitted if such facility is likely to require excessive public expenditures for maintenance and continued use, unless it can be shown that the public purpose served by the facility outweighs the required public expenditures for construction, maintenance, and continued use. For the purpose of this standard, "public facility" shall mean a project which is paid for in any part by public funds.

- (7) In those instances where ground absorption sewage disposal systems may legally be placed less than 100 feet from the mean or normal high water mark of any waters classified as S.A., such systems shall be permitted only if:
- (A) The nitrification lines are separated from the seasonal high ground water by a minimum of 30 inches of suitable or provisionally suitable soil; and
  - (B) It meets all of the other applicable laws and rules for ground absorption sewage disposal systems adopted by the North Carolina division of health services and the North Carolina division of environmental management.
- (8) Development shall not cause major or irreversible damage to valuable, documented historic architectural or archaeological resources.

History Note: Statutory Authority G.S. - 113A-107(a);  
113A-107(b); 113A-113(b);  
Eff. September 9, 1977;  
Amended Eff. June 1, 1979.

## SECTION .0300 - OCEAN HAZARD AREAS

## .0301 OCEAN HAZARD CATEGORIES

The next broad grouping is composed of those AECs that are considered natural hazard areas along the Atlantic Ocean shoreline where, because of their special vulnerability to erosion or other adverse effects of sand, wind, and water, uncontrolled or incompatible development could unreasonably endanger life or property. Ocean hazard areas include beaches, frontal dunes, inlet lands, and other areas in which geologic, vegetative and soil conditions indicate a substantial possibility of excessive erosion or flood damage.

History Note: Statutory Authority G.S. 113A-107(a);  
113A-107(b); 113A-113(b)(6)a;  
113A-113(b)(6)b; 113A-113(b)(6)d;  
Eff. September 9, 1977.

## .0302 SIGNIFICANCE OF THE OCEAN HAZARD CATEGORY

(a) The primary causes of the hazards peculiar to the Atlantic shoreline are the constant forces exerted by waves, winds, and currents upon the unstable sands that form the shore. During storms, these forces are intensified and can cause significant changes in the bordering landforms and to structures located on them. Hazard area property is in the ownership of a large number of private individuals as well as several public agencies and is used by a vast number of visitors to the coast. Ocean hazard areas are critical, therefore, because of both the severity of the hazards and the intensity of interest in the areas.

(b) The location and form of the various hazard area landforms, in particular the beaches, dunes, and inlets, are in a permanent state of flux, responding to meteorologically induced changes in the wave climate. For this reason, the appropriate location of structures on and near these landforms must be reviewed carefully in order to avoid their loss or damage. As a whole, the same flexible nature of these landforms which presents hazards to development situation immediately on them offers protection to the land, water, and structures located landward of them. The value of each landform lies in the particular role it plays in affording protection to life and property. (The role of each landform is described in detail in Technical Appendix 2 in terms of the physical processes most important to each.) Overall, however, the energy dissipation and sand storage capacities of the landforms are most essential for the maintenance of the landforms' protective function.

History Note: Statutory Authority G.S. 113A-107(a);  
113A-107(b); 113A-113(b)(6)a;  
113A-113(b)(6)b; 113A-113(b)(6)d;  
Eff. September 9, 1977.

.0303 MANAGEMENT OBJECTIVE OF OCEAN HAZARD AREAS

The CRC recognizes that absolute safety from the destructive forces indigenous to the Atlantic shoreline is an impossibility for development located adjacent to the coast. The loss of life and property to these forces, however, can be greatly reduced by the proper location and design of shoreline structures and by care taken in prevention of damage to natural protective features. Therefore, it is the CRC's objective to provide management policies and standards for ocean hazard areas that serve to eliminate unreasonable danger to life and property and achieve a balance between the financial, safety, and social factors that are involved in hazard area development.

History Note: Statutory Authority G.S. 113A-107(a);  
113A-107(b); 113A-113(b)(6)a;  
113A-113(b)(6)b; 113A-113(b)(6)d;  
Eff. September 9, 1977.

Regulation 15 NCAC 7H .0304; AECs WITHIN OCEAN HAZARD AREAS; has been amended to read as follows:

The ocean hazard system of AECs contains all of the following areas:

- (1) Ocean Erodible Area. This is the area in which there exists a substantial possibility of excessive erosion and significant shoreline fluctuation. The seaward boundary of this area is the mean low water line. The landward extent of this area is determined as follows:
  - (a) a distance landward from the first line of stable natural vegetation to the recession line that would be established by multiplying the present long-term annual erosion rate times 30, provided that where there has been no long-term erosion or the rate is less than two feet per year, this distance shall be set at 60 feet landward from the first line of stable natural vegetation; and
  - (b) a distance landward from the recession line established in Subparagraph (a) of this Paragraph to the recession line that would be generated by a storm having a one percent chance of being equalled or exceeded in any given year.
- (2) The High Hazard Flood Area. This is the area subject to high velocity waters (including, but not limited to, hurricane wave wash) in a storm having a one percent chance of being equalled or exceeded in any given year, as identified as zone VI-30 on the flood insurance rate maps of the Federal Insurance Administration, U.S. Department of Housing and Urban Development. In the absence of these rate maps, other available base flood elevation data prepared by a federal, state, or other source may be used, provided said data source is approved by the CRC.
- (3) Inlet Hazard Area. The inlet hazard areas are those lands identified by the state geologist to have a substantial possibility of excessive erosion that are located adjacent to inlets. This area shall extend landward from the mean low water line a distance sufficient to encompass that area within which the inlet will, based on statistical analysis, migrate, and shall consider such factors as previous inlet territory, structurally weak areas near the inlet (such as an unusually narrow barrier island, an unusually long channel feeding the inlet, or an overwash area), and external influences such as jetties and channelization. These areas are identified as recommended inlet hazard areas in the report to the CRC entitled "Inlet Hazard Area" by Lois J. Priddy and Rick Carraway (September 1978). In all cases, this area shall be an extension of the adjacent ocean erodible area and in no case shall the width of the inlet hazard area be less than the width of the adjacent ocean erodible area.

History Note: Statutory Authority G.S. 113A-107(a) and (b);  
113A-113(6)(b);  
Eff. September 9, 1977;  
Amended Eff. July 15, 1979.

Regulation 15 NCAC 7H .0305; GENERAL IDENTIFICATION; has been amended to read as follows:

.0305 GENERAL IDENTIFICATION AND DESCRIPTION OF LANDFORMS

(a) Ocean Beaches. Ocean beaches are lands consisting of unconsolidated soil materials that extend from the mean low water line landward to a point where either: (1) the growth of vegetation occurs or; (2) a distinct change in slope or elevation alters the configuration of the landform.

(b) Primary Dunes. Primary dunes are the first mounds of sand located landward of the ocean beaches having an elevation equal to the mean flood level (in a storm having a one percent chance of being equalled or exceeded in any given year) for the area plus six feet. The primary dune extends landward to the lowest elevation in the depression behind that same mound of sand (commonly referred to as the dune trough).

(c) Frontal Dunes. In areas where there is a primary dune, that dune shall be deemed to be the frontal dune. Where there is no primary dune, the frontal dune is deemed to be the first mound of sand located landward of the ocean beach having sufficient vegetation, height, continuity and configuration to offer protective value. Man-made mounds shall not be considered to be frontal or primary dunes.

(d) General Identification. For the purpose of public and administrative notice and convenience, each designated minor development permit-letting agency with ocean hazard areas may designate, subject to CRC approval, a readily identifiable land area within which the ocean hazard areas occur. This designated notice area must include all of the land areas defined in Rule .0304 of this Section. Natural or man-made landmarks should be considered in delineating this area.

History Note: Statutory Authority G.S. 113A-107;  
113A-113(6)(b);  
Eff. September 9, 1977;  
Amended Eff. June 1, 1979.

Regulation 15 NCAC 7H .0306; GENERAL USE STANDARDS FOR OCEAN HAZARD AREAS; has been amended to read as follows:

(a) In order to avoid unreasonable danger to life and property, development (except beach nourishment erosion control projects) will be permitted only landward of the crest of the primary dune. If no primary dune is present, within the ocean hazard AECs at the point of the proposed development, the development shall be set back the maximum feasible distance from the first line of stable natural vegetation. Where there is no stable natural vegetation present, this line shall be established by extending or connecting the line of adjacent areas with such vegetation. In all cases, such development shall be located landward of the frontal dune and set back from the established line of stable natural vegetation a distance no less than 30 times the long-term annual average erosion rate. In areas where there is no erosion or where the rate is less than two feet per year, the minimum set back requirement shall be 60 feet from the established line.

(b) In order to avoid weakening the protective nature of primary and frontal dunes, no development will be permitted that involves the removal or relocation of primary or frontal dune sand or vegetation thereon. If possible, other dunes within the ocean hazard area shall not be disturbed. Compliance with the provisions of Rule .0307 of this Section must be demonstrated before any structures allowed as an exception to this Rule may be occupied.

(c) In order to avoid excessive public expenditures for maintaining public safety, construction or placement of growth-inducing public facilities to be supported by public funds will be permitted in the ocean hazard area only when such facilities:

- (1) clearly exhibit overriding factors of national or state interest and public benefit,
- (2) will not exacerbate existing hazards or damage natural buffers,
- (3) will be reasonably safe from flood and erosion related damage,
- (4) will not promote growth and development in ocean hazard areas.

Such facilities include, but are not limited to, sewers, waterlines, roads, bridges, and erosion control structures.

(d) Development shall not cause major or irreversible damage to valuable documented historic architectural or archaeological resources.

(e) Development shall be consistent with minimum lot size and set back requirements established by local regulations.

(f) Mobile homes shall not be placed within the high hazard flood area unless they are within mobile home parks existing as of June 1, 1979.

(g) Development shall be consistent with the general management objective for ocean hazard areas set forth in Rule .0303 of this Section.

(h) Development shall not create undue interference with legal access to, or use of, public resources.

(i) Development proposals shall incorporate all reasonable means and methods to mitigate or minimize adverse impacts of the project. These measures shall be implemented at the applicant's expense and may include actions that will:

- (1) minimize or avoid adverse impacts by limiting the magnitude or degree of the action,
- (2) restore the affected environment, or
- (3) compensate for the adverse impacts by replacing or providing substitute resources.

(j) Prior to the issuance of any permit for development in the ocean hazard AECs, there shall be a written acknowledgement from the applicant that the applicant is aware of the risks associated with development in this hazardous area. By granting permits, the Coastal Resources Commission does not guarantee the safety of the development and assumes no liability for future damage to the development.

History Note: Statutory Authority G.S. 113A-107;  
113A-113(6)(b);  
Eff. September 6, 1977;  
Amended Eff. June 1, 1979.

.0307 GENERAL USE STANDARDS FOR OCEAN HAZARD AREAS; EXCEPTIONS

(a) Development which does not involve the placement or construction of major state supported facilities or of structures to be used for residential, institutional, industrial, or commercial purposes may be permitted in hazard areas if it can be demonstrated that development will not: (1) reduce or cause to be reduced the amount of sand held in storage in beaches and frontal dunes, (2) cause accelerated erosion along the shore, or (3) otherwise increase the risk of loss or damage presented to life or property.

(b) The construction or placement of a structure to be used for residential, institutional, or commercial purposes may be permitted on the frontal dune if it can be demonstrated that the size or location of an existing lot [as defined in (d) of this Regulation] allow any practical use to be made of it. In such a case, written acknowledgement of the lot's location in a hazard area and of the state's policy concerning public expenditures in hazard areas will be required of the property owner, as well as compliance with relevant provisions of the North Carolina

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