

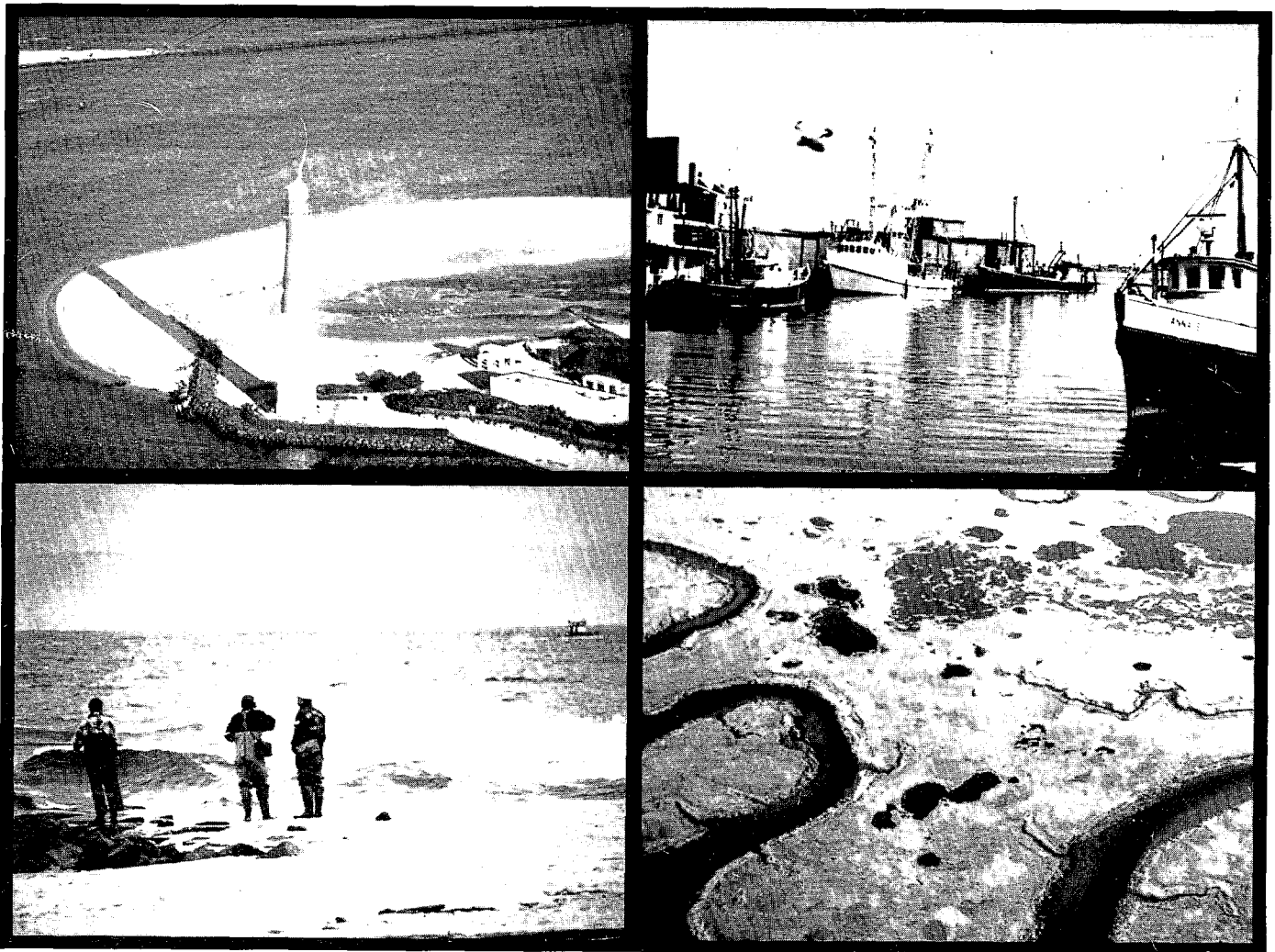
STATE OF NEW JERSEY COASTAL MANAGEMENT PROGRAM BAY AND OCEAN SHORE SEGMENT

MAY 1978

DRAFT ENVIRONMENTAL IMPACT STATEMENT

US DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of Coastal Zone Management

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The New Jersey Coastal Management Program - Bay and Ocean Shore Segment
was prepared in part with financial assistance from the National Oceanic and
Atmospheric Administration, Office of Coastal Zone Management, under the provisions
of Section 305 of the federal Coastal Zone Management Act (P.L. 92-583, as amended).

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BAY AND OCEAN SHORE SEGMENT
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STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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APR 19 1978

Mr. Robert Knecht
Assistant Administrator for Coastal Zone Management
U. S. Department of Commerce
National Oceanic and Atmospheric Administration
3300 Whitehaven Street, N. W.
Washington, D. C. 20235

COASTAL ZONE
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Dear Mr. Knecht:

The State of New Jersey takes pride in submitting to you the New Jersey Coastal Management Program - Bay and Ocean Shore Segment, to begin the federal review process under Section 306 of the federal Coastal Zone Management Act.

The Department of Environmental Protection, as New Jersey's lead coastal management agency, will undertake a series of public hearings and informal workshops throughout the state to discuss the proposed Coastal Management Program - Bay and Ocean Shore Segment with a wide range of federal, state, and local agencies, interest groups, and citizens to help identify, over the next three months, the revisions that may be appropriate before the Governor's formal review and request that you approve the program.

New Jersey's coast is a fragile and coveted resource facing conflicting opportunities and pressures. This Coastal Management Program provides the framework for sound decision-making to conserve this resource and achieve a balanced use of the Bay and Ocean Shore region of New Jersey's coast.

Very truly yours,

Rocco D. Ricci, P. E.
Commissioner

NOTE TO READER/NEPA SUMMARY

The National Environmental Policy Act of 1969 (NEPA) mandates that an environmental impact statement be prepared as part of the review and approval process of major actions by Federal agencies. The action contemplated is approval of the New Jersey Coastal Management Program - Bay and Ocean Shore Segment under Section 306(h) of the Federal Coastal Zone Management Act of 1972, as amended (CZMA). An immediate effect of approval is the qualification of the State for Federal matching funds for use in administering the Coastal Program for the Segment. In addition, the Coastal Zone Management Act stipulates that Federal activities affecting the coastal zone shall be, to the maximum extent practicable, consistent with an approved State management program.

This document is organized as follows:

- Part I - Introduction - prepared by the Federal Office of Coastal Zone Management (OCZM) with the assistance of the State of New Jersey.
- Part II - New Jersey Coastal Management Program - Bay and Ocean Shore Segment - prepared by the state and relied upon by the Federal OCZM as a description of the proposed action.
- Part III-VIII - Environment Impacts - prepared by Federal OCZM with the assistance of the State of New Jersey.

For purposes of reviewing this proposed action, the key concerns are:

- whether the Bay and Ocean Shore Segment is consistent with the objectives and policies of the national legislation,
- whether the State management authorities are adequate to implement the segment,
- whether the award of Federal funds under Section 306 of the Federal Act will help New Jersey to meet those objectives, and
- whether there will be a net environmental gain as a result of Program approval and implementation.

The Federal Office of Coastal Zone Management believes the answers to these key questions are affirmative. The Office wants the widest possible circulation of this document to all interested agencies and parties in order to receive the fullest expression of opinion on these questions.

This Program is of major significance, not only to New Jersey, but to the Nation. It is one of the first Programs submitted from an eastern coastal state. Further, the New Jersey coast represents a concentration of natural, historic, and economic attributes that is of national importance. The Federal Office of Coastal Zone Management thanks those participating in the review of the New Jersey Coastal Management Program - Bay and Ocean Shore Segment and this environmental impact statement.

Federal approval of the Coastal Program will permit NOAA-OCZM to award New Jersey annual program administration grants to implement the program, grants for continued funding under the Coastal Energy Impact Program (CEIP), and grants to plan and manage for shorefront access and shoreline erosion. In addition, federal actions in this segment of New Jersey's coastal zone will be required to be consistent with the Coastal Program, to the maximum extent practicable.

The award of federal funds will allow New Jersey to:

- a) continue to develop and implement the Program's Location Policies, also referred to as the Coastal Location Acceptability Method (CLAM).
- b) undertake three mapping programs which will chart the natural, social and economic features of the coastal zone.
- c) prepare a Coastal Handbook.
- d) increase coordination on coastal decision making between state and local governments.
- e) continue educational and information programs and projects to increase coastal awareness.
- f) develop specific energy facility siting criteria and policies jointly with the Department of Energy.
- g) coordinate with Atlantic City and County officials in the redevelopment of Atlantic City.
- h) support and promote access to beaches and other waterfront areas and continue the Beach Shuttle service to Island Beach State Park.
- i) improve coastal management enforcement and monitoring programs.
- j) fully consider the national interests in the use of the coastal zone.

NEPA Summary

- Draft Environmental Impact Statement Final Environmental Impact Statement

Department of Commerce, National Oceanic and Atmospheric Administration, Office of Coastal Zone Management. For additional information about this proposed action or this statement, please contact:

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National Oceanic and Atmospheric Administration
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Regional Manager, North Atlantic Region or
Richard S. O'Connor
Assistant Manager, North Atlantic Region
3300 Whitehaven Street, N.W.
Washington, D.C. 20235
Phone: 202/634/4235

1. Type of Action

Proposed Federal approval of New Jersey Coastal Management Program - Bay and Ocean Shore Segment.

- Administrative Legislative

2. Brief Description of Action

It is proposed that the Secretary of Commerce approve the Coastal Zone Management Program (Bay and Ocean Shore Segment) of the State of New Jersey pursuant to P.L. 92-583. Approval would permit implementation of the proposed segmented program, allowing program administration grants to be awarded to the State, and require that Federal actions be consistent with the Program, to the maximum extent practicable.

3. Summary of Environmental Impacts and Adverse Environmental Effects

Approval and implementation of the Program will allow the State to more effectively implement existing State management within the Bay and Ocean Shore region. The State will condition, restrict, or prohibit selected land and water uses in some parts of the New Jersey coast, while encouraging development in other parts. Each coastal municipality will retain primary responsibility for managing land use along its coast. The impacts of the New Jersey Coastal Management Program - Bay and Ocean Shore Segment will be generally beneficial, although there may be some adverse, short-term economic impacts on some coastal users, and the Program will entail the irreversible commitment of coastal resources.

4. Alternatives Considered

A. Federal Alternatives

The Assistant Administrator could delay or deny approval of the New Jersey Coastal Management Program - Bay and Ocean Shore Segment under the following conditions if:

1. The Program does not have the authorities necessary to implement the Program at the time of Section 306 segment approval.
2. The Program does not adequately achieve the goals of the Coastal Zone Management Act as expressed by Congress in Section 302 of the Act.
3. The national interest in the siting of facilities in the coastal zone were not adequately considered.
4. The Bay and Ocean Shore Segment could not be unified with the entire state coastal management program.

B. State Alternatives

1. The State could withdraw its application and not seek Federal assistance.
2. The State could wait until the entire State Program is submitted.
3. The State could wait until new legislation is adopted that recodifies the Wetlands Act, CAFRA and Riparian Laws.
4. The State could reduce the coastal boundary under CAFRA jurisdiction.

5. The State could wait until more precise policies using the Coastal Location Acceptability Method (CLAM) have been completed or mapped.
 6. The State could seek legislation delegating coastal zone management authority to localities.
5. A list of all Federal, State and Local Agencies and other parties from which comments have been requested is in the Appendix.
 6. This DEIS was submitted to EPA on April 28, 1978, and a notice of availability was published in the Federal Register on May 5, 1978. Public comments on the DEIS should be submitted to the Federal Office of Coastal Zone Management by June 19, 1978.

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PART I:
INTRODUCTION

The New Jersey Coastal Management Program - Bay and Ocean Shore Segment has been prepared to determine and describe New Jersey's strategy to manage the future protection and development of the coast. The State of New Jersey is seeking approval of the Program by the U. S. Department of Commerce to obtain the benefits of the federal Coastal Zone Management Act, which will aide State efforts to manage the often conflicting pressures facing the coast.

This document serves as a combined Coastal Management Program for the Bay and Ocean Shore Segment and as a Draft Environmental Impact Statement, because federal approval of a state coastal management program is considered a "major action" requiring an environmental impact statement under the National Environmental Policy Act (NEPA). The New Jersey Department of Environmental Protection, Office of Coastal Zone Management (DEP-OCZM) prepared the Coastal Program in part with funding provided by the National Oceanic and Atmospheric Administration (NOAA).

New Jersey is preparing its coastal management program in two phases. The geographic area addressed by this first part of the New Jersey Coastal Management Program includes a 1,382 square mile land area and related coastal waters in a region stretching from the Raritan Bay along the Atlantic oceanfront to the Delaware Bay. This is the area defined by the State Legislature in the Coastal Area Facility Review Act (CAFRA) of 1973, plus tidal wetland areas inland of the CAFRA boundary which are regulated under the Wetlands Act of 1970.

This report defines and explains the Coastal Resource and Development Policies and the management system the Department of Environmental Protection and the Department of Energy will use in managing activities in this Coastal Program Segment. The Coastal Policies are divided into three groups: (1) Location Policies evaluate specific types of coastal locations, such as wetlands and prime farm land; (2) Use Policies are directed at different uses of the coastal zone, such as housing and energy facility development; and (3) Resource Policies focus on controlling the effects of development, such as water runoff and soil erosion.

The major choices and basic direction provided in the many specific policy statements are represented by four Basic Coastal Policies:

1. Protect the coastal ecosystem.
2. Concentrate rather than disperse the pattern of coastal residential, commercial, industrial, and resort-oriented development, and encourage the preservation of open space.
3. Employ a method for decision-making which allows each coastal location to be evaluated in terms of both the advantages and the disadvantages it offers for development.
4. Protect the health, safety and welfare of people who reside, work, and visit in the coastal zone.

The Coastal Program will be implemented through existing laws and agencies. The principal legal authority will be the coordinated use of the Coastal Area Facility Review Act (CAFRA), Wetlands and waterfront development (riparian) programs, shore protection program and the regulatory activities of the Department of Energy. The Coastal Area Facility Review Act (N.J.S.A. 13:19-1 et seq.) is New Jersey's major coastal law. In CAFRA, the Legislature entrusted the Department of Environmental Protection with the responsibility to regulate the location, design, and construction of housing developments of 25 or more units and most major industrial, sewer, and energy facilities in the legislatively-defined "Coastal Area". Since CAFRA took effect in September 1973, DEP has received 244 applications for CAFRA permits. To date, more than 165 applications have been approved, while 18 residential projects and one sanitary landfill have been denied CAFRA permits.

DEP also has authority to regulate certain activities on mapped coastal wetlands, under the Wetlands Act of 1970 (N.J.S.A. 13:9A-1 et seq.). Virtually any development in a mapped tidal wetland must receive a Wetlands permit before construction can begin. In addition, certain activities are prohibited in the wetlands, including dumping solid waste, discharging treated or untreated sewage waste, storing or disposing of pesticides, applying persistent pesticides, and applying pesticides on significant stands of wetlands vegetation.

New Jersey's third major coastal law is the set of riparian statutes which apply to the lands now or formerly flowed by tidal waters. Under these statutes, DEP and the Natural Resource Council (an autonomous but closely related citizen body, with members appointed by the Governor with the consent of the State Senate) can sell or lease these lands, and manage most activities on the lands through the administration of the Waterfront Development permit program. Through the riparian statutes, DEP requires a permit for construction or alteration of facilities such as a dock, wharf, pier, bulkhead, bridge, pipeline or cable, and dredging and filling involving lands flowed by the tide.

New Jersey's fourth key coastal law concerns the shore protection program of state aid to municipalities to finance structural and non-structural solutions to shoreline erosion.

The policies and procedures outlined in Part II, Chapter Three will be promulgated as rules prior to Section 306 approval by the Assistant Administrator.

The Coastal Program will also rely upon the consistency of federal actions and actions of other agencies to carry out the Basic Coastal Policies, to the extent statutorily permissible. Finally, the Coastal Program will serve as guidance to municipal, county and regional agencies with coastal decision-making responsibilities.

This document is a revision of the Coastal Management Strategy for New Jersey-CAFRA Area submitted by DEP to the Governor, Members of the State Legislature, and the general public in the Fall of 1977. More than 80 individuals, groups, and agencies submitted comments on the Strategy either in writing or at one of the eight public meetings convened by DEP and attended by more than 300 people. Although the Basic Coastal Policies and the Use Policies have remained substantially the same, the public comments led to numerous revisions and additions between the Strategy and present document. The most significant change was the total reor-

ganization and rewriting of the Location Policy, defined in the Coastal Management Strategy as the Coastal Location Acceptability Method or CLAM. The individual comments and DEP responses to them are summarized in Appendix C and E of this document and presented in greater detail in a separate document, Coastal Management Strategy-Public Comments and DEP Responses.

The New Jersey Coastal Management Program-Bay and Ocean Shore Segment is a draft document. The State of New Jersey will be able to make additional revisions on the basis of public comment during a sixty day comment period ending in early July 1978, during the environmental impact statement review process. A schedule of public hearings to review the New Jersey Coastal Management Program - Bay and Ocean Shore Segment is on the back cover of this document.

PART II

DESCRIPTION OF THE PROPOSED ACTION:

NEW JERSEY COASTAL MANAGEMENT PROGRAM - BAY AND OCEAN SHORE SEGMENT

This Part presents the New Jersey Coastal Management Program - Bay and Ocean Shore Segment in seven chapters, as prepared by the State of New Jersey. Chapter One presents background information and the Basic Coastal Policies that serve as the Program's foundation. Chapter Two defines the geographic scope of the Program. Chapter Three presents the heart of the Program, the policies on what should or should not take place in the coastal zone. All of Chapter Three will be proposed and adopted, with appropriate revisions based on public comments, as an agency rule prior to federal approval of the Coastal Program, according to the provisions of New Jersey's Administrative Procedures Act. Chapter Four indicates how decisions will be made to carry out the Program. Chapter Five addresses the national interests, federal consistency, and uses of regional benefit. Chapter Six addresses specific coastal resource and development policy concerns required under the federal Coastal Zone Management Act. Chapter Seven concludes with the next steps in the coastal management process in New Jersey. Several appendices in this document are also part of the Program.

Chapter One: COASTAL MANAGEMENT IN NEW JERSEY

Purpose
Major Issues and Opportunities
Coastal Management Efforts in New Jersey
New Jersey's Approach to the Federal Coastal Zone Management Program
Basic Coastal Policies

Purpose

The Department of Environmental Protection (DEP) has prepared the New Jersey Coastal Management Program - Bay and Ocean Shore Segment to protect the state's coastal resources while accommodating needed future development. The Program provides the statements of policy which will be followed by DEP in making coastal decisions and which will guide other public and private actions affecting the coast. The Coastal Program is also designed to enable New Jersey to meet the requirements, and thereby reap the benefits of the federal Coastal Zone Management Act, particularly greater consistency between state and federal actions in the coastal zone and federal funds for New Jersey's coastal management efforts.

This document describes a draft coastal program for the Delaware and Raritan Bay and Atlantic Ocean Shore Segment of the New Jersey Coastal Zone. The Coastal Program for the Segment includes a boundary description, statements of policy, and a management system to apply the policies within the described boundary, as well as a discussion of the next steps in the coastal planning process. Most regulatory determinations will be made through the permit application process.

The Coastal Program also presents the standards DEP will use to determine the consistency of actions proposed in the coastal zone by federal, state, and local agencies. New Jersey's coastal policies will be used to determine the consistency with the approved program of federal activities, development projects, licenses, permits, and financial assistance to the State and local governments under Section 307 of the federal Coastal Zone Management Act. The Coastal Program will aid DEP when it is called upon to review federal domestic financial assistance applications under the A-95 Project Notification and Review Process, as well as Environmental Impact Statements prepared under the National Environmental Policy Act. From time to time, DEP is also likely to receive requests for advice or comments on the adequacy or appropriateness of plans and proposals by government agencies and private interests. The Coastal Policies provide a visible basis for offering an informed comment on the consistency of these plans and proposals.

State funding decisions that affect coastal resources will also be guided by the Coastal Program. In particular, several important State aid, and direct State financing programs administered by DEP involve decision-making in the Bay and Ocean Shore Segment: (1) the Green Acres Open Space Acquisition and Outdoor Recreation program of grants to local governments and direct DEP efforts, (2) the Shore Protection program of matching grants to local governments, and (3) the wastewater treatment facilities construction grants program.

This Coastal Management Program is a tool for making decisions, but it is not a panacea. It is important to understand that this document is not a detailed, rigid plan indicating only one activity which can or should take place on each site, block, or acre in the coastal zone. New Jersey has deliberately designed a program which accommodates the creativity and initiative of individual land owners, developers and others, and recognizes the State's historic commitment to a strong role for local governments in land use decision-making. The Program, therefore, focuses on coastal resource management decisions with greater than local significance that the Legislature has entrusted to State agencies. The Coastal Program provides enforceable policies to form predictable and consistent decisions which will best manage New Jersey's coast.

Major Issues and Opportunities

Sand dunes, power plants, surf clams and tankers all share the resources of New Jersey's coast. Over the years, numerous competing and often conflicting activities have converged on the Jersey Shore. New Jersey residents and tourists from all regions of the country spend their vacations at the Jersey Shore which accounts for the vitality of New Jersey's second largest revenue-producing industry, tourism. Boaters, fishermen, divers, young and old enjoy the ocean breezes and salt air. Rapid development of the shore area to accommodate those seeking relief from hot summers in the city, as well as those desiring permanent residence in a healthy environment, however, has created many competing pressures for the coast's fragile resources. New Jersey's wetlands were disappearing until the passage of the Wetlands Act. The barrier islands are overbuilt. The shoreline is eroding. Fish and shellfish resources are under intense pressure from recreational, commercial and industrial interests. The energy industry continues to examine the coast for potential sites for energy facilities. How can the Jersey coast be maintained as a healthy ecosystem and guard against the depletion of natural resources, while accommodating those resort-oriented and other activities and facilities which belong on the coast? Recognizing the coast as one of the nation's and state's most important resources, coastal laws were passed in 1970 and 1973 at the state level in New Jersey and 1972 and 1976 at the federal level to provide funding, regulatory techniques and governmental and public focus on the management of coastal areas.

One of the major issues the Coastal Program addresses is water quality. The water bodies in the coastal area are crucial to the vitality of the coastal ecosystem and the protection of the health and safety of coastal and many inland residents. Proper management can alleviate problems of contaminated ground and surface water, stream turbidity and land and bank erosion. Good water quality is also essential to the fish and shellfishing industry, as well as to sport fishermen and boaters.

Recent storms and increased development have contributed to New Jersey's eroding shoreline. Beach restoration and preservation are essential for maintaining New Jersey's thriving tourist industry. Construction along the beach and waterfront areas can also limit public access to the shore. High-rises built in the past have obstructed some panoramic vistas, and some beachfront development interferes with passive and active coastal recreation.

The coast does not just include pristine areas. Many of the once thriving urban waterfronts in New Jersey are now vacant land and unused, poorly maintained docks. Atlantic City faces a unique set of development pressures from casino gambling and offshore oil and gas exploration.

Energy is one of the most complex issues facing the entire country. The Jersey coast currently has two operating nuclear plants and four more are under construction. The prospect of oil and gas exploration and development off New Jersey's coast is now a reality. New Jersey will have to grapple with the new demands which will be placed on the coast's resources by the activities and facilities associated with exploration, and later, possible development and production of offshore oil and gas.

Public concern for prudent coastal management reflects a general concern for the quality of life. People want to live in a healthy environment, and provide a healthy environment for all the other living resources which are part of the coastal ecosystem. However, the public often expresses concern over the morass of regulations at all levels of government directed toward management of public goods and resources. Often, the applications, fees, permits and time delays appear to overshadow the intended benefits of a resource management program.

Despite the federal and state legislation for coastal management in New Jersey, the coastal program faces several constraints. The real property tax system has led to inter-municipal rivalry for ratable-producing property. Construction and development often take precedence over concern for open space in some financially hard pressed municipalities. New Jersey's strong tradition of home rule has meant that some municipalities make individual development decisions with little regard for regional impacts, posing severe constraints for the proper management of coastal regions. In addition, the actions, or lack of action, of neighboring states can affect New Jersey's coast.

Coastal management in New Jersey is a delicate process, balancing fragile and sensitive environmental resources with development essential to the economy of the state. The public wants to work, live, and play, in the coastal zone, as well as to develop, restore and protect the coast. The agenda of coastal zone management ranges from dredge spoil disposal to offshore oil, from protection of surf clam beds to preservation of dunes. This requires a program that is dynamic and flexible to change, and, most important, responsive to the concerns of the citizenry while being sufficiently specific to indicate to public officials and private interests the implications of the program.

Coastal Management Efforts In New Jersey

In New Jersey, the Legislature has given increasing responsibility for coastal management to the state government. The State's active involvement in coastal management dates back to 1776 when it became owner of all tide-flowed lands, as a result of the American Revolution. During the past 200 years, the state's policies and practices have reflected the concerns and perception of the time. In the late 1800's and early 1900's for example, the State sold considerable amounts of riparian land to railroad and land development companies at bargain rates. In the early 1900's the State began to more actively regulate construction along the tidal waterfronts of New Jersey.

Within the past decade, however, as the public's environmental consciousness has grown, the State's role has increased. The Department of Environmental Protection, created in 1970, has had the lead responsibility for the state's coastal management activities. Through the Shore Protection Program, DEP has disbursed millions of dollars for shore protection structures and programs. In recent years, DEP has used that funding as an incentive to encourage municipalities to provide public access to adjacent waters and shorefront areas.

In 1970, the Legislature passed the Wetlands Act and, in 1973, the Coastal Area Facility Review Act (CAFRA). The two resulting regulatory programs, together with the State's responsibility to approve all activities on riparian land, solidified the State's role in coastal management. The pressures faced by the New Jersey coast for oil and gas, recreation, casino gambling, and many other activities, along with the opportunities provided by the federal Coastal Zone Management Act of 1972, have further intensified and concentrated the State's efforts to manage the coast.

New Jersey Approach to the National Coastal Zone Management Program

The federal Coastal Zone Management Act of 1972 (P. L. 92-583, as amended in 1976 by P.L. 94-370) established a voluntary national program to encourage coastal states to define and carry out comprehensive programs to manage coastal areas. Administered by the National Oceanic and Atmospheric Administration's Office of Coastal Zone Management (NOAA-OCZM) in the U. S. Department of Commerce, the basic national program offers states two chief incentives: First, funds for coastal planning and management, and second, an opportunity to increase the consistency of federal actions in a state's coastal zone with the state's own coastal policies.

It is important to note that unlike the Clean Air Act and the Federal Water Pollution Control Act, no direct federal coastal management standards or regulations will be imposed if New Jersey fails or declines to develop a federally acceptable coastal management program.

New Jersey began participating in the national coastal management program in June 1974, by receiving its first coastal planning, or program development, grant from NOAA-OCZM. Since 1974, federal grants have provided more than two-thirds of the funds, or approximately \$1.2 million, used by the Department of Environmental Protection and other state and county agencies for coastal planning. Upon federal approval of New Jersey's coastal management program, the State may expect to continue receiving federal grants.

The federal Coastal Zone Management Act and the NOAA-OCZM regulations concerning the approval of management programs (15 CFR 923, Federal Register, Vol. 43, No. 41, March 1, 1978, pp. 8378-8431) define the framework, program approval standards, and options available to states in formulating a coastal management program. The New Jersey approach to the national program features submission of a management program for federal approval in two phases and reliance upon direct state controls to carry out the program.

The region defined by state law as the "Coastal Area" in the Coastal Area Facility Review Act of 1973, and commonly referred to as the "CAFRA Area", generally defines the geographic extent of the first phase, or segment, of New Jersey's coastal management program to be submitted for federal approval. Approximately 3,750 acres of wetlands already regulated under the Wetlands Act, located inland of the CAFRA boundary, are also included in the geographic scope of the

Bay and Ocean Shore Segment. New Jersey's use of the option to pursue federal approval of the Segment recognizes the fundamental adequacy of the State's coastal management program in the major, Delaware Bay, Raritan Bay and Atlantic Ocean front portion of New Jersey's coastal zone.

This document constitutes the Bay and Ocean Shore Segment management program submission to NOAA-OCZM. The second phase, completing the management program for the entire coastline of the state as described in Chapter Seven, is expected to be submitted for federal approval in late 1978.

State coastal management programs vary across the nation, and properly so given the diversity of resources and pressures facing the shorelines of the United States. One important distinction between state coastal programs is the approach to governmental decision-making. New Jersey's program has been fashioned by drawing upon New Jersey's pattern of selected State involvement in coastal land and water use decision-making, within a tradition of strong municipal land use decision-making.

The federal Coastal Zone Management Act offers a state three broad options for implementing its coastal program:

- Technique A - Local Implementation - Section 306(e)(1)(A)
- Technique B - Direct State Control - Section 306(e)(1)(B)
- Technique C - Case-by-Case Reviews - Section 306(e)(1)(C)

Technique A means that states may establish criteria and standards for local implementation, under state review and enforcement procedures. Technique B means that states may engage in direct regulation. Technique C means that states may operate through the administrative review of local plans, projects and regulations for consistency with statement management.

New Jersey opts for the direct state control approach (Technique B), relying upon existing state laws which entrust the Department of Environmental Protection and Department of Energy with direct state control over selected coastal areas and selected uses of coastal resources:

In particular, the DEP enabling legislation, and the Coastal Area Facility Review Act (CAFRA), Wetlands Act, and riparian and shore protection statutes, as well as the Department of Energy Act, provide a strong mandate and basis for direct State agency involvement in key decisions involving the coastal region.

The strong direct State role does not mean that DEP will regulate every proposed use of coastal resources within the defined coastal zone. Local governments in the coastal zone will continue to be solely responsible for the considerable amount of land and water use decision-making in the coastal zone which has no regional impact.

New Jersey's management program for the Bay and Ocean Shore Segment has three inter-related, basic elements: First, a boundary defining the general geographic scope of the program; second, Coastal Resource and Development Policies defining the standards for making decisions on what activities may take place within the boundary; and third, a management system defining the types of decisions subject to the program, and the process by which those decisions will be made. The Coastal Management Program, a guide to decision-making, resembles a tripod. All three

legs, or elements, must be firmly in place for the Program to stand and work. All three elements function together and must be read and understood together, especially because of New Jersey's direct state control approach.

For example, if read out of the context of the overall management program, the Coastal Resource and Development Policies could be applied to every land and water use decision in the coastal zone, from the location of a single gas station to a nuclear generating station. That is not the intent here. Rather, the Coastal Resource and Development Policies are to be applied as substantive standards for decision-making for only those selected coastal decisions defined in the management system, particularly on CAFRA, Wetlands, and riparian permit applications. The Coastal Policies could, however, because of their comprehensive nature, be used to guide other decisions not strictly subject to the New Jersey Coastal Program. The heart of the program remains, however, the combination of boundary definition, policy statements, and decision-making processes that in concert spell out New Jersey's approach to managing its coastal resources.

Basic Coastal Policies

Chapter Three of the New Jersey Coastal Management Program - Bay and Ocean Shore Segment contains many specific Coastal Resource and Development Policies which DEP will use to make coastal land and water use decisions. The major choices and the basic direction represented by the specific policies are summarized by the following Basic Coastal Policies:

1. Protect the coastal ecosystem.

The ecosystem of the Bay and Ocean Shore Segment is fragile and special, and is characterized by a combination of beaches and the ocean, tidal and inland wetlands, flood plains, estuarine areas, bays, stream and stream corridors, vegetation and wildlife habitats. These natural features make the area a desirable place to visit, which in turn fosters the state's tourist industry. The same features make the coastal region a productive area for agriculture and commercial and recreational fishing. If the ecosystem is not protected, however, not only will natural resources and processes be harmed and disrupted, but the economy of the area, and of the state, will suffer.

2. Concentrate rather than disperse the pattern of coastal residential, commercial, industrial, and resort development and encourage the preservation of open space.

The special characteristics of the coast attract many different types of development to an area which is limited in size. The concentration of development is the most efficient way to use this limited space because it allows a large variety of activities to be located in the Bay and Ocean Shore Segment while minimizing conflicts which would occur between activities such as industry and recreation if they were located near each other. In addition, the concentration of development can provide large expanses of open space which can be more useful to the public than a similar amount of open space scattered among many small parcels. The policy to concentrate development does not apply to nuclear generating stations and liquefied natural gas (LNG) facilities.

3. Employ a method for decision-making which allows each coastal location to be evaluated in terms of both the advantages and the disadvantages it offers for development.

Traditionally, land and water use planning has focused exclusively on environmental features which offer disadvantages for development or which should be preserved. Each location, however, can also be evaluated in terms of the advantages it offers for development. A site near existing roads, for example, could be developed with less cost and environmental disturbance than a more isolated site. This policy insures that both types of factors will be considered in decision-making under the Coastal Program.

4. Protect the health, safety and welfare of people who reside, work and visit in the coastal zone.

The last basic policy is a reminder that people use the coast for different purposes and have different needs and expectations. The quality of human life improves if needed development is built in a manner which respects the natural and built environment.

The development of the Coastal Program has also been based on two procedural principles which have been particularly significant in shaping the Management System described in Chapter Four. These principles are the following:

1. Consider only coastal resource and coastal land and water use decisions of greater than local significance, and create mechanisms to insure that decisions on coastal land and water uses are made at the lowest practicable level of government, consistent with these guiding principles.

Land and water decisions with limited impact that affect only one municipality should be made by local citizens and officials. Other decisions, however, such as the use of a beach or other natural resource, or the construction of a major development, can affect a much larger area and group of people. The Coastal Program is designed to involve DEP in only the second type of decisions, those that require direct State management.

2. Provide information in understandable terms to citizens, interest groups, and public agencies about the use of coastal resources.

The success of the Coastal Program is dependent upon the number of people who read and understand this and subsequent documents. The Program relies upon comments and responses from the public for its vitality, and also relies upon public advocacy and understanding of the need for wise management of coastal resources in the future.

Introduction

Inland Boundary - Bay and Ocean Shore Segment

Seaward and Interstate Boundaries - Segment

Introduction

Different people and various interest groups hold different perceptions of the geographic extent of New Jersey's coastal resources. This chapter defines the boundary of the Bay and Ocean Shore Segment of New Jersey's coastal zone under the federal Coastal Zone Management Act. At this stage of New Jersey's participation in the national coastal management program, the geographic scope of the New Jersey Coastal Program submitted for federal approval is limited to this initial segment. New Jersey's coastal management program for federal purposes does not yet include the entire coastline of the state. This boundary must not be considered in a vacuum. It must be read and understood in concert with the Coastal Resource and Development Policies of Chapter Three and the Management System of Chapter Four that defines how decisions on uses of coastal resources will be made within the defined boundary under the Coastal Program.

Inland Boundary - Bay and Ocean Shore Segment

The geographic scope of the Bay and Ocean Shore Segment includes lands along New Jersey's Atlantic Ocean shoreline, lands along the bays behind the barrier islands, and lands along the Delaware Bay and Raritan Bay. This general description provides the basis for the term "Bay and Ocean Shore Segment", as depicted in Figure 1. The actual inland boundary of the Segment uses the CAFRA boundary and the Upper Wetlands Boundary, and is defined as:

The landward boundary of the Coastal Area as defined in the Coastal Area Facility Review Act, or the Upper Wetlands Boundary of coastal wetlands located landward of the CAFRA boundary along tidal water courses that flow through the CAFRA Area, whichever is more landward, including State-owned tidelands.

In 1973, the Legislature enacted and the Governor signed into law the Coastal Area Facility Review Act (CAFRA). This law includes a statutory "Coastal Area" that generally describes the inland boundary of the Bay and Ocean Shore Segment, with the exception of certain additional wetlands areas as defined in this chapter. The inland boundary of the "Coastal Area" delineated under CAFRA in 1973 appears on Figure 2. It extends from the Raritan Bay east to Sandy Hook, south to Cape May Point and north and west up the Delaware estuary almost to the Delaware Memorial Bridge north of Salem. The total land area is 1,376 square miles or 17 percent of New Jersey's land area. The coastline is more than 215 miles in length, with 126 miles along the Atlantic oceanfront from Sandy Hook to Cape May. Inland the CAFRA boundary ranges from a few thousand feet from the ocean in Monmouth County, to 24 miles from the Atlantic Ocean around the Mullica River at Batsto in Burlington County. Major roads and rights-of-way, such as the Garden State Parkway and county roads, define the inland boundary. The law excluded a small area around the Cape May County Airport from the "Coastal Area". A metes-and-bounds description of the "Coastal Area" may be found in the statute, at N.J.S.A. 13:19-4. Maps indicating the CAFRA boundary on U.S. Geological Survey topographic quadrangle maps (scale of one inch = 2,000 feet or 1:24,000) are available for public inspection at the Trenton offices of DEP's Division of Marine Services.

Figure 1

NEW JERSEY BAY AND OCEAN SHORE SEGMENT BOUNDARY 1978

(CAFRA AND
WETLANDS)

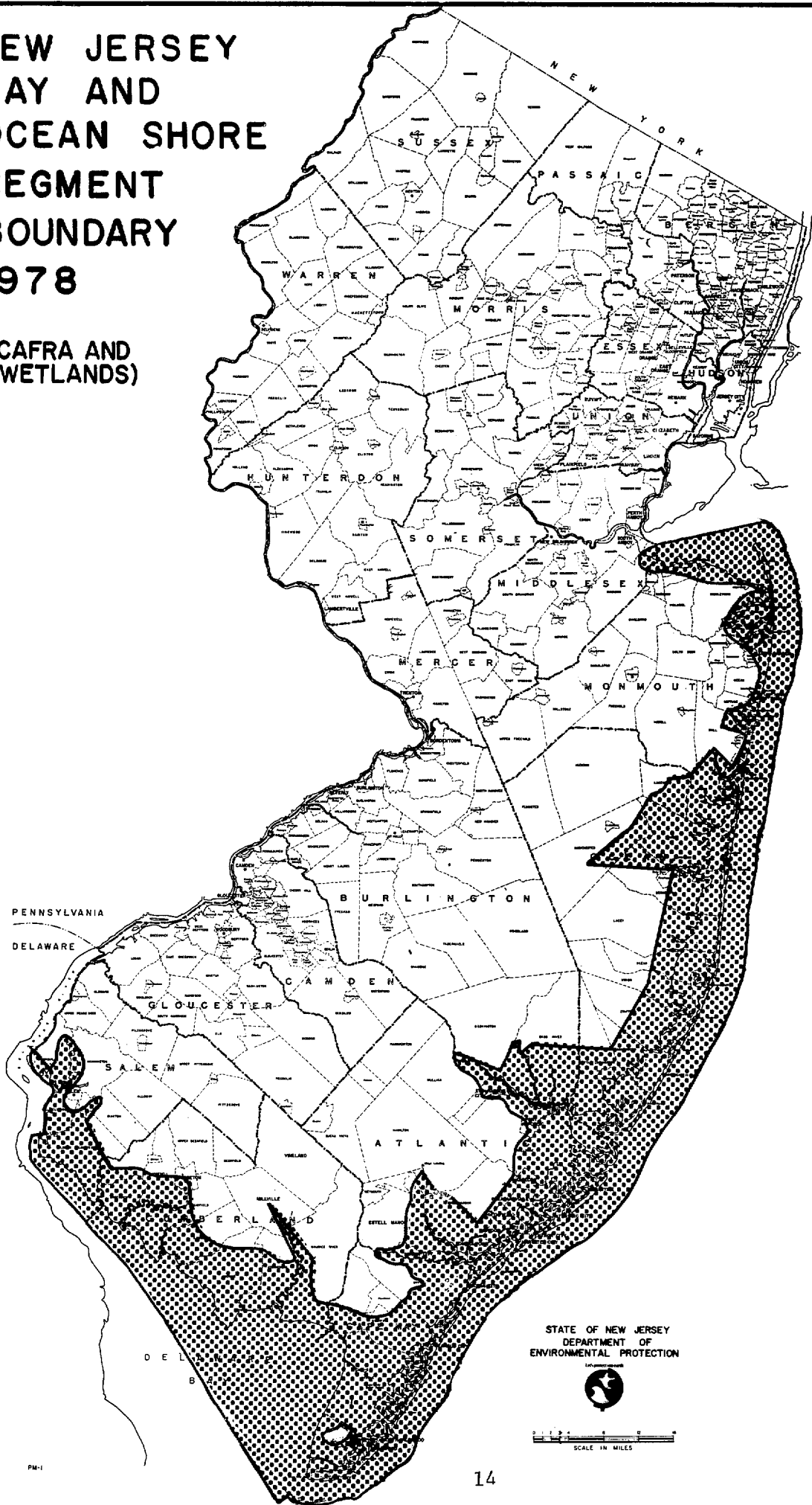
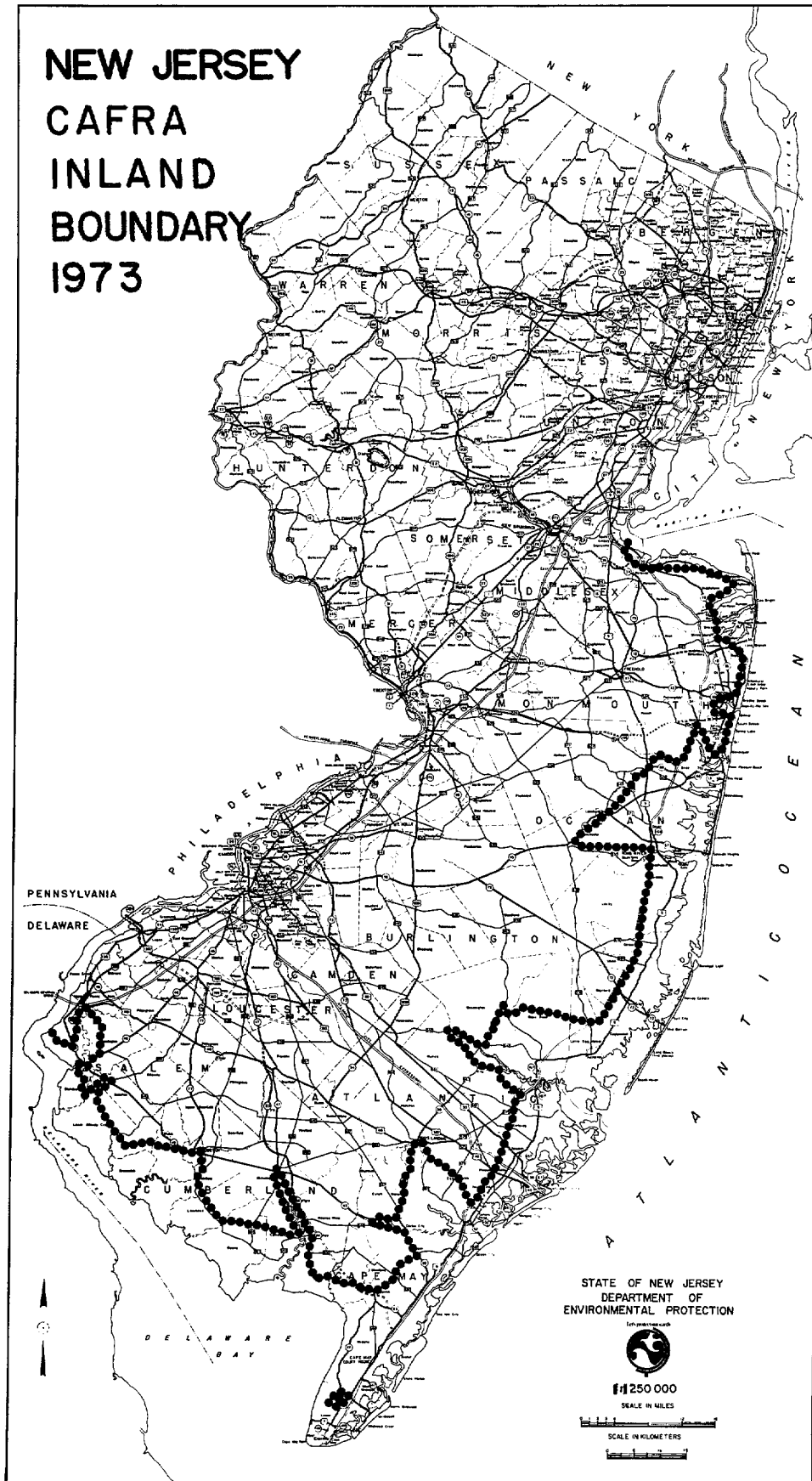


Figure 2



The CAFRA Area features the stretch of barrier islands and headlands traditionally called the "Jersey Shore," long known as a recreation area for the state, northeastern United States, and Canada. This area includes all of the state's oceanfront beaches. Parts of the unique Pine Barrens, as well as the shores of the Delaware Bay and Raritan Bay are also included within the "Coastal Area". All of Atlantic City, which faces new opportunities and problems as a result of casino gambling and offshore oil and gas exploration, lies within the CAFRA Area.

While the statutory CAFRA Area does include considerable portions of the regulated coastal wetlands, DEP completed the rigorous delineation and mapping of coastal wetlands required by the Wetlands Act of 1970 (N.J.S.A. 13:9A-1 et seq.) after enactment of CAFRA. As a result, approximately 3,750 acres of selected coastal wetlands are found landward of the present CAFRA inland boundary, along tidal streams that are largely included within the CAFRA Area. This situation occurs primarily in Atlantic, Burlington, Cumberland, Monmouth and Salem counties. In order to comply with the inland boundary requirements of the federal Coastal Zone Management Act, these coastal wetlands must be included with this first segment of New Jersey's coastal management program. State-owned tidelands along these same tidal streams are also included by definition.

The Upper Wetlands Boundary defines land areas subject to the jurisdiction of the Wetlands Act, on photo-maps (scale of one inch = 200 feet or 1:2,400) on file at county court houses and available for inspection at the Trenton offices of DEP's Division of Marine Services. Appendix F lists the DEP Wetlands maps that include wetlands areas considered to be within the inland boundary of the Bay and Ocean Shore Segment. Figure 3 shows an example of an area in Monmouth County where wetlands extend landward of the CAFRA boundary. As the inland boundary of the Segment is not exactly the same as the CAFRA inland boundary, the phrase "Bay and Ocean Shore" will be used to describe the geographic area that includes the CAFRA Area and these directly adjacent Wetlands, for the purposes of the federal Coastal Zone Management Act. This term will also be used to distinguish the Bay and Ocean Shore Segment from the waterfront areas of New Jersey's coastline along the Delaware and Hudson rivers.

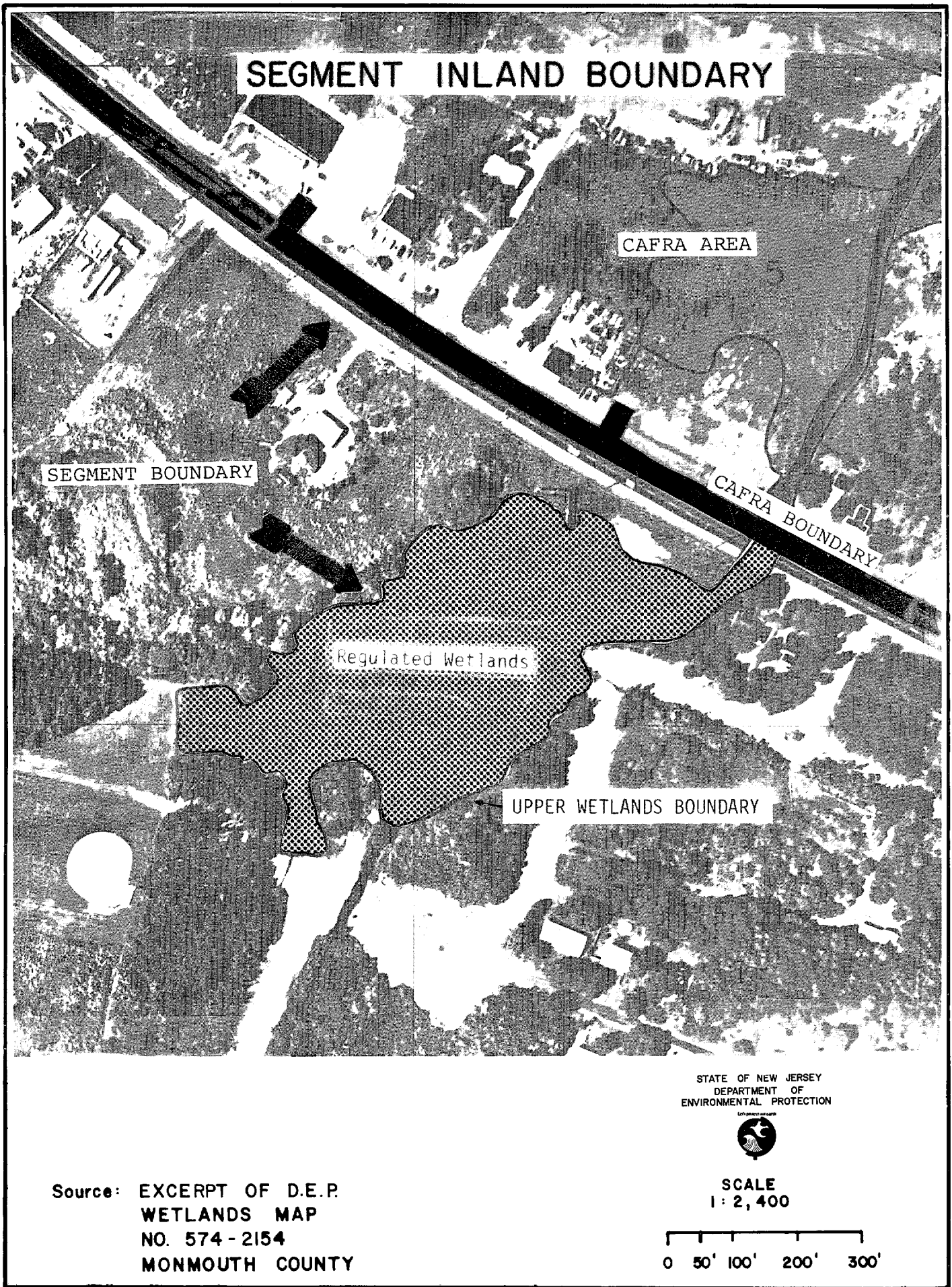
Finally, as DEP completes its multi-year tidelands delineation program, the inland boundary of the Bay and Ocean Shore Segment may require further revision to include tidelands that may also be located landward of the present CAFRA boundary.

Seaward and Interstate Boundaries - Bay and Ocean Shore Segment

The seaward boundary of the Bay and Ocean Shore Segment and indeed the entire coastal zone is the outer limit of the United States territorial sea. This limit is three nautical miles from base lines established by international law and defined by the United States. The geographic jurisdiction of the Coastal Area Facility Review Act extends seaward to the State's territorial limit.

New Jersey has potential interstate coastal zone boundaries with Delaware, New York, and Pennsylvania, but the Pennsylvania boundary will not be addressed here as it does not affect the Bay and Ocean Shore Segment.

Figure 3



New Jersey's Bay and Ocean Shore Segment boundary with the State of Delaware through Delaware Bay and the Delaware River was established in 1933 by the U.S. Supreme Court in New Jersey v. Delaware (291 U.S. 361). The interstate boundary is generally along the ship channel in the middle of Delaware Bay. However, from a point near the northern tip of Artificial Island, in Lower Alloways Creek Township, Salem County, the interstate boundary between New Jersey and Delaware extends north at the mean low water line on the New Jersey shoreline, until the Delaware-Pennsylvania boundary. Resolution of potential conflicts between the coastal policies of Delaware and New Jersey will require continued coordination and work in the first year of Program approval, toward appropriate agreements between the coastal management programs of both states, Salem County and the affected municipalities.

The extensions on the open sea of New Jersey's boundaries with New York and Delaware are not yet determined. The issue of the lateral seaward boundary is receiving focused attention as a result of the 1976 amendments to the federal Coastal Zone Management Act, which created a Coastal Energy Impact Program to assist states financially to cope with the onshore effects of offshore oil and gas energy activities. Each state's share of this financial assistance depends in part upon the leased Outer Continental Shelf acreage adjacent to a particular coastal state. Adjacency is determined by the extension of the lateral seaward boundary of each state. The New Jersey Department of Environmental Protection and the New Jersey Department of Energy, the designated lead agency for administration of the Coastal Energy Impact Program in New Jersey, are taking steps to define the lateral seaward boundaries of New Jersey with Delaware and with New York.

Chapter Three: COASTAL RESOURCE AND DEVELOPMENT POLICIES

- 1.0 Purpose
- 2.0 Authority
- 3.0 Jurisdiction
- 4.0 Definitions
- 5.0 Coastal Management Decision-Making Process
- 6.0 Location Policies
- 7.0 Use Policies
- 8.0 Resources Policies

Note to Reader

This chapter spells out coastal policies to guide public decisions about significant proposed development and activities in the Bay and Ocean Shore Segment, which will be evaluated in terms of a three stage screening process. Each stage contains a group of policies embodying standards that must be met in order for proposed development to pass the screen and be deemed acceptable. The purpose of the screening process is to increase predictability and add more specificity to the decision making process. The process is outlined in Section 5.0 below. The policies will be adopted as rules to implement the Coastal Program, and will be carried out under the authorities outlined in Section 2.0 of this chapter, as well as in Chapter Four: Management System. Sections 1.0 - 3.0 of this chapter are required for its adoption as rules. The chapter is numbered to facilitate adoption as a rule.

1.0 Purpose

This chapter presents the substantive policies of the Department of Environmental Protection regarding the use and development of coastal resources, to be used by the Division of Marine Services in the Department primarily in reviewing permit applications under the Coastal Area Facility Review Act (CAFRA), N.J.S.A. 13:19-1 et seq., Wetlands Act, N.J.S.A. 13:9A-1 et seq., and Waterfront Development Permit Program, N.J.S.A. 12:5-3. The rules also provide a basis for recommendations by the Department to the Natural Resource Council on applications for riparian grants, leases, or licenses. In 1977, the Commissioner of DEP submitted to the Governor and Legislature the Coastal Management Strategy for New Jersey-CAFRA Area (September 1977), prepared by the Department as required by CAFRA, N.J.S.A. 13:19-16, and submitted for public scrutiny in late 1977. The Department revised the Coastal Management Strategy based on extensive public comments and the Governor is expected to submit the revised Strategy for federal approval as the New Jersey Coastal Management Program - Bay and Ocean Shore Segment. By adopting these policies as administrative rules, according to the Administrative Procedures Act, the Department aims to increase the predictability of the Department's coastal decision-making by limiting administrative discretion, as well as to ensure the enforceability of the coastal resource and development policies of the coastal management program of the State of New Jersey prepared under the federal Coastal Zone Management Act.

2.0 Authority

These rules are adopted under the general powers of the Department, N.J.S.A. 13:1D-9, as well as the Department's specific rule-making and coastal management powers under the Coastal Area Facility Review Act, N.J.S.A. 13:19-17, the Wetlands Act, N.J.S.A. 13:9A-1 et seq., and the riparian statutes, N.J.S.A. 12:5-1 et seq. These rules are consistent with the purpose and intent of the 90 Day Construction Permit Law, L. 1975, c. 232, and N.J.A.C. 7:1C-1 et seq. These rules complement the adopted rules that implement the Wetlands Act, N.J.A.C. 7:7A-1.0 et seq., and the rules that define the permit application procedures under CAFRA, N.J.A.C. 7:7D-2.0 et seq. The Coastal Resource and Development Policies are derived from the legislative intent of the CAFRA, Wetlands, and riparian statutes, and, in the case of the Coastal Area Facility Review Act, the rules define the standards for approval, conditional approval, or denial of permit applications more precisely than the findings required by N.J.S.A. 12:19-10, and 11.

3.0 Jurisdiction

These rules shall apply to proposed uses of coastal resources that meet the geographic location and activity or facility type requirements defined below.

3.1 Geographic Jurisdiction

- 3.1.1 All tidal or navigable waters of the State, and any waterfront upon such waters, including the lands bounding upon the mean high water line, as defined by N.J.S.A. 12:5-3.
- 3.1.2 The Coastal Area as defined by N.J.S.A. 13:1A-4.
- 3.1.3 Regulated Wetlands as defined on Wetlands Maps listed at N.J.A.C. 7A-1.13.

3.2 Activity or Facility Jurisdiction

- 3.2.1 All activities involving occupation or use of riparian lands.
- 3.2.2 Facilities requiring a CAFRA permit as defined by N.J.S.A. 13:19-3 and N.J.A.C. 7:7D-2.2.
- 3.2.3 All regulated activities involving Wetlands.

4.0 Definitions

- 4.1 Prohibited - A proposed development that meets this standard will be denied.
- 4.2 Discouraged - A proposed development that meets this standard will be denied unless certain specified findings can be made or conditions can be met. The revisions to the project necessary to make the project acceptable would be major and difficult to achieve.
- 4.3 Conditionally Acceptable - A proposed development that meets this standard is likely to be approved provided that specified conditions are followed, or specified findings can be made. The revisions to the project necessary to make the project acceptable would be relatively minor.

- 4.4 Acceptable - A proposed development that meets this standard is likely to be approved without special conditions.
- 4.5 Encouraged - A proposed development that meets this standard is acceptable, and also displays certain extra desirable characteristics of location and/or design. These characteristics include use of solar energy, tree preservation above the required minimum, and provision of low cost housing. Acceptable projects that include encouraged features may expect general approval from DEP for the proposed development as a whole, and, within the requirements of the Coastal Resource and Development Policies, policy interpretations favorable to the proposed development in areas of policy debate, in order to promote and facilitate the siting of desirable developments.
- 4.6 Pre-application Stage - An informal discussion between DEP staff and a prospective applicant or consultant on a proposed development before a formal permit application is submitted. Prospective applicants are strongly encouraged to arrange a pre-application conference as early as possible, preferably before a site has been selected.
- 4.7 Application Stage - The formal permit application procedure as defined in the applicable procedural rules and regulations of the coastal permit programs.
- 4.8 Development - Any activity, use or action proposed that is subject to the jurisdiction of the New Jersey Coastal Management Program - Bay and Ocean Shore Segment, as defined in Section 2.0 above and in Chapter Four.
- 4.9 Site - The actual location of the proposed development and the appropriate surrounding region that may be affected by the development.
- 4.10 Acceptability Factor - A varying factor of the built or natural environment that contributes to variations of DEP policy for a proposed location. Certain factors, such as depth to water table, indicate the sensitivity of a site to development or its disadvantages, while other factors, such as access to roads, indicate the potential of a site for development, or its advantages.

5.0 Coastal Management Decision-Making Process

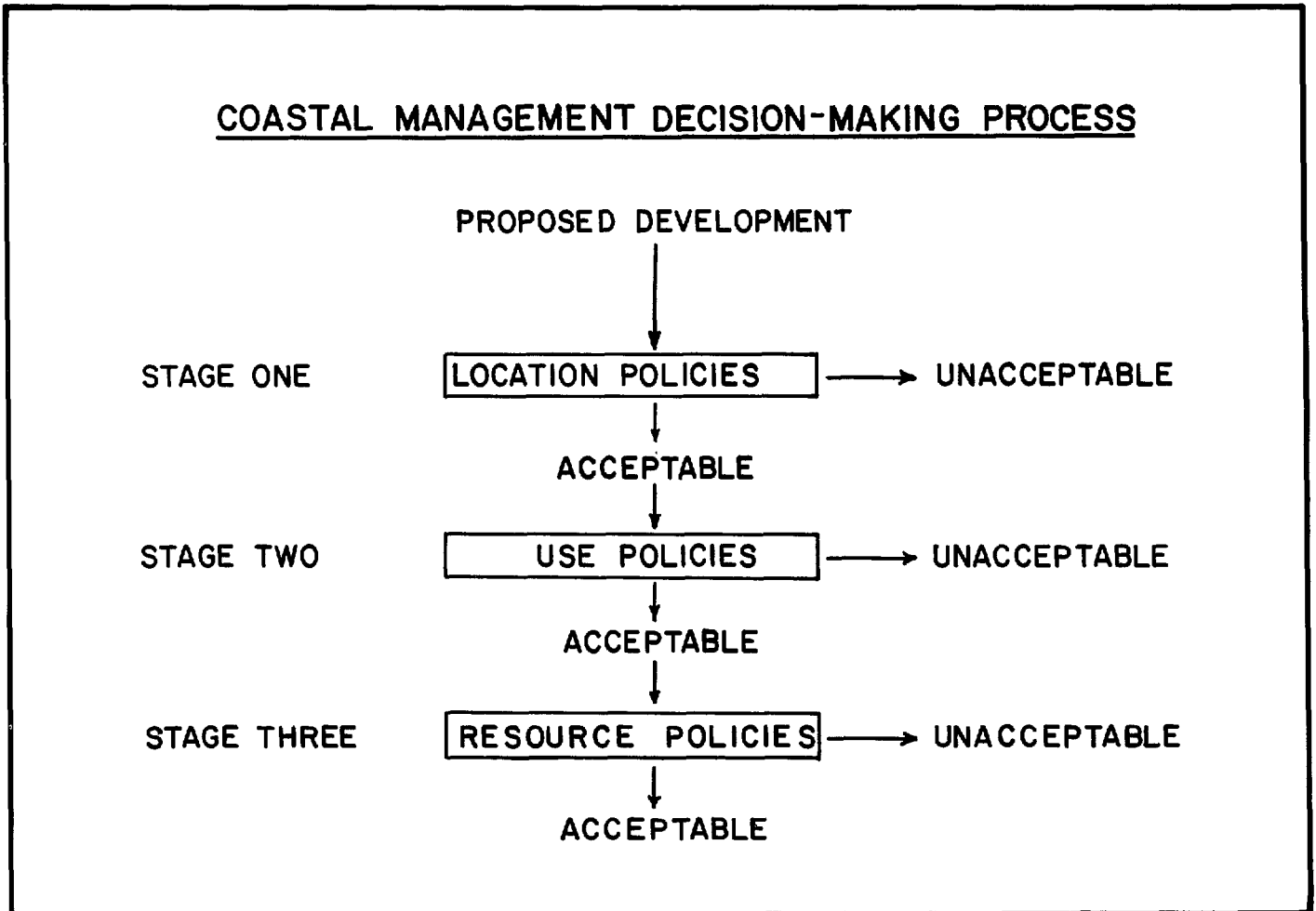
The decisions of DEP's Division of Marine Services on uses of coastal resources will be made using a three stage screening process, using the coastal policies in Sections 6.0, 7.0 and 8.0 below, primarily through the CAFRA, wetlands, and waterfront development permit programs.

Specific decisions about uses of New Jersey's coastal resources will be based on publicly-established and clearly-stated policies. This chapter spells out coastal policies to guide public decisions about significant proposed developments and activities in the Bay and Ocean Shore Segment of New Jersey's coastal zone. Proposed developments and activities under the jurisdiction of the Coastal Program (as defined in Chapter Four: MANAGEMENT SYSTEM) will be evaluated in terms of a three stage screening process. Each stage features a discrete type of policy embodying standards that must be met for a proposed development to pass the screen and be deemed acceptable under the Coastal Program. Each stage provides information necessary for a decision, but there is an intentional degree of overlap between the three stages (which is cross-referenced in the text).

Stage One: Location Policies
 Stage Two: Use Policies
 Stage Three: Resource Policies

The purpose of the three-stage screening process is to increase the predictability of coastal decision by adding more specificity to the decision-making process. Explanations of these three stages may be useful before the detailed statement of the policies themselves (See Figure 4).

Figure 4



First, the Location Policies delineate acceptable amount and intensity of development for different types of locations, by considering both the sensitivity, or disadvantages, of sites, as well as their development potential, or advantages. This process of evaluating the acceptability of locations is called the Coastal Location Acceptability Method (CLAM) and indicates where developments may take place.

Second, proposed developments that pass the Location Policies screen are then evaluated in terms of specific Use Policies that more precisely define acceptable uses of coastal land and water resources -- such as high-rise housing and parks -- from the perspective of a proposed development, as distinguished from a proposed location. Use policies indicate what may take place.

Third, proposed developments that meet the standards of the first and second stages must also comply with appropriate Resource Policies regarding the possible effects of the proposed development on coastal resources such as water, air, and public access to the shorefront.

In brief, these stages, presented in Section 6.0, 7.0 and 8.0, define a process for decision-making to carry out the Basic Coastal Policies at both the regional and site-specific scales. Any interested person should be able to fill in the characteristics of a particular site or development project to determine its acceptability under the Coastal Program.

Before presenting the Coastal Resource and Development Policies, it is important to grasp the kinds of decisions these policies will help to make. First, the policies will serve as the standards for regulatory decisions, primarily under the three coastal permit programs. Second, the policies will serve as the basis for determining the consistency of proposed actions, by federal, state, and local agencies with the Coastal Program. Third, the coastal policies will shape key state funding decisions in the coastal zone especially under the Shore Protection and Green Acres Open Space Acquisition and Outdoor Recreation programs. Fourth, the coastal policies will guide further planning and advocacy actions by DEP as the state coastal management agency.

This Chapter spells out New Jersey's substantive coastal policies for the Bay and Ocean Shore Segment, in a manner that can be used by prospective developers, DEP staff, other public agencies and interested citizens to determine whether or not a proposed development or activity should or should not take place in New Jersey's coastal zone. The description of each of the three stages includes definitions of geographic areas, uses, and other terms, indicates the applicable policy, and provides a rationale for the policy. At this stage in New Jersey's participation in the national coastal zone management program, it is important to stress that for the purposes of the federal Coastal Zone Management Act, the policies of this chapter apply only within the Bay and Ocean Shore Segment boundary defined in Chapter Two and to the developments under the jurisdiction of the Coastal Program, as defined in Chapter Four.

6.0 LOCATION POLICIES

- 6.1 Introduction
- 6.2 Special Water Areas
- 6.3 Water Areas
- 6.4 Special Water's Edge and Land Areas
- 6.5 Water Edge Areas
- 6.6 Land Areas
- 6.7 Composite Mapping
- 6.8 Preparation of Location Acceptability Map
- 6.9 Determination of Location Acceptability
- 6.10 Location of Linear Facilities
- 6.11 General Location Policy

6.1 Introduction

6.1.1 Purpose

The coastal land and water areas of New Jersey are diverse. The same development placed in different locations will have different impacts on the coastal ecosystem and built environment, as well as different social and economic implications. Different policies are therefore required for different locations. This section defines the Location Policies of the Coastal Program. This presentation of the policies is lengthy and detailed because the coast is large, varied, and complex. The method of applying the policies is, however, relatively simple.

6.1.2 Eight Step Process

The Location Policies provide an eight step process for determining the acceptability for development of a particular location for a particular use. This process, or method, was developed by DEP-OCZM and is sometimes referred to as the Coastal Location Acceptability Method. In addition to this stage, proposed coastal developments must pass the two screens of the appropriate Use Policies and Resources Policies.

The eight location policy steps require the identification of defined water, water's edge, or land types, and the preparation of maps indicating the distribution of the various location types present on a proposed site. Various policies are associated with the different types. The final steps in the process identify the distribution of specific policies for the proposed site.

The eight steps of analysis begin at the wettest parts of the coastal region and proceed upland to the driest areas. The steps, with their relevant section numbers, are as follows:

Step 1 - Identify and Map Special Water Areas (Section 6.2)

In some water areas, such as surf clam beds or navigation channels, there is a concentration of specifically valued natural or cultural

resources that require special management policies. The policies for these areas are supplemental to other water policies, in cases of difference between special water policies and general water policies, the more restrictive shall take precedence.

Step 2 - Identify and Map Water Areas (Section 6.3)

This step identifies which general water types are present on a proposed site. Water Areas are classified into channels and basins, which are further subdivided by the volume of flow or depth of water. Location policies are defined for specific uses in specific water types.

Step 3 - Identify and Map Special Water's Edge and Land Areas (Section 6.4)

As in the water, there are areas on the water's edge and land where there is a concentration of specially valued natural or cultural resources. Examples include prime agricultural land and historic places. These areas require special policies which are supplemental to other water's edge and land policies. Where there is difference between the special policies and general policies, the more restrictive shall take precedence. This step identifies and maps these areas.

Step 4 - Identify and Map Water's Edge Areas (Section 6.5)

Water's Edge Areas are those lands above the mean high water line adjacent to water bodies. They are periodically inundated by seasonally high tides or storm flooding, and can play an important water quality buffering function. They are divided into lower water's edge areas, including brackish wetlands or beaches; upper water's edge areas, and various kinds of developed water's edge. Various policies are associated with the different types.

Step 5 - Identify and Map Land Areas (Section 6.6)

This step involves the preparation of seven maps: six acceptability factor maps and one land composite map. The six acceptability factors are used to describe different land types. Four of these acceptability factors are used to determine the environmental sensitivity of a location to development, or the disadvantages of the site:

- (a) Depth to seasonal high water table
- (b) Soil permeability
- (c) Soil fertility
- (d) Existing vegetation

Two of these acceptability factors are used to determine the development potential of a site, or the advantages for development:

- (a) Development Potential - This is a composite of several factors including, for example, road, and sewer and water access.
- (b) Regional Growth Type - This is an assessment of the growth potential of the region around the site. Such elements as access to employment and major transportation corridors and regional recreation opportunities are included, as well as the pattern of growth in the area.

The distribution of each of these factors is identified and mapped, separately, and then a land factor composite map is prepared to show the different land types present on a site.

Step 6 - Prepare a Composite Map (Section 6.7)

Each of the first five steps involves the preparation of maps identifying the distribution of specified elements of the built or natural environment. This step combines all the maps into a single composite map, which is the geographic base on which the specific policy for a site is determined. This composite map delineates all of the identified subareas on the site.

Step 7 - Prepare Location Acceptability Map (Section 6.8)

The next step is to consult the specific Location Policies in Sections 6.2-6.6, stated in the tables, criteria, and conditions, and in particular the Water Acceptability Table (Figure 4, Section 6.3.7) and the Land Acceptability Table (Figure 20, Section 6.6.9.5), to determine the Location Policy applicable to each different subarea.

By linking each subarea of the composite map to the relevant policies, a map may be prepared to determine and show the distribution of location acceptability of the site.

Step 8 - Determine Location Acceptability (Section 6.9)

Compare the site plan of the proposed development with the Location Acceptability Map prepared in Step 7 to determine the acceptability of a location, according to the Location Policies of the Coastal Management Program - Bay and Ocean Shore Segment.

The next stage in the three stage screening process is for development proposals that are deemed acceptable is to proceed to the second stage or screen, the Use Policies specified in Section 7.0.

6.1.3 Organization of Specific Location Policies Section

The sections below are arranged in the same order as these eight steps. Each section contains: a definition of the identified location types, a statement of policies associated with the location type, a brief rationale for the policy, the information requirements that an application must meet at both the pre-application and application stages (the data sources for the information, are identified in Appendix I - note that the soil conservation survey data is approximate) and finally an example of a part of the coastal area illustrating the way in which the step would be completed when analyzing the acceptability of a site.

6.1.4 Illustrative Example

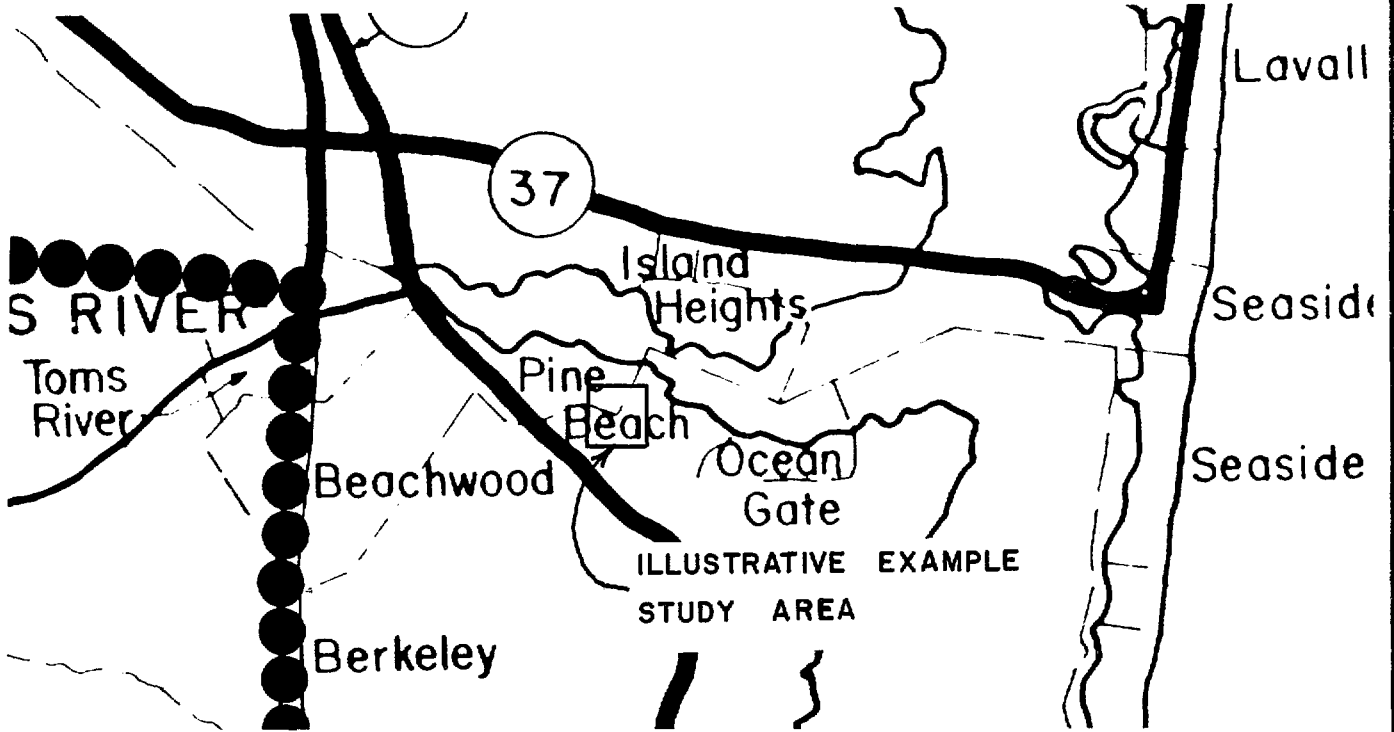
The illustrative example which appears in each section is a site adjacent to the Toms River in Ocean County. The Mill Creek diagonally cuts through the site as it flows into the river. For the purposes of illustration, this Chapter assumes that an application has been received by DEP for residential development with boat launching and mooring facilities adjacent to the river.

As each of the analysis steps is discussed, there will be a reference to the illustrative example indicating how the step should be completed graphically and analytically.

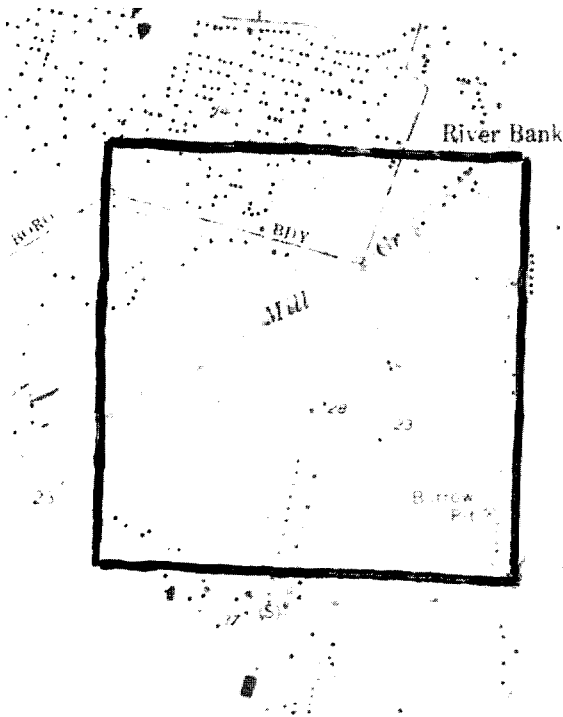
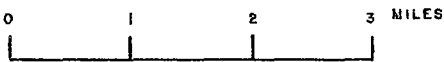
The following maps show the regional and subregional location of the example site. The data sources are NJDEP coastal maps at a scale of 1:100,000, the USGS 7 1/2 minute Quadrangle and the Photoquadrangle of Tom's River at a scale of 1:24,000, and the DEP Wetlands map at a scale of 1:24,000.

CLAM CASE STUDY

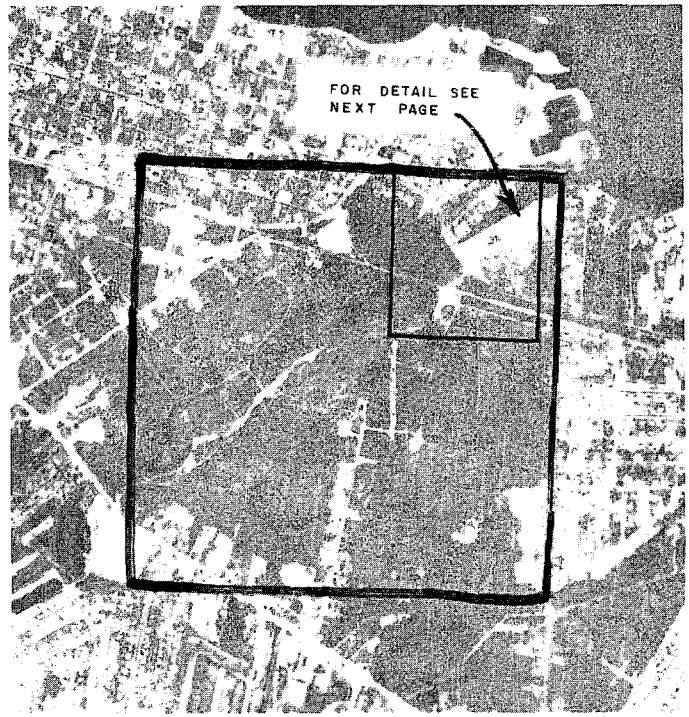
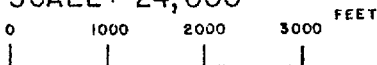
ILLUSTRATIVE EXAMPLE STUDY AREA



REGIONAL LOCATION MAP
SCALE: 1: 100,000



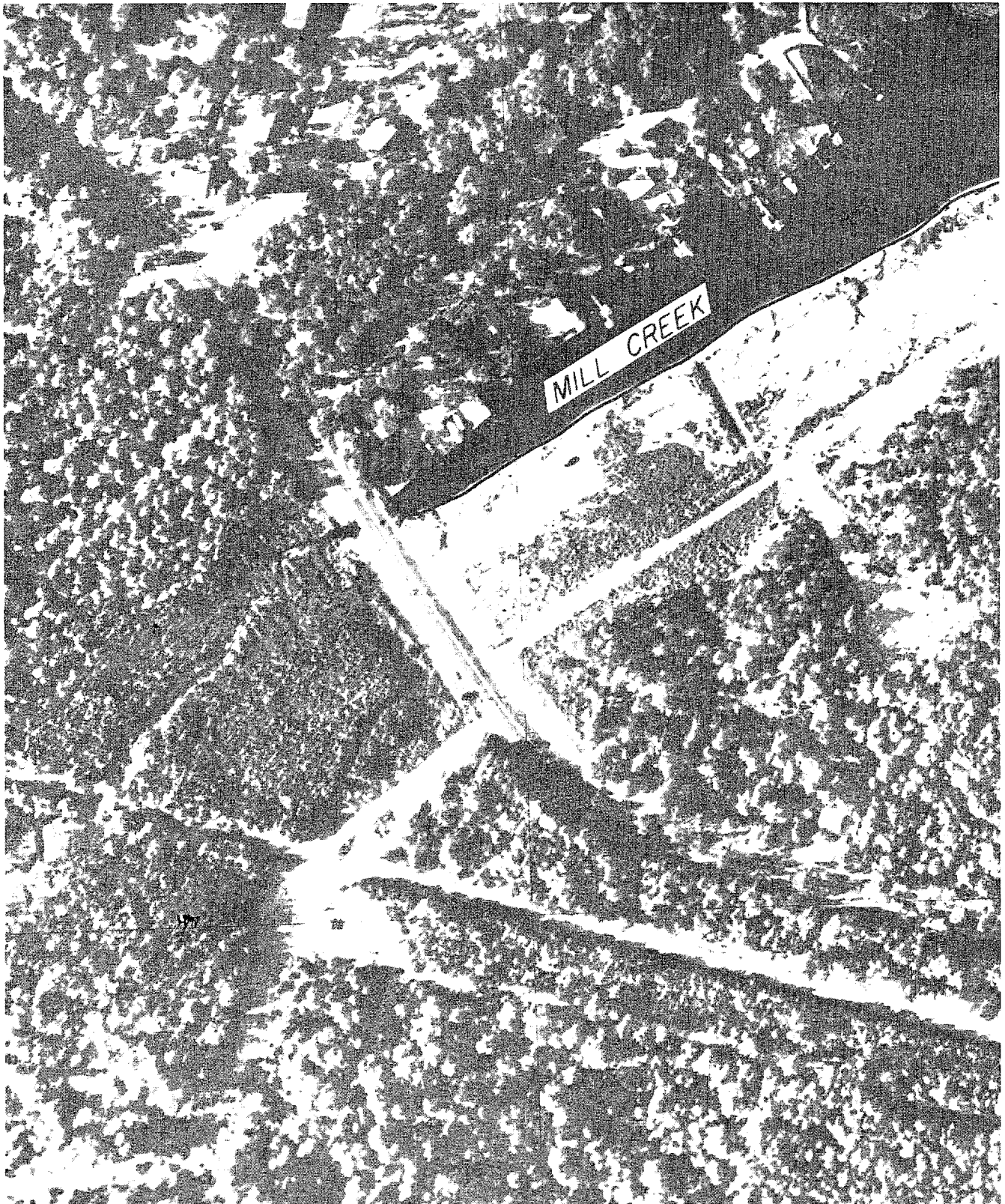
LOCATION MAP
SCALE: 24,000



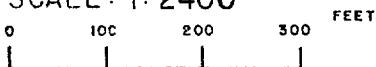
SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLE: TOMS RIVER.

CLAM CASE STUDY

ILLUSTRATIVE EXAMPLE DETAIL STUDY AREA



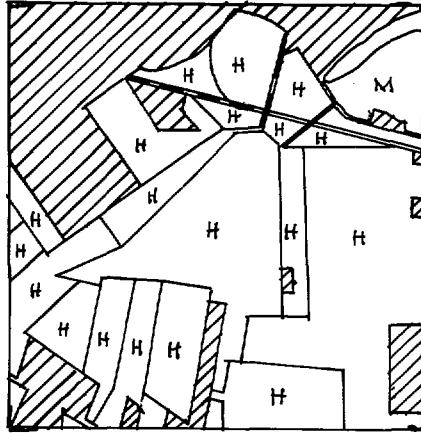
LOCATION MAP
SCALE: 1:2400



SOURCE: WETLANDS MAP # 399-2142



This map shows the distribution of existing property boundaries to a scale of 1:24,000. The source of data is the Ocean County Tax Records.



M = Hypothetical Marina Proposal
H = Hypothetical Housing Proposals
= Existing small subdivisions
PROPERTY BOUNDARIES

The assumption is made for the purpose of illustrating the analysis described in the following sections, that proposals have been received simultaneously on all properties marked "H" for moderate density housing (5 dwelling units per acre) and on the property marked "M" for a marina.

No such proposals really exist; this is a purely hypothetical study to illustrate how the steps of the Location Policies (CLAM) analysis are done.

6.2 Special Water Areas

(Step 1. Identify and Map Special Water Areas)

Certain specific water areas merit focused attention and special management policies. The tidal estuaries of New Jersey are critical habitats for at least two-thirds of the state's important marine commercial and recreational species of finfishes. These species are commonly called "estuarine dependent", because their life cycles rely upon the estuaries as nursery, wintering, and/or feeding areas. Finfish, like waterfowl and blue-claw crabs, are highly mobile and seasonally migratory creatures. Each uses various portions of the estuarine system at different stages in their life cycles, depending on seasonal and daily aquatic and atmospheric conditions. For these reasons, the entire estuarine system (tidal waters and coastal wetlands) must be viewed as prime finfish and shellfish nursery habitats and prime migratory waterfowl wintering areas. This section defines the various Special Water Areas, and indicates the applicable location policy.

The information requirements for each of these Special Water Areas are similar; a map shall be prepared at the scale of 1:24,000 for pre-application conferences and at least the scale of 1:2,400 for application purposes, showing the distribution of each Special Water Area on the proposed site.

6.2.1 Shellfish Beds

6.2.1.1 Definition

Estuarine bay or river bottoms (tidelands) presently supporting commercial or recreational quantities of hard clams, soft clams, oyster or bay scallops. This category includes: open, seasonally open, and specially restricted water quality classes as shown in Shellfishing Area Charts 1 through 10, prepared by and available from DEP. Source areas for transplanting (relays) programs and depuration processing are included, as well as natural or artificial oyster seed (spat) setting beds. Maps of shellfish beds can be found in H. Haskin (1963) "Distribution of Shellfish Resources in Relation to New Jersey Intracoastal Waterway".

6.2.1.2 Policy

Coastal development which would directly discharge untreated domestic sewage, or industrial wastes, toxic or carcinogenic agents or alter salinity regime, or natural water flow patterns during operation of development is prohibited. Water dependent development which requires dredging adjacent to shellfish beds will be conditionally acceptable, provided that the activity is managed so as not to cause significant mortality of the shellfish resulting from increase in turbidity and sedimentation, resuspension of toxic chemicals, or to otherwise interfere with the natural functioning of the shellfish beds.

Dredging within shellfish beds is prohibited. Oyster and clam transplant and relay programs, and construction of depuration facilities will be encouraged.

6.2.1.3 Rationale

Estuarine shellfish are harvested by both commercial and recreational fishermen, with the sport group concentrating on hard clams. Oysters, bay scallops and soft clams are predominantly commercial species. Commercial dockside landing values in New Jersey for 1976 were \$3.17 million for estuarine mollusks, with an estimated retail industry value of \$7.94 million. The commercial harvest is estimated to support employment of 1,500 persons in fishing, distributions, processing, and retail. Sport clambers numbered 17,000 in 1976. In addition to direct human consumption, shellfish play an important role in the overall ecology of the estuary. Young clams are important forage foods for a variety of finfish such as winter flounder, crabs and migratory waterfowl especially the diving species.

6.2.2 Surf Clam Areas

6.2.2.1 Definition:

Waters within the State of New Jersey three nautical mile territorial sea which can be demonstrated to support significant commercially exploitable quantities of surf clams, or beds important for productivity replacement of fishery stocks. This includes Sea Clam Research Sanctuaries established by the N.J. Bureau of Shellfisheries, under the authority of N.J.S.A. 50:1-5 and adopted as N.J.A.C. 7:26-7.6, June, 1974. Waters open for harvesting or condemned for harvesting are delineated on NJDEP Condemned Area Charts 1 through 10.

6.2.2.2 Policies:

Development which would result in condemnation of surf clam stocks will be prohibited. Developments which would result in closing productive areas to commercial shellfishing or in direct mortality of surf clams within a specific area will be encouraged to locate in alternate less productive areas. Only if the development is of significant national interest and no prudent and feasible alternative sites exist will development within surf clam areas be conditionally acceptable.

6.2.2.3 Rationale:

The surf clam fishery is New Jersey's single most important fishery with dock-side landing values (wholesale) of \$10.8 million during 1976 and estimated retail value of \$27 million. The industry annually generates monies in excess of the retail value, supports employment of over 300 full and part time people in fishing and 1,000 - 1,500 in canning processing, distribution and industry services. Significant areas of productive water are presently closed due to water pollution. In addition, the massive marine fish kill during the summer of 1976 was estimated to have resulted in the loss of \$65 million in sea clam stocks over a seven year period. Surf clam harvesting within New Jersey's territorial sea is regulated by NJDEP. The Mid-Atlantic Regional Fisheries Management Council regulates sea clamming within the Fishery Conservation Zone (200 mile limit). Harvesting is required to be compatible with these agencies, as appropriate. Harvest quotas and other management measures have been adopted for sea clamming (surf clams and ocean quahogs) within the Fishery Conservation Zone.

6.2.3 Prime Fishing Areas

6.2.3.1 Definition:

This category includes special tidal water areas and any water's edge areas which have a demonstratable history of supporting a significant local quantity of recreational fishing activity. Included are all coastal jetties and groins and public fishing piers or docks. Prime fishing areas also includes all red line delineated features within the State of New Jersey's three mile territorial sea illustrated in: B.L. Freeman and L.A. Walford (1974) Angler's Guide to the United States Atlantic Coast Fish, Fishing Grounds and Fishing Facilities, Section III and IV.

6.2.3.2 Policies:

Permissible uses include recreational and commercial finfishing and shellfishing, as presently regulated by NJ Division of Fish, Game, and Shellfisheries, scuba diving and other water related recreational activities. Fishing activities in these areas seaward of New Jersey's Coastal Zone Boundary (within the Fishery Conservation Zone) are required to be consistent with regulations adopted by Mid-Atlantic Regional Fisheries Management Council.

Prohibited uses include sand or gravel submarine mining which would alter existing bathymetry to a significant degree so as to reduce the high fishery productivity of these areas. Disposal of domestic or industrial wastes is discouraged and must meet applicable State and federal effluent limitations and water quality standards. Development which would preclude existing public access to shoreline will be prohibited. Development of regional or national significance, such as crude oil or natural gas submarine pipelines, will be directed to locate in an alternate corridor.

6.2.3.3 Rationale:

Natural bathymetric features and artificial structures act as congregation areas for many species of finfish, shellfish, and a diversity of invertebrate species which are essential to marine ecosystem functioning. These areas are heavily utilized by recreational and commercial fishermen. Over 2.7 million people annually participate in marine sport fishing and shellfishing in New Jersey. This represents the highest number of participants in any state, from Maine to Maryland. Of that total, 1.6 million reside in New Jersey, with the remaining number coming mostly from Pennsylvania and New York (792,000 and 300,000 respectively.)

6.2.4 Finfish Migratory Pathways

6.2.4.1 Definition:

Waterways (rivers, streams, creeks, bays and inlets) known to serve as passageways for anadromous fish to or from seasonal spawning areas, as listed by H. E. Zich (1977) "New Jersey Anadromous Fish Inventory" NJDEP Miscellaneous Report. No. 41, and including those portions of the Hudson and Delaware Rivers within the coastal zone boundary. Species of concern include: alewife (river herring) (Alosa pseudoharengus), blueback herring (Alosa aestivalis), American shad (Alosa sapidissima), and striped bass (Morone saxatilis).

6.2.4.2 Policies:

Development that blocks upstream movement of anadromous species is prohibited. Mitigation measures will be required for any development which would result in: lowering dissolved oxygen levels, releasing toxic chemicals, raising ambient water temperature impinging on or suffocating species; causing siltation, or raising turbidity levels during spring migration periods. Water's edge development which incorporates migration access structures, such as

functioning fish ladders, will be encouraged, provided that the NJ Division of Fish, Game, and Shellfisheries approves the design of the access structure.

6.2.4.3 Rationale:

Striped bass are one of New Jersey's most prized sport fish and are actively sought wherever they occur in New Jersey. This species spawns in the Delaware, Hudson and Maurice Rivers. American Shad, once much more numerous and formerly an important commercial species, continue to make an annual spawning run in the Delaware River, where there is an active sport fishery. A much reduced commercial fishery exists in Delaware Bay. Herrings are important forage species and spawn annually in many of New Jersey's tidal tributaries. Herrings are fished during spring runs, for direct human consumption and for use as bait.

6.2.5 Submerged Vegetation

6.2.5.1 Definition:

This special water area includes estuarine water supporting rooted vascular seagrasses such as widgeon grass (Ruppia maritima), eelgrass (Zostera marina), and the green algae sea lettuce (Ulva lactuca). Eelgrass beds are limited to shallow portions of Sandy Hook Bay, Shrewsbury River, lower Barnegat Bay and Little Egg Harbor. Widgeon grass is for the most part limited to shallow areas of upper Barnegat Bay. Detailed maps of the distribution of the above species for Little Egg Harbor are available from DEP in the DEP-OCZM sponsored study, in R.E. Good. et al. Analysis and Delineation of the Submerged Vegetation: A Case History of Little Egg Harbor. In areas outside of Little Egg Harbor, a developer will be required to survey this resource until DEP completes additional surveys.

6.2.5.2 Policies:

Destruction of submerged vegetation beds is prohibited. Mitigation measures will be required for all developments which would result in erosion or increased turbidity within this special area. Dredging for energy pipelines and submarine cables of national significance will be conditionally acceptable, provided there is no prudent or feasible alternative site, and if the site is restored to original bathymetry and replanted with pre-development vegetation.

6.2.5.3 Rationale:

New Jersey's estuarine waters are relatively shallow, rich in nutrients and highly productive. The submerged vegetation of these shallow waters serve important functions, as suspended sediment traps, important winter forage for migratory waterfowl, nursery areas for juvenile finfish, bay scallops and blue-claw crabs, and as nourishing fishery resources through primary biological productivity (synthesis of basic organic material) through detrital food webs in a similar manner to salt marsh emergent Spartina cord grasses. In addition, seagrasses absorb wave energy and help stabilize silty bay bottoms. The value of seagrasses was dramatically illustrated during the 1930's when a disease epidemic virtually eliminated eelgrass from the eastern U.S. Atlantic coastline. The number of finfish, shellfish, and waterfowl drastically decreased, threatening their survival. The oyster industry of the Atlantic coast was ruined. Bays became choked with silt and sewage, as new mud flats were formed.

6.2.6 Navigation Channels

6.2.6.1 Definition:

Areas with mean low water depth of five feet or greater, of tidal rivers and bays presently maintained and marked by U.S. Coastal Guard with buoys or stakes, as shown on NOAA/National Ocean Survey Charts: 12314, 12312, 12311, 12304, 12318, 12323, 12337, 12337, and 12343.

6.2.6.2 Policy:

Maintenance dredging of existing navigation channels is encouraged. Development which would cause terrestrial soil and shoreline erosion and siltation in navigation channels will be required to utilize mitigation measures. Development which would result in loss of navigability, will be prohibited. Reuse of dredge spoils from navigation channels and inlets for beach nourishment is acceptable, provided that the material composition is suitable. Subaqueous (water) disposal of dredge spoil is prohibited. Land disposal in suitable areas is acceptable (See Section 6.6 - Land Areas).

6.2.6.3 Rationale:

Navigation channels are essential for commercial and recreational surface water transportation, especially in New Jersey's back bays where water depths are very shallow. Channels play an important ecological role in providing estuarine circulation and flushing routes, and migration pathways and wintering and feeding habitat for a wide diversity of finfish, shellfish, and waterfowl.

6.2.7 Shipwrecks and Artificial Reefs

6.2.7.1 Definition:

All permanently submerged remains of vessels lying within the State of New Jersey three mile territorial sea, whether sunk intentionally or unintentionally. Known sites include those shown either on National Ocean Survey (N.O.S.) Charts listed in the definition above of the Navigation Channel Special Water Area, or listed in: W. Krotee and R. Krotee (1966) Shipwrecks Off the New Jersey Coast. Also included in this category are artificial fishing reefs.

6.2.7.2 Policies:

Acceptable uses include recreational and commercial finfishing and shellfishing, scuba diving, research and expansion of artificial reefs by the deposition of additional weighted non-toxic material, provided it can be demonstrated that additional material will not wash ashore, or interfere with navigation as regulated by U.S. Coast Guard, or commercial fishing operations.

Prohibited uses include commercial salvage of wrecks and submarine sand or gravel mining which would destroy ecological or physical stability, and sewage or industrial waste disposal. Federal management of shipwrecks outside of the coastal boundary should be consistent with state policies developed for shipwrecks within the boundary.

6.2.7.3 Rationale:

Shipwrecks serve as critical habitat for benthic finfish and lobsters, and other invertebrates which prefer shelter and hard substrates otherwise uncommon in New Jersey's marine waters. These areas function as congregation areas for migratory species and support extensive recreational fishing by private boats, commercial party boats, and commercial lobstering. Shipwrecks are also fragile historic and cultural resources. Scuba diving club members from New Jersey and other states visit these resources. These activities contribute to New Jersey's tourist industry.

6.2.8 Marine Sanctuary

6.2.8.1 Definition:

A marine sanctuary is a specific geographic area located within ocean waters, from the highest extent of tidal action seaward to the water edge of the

Continental Shelf, which have been so designated and approved by the Secretary of Commerce and Governor of the State of New Jersey. Under Title III of the Marine Protection, Research and Sanctuaries Act of 1972 (P.L. 92-532), a marine sanctuary can be established for the purpose of preserving or restoring marine areas for various values. To date, there are no designated marine sanctuaries within New Jersey. The Office of Ocean Management within NOAA is presently reviewing all nominations and recommendations within the Mid-Atlantic states. DEP-OCZM submitted six recommendations to NOAA in 1977, including the Hudson Canyon, Shrewsbury Rocks, Great Bay estuary, shipwrecks, inlets, and offshore sand ridges. Final definition and designation of marine sanctuaries in New Jersey's nearshore and offshore areas requires joint actions by the Governor of New Jersey and the U.S. Secretary of Commerce, with final approval by the President of the United States and could take place during 1978-1979.

6.2.8.2 Policy:

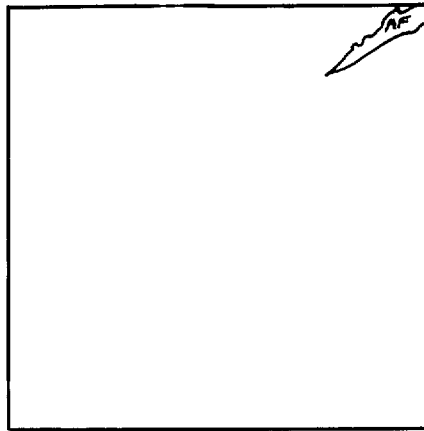
Management principles in the selected areas will serve to preserve and protect the areas, as well as indicate what actions are not permissible in the area. Non-permissible uses will be dependent on the five basic purposes for designation, which include: habitat areas, species areas, research areas, recreational and esthetic areas, and unique or exceptional areas. After designation, activities not compatible with the basic purposes will be prohibited or restricted, but in general all other uses are allowed. Final policy in marine sanctuaries must be approved jointly by the Governor of New Jersey and the U.S. Secretary of Commerce.

6.2.8.3 Rationale:

Certain portions of the Atlantic Ocean and adjacent estuaries are of special national and regional value which could be adversely impacted by development likely to take place in the future, especially activities related to offshore oil and gas development. It is in the long-term interest of the people of the Nation to identify, protect, and manage these special areas.

6.2.9 Illustrative Example: Special Water Areas

The map below shows, to a scale of 1:24,000, the Special Water Areas present in the illustrative site. The only special water area present is Anadromous Fishing areas which is included in the Finfish Migratory Pathways. The data source for this information is the "New Jersey anadromous Fish Inventory" Miscellaneous Report No. 41 NJDEP as listed by H.E. Zich (1977).



Special Water Areas

Legend:

AF = Anadromous Fish
Area

6.3 Water Areas (Step 2 - Identify and Map Water Areas)

6.3.1 General Definition

Areas below the mean high water line, including intertidal areas, and nontidal permanent surface water features are classified "Water Areas". Water areas include various specific types of basins and channels.

6.3.2 General Policy

The location policy for coastal water areas varies according to the depth of the water basin, flow of the water channel, and proposed water use. For this reason, specific water basin and water channel types and specific water uses are defined below. Specific coastal policies are then articulated in a Water Acceptability Table for specific uses, considering both the advantages and disadvantages (sensitivity and development potential) of various types of locations, using the Coastal Location Acceptability Method (CLAM). In addition to the Water Areas policies presented here, proposed coastal development must also comply with applicable state and federal effluent limitations and water quality standards.

6.3.3 Rationale

The sensitivity of water areas to environmental impacts depends primarily on the assimilative capacity of the specific water area. Assimilative capacity indicates the amount of adverse impact or pollutants that a water body can absorb and neutralize before it begins to display a significant reduction in biological diversity, chemical, or physical water quality. Two factors -- water volume and flushing rate (the rate that water in a channel or basin is replaced) -- are used in CLAM to determine the approximate assimilative capacity of water basins and water channels respectively. Water volume depends upon the surface area and depth of a water body. The Location Policy for Water Areas considers flushing rate in terms of three types of water channels and three types of bays. The development potential of water types for specific uses has been included in the Water Area Acceptability Table.

6.3.4 General Information Requirements

A map shall be prepared at the scale of 1:24,000 for pre-application conferences, and at least the scale of 1:2,400 for application purposes, showing the distribution of various water body types on the proposed site.

6.3.5 Definitions of Water Body Types

The water areas of the coastal zone have been classified into eight water body types, as defined below. In addition, some water body types are further classified according to the depth of the water body type, or its bathymetry.

6.3.5.1 Basin Types (arranged by assimilative capacity from high to low)

6.3.5.1.1 Ocean

All areas of the Atlantic Ocean out to the limit of New Jersey's territorial sea, three nautical miles from the shoreline. The ocean extends from the marine boundary with the State of New York in Raritan Bay and Sandy Hook Bay south to the marine boundary with the State of Delaware in Delaware Bay, near Cape May Point.

6.3.5.1.2 Open Bay

A large, somewhat confined coastal water body that has a shoreline length in excess of three times the width of its outlet to the sea, with a major river mouth discharging directly into its upper portion. The outlet is typically wide and unrestricted by land. Delaware Bay, Raritan Bay and Upper New York Bay are the only representatives of this type in New Jersey.

6.3.5.1.3 Semi-Enclosed Bay

A partially confined coastal water body with a narrow restricted inlet and with significant fresh water inflow, such as Great Bay and Great Egg Harbor.

6.3.5.1.4 Back Bay

A generally small shallow coastal water body with restricted inlets to the sea and low freshwater inflows, and limited tidal circulation such as Shark River, Barnegat Bay, Reeds Bay, Absecon Bay, Lake's Bay and Great Sound, among others.

6.3.5.1.5 Inland Basins (shallow and deep)

Enclosed freshwater basins, both shallow and deep, with little, or insignificant flow, such as lakes, ponds, and reservoirs.

6.3.5.1.6 Man-Made Harbor

Existing marinas and other semi-enclosed water bodies protected by man-made structures, such as a breakwater.

6.3.5.2 Channel Types (arranged in order of assimilative capacity from high to low)

6.3.5.2.1 Large River

The Delaware and Hudson Rivers.

6.3.5.2.2 Medium Rivers and Streams

Stream channels with a watershed area of more than five square miles. This includes the lower reaches of streams such as the Raritan, Navesink, Manasquan, Toms, Wading, Mullica, Great Egg, Maurice, Cohansey, and Salem and Rancocas.

6.3.5.2.3 Small Creeks and Streams

Stream channels with a watershed area of less than five square miles. This includes small tributaries of rivers and medium streams.

6.3.6 Definitions of Water Uses

Numerous developments or activities seek locations in New Jersey's coastal waters. Some uses involve locations both above and below the mean high water line, in both Water and Water's Edge areas. This section defines generally the important uses of water areas managed by the Coastal Program.

6.3.6.1 Aquaculture

Aquaculture is the use of a permanently inundated water area, whether saline or fresh, for the purposes of growing and harvesting plants or animals in a way to promote more rapid growth, reduce predation, and increase harvest rate. Oyster farming of Delaware Bay is a form of aquaculture.

6.3.6.2 Boat Ramps

Boat ramps are inclined planes, extending from the land into a water body for the purpose of launching a boat into the water until the water depth is sufficient to allow the boat to float. Boat ramps are most frequently paved with asphalt or concrete, or covered with metal grates.

6.3.6.3 Retaining Structures

Bulkheads are vertical retaining walls stabilizing shorelines. Revetments are inclined retaining walls for the same purpose. Sea walls are bulkheads or revetments that face the ocean.

6.3.6.4 Docks and Piers

Docks and piers are structures in the water for the purpose of gaining access to moored boats or for fishing or amusement purposes. They are usually supported on pilings driven into the bottom substrate, but may be made of fill or floating.

6.3.6.5 Dredging-Maintenance

Maintenance dredging is the removal of accumulated sediment from areas where dredging has taken place in the past, such as navigation channels or boat moorings, for the purpose of maintaining a required water depth for navigation purposes.

6.3.6.5 Dredging (New)

New dredging is the removal of sediment from the bottom of a water body that has not been previously dredged for the purpose of increasing water depth.

6.3.6.7 Dredged Spoil Disposal

Dredged spoil disposal is the discharge of sediments (spoils) removed during dredging operations.

6.3.6.8 Dumping (Solid Waste or Sludge)

The dumping of solid waste or sludge is the discharge of solid or semi-solid waste material from industrial or domestic sources or sewage treatment operations into a land or water area.

6.3.6.9 Filling

Filling is the deposition of inorganic material (sand, soil, earth, dredge spoils, etc.) into land or water areas for the purpose of raising land surface or water bottom elevations.

6.3.6.10 Piling

Piling is the insertion of columnar structural members into the ground or water bottom substrate.

6.3.6.11 Mooring

A boat mooring is a temporary or permanent, piling or floating anchored facility in a water body for the purpose of attaching a boat.

6.3.6.12 Offshore Sand and Gravel Mining

Offshore sand mining is the removal of sand or gravel from the floor of the ocean, usually by suction dredge.

6.3.6.13 Bridges

Bridge construction is the building of a vehicle or pedestrian access routes across a water body or topographic depression.

6.3.6.14 Cable Routes

Cable routes are the lines along which telecommunication cables are laid.

6.3.6.15 Overhead Transmission Lines

Overhead transmission lines are electrically conducting wires hung between supporting pylons for the transmission of electrical power from generating plant to the site of consumption.

6.3.6.15 Pipeline Routes

Pipeline routes or corridors are linear sites along which hollow pipes are laid, buried, or trenched for the purpose of transmitting fluids. Examples would be oil, natural gas or sewage pipelines.

6.3.6.17 Effluent Release

Effluent release is the discharge of liquid waste, or solids in liquid suspension, from industrial or domestic uses or from sewage treatment plants, usually into a water body.

6.3.6.18 Dams and Impoundments

Dams and impoundments are structures that obstruct natural water flow patterns for the purpose of forming a contained volume of water.

6.3.7 Water Acceptability Table

The Water Acceptability Tables indicate the Coastal Management Program's location policy toward the introduction of the various uses into each of the coastal water body types. This table uses the following key:

- P = The use is prohibited (except in areas where the State of New Jersey has conveyed a riparian grant, in which case the use is discouraged.)
- D = The use is discouraged
- C = The use is conditionally acceptable, subject to the conditions identified in the next section
- E = The use is encouraged
- / = The use is impractical

Figure 5
WATER ACCEPTABILITY TABLE

	<u>Ocean</u>			<u>Open Bay</u>			<u>Semi-Enclosed Bay</u>			<u>Back Bay</u>			<u>Inland Basin</u>	<u>Man-Made Harbor</u>	<u>Channel</u>		
<u>Key</u>													Lakes and Ponds		Large Rivers	Medium Rivers and Streams	Small Creeks and Streams
	Deep 18' +	Medium 6' - 18'	Shallow 0' - 6'	Deep 18' +	Medium 6' - 18'	Shallow 0' - 6'	Deep 6' +	Medium 1/2' - 6'	Shallow 0' - 1/2'	Deep 6' +	Medium 1/2' - 6'	Shallow 0' - 1/2'					
1. Aquaculture	C	C	P	C	C	C	C	C	C	C	C	C	C	P	C	C	D
2. Boat Ramps	/	C	C	/	C	C	C	C	C	C	D	C	C	E	C	C	D
3. Retaining Structures	C	C	C	C	C	C	C	C	C	C	C	C	D	C	C	C	D
4. Docks and Piers	D	C	C	D	C	C	C	C	C	C	C	C	D	E	C	C	D
5. Dredging-Maintenance	C	C	P	/	C	P	C	P	P	C	P	P	P	E	C	C	P
6. Dredging-New	/	D	P	/	D	P	D	P	P	D	P	P	P	D	D	D	P
7. Spoil Disposal	C	P	C	P	P	C	P	P	P	P	P	P	P	P	P	P	P
8. Dumping	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
9. Filling	/	P	C	/	P	C	P	D	D	P	D	D	P	P	D	D	P
10. Piling	D	C	C	D	C	C	C	C	C	C	C	C	P	C	C	C	D
11. Mooring	P	P	P	D	D	C	C	C	/	C	C	/	P	C	C	C	P
12. Offshore Sand Mining	C	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13. Bridges	/	/	/	D	D	D	D	D	D	D	D	D	P	P	C	C	C
14. Cable Routes	C	C	C	C	C	C	C	C	C	C	C	C	P	P	C	C	C
15. Overhead Lines	/	/	P	/	/	P	P	P	P	D	D	D	P	P	D	C	C
16. Pipeline Routes	C	C	C	D	D	P	C	C	C	C	C	C	P	P	D	D	D
17. Effluent Release	C	P	P	C	P	P	P	P	P	D	D	P	P	P	C	D	P
18. Dams and Impoundments	/	/	/	/	/	/	P	P	P	P	P	P	P	P	P	P	P

Note: Water depths are measured from mean low water

6.3.8 Water Acceptability Conditions

The Water Acceptability Table identified numerous uses that are conditionally acceptable at various water locations. This section defines those conditions, in addition to the Use and Resource Policies of the Coastal Program.

6.3.8.1 Aquaculture

Aquaculture is generally encouraged, providing that water recreation and resort uses are not unacceptably restricted, and that aquaculture practices do cause adverse off-site environmental impacts.

6.3.8.2 Boat Ramps

Boat ramps are conditionally acceptable on ocean shores providing that there is a demonstrated need that cannot be satisfied by existing facilities; that the shoreline is not a high risk erosion area; and that the adjacent shorefront areas are intensely developed with resort-related uses.

Boat ramps are conditionally acceptable on bay shores and river banks providing that (a) they do not disturb intertidal flats or subaqueous vegetation, (b) there is a demonstrated need that cannot be satisfied by existing facilities, (c) there is access to an existing navigation channel of adequate depth, and (d) the location policies for upper and lower water's edge areas are satisfied. (See location policies below)

Boat ramps shall be constructed of environmentally acceptable materials such as concrete or oyster shell. Public use ramps have priority over restricted use and private use ramps. Applications for restricted and private use ramps will be approved only if they can demonstrate that a public use ramp is not feasible. Refuse barrels shall be provided as part of a boat ramp.

6.3.8.3 Retaining Structures

Bulkheads, revetments, and sea walls and other retaining structures are generally discouraged. On a case by case basis, shoreline retention structures may be considered for acceptability if it can be shown that without shoreline stabilization there is danger to life or property or that water dependent uses that satisfy the Location Policy requirements for Upper and Lower Water's Edge Areas (see Section 6.5) cannot feasibly operate without the structure. A small retaining structure that connects two existing lawful retaining structure may be considered for

acceptability if it would provide a net benefit to the environment. Rip-rap is a preferred construction material for retaining structures as it provides a habitat for aquatic life and helps absorb wave energy.

6.3.8.4 Docks and Piers

Docks and piers are conditionally acceptable in some water body types provided that: (a) there is a demonstrated need that cannot be satisfied by existing facilities, (b) the adjacent shorefront is intensely used for coastal recreation, (c) the location policies for upper and lower water's edge areas are satisfied (see Section 6.5), (d) the construction minimizes environmental impact to the maximum extent feasible and (e) there is minimum feasible interruption of natural water flow patterns. Docks and piers on pilings shall be preferred to solid constructions on fill. Applicants shall demonstrate why floating docks and piers cannot serve the required purpose.

6.3.8.5 Dredging-Maintenance

Maintenance dredging is encouraged in all existing navigation channels and boat moorings to ensure that adequate water depth is efficient for safe navigation.

6.3.8.6 Dredging-New

New dredging is generally prohibited. On a case by case basis new dredging may be considered for acceptability for boat moorings or navigation channels providing that: (a) there is a demonstrated need that cannot be satisfied by existing facilities, (b) the facilities served by the new dredging satisfy the location requirements for upper and lower water's edge areas (see Section 6.5), (c) the adjacent water areas are currently used for recreational or commercial boating, (d) the dredge area causes no disturbance to intertidal flats or subaqueous vegetation, (e) the adverse environmental impacts are minimized to the maximum extent feasible; and (f) the dredged area is reduced to the minimum practical.

6.3.8.7 Dredged Spoil Disposal

Dredged sediment may be disposed of in the deep ocean provided that: (a) no feasible land disposal is available, (b) the environmental impact in the deep ocean will not degrade valued resources, (c) toxic materials are not present in the sediments in quantities that could adversely affect marine life, and (d) sediments will not be carried by currents inland of the 18' contour.

Clean dredge sediments of suitable particle size are acceptable for beach nourishment on ocean or open bay shores.

6.3.8.8 Dumping

The dumping of solid or semi-solid waste of any description in any coastal waters is prohibited.

6.3.8.9 Filling

Filling is generally prohibited in all coastal waters. Clean sediment of suitable particle size and composition is acceptable for beach nourishment projects. Limited filling may be considered elsewhere for acceptability on a case by case basis provided that: (a) the use that requires the fill satisfies the location policies for the upper and lower water's edge (see above), (b) there is a demonstrated need that cannot be satisfied by existing facilities, (c) there is no feasible or practical alternative to filling and that filling is essential to the functioning of the use, (d) the minimum practical area is filled, (e) the adverse environmental impacts are minimized, and (f) intertidal flats and Special Water Areas are not disturbed.

6.3.8.10 Piling

Piling is usually associated with docks and shoreline structures piers and must satisfy the conditions set out above for these uses (see Section 6.7.4 above).

6.3.8.11 Mooring

Temporary or permanent boat mooring areas are conditionally acceptable in some body types provided that the mooring area is adequately marked and is not a hazard to navigation.

6.3.8.12 Offshore Sand and Gravel Mining

Offshore sand and gravel mining for mineral extraction or beach nourishment is conditionally acceptable in the deep ocean providing that: (a) areas of finfish and shellfish concentration are neither directly or indirectly degraded, (b) the physical and chemical impacts associated with turbidity and release of toxic agents from substrate layers are minimized to the maximum extent practical, and (c) the visual impact of dredging machinery from shore areas is acceptable.

6.3.8.13 Bridges

Bridges are conditionally acceptable over rivers and streams provided that there is a demonstrated need that cannot be satisfied by existing facilities and that the secondary impacts of the new or improved bridge are acceptable (see the Secondary Impact Policy in the Resources Policies).

6.3.8.14 Cable Routes

Cable routes are conditionally acceptable in the water body types as indicated in the Water Acceptability Tables, provided that (a) the route avoids Special Water Areas to the maximum extent practicable, (b) areas where anchors may foul the cable are avoided, and (c) the alignment of the cable route is marked at the landfall and by buoys at the surface.

6.3.8.15 Overhead Transmission Lines

Overhead transmission lines are generally prohibited, except over medium and small streams. In these water body types and on a case by case basis over larger water bodies, transmission lines will be considered for acceptability provided that: (a) there is a demonstrated need that cannot be satisfied by existing facilities, (b) there is no feasible alternate route that avoids crossing water bodies, (c) further development likely to be induced by the transmission lines is acceptable, and (d) adequate safety precautions are included to prevent a broken cable touching the water in case of accidental breakage.

6.3.8.16 Pipeline Routes

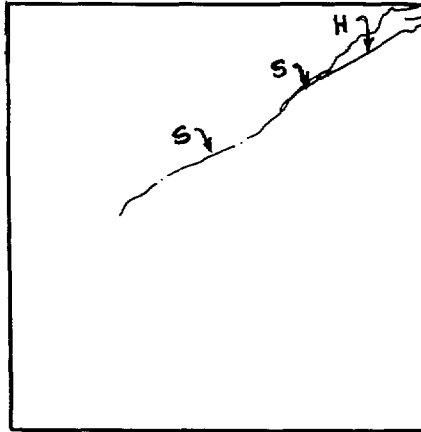
Pipeline routes are conditionally acceptable in the water body types indicated in the Water Acceptability Tables, provided that (a) they are not sited within High Risk Erosion Areas, or other Special Water Areas, unless no prudent and feasible alternate route exists, (b) trenching take place to a sufficient depth to avoid punctures or snagging sea clam dredges, and (c) the conditions outlined for pipelines in the Use Policies (See Section 7.0) are satisfied.

6.3.8.17 Effluent Release

Effluent release is conditionally acceptable in the water body types indicated, provided that all applicable water quality standards are satisfied. Standards relating to the chemical and physical quality of the effluent and to the quantity of the effluent relative to the volume and flushing rate of the water body shall be applicable.

6.3.9 Illustrative Example: Water Areas

The map below shows, to a scale of 1:24,000, the water areas present in the illustrative example. The only water area present in the study area is a Small Creek. The source of the data is the USGS 7 1/2 mile Topographic Quadrangle.



Water Areas

S = Small Stream
H = Harbor Area

6.4 Special Water's Edge and Land Areas (Step 3 - Identify and Map Special Water's Edge and Land Areas)

Certain specific types of water's edge and land areas are special and deserve focused attention and more specific location policies. These policies are supplemental to the general location policies. In case of conflict, the more restrictive policies take precedence.

6.4.1 High Risk Erosion Areas

6.4.1.1 Definition

High Risk Erosion Areas are eroding shorelines of the bay and ocean shores with a history of erosion and a high susceptibility to damage from storms. High Risk Erosion Areas can be identified by the following characteristics:

- (a) Lack of beaches
- (b) Lack of beaches at high tide
- (c) Narrow beaches
- (d) High beach mobility
- (e) Foreshore extended under a boardwalk
- (f) Low dunes or no dunes
- (g) Escarped foredune
- (h) Gaps in dune fields

- (i) Steep beach slopes
- (j) Cliffed bluffs adjacent to beach
- (k) Insufficient dune or bluff vegetation
- (l) Exposed, damaged or breached jetties, groins or seawalls
- (m) High long-term erosion rates
- (n) Pronounced downdrift effects of groins (jetties)

Thirteen specific examples of high risk erosion areas have been identified by DEP within the Bay and Ocean Shore Segment, including:

1. Cumberland County - Delaware Bay Shore (developed portions along bayshore)
2. Middle Township (developed portions of bayshore), Cape May County
3. Cape May City
4. Northern Wildwood (where Hereford Inlet fronts beach)
5. Strathmere (Putnam Avenue to end of developed island)
6. Ocean City (3rd St. to 18th St.)
7. Ocean City (E. Atlantic Blvd. to Newcastle Rd.)
8. Atlantic City (where Absecon Inlet fronts beach, Oriental Ave. to Parkside)
9. Barnegat Light (8th to 4th St.)
10. Loch Arbour to Elberon
11. Long Branch
12. Sea Bright and Monmouth Beach
13. Raritan Bay (developed portions along bayshore)

Figure 6 indicates the location of these illustrative high risk erosion areas.

6.4.1.2 Policy

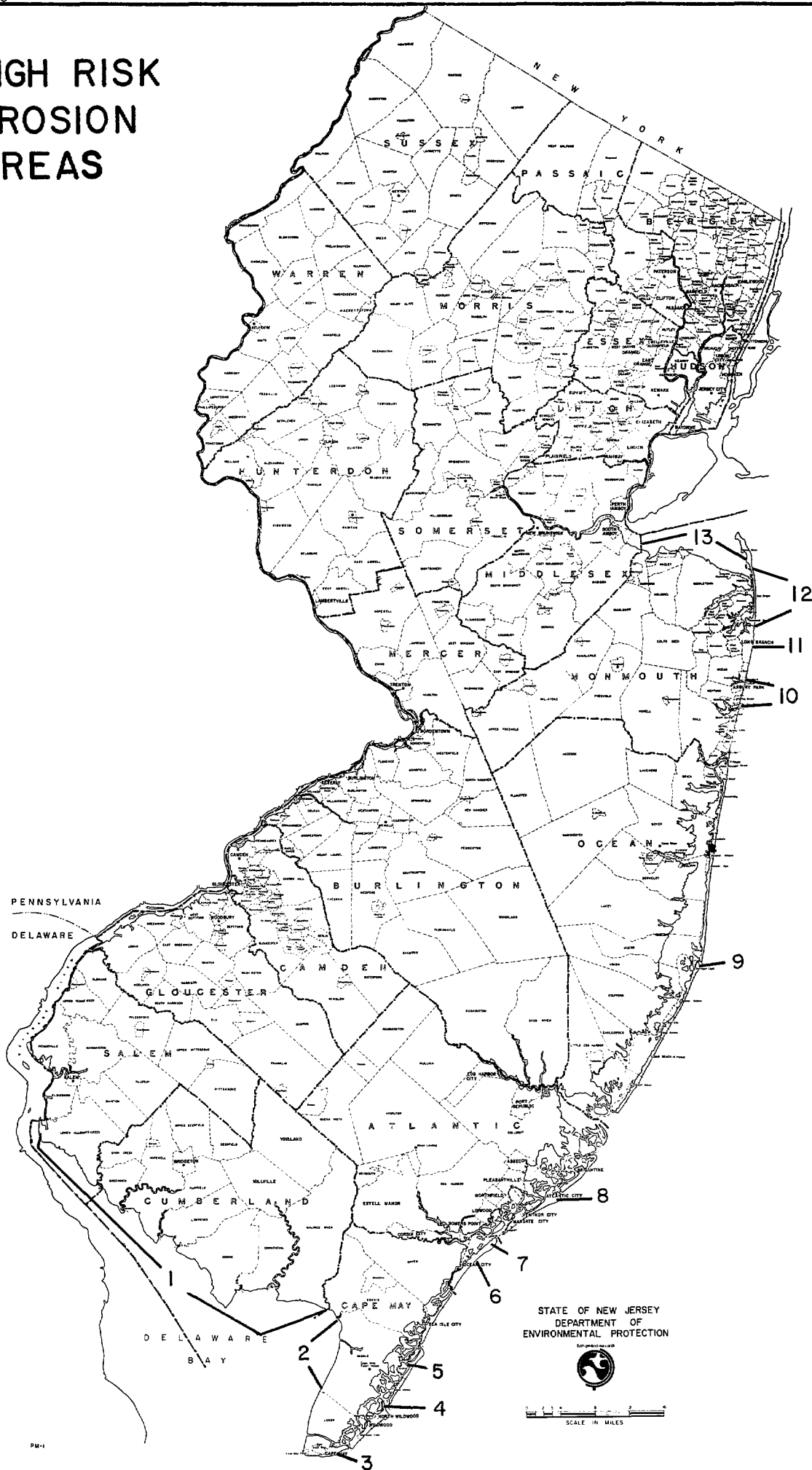
Development in high risk erosion areas is prohibited, except for shore protection measures that satisfy the shore protection Use Policies (See Section 7.0). Development that contributes to further erosion of high risk erosion areas is discouraged.

In principle development in areas that will be eroded in the mid term future (< 50 years) is discouraged.

In shorelands adjacent to rapidly eroding shorelines there are several factors that affect policy on the geographical extent of areas where development should be restricted. These include:

Figure 6

HIGH RISK EROSION AREAS



PM-1

In principle, development in areas that will be eroded in the mid term future (< 50 years) is discouraged.

In shorelands adjacent to rapidly eroding shorelines there are several factors that affect policy on the geographical extent of areas where development should be restricted. These include:

- The rate of shoreline erosion and estimated future shoreline positions without further shore protection.
- The extent and condition of existing shoreline stabilization structures.
- The extent and distribution existing private investment in endangered areas.

On a case by case by case basis, cost-benefit studies shall be conducted to establish the feasibility and beneficiaries of stabilizing a shoreline and permitting development in the protected areas.

Information shall be prepared on the factors mentioned above and cost-benefit studies performed on several alternatives including no stabilization - no development.

Decisions will be made on the basis of these studies.

For an alternative to be considered, the following conditions at least shall be satisfied.

Structural solutions to managing high risk erosion areas are conditionally acceptable, provided that the development: (a) is essential to protect highly built-up shorefront areas, or existing infrastructure, or public recreation areas, and (b) will not cause unreasonable net adverse environmental impacts along the shoreline as a result of interruption of the littoral drift. Non-structural solutions to managing high risk erosion areas are encouraged.

6.4.1.3 Rationale

As a result of continuing rising sea levels and active storm-induced sand movement and offshore currents (littoral drift), the Atlantic coastline of New Jersey is a retreating shore. Coastal erosion also affects the bayshores of New Jersey. The rate of retreat, or erosion, is not uniform, and varies locally depending upon the nature and magnitude of coastal processes operating within individual parts of the shoreline.

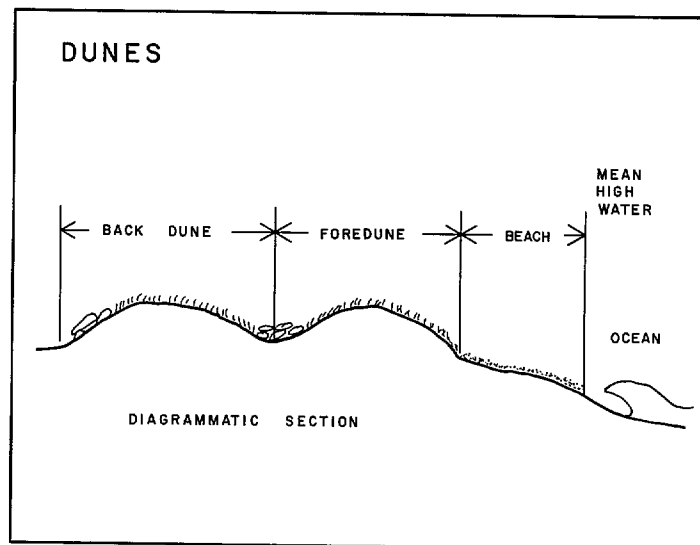
Certain parts of the shoreline have a higher risk for further erosion. Development other than restoration measures should be sharply restricted in these areas in order to protect public safety and prevent loss of life and property. In 1977, the Center for Coastal and Environmental Studies at Rutgers University completed a study commissioned by DEP-OCZM, entitled, Coastal Geomorphology of New Jersey, which analyzed the problems of shoreline erosion, classified the shoreline and identified areas of highest concern.

6.4.2 Dunes

6.4.2.1 Definition

Dunes are formations of partially stabilized, vegetated, drifting sand roughly paralleling and upland from the beaches on ocean and bay shores. The inland limit of dunes is defined topographically. Typically, the land surface rises above a beach as a foredune, flattens on a ridge line, and then falls as a back dune. This is the primary dune. Sometimes the surface rises and falls again one or more times, creating secondary or tertiary dunes. The term dune includes all areas between the inland limit of the dry, sandy beach and the foot of the most inland dune slope (see figure 7).

Figure 7



6.4.2.2 Policy

Development on dunes is prohibited, with the exception of the construction of limited pedestrian walkways supported on piles above the dune surface. The restoration of destroyed or damaged dunes and the stabilization of existing dunes and the creation of new dunes are encouraged.

6.4.2.3 Rationale

The number and extent of dunes and barrier beach vegetation have diminished along New Jersey's Atlantic coastline, due largely to extensive and intensive development on barrier islands. Most of the New Jersey's dunes are located either in publicly-owned areas such as Sandy Hook (Gateway National Recreation Area), Island Beach State Park, Little Beach in the Brigantine National Wildlife Refuge, and Higbee Beach in Cape May County (proposed for state acquisition), as well as adjacent to the developed parts of barrier island. Many but not all shorefront municipalities have ordinances to protect the dunes. Dunes serve as valuable physical storm wave protection, wildlife habitat, and aesthetic and educational resources. Dunes also provide a reservoir of sand to replace sand lost on beaches during severe storms.

6.4.3 Central Barrier Island Corridor

6.4.3.1 Definition

The Central Barrier Island Corridor is that portion of the barrier island or spit that lies between the upper boundaries of the Lower Water's Edge (beach and wetlands) that line the ocean and bay sides of a barrier island. The Central Barrier Island Corridor excludes Dune Areas, and begins at the foot of the most inland slope of dunes (See Figure 8).

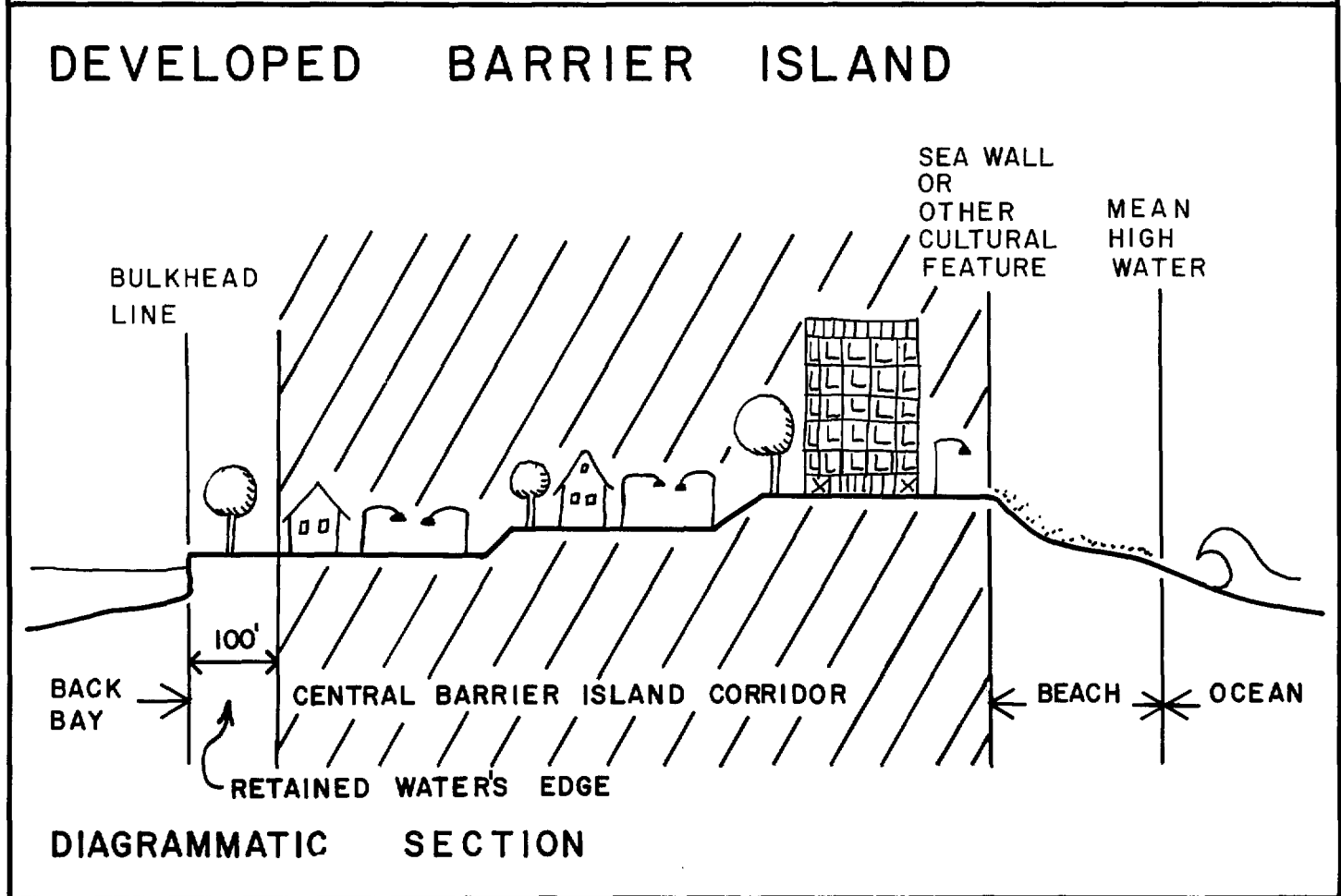
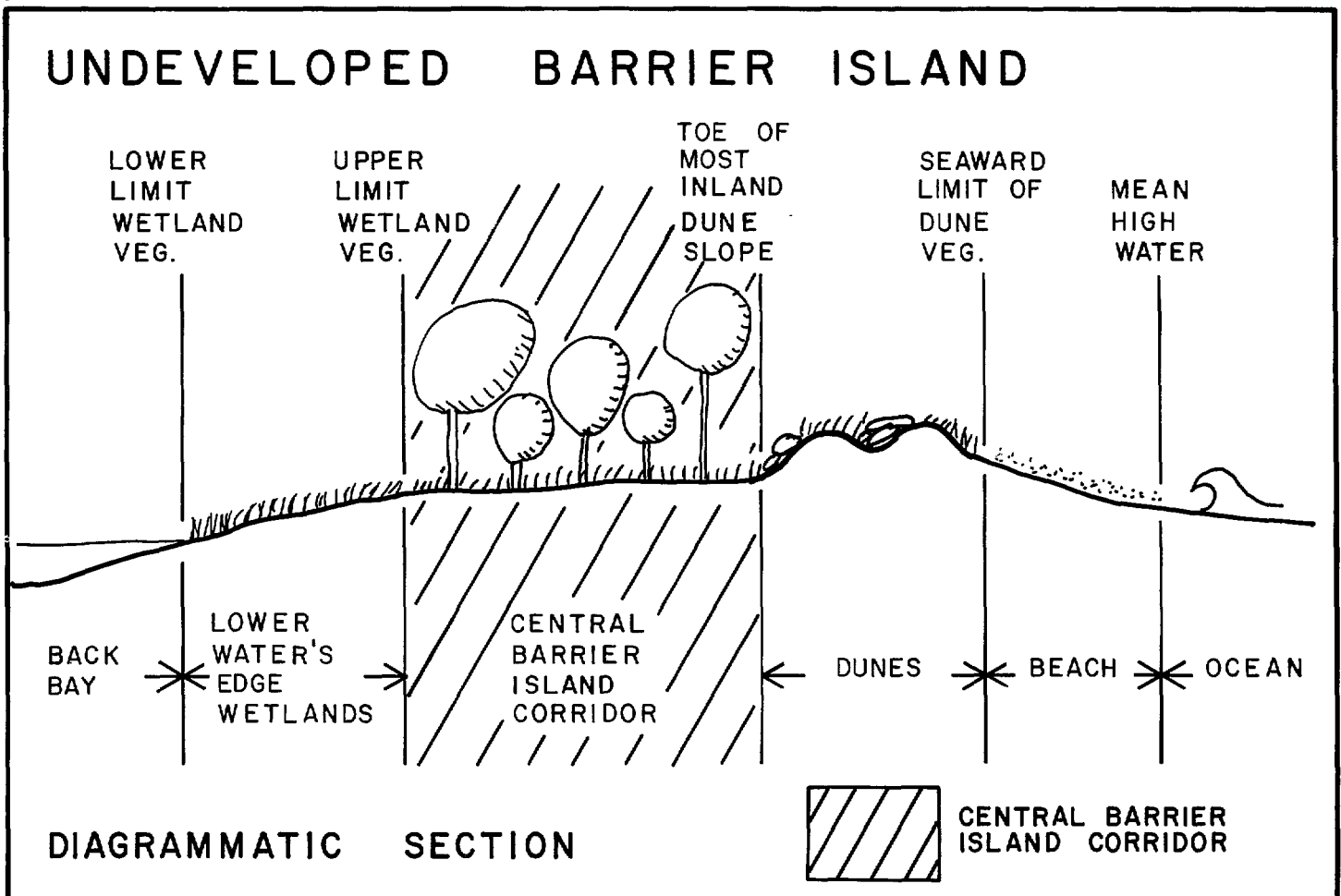
6.4.3.2 Policy

Development on the central portion of barrier islands and spits is conditionally acceptable provided that the criteria for a High Development Potential rating are met, as defined in the location policy for Land Areas (see Section 6.6 below).

6.4.3.2 Rationale

All of New Jersey's barrier islands, except for Pullen Island in the Brigantine National Wildlife Refuge, are developed to varying degrees, largely as a result of incremental decisions made beginning more

Figure 8



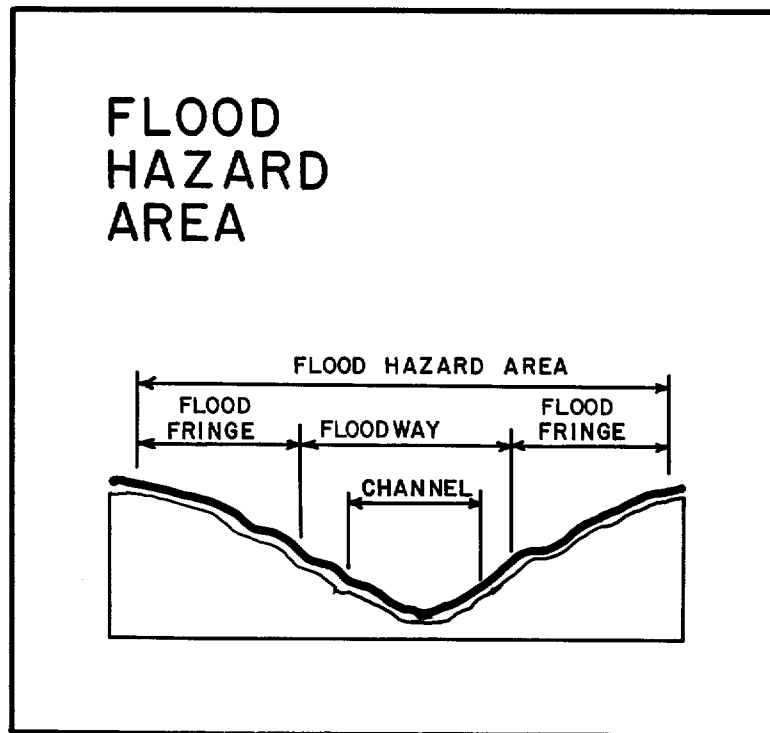
than one hundred years ago. Because the public facilities (roads and utilities) necessary to support urban and resort development already exist, and should be protected on New Jersey's barrier islands, and because development pressure is intense on barrier islands, the acceptability for development is to be determined by the Location Policy's criteria for residential development. Use of the high development potential criterion will generally encourage infill projects and discourage extensions of development on barrier islands.

6.4.4 Flood Hazard Areas

6.4.4.1 Definition

Flood hazard areas consist of the floodway and any additional portions of the flood plain inundated during flood periods where the flow exceeds the capacity of the channel (see Figure 9).

Figure 9



The floodway consists of the stream channel and portions of the adjacent flood plain necessary to carry and discharge the flood water or flood flow of any natural stream. Floodways can carry waters of 100 year flood without increasing the water surface elevation by more than 0.2 feet at any point.

Flood hazard areas are delineated by DEP by a complex engineering method. The resulting water surface profile elevations are superimposed on topographic maps to identify areas of inundation. DEP is presently delineating all flood hazard areas. Delineations have been completed for entire Raritan River Basin, outside of the Bay and Ocean Shore Segment. Of 6,500 mile of streams in New Jersey, 618 miles have been delineated and an additional 216 miles are scheduled for completion by the end of 1978.

The Army Corps of Engineers has defined, for certain streams, the water surface profiles which have been developed for both the floodway and the flood hazard area design floods. However, the delineation of flood hazard area must be determined on a case by case basis due to lack of accurate elevation maps. A complete list of streams affected by this delineation can be found in the N.J.A.C. 7:13-1.11 et seq.

In areas where the delineation of flood hazard areas using this engineering method is not complete, DEP determines the flood hazard areas on a case by case basis using a detailed elevation and stream profile information submitted by the applicant as required by DEP.

Where data gaps exist, flood hazard areas can be preliminarily identified by the use of U.S. Geological Survey Flood Prone Areas maps (scale of 1:24,000), supplemented with alluvial soil information for the small watersheds in the upland alluvial flood plains.

In tidal areas, 100 year tidal elevations have been identified for most municipalities within the Bay and Ocean Shore Segment by the U.S. Army Corps of Engineers, and can be readily indicated on USGS topographic maps as flood prone areas (there are no floodways in tidal flooding).

6.4.4.2 Policy

Development is discouraged in flood hazard areas.

Certain uses are prohibited in the floodway portion of fluvial flood hazard areas, including uses such as placing, depositing or dumping solid wastes on the delineated floodways; processing, storing or disposal of pesticides, domestic or industrial wastes, radio-active materials, petroleum products or hazardous materials; erection of structures for occupancy by humans or livestock or kennels for boarding of domestic pets; storage of materials or equipment or construction of septic tanks for residential or commercial use (see N.J.A.C. 7:13-1.2 et seq.). Not affected by this policy are hazard-free activities such as recreation, agriculture, soil conservation projects and similar uses which are not likely to cause obstructions, undue pollution, or intensify flooding.

According to N.J.A.C. 7:13-1.4(c), any lawful, pre-existing prohibited uses may be maintained in a delineated floodway provided that, if expanded or enlarged, they do not increase the flood damage potential. Property owners in delineated floodways may rebuild damaged structures, providing that any expansion or enlargement will not increase the flood damage potential.

Most uses are also regulated in the flood fringe. Structures for occupancy by humans are conditionally acceptable provided that: (a) the first habitable elevation is one foot above the 100 year flood prone line established by HUD Flood Insurance Maps, and (b) the structure will not increase flood damage potential, by obstructing flood waters.

Construction acceptable in flood hazard areas must conform with applicable flood hazard reduction standards, as adopted by the Federal Insurance Administration in HUD (Federal Register, Vol. 41, No. 207, Part II, October 26, 1976).

6.4.4.3 Rationale

Past development of lands susceptible to flooding in New Jersey has led to flood damages, with sometimes tragic social, economic and ecological consequences. Intensive development of flood plains leads to increased runoff, reduction in flood storage capacity, increased size and frequency of downstream flooding, erosion of stream banks and downstream deposition of sediments with consequent reduction in estuarine productivity. Flood plains serve as important wildlife habitat for endangered and threatened species, game and fur-bearing species, and rare species of vegetation.

6.4.5 Historic Resources

6.4.5.1 Definition

Historic resources include objects, structures, neighborhoods, districts, and man-made or man-modified features of the landscape, including archaeological sites, which either have been on or are eligible for inclusion in the State or National Register of Historic Places. The criteria are defined by the National Park Service. The range of historic resources along the coast is broad and diverse, from oceanfront Victorian "gingerbread" architecture, to examples of New Jersey's maritime heritage, to colonial homes, and Indian artifacts.

6.4.5.2 Policy

Development that detracts from, encroaches upon, damages, or destroys the value of historic resources is discouraged. Scientific recording and/or removal of the historic resource must take place, if the proposed development proposal would irreversibly affect historic resources. Development that incorporates historic resources in adaptive reuse is encouraged.

6.4.5.3 Rationale

The public interest requires the preservation of both representative and unique historical and archaeological (cultural) resources of the coast, in order to provide the present and future generations with a sense of the people, who lived, worked, and visited in the coast in the past. DEP's Office of Historic Preservation maintains an up-to-date list of properties on the New Jersey State Register of Historic Places (N.J.S.A. 13:1B-15.128 et seq.) and the National Register of Historic Places.

6.4.6 Specimen Trees

6.4.6.1 Definition

Specimen trees are the largest (diameter at 4.5 feet above ground) known individual trees of each species in New Jersey as listed by DEP-Bureau of Forestry (see New Jersey Outdoors, September-October 1977 for a listing of specimen trees). A specimen tree site is the area directly beneath the crown, also known as the dripline.

6.4.6.2 Policy

Development is prohibited that would significantly reduce the amount of light reaching the crown, alter drainage patterns within the site, adversely affect the quality of water reaching the site, cause erosion or deposition of material in or directly adjacent to the site, or otherwise injure the tree. Preservation of the site is encouraged. The site extends to the outer limit of the buffer areas necessary to avoid adverse impacts, or 50 feet from the tree, which ever is less.

6.4.6.3 Rationale

Many specimen trees have been associated with significant historical events, in addition to their scientific importance. Specimen trees are the largest known representative of a species, and frequently the oldest representative, too. Specimen trees are irreplaceable.

6.4.7 Prime Forest Areas

6.4.7.1 Definition

Low lying areas supporting Atlantic White Cedars (Ghamaecyparis thuyoides), where white cedars compose a significant percentage of stems within a given area. Generalized location maps of white cedar stands can be found in J. McCormick and L. Jones, the Pine Barrens Vegetation (1973), and forest type maps within the N.J. DEP Bureau of Forestry.

6.4.7.2 Policy

Development that adversely affects prime forest areas, including white cedar stands and their surrounding areas, is prohibited.

6.4.7.3 Rationale

White cedar stands most commonly occur in flood plains and in the fringe areas of drainage ways and bogs, which are frequently underlain with saturated organic peat deposits. This material is particularly unsuited for development unless highly altered. White cedars are usually found in swampy areas with high seasonal groundwater tables between zero to one foot.

White cedar stands, as well as other lowland swamp forests, play an important role in purifying water in coastal streams, retarding runoff, providing scenic value, and serving as a rich habitat for many rare and endangered plant and animal species, as well as game species, such as deer.

White cedar stands also act as forest fire breaks. This species in New Jersey's most valuable timber species and grows in discrete stands. The wood has a long tradition of maritime and local craft uses. Unfortunately, white cedars have been eliminated from much of their previous range in New Jersey.

6.4.8 Prime Wildlife Habitats

6.4.8.1 Definition

Areas known to be the habitat of any flora or fauna species identified as "endangered" or "threatened" on federal or New Jersey lists of endangered or threatened species, including a buffer area of sufficient dimension to ensure continued survival of the species, and other local areas serving a critical role in maintaining wildlife, particularly in wintering, breeding, and migrating. These habitats includes but are not limited to: colonial nesting bird rookeries and white-tail deer wintering yards. Information on the geographic distribution of this Special Land Area is sensitive and not widely published.

6.4.8.2 Policy

Development that causes minimal feasible interference with prime wildlife habitats is conditionally acceptable. DEP will review development proposals involving these areas on a case-by-case basis.

6.4.8.3 Rationale

The value of endangered and threatened species can not be based upon commercial or recreational industries which they help support, for these industries are usually consumptive of natural resource. Rather, the State of New Jersey, as custodian of a particular portion of the national wildlife heritage, has the obligation of stewardship on behalf of the people of the state and nation toward perpetuation of wildlife species within its borders. Natural forces and especially human actions have steadily reduced the number and diversity of certain species. The State has an obligation to use its influence and authority to keep preventable losses to a minimum and perpetuate those species faced with possible extinction.

Further, this obligation has been clearly specified by both state and federal legislation. The New Jersey Endangered and Nongame Species Conservation Act (P.L. 1973, c. 309) declares that it is the policy of the State to manage all forms of wildlife

to insure their continued participation in the ecosystem, and accord special protection to officially listed species indigenous to New Jersey in order to maintain and to the extent possible enhance their numbers.

Rare and endangered vegetation are not presently protected by specific New Jersey legislation. Rare plants, however, are covered by the federal Endangered Species Act of 1973. Fifteen species of New Jersey plants have been proposed for adoption by the Smithsonian Institute. Twelve species may occur within the coastal zone, with the majority in Pine Barrens bogs, swamps, and moist lowlands. The remaining three are northern non-coastal species.

Colonial nesting birds are species which nest in communal groups for mutual protection and to meet specific habitat requirements. Colonial nesters include coastal dependent water birds such as: herons, egrets, ibis, terns, gulls, and skimmers. These species have been severely impacted by: loss of habitat; intensive urbanization of barrier islands, flooding, vandalism, rats and human pets. Man's intensive use of barrier islands have pushed these species into more marginal sites where flooding is more frequent and summer beach visitors compete for space. White-tail deer wintering yards are limited within the Bay and Ocean Shore Segment, and frequently are associated with Atlantic white-cedar stands.

6.4.9 Public Open Space

6.4.9.1 Definition

Land areas owned and maintained by state, federal, county and municipal agencies or non-profit private groups (such as conservation organizations and homeowner's association) and dedicated to conservation of natural resources, public recreation, or wildlife protection or management. Public Open Space includes State Forests, State Parks, and State Fish and Wildlife Management Areas and designated Natural Areas Systems (N.J.S.A. 13:1B-15.12a et seq.) within DEP owned and managed lands.

6.4.9.2 Policy

Development that adversely affects public open space is discouraged. Development within public open space, such as campgrounds or paving, is conditionally acceptable provided the proposed development is consistent with the character and purpose of the public open space.

Development that creates new public open space is encouraged.

6.4.9.3 Rationale

As the rapid urbanization of New Jersey continues and leisure time increases, open space will play an increasingly important role in maintaining a desirable living environment for the residents of New Jersey. Even though the supply of open space will decrease considerably in the future under the growing pressure for development, the State's expanding population will require more public open space to satisfy its needs.

Not only is open space the basic resource for recreation facility development, it also performs other worthwhile functions. Open space can create spaces in densely settled areas, shape urban growth, provide buffers for incompatible uses, retain contiguous farmland, insure the preservation of wildlife corridors increase the economic value of adjacent land, and preserve distinct architectural, historic, and geologic sites.

The distribution of open space should not only be centered around the preservation of unique areas, but must also respond to the needs of people. Where possible, open spaces should be contiguous both visually and physically to gain a sense of continuity and to afford users continued movement through the public open spaces.

6.4.10 Steep Slopes

6.4.10.1 Definition

Areas with slopes greater than 15% and with soil erodability (K factor) of 0.25 or greater, or slopes greater than 25% with soil erodability factor of 0.15 or greater. Only a few such areas exist in the relatively flat Coastal Plain of New Jersey.

6.4.10.2 Policy

Development of steep slope sites will be conditionally acceptable only if there is no prudent or feasible alternative site, and erosion and sedimentation control measures are incorporated in the design, construction, and operation of the development according to standards set by the U.S. Soil Conservation Service.

6.4.10.3 Rationale

Steep slopes occur in the Bay and Ocean Shore Segment along certain tributaries of the Delaware River, and the Raritan River, in the northeastern portion of Monmouth County known as the Highlands, which is bounded by Sandy Hook Bay and the Navesink River. Slope maps are available from NJDEP/OCZM based on U.S.G.S. Topographic Quadrangle sheets (1:24,000 scale). Isolated steep slope areas are also found near headwaters of coastal streams.

Preservation of steep slopes prevents soil erosion, protects up-slope lands, minimizes pollution surface waters, and reduces flooding. When vegetation is stripped rainfall strikes surface soils causing soil particle movement through surface water flow and gravity, resulting in increased surface runoff and downstream flooding. When this silty water enters a surface water body, increased turbidity and sedimentation usually follow which can cause reduction of productivity and flood water storage capacity. Aesthetics are also affected when gullies and rills are formed as topsoil is lost.

6.4.11 Prime Agricultural Areas

6.4.11.1 Definition

Large, contiguous tracts of 20 acres or more of actively-farmed or presently fallow or vacant lands with soils in the Prime Agricultural Capability Classes I and II as mapped by the U.S. Soil Conservation Service.

6.4.11.2 Policy

Development of Prime Agricultural Areas for non-farming purposes is discouraged unless continued farming is:

- (a) incompatible with adjacent development that carries out the policy to concentrate the pattern of development, and
- (b) infeasible on a long-range basis because of the location, or other characteristics of the site.

6.4.11.3 Rationale

Prime Agriculture Areas are an irreplaceable natural resource essential to the production of food and fiber, particularly in the "Garden State." Preservation of large, contiguous areas of Prime Agricultural Lands for farming serves both private and public interests, particularly in terms of ready access to locally-grown food, jobs and open space. At the same time, the policy here recognizes the desirability of minimizing conflicts between farm and urban areas. Appropriate buffers may help minimize compatibility problems.

6.4.12 Bogs

6.4.12.1 Definition

Bogs are local undrained topographic depressions with the seasonal high water table at surface, fed by groundwater, usually underlain with peat and other organic material. Water in bogs is acidic, nearly free of dissolved nutrients.

6.4.12.2 Policy

Development that would adversely affect the natural functioning of the bog or ephemeral pond environment is prohibited.

6.4.12.3 Rationale

Bogs, while limited in extent in the Bay and Ocean Shore Segment, are the habitat for many rare and endangered species of plants and animals. Bogs are inappropriate development sites due to poor drainage and load bearing capacity of the underlying soils.

6.4.13 Stream Heads

6.4.13.1 Definition

A stream head is the area immediately upland from a spring line or the inland unit of ephemeral or intermittent streams. A bulb of moisture forms in the soil in this area, which discharges into surface water channels.

The head is defined as a 300 foot buffer zone measured from points where a line projected upland along the line of the stream intersects the line defining the limit of seasonal high water table at surface. A stream head also extends 50 feet on both sides of intermittent or perennial stream channels, when the limit of seasonal high water table at surface does not extend to the end of the stream channel. (See Figure 10).

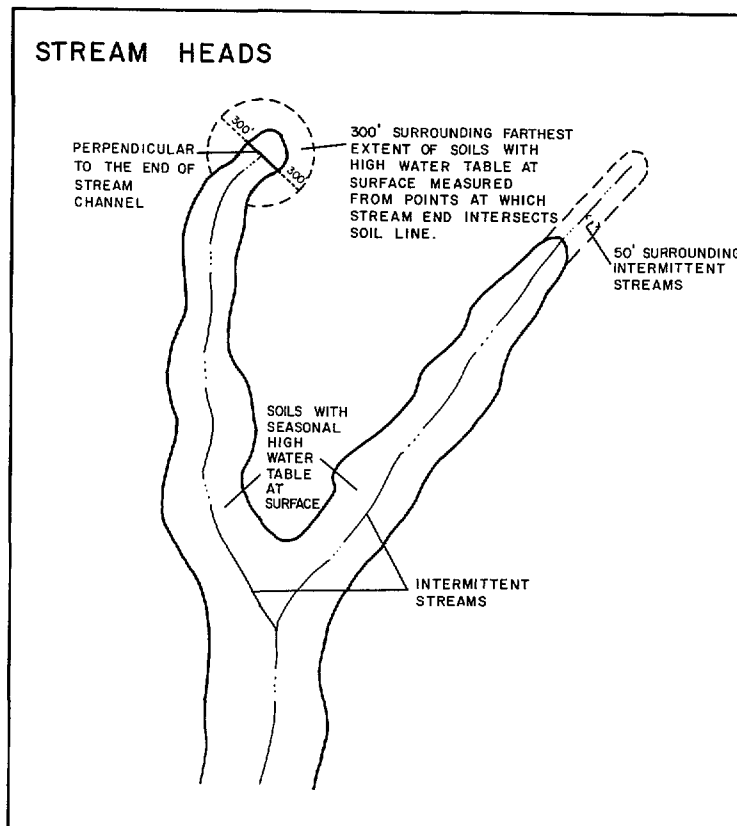
6.4.13.2 Policy

Development that would adversely affect the natural functioning of stream heads is prohibited. In particular, paving, filling, effluent discharge, vegetation disturbance, and disturbance of drainage patterns are prohibited.

6.4.13.3 Rationale

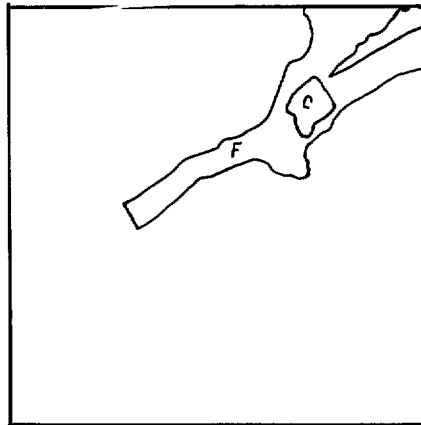
Stream heads serve as groundwater discharge areas that help maintain the quality of the water regimen of streams, and directly protect the quality of coastal waters. Stream heads are the source of perennial and ephemeral streams.

Figure 10



6.4.14 Illustrative Example: Special Water's Edge and Land Areas

The map below shows, to a scale of 1:24,000, the Special Water Areas present in the illustrative example. The areas included on this site are Flood Hazard Areas and Cedar Stands. The data source for the Flood Hazard areas is either N.J. DEP Flood Hazard areas or Army Corps of Engineers Flood Hazard Areas, or USGS Flood Prone Areas supplemented with alluvial soils, or in tidal areas the 100 year tidal elevations defined by the Army Corps of Engineers. The data source for White Cedar Stands is either "The Pine Barrens Vegetation Geography" by Jack McCormick and L. Jones, or NJ DEP Bureau of Forestry Maps.



Special Land Areas

Legend:

F = Flood Area
C = Cedar Stands

6.5 Water's Edge Areas (Step 4 - Identify and Map Water's Edge Areas)

6.5.1 Lower Water's Edge

6.5.1.1 Definition of Lower Water's Edge

The lower boundary line of the Lower Water's Edge is either the mean high water line or in the case of coastal wetlands the seaward limit of wetlands vegetation. The upper boundary of the Lower Water's Edge is either the upland limit of coastal wetlands vegetation as defined by the Upper Wetlands Boundary on NJDEP Wetland maps or the upland limit of beaches defined either by the upland limit of unvegetated

sandy beach or the first cultural feature such as road, seawall or boardwalk. These two Lower Water's Edge types shall be known as wetlands and beaches respectively. Natural water's edges without beaches or coastal wetlands, and retained and filled areas at the mean high water line, with no remaining natural wetlands or beach area, are considered to be Upper Water's Edge areas. Figure 11 presents sketches defining the Lower Water's Edge.

6.5.1.2 Wetlands Policy

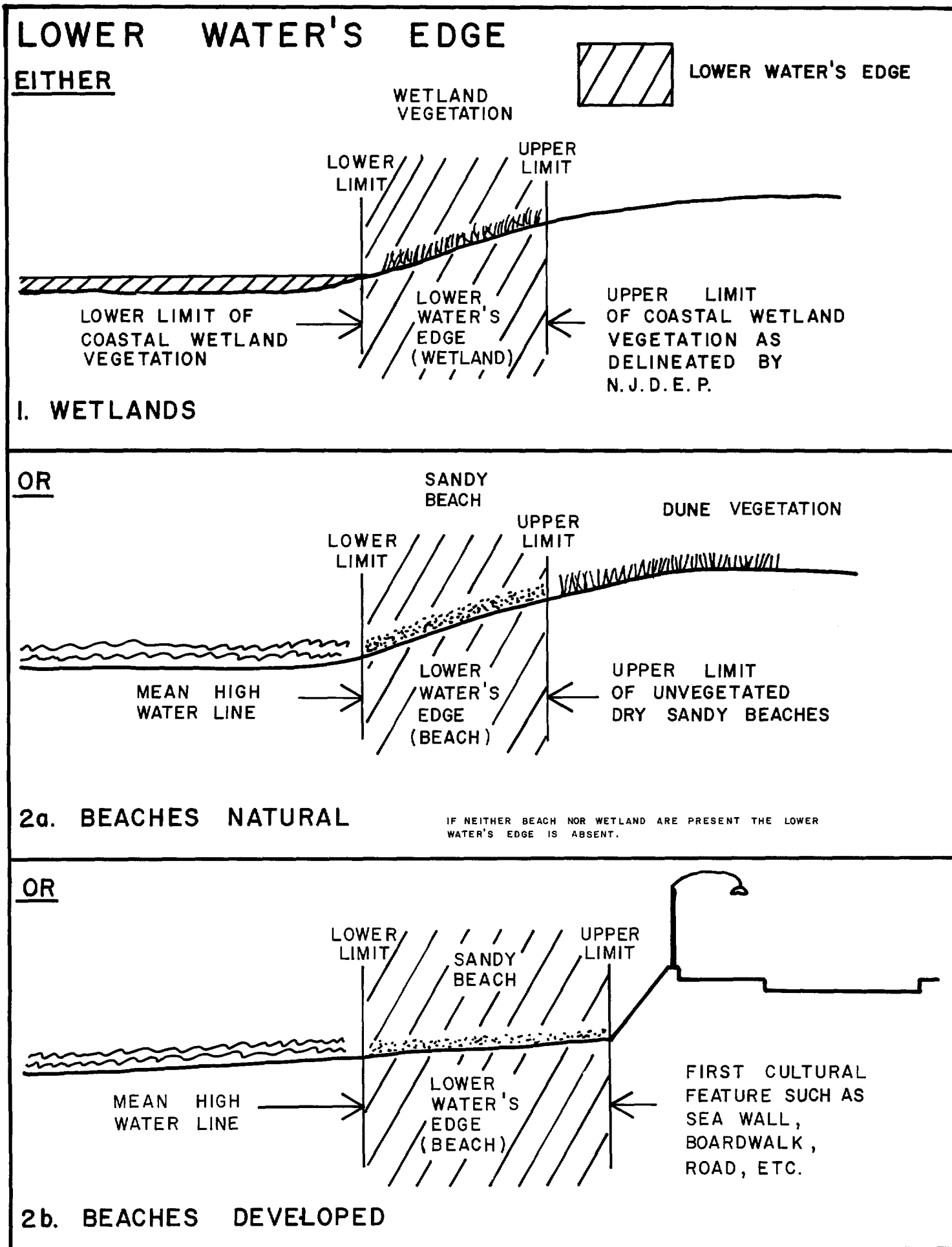
- (a) In general, development of all kinds is discouraged in wetlands, unless DEP can find that the proposed development (see N.J.A.C. 7:7A-1.4):
 - (i) Requires water access or is water oriented as a central purpose of the basic function of the activity (this policy applies only to development proposed on or adjacent to waterways);
 - (ii) Has no prudent or feasible alternative on a non-Wetland Site,
 - (iii) Will result in a minimum feasible alternation or impairment of natural tidal circulation, and
 - (iv) Will result in minimum feasible alternation or impairment of the natural contour or the natural vegetation of the wetlands.
- (b) In particular, dumping solid or liquid wastes, and applying or storing certain pesticides on wetlands are prohibited (See N.J.A.C. 7:7A-1.2).

6.5.1.3 Rationale for Wetlands Policy

The environmental values, social values, and fragility of coastal wetlands have been officially recognized in New Jersey with the passage of the Wetlands Act of 1970 (N.J.S.A. 13:9A-1 et seq.) Coastal wetlands are undoubtedly the most environmentally valuable land areas within the coastal zone.

Coastal wetlands contribute to the physical stability of the coastal zone by serving as: (a) a transitional area between the forces of the open sea and upland areas by absorption and dissipation of wind driven storm waves and storm surges, (b) flood water storage areas, thus reducing inland damage, and (c) sediment and pollution traps. Also, wetlands perform naturally the waste water treatment process of removing phosphorous and nitrogenous water pollutants, unless the wetlands are stressed.

Figure 11



The biological productivity of New Jersey's coastal wetlands is enormous and critical to the function of estuarine and marine ecosystems. The emergent cord grasses and associated algae mats converted inorganic nutrients into organic vegetative material through the process of photosynthesis which is the critical basis for estuarine and marine food webs. The primary biological productivity of New Jersey's coastal wetlands is greater than that of terrestrial corn and wheat fields on a per acre basis. However, this value is not clearly apparent and was formerly overlooked. The principal direct dietary beneficiaries of organic wetland detritus are bacteria and protozoan, which are in turn fed upon by large invertebrates, and then the commercial and recreational important finfish, shellfish, and waterfowl and other aquatic birds which contribute to social and aesthetic resources of the coast. New Jersey's Coastal Wetlands are fact prime wintering habitat annually for hundreds of thousands of migratory waterfowl. Approximately two-thirds of marine finfish and shellfish are known to be estuarine and therefore, wetland dependent.

DEP encourages both the restoration of degraded wetlands as a mitigation measure for certain types of approved wetlands development and the creation of new wetlands in non-sensitive areas. The Division of Marine Services has previously required restoration of temporarily disturbed wetlands and will continue to do so in a case-by-case basis. The construction of new vegetated wetlands is a highly technical activity requiring a great degree of precision and understanding of the estuarine system.

6.5.1.4 Beaches Policy

- (a) Unrestricted public access to beaches is encouraged. Development that unreasonably restricts access to beaches is discouraged.
- (b) Development with paving and structures is prohibited on beaches, unless the proposed development has no prudent or feasible alternative on a non-beach location.
- (c) In cases where development already exists on the beach, additions to these structures will be prohibited unless, the applicant can prove that there is no prudent or feasible alternative site for the proposed use. The existence of the structures on the beach is not sufficient for their expansion.

6.5.1.5 Rationale for Beaches Policy

Undeveloped beaches are vital to the New Jersey resort economy. Unrestricted access for recreational purposes is desirable so that the beaches can be enjoyed by all residents and visitors of the state. Public access will be required for any beaches obtaining state funds for shore protection purposes.

Beaches are subject to coastal storms and erosion from offshore currents. Public health and safety considerations require that structures are excluded from beaches to prevent or minimize loss of life or property from storms and floods, except for some shore protection structures and linear facilities, such as pipelines, when non-beach locations are not feasible.

6.5.1.6 Lower Water's Edge Information Requirements

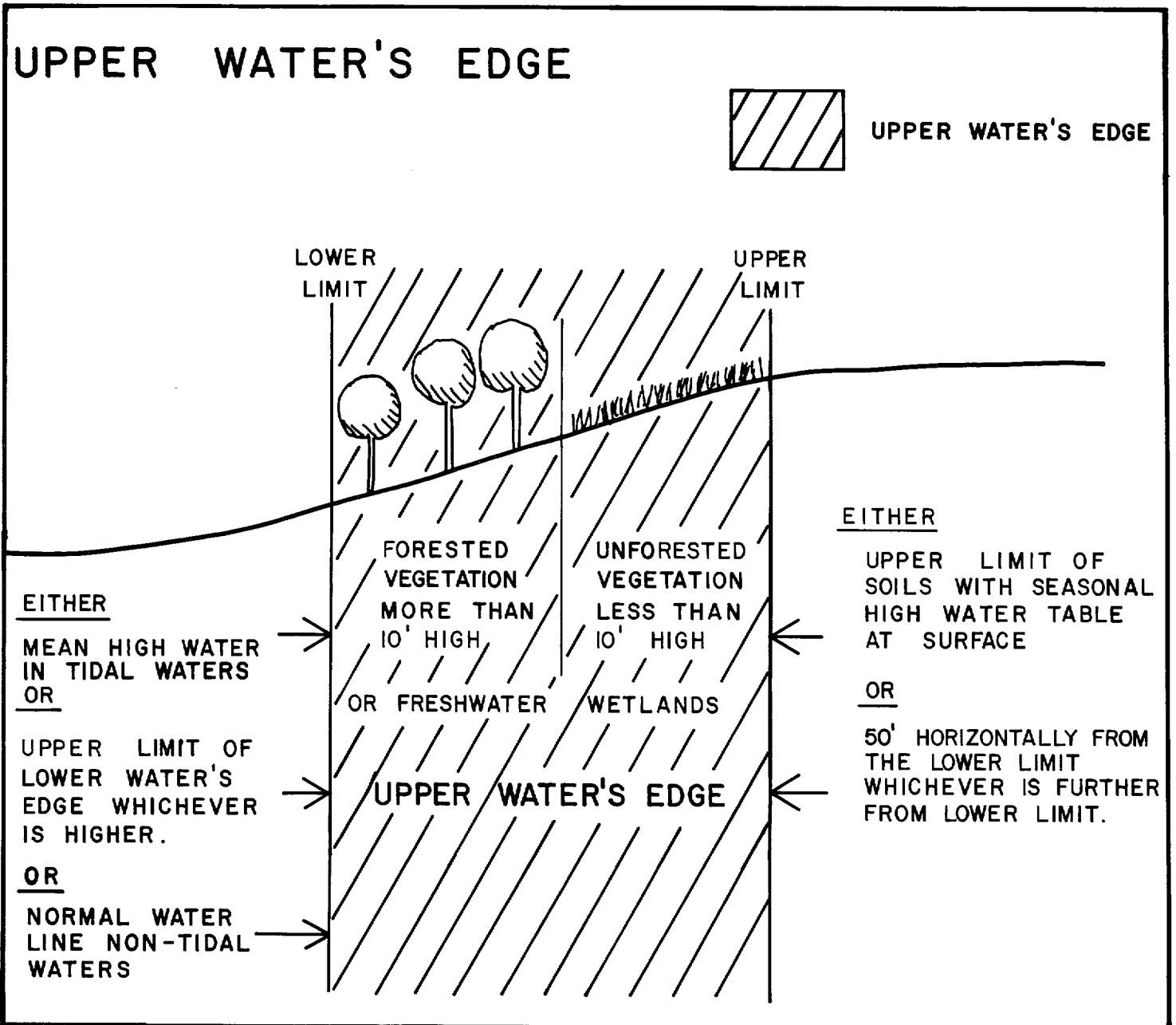
Development proposals shall map and label the wetlands and beach areas of a proposed site at a scale of 1:24,000 at the pre-application stage and at least 1:2,400 at the application stage, indicating data sources. DEP Wetlands maps shall be used. Pending completion of the DEP Tidelands Delineation Program, the mean high water line shall be as indicated on DEP Wetlands maps or the edge of water bodies as delineated on U.S.G.S. topographic quadrangles (1:24,000 scale). The inland limit of beaches shall be determined from aerial photograph or a site survey.

6.5.2 Upper Water's Edge

6.5.2.1 Definition

The Upper Water's Edge lies between either the mean high water line or the upland limit of coastal wetlands vegetation (Upper Wetlands Boundary) as delineated by the NJ DEP Wetlands maps or the upland limit of beaches (limit of sandy, unvegetated area, or first cultural feature), or the normal water line of non-tidal permanent surface water features, whichever is furthest inland, and either the upland limit of soils contiguous with stream corridors or bay shores with a seasonal high water table at the surface, as defined by the U.S. Department of Agriculture, Soil Conservation Service, or 50 feet from the landward limit of the Lower Water's Edge, whichever is further from either the mean high water line or the normal water line of non-tidal permanent surface water features. Figure 12 presents sketches defining the Upper Water's Edge. The Upper Water's Edge includes freshwater (non-tidal) wetlands, along non-tidal surface water features. Soils with a

Figure 12



seasonal high water table at the surface which are not contiguous with stream corridors or bay shores are defined as wet terraces (See Section 6.6).

6.5.2.2 Policy

In general, development (within the jurisdiction of DEP under CAFRA) is prohibited in Upper Water's Edge areas, unless DEP can find that the development satisfies all the following conditions.

- (a) Requires direct water access or is water-oriented as a central purpose of the basic function of the activity, (this policy applies only to development proposed on or adjacent to waterways),
- (b) Has no prudent or feasible alternative on a non-Upper Water's Edge site,
- (c) Is immediately adjacent to existing water's edge development, defined as water's edge areas that have been filled, with or without retaining structures, and contain paving or structures.
- (d) Would result in minimal feasible alteration of valuable on-site vegetation, including forest vegetation of more than ten feet high.

6.5.2.3 Rationale

The Upper Water's Edge coincides fairly closely with areas periodically inundated by flood waters. In these areas, ground water is near or at the surface. Construction in these areas is often impossible without filling or piling. When left undeveloped, these upper water's edge areas serve the following various functions critical to the protection of coastal ecosystems and the health and safety of coastal residents:

- (a) Water Purification. If a vegetated buffer is preserved adjacent to water bodies, contaminated surface water flowing from the land is filtered and purified by passage through the soil and by the growth processes of plants. This buffering function helps to protect coastal water quality in wetlands, streams and bays.
- (b) Channel stabilization. Vegetation on the banks of streams and rivers stabilizes the soil with the roots, and helps to prevent bank erosion and stream turbidity and sedimentation.

(c) Control of Stream Flow Variations. When precipitation falls on a vegetated stream watershed, water moves toward stream channels fairly slowly and predominately through the ground. Flow in the stream increases gradually some time after the onset of precipitation, reaches a peak, and then decreases slowly some time after the end of precipitation. This curve is called the hydrograph of the stream. The groundwater reservoir acts as a buffer modifying abrupt changes of flow and produces a gentle hydrograph.

When a watershed is paved, more runoff flows overland and less through the ground. The buffering effect of slow subsurface movement of water is lost. Large amounts of water may reach the stream shortly after precipitation has begun. The storm hydrograph shows a steep peak flow, sometimes known as a "flashy hydrograph". This abrupt change of overland and stream flow can cause land and bank erosion, stream turbidity, siltation and flash floods in downstream areas. A vegetated buffer around streams, particularly if there is a detention swale on the upland boundary, helps to produce a more natural storm hydrograph and prevent the problems associated with abrupt runoff increases.

(d) Erosion and Sediment Control. Surface water runoff is a well-documented source of water quality degradation. Runoff carries sediment which, if it reaches surface water, causes turbidity reducing light penetration into water, and disturbing wetlands, aquatic photosynthesis, and estuarine productivity. Vegetated water's edge buffers trap sediment in roots and stems and reduce land erosion and water turbidity.

(e) Flood Control. Areas adjacent to surface water that are periodically inundated by flood water provide valuable flood storage. Filling and structures reduce this storage capacity. This storage protection is especially important on stream and river flood plains where any reduction of flood storage capacity will increase downstream flooding, and pose a threat to health, safety, and welfare.

(f) Maintenance of Estuarine Productivity. A significant amount of the primary productivity of estuaries originates in the floodplains of tidal streams and rivers, and in freshwater wetlands. Floods periodically deposit organic sediments on the flood plains. These deposits, together with abundant moisture, make these areas very fertile. Vegetation grows swiftly and abundantly. Organic detritus from

leaves and dead plants is washed to the streams, which carry it to estuarine waters where the detritus becomes the basis for estuarine food webs.

(g) Maintenance of Wildlife Habitats. Flood prone areas are very important wildlife habitats. The branching nature of streams serves as wildlife movement corridors. Even when development is intense between stream corridors, preserved vegetated buffers along streams help maintain wildlife species diversity and numbers.

(h) Recreation. The linear branching nature of streams also offers the possibility of providing green walkways and bikeways, if vegetated buffers are preserved.

6.5.2.4 Upper Water's Edge Information Requirements

Development proposals shall map and label the upper water's edge areas of a proposed project at a scale of 1:24,000 at the pre-application stage and at least the 1:2,400 scale at the application stage, indicating sources of information and the lower and upper boundaries of the upper water's edge. These areas shall be labeled Upper Water's Edge. If the on-site vegetation is greater than 10 feet in height, as established by site survey, then the area shall be labeled FORESTED. If the vegetation is less than 10 feet high and not wetlands vegetation, the area shall be labeled UNFORESTED. Areas growing freshwater vegetation shall be labeled FRESHWATER WETLANDS.

At the application stage, the inland limit of the upper water's edge should be defined by an on-site soil survey.

6.5.3 Retained Water's Edge

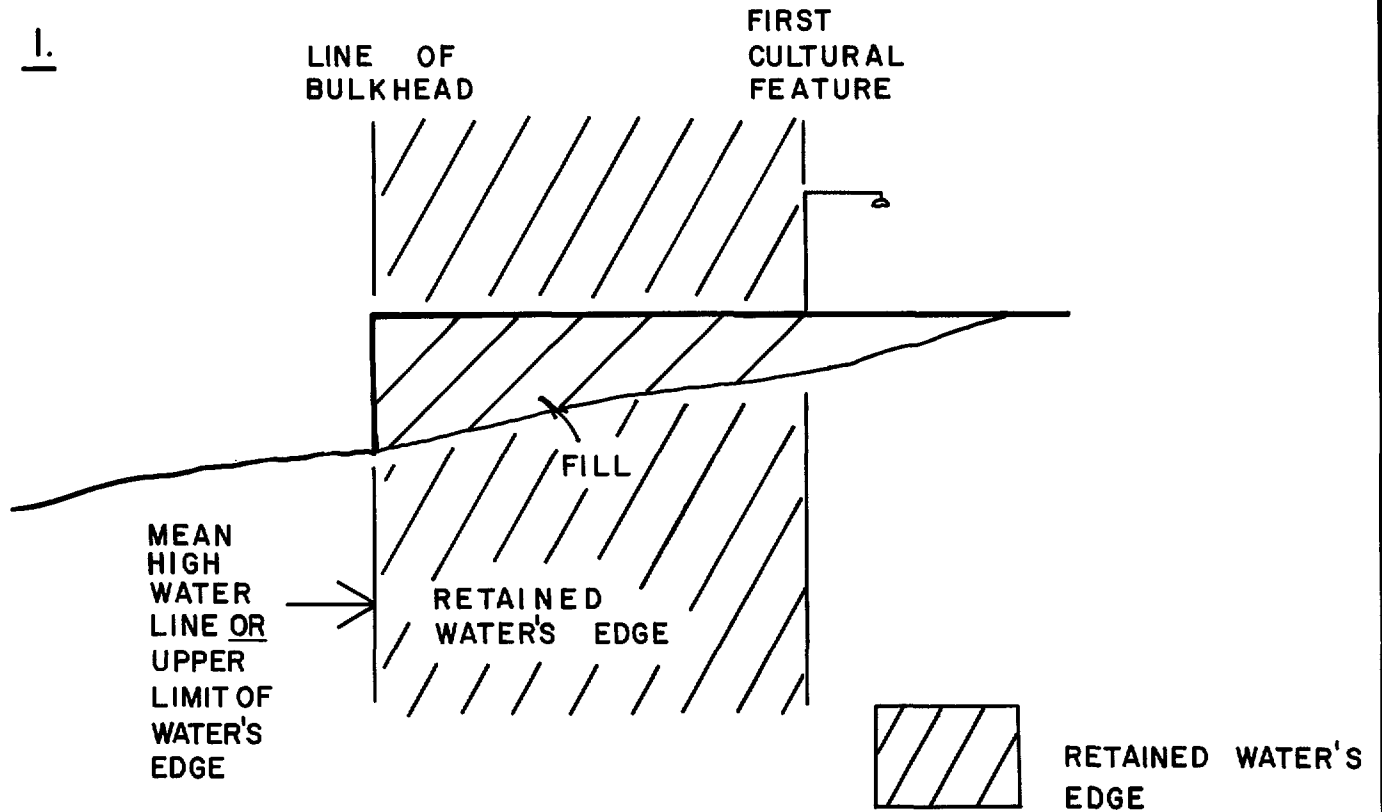
6.5.3.1 Definition of Retained Water's Edge

Retained Water's Edge Areas are adjacent to either water areas or lower water's edge areas as defined above and stabilized with existing bulkheads, revetments or sea walls. The lower limit of the Retained Water's Edge is the line of the retaining structure. The upper limit of the Retained Water's Edge is either the first public cultural feature inland from the retaining structure (such as a road or boardwalk) or 100 feet inland, whichever is the lesser. Two types of Retained Water's Edge are defined: those along open water bodies and those along man-made lagoons. Figure 13 presents a sketch showing the extent of the Retained Water's Edge.

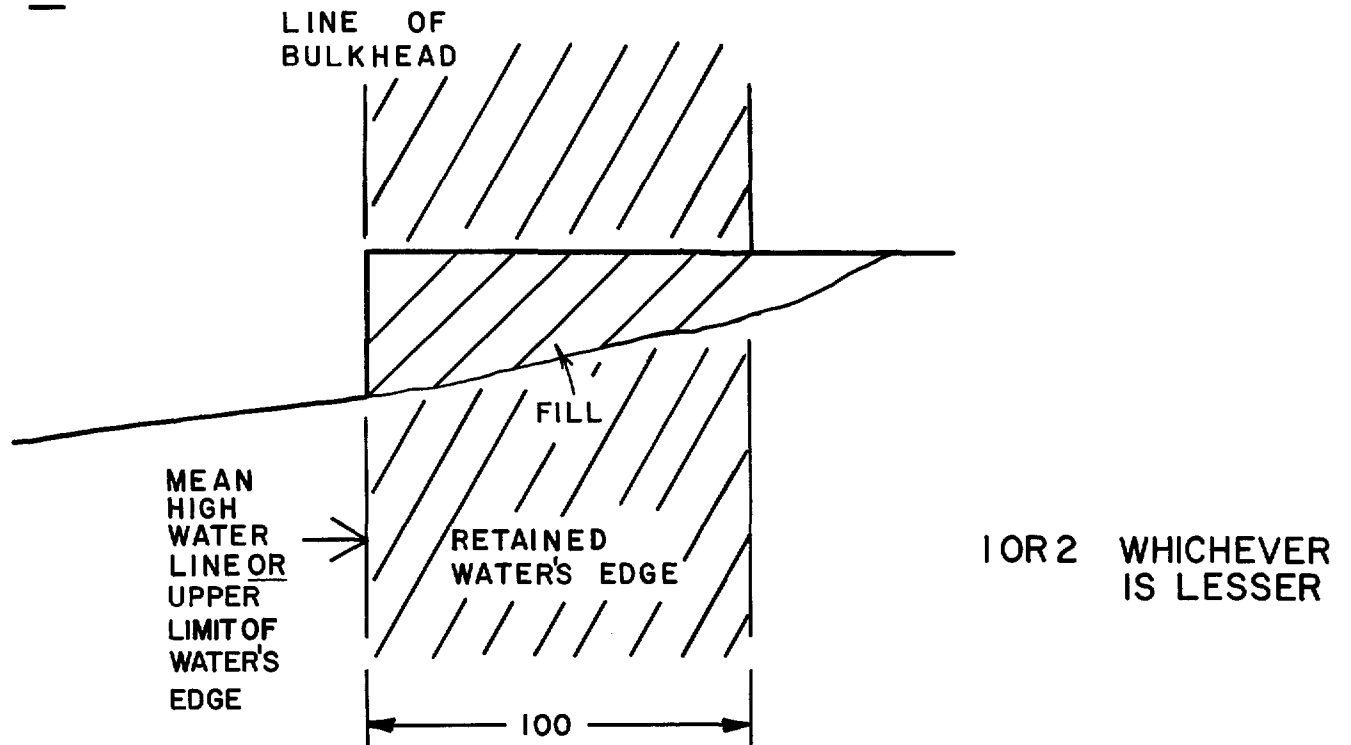
Figure 13

RETAINED WATER'S EDGE

1.



2.



6.5.3.2 Policy

Development is acceptable in retained water's edge areas along open water bodies providing that: (a) the development is either water dependent or the site is proposed for a public recreation or resort use (This latter category would include waterfront parks) and is compatible with adjacent land uses, (b) the structural condition of the existing retaining structure is adequate to protect or the proposed development provides for adequate repair of the structure, and (c) the site is not a High Risk Erosion Area (Section 6.4.1) or would contribute to the extension of a Central Barrier Island Corridor (Section 6.4.3).

Development is conditionally acceptable on retained water's edge areas along existing non-developed man-made lagoons providing that:

- (a) the development is compatible with adjacent uses,
- (b) the structural condition of the existing retaining structure is adequate to protect the proposed development or the proposed development provides for adequate repair of the structure,
- (c) the development provides a net benefit to the environment, and
- (d) storm water drainage techniques satisfy the runoff policies in the Resource Policy section.

6.5.3.3 Rationale

In retained water's edge areas environmental concerns are less than in undisturbed water's edge areas. The buffering functions of the water's edge have already been largely lost through filling and the construction of retaining structures. Providing that runoff from paved areas is not discharged directly into the adjacent water bodies, it is desirable to allow certain kinds of development up to the line of the retaining structure. Because the waterfront is a scarce resource, it is desirable to limit development in these areas to uses that are either dependent direct water access or uses that are related to shoreland recreation and benefit the most number of people. The construction of new private housing along open water bodies would be an inefficient use of this scarce resource, but such uses as public waterfront parks, hotels would be restaurants are desirable.

6.5.4 Filled Water's Edge

6.5.4.1 Definition of Filled Water's Edge

Filled Water's Edge areas occur when existing filled areas lie immediately adjacent to Water or Lower Water's Edge areas, and there is no retaining structure along the shoreline. The lower boundary of the filled Water's Edge is the upper limit of the Lower Water Edge, either the: (a) Upper Wetlands Boundary as delineated by DEP, (b) upper limit of the dry sand beach, or (c) the mean high water line. The upper boundary of the Filled Water's Edge is 25 feet inland from the top of the fill slope. Two types of Filled Water Edge are defined: those along open water bodies and those along existing man-made lagoons. Figure 14 presents a sketch of the Filled Water's Edge.

6.5.4.2 Policy

The development of Filled Water's Edge areas along open water bodies is discouraged. Development on non-filled Water's Edge areas that is deemed acceptable under the Location Policies must include planting the slope of the Filled Water's Edge in native adapted shrubs and trees, while the 25 foot buffer may be planted in a mix of appropriate woody and herbaceous native species.

In addition, development is conditionally acceptable on Filled Water's Edge areas along existing non-developed, man-made lagoons provided that the development also:

- (a) is compatible with adjacent uses, and
- (b) provides a net benefit to the environment.

6.5.4.3 Rationale

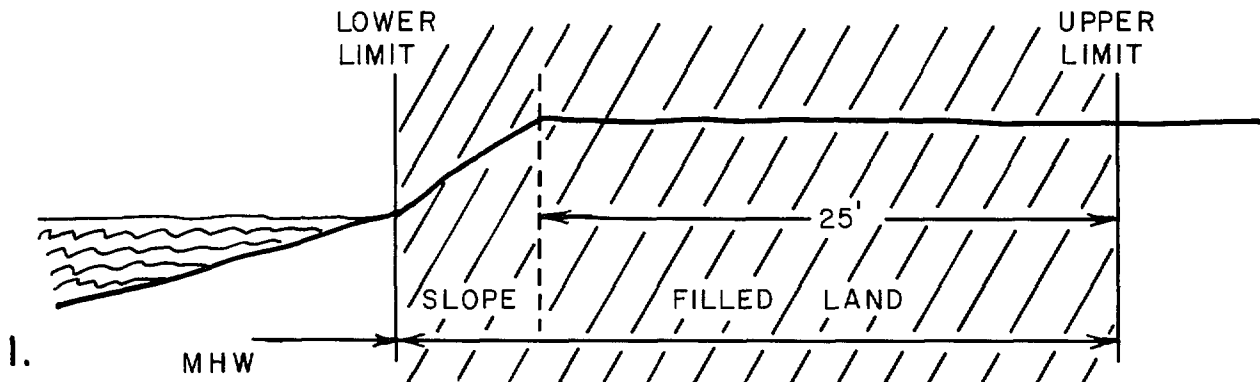
Filled lands adjacent to water represent potential problems for water quality. The slope must be stabilized in order to prevent erosion, turbidity and loss of estuarine productivity. The twenty-five foot buffer is necessary in order to protect the top of the slope as well as to act as a visual and water quality buffer.

These problems have been well documented in Grant F. Walton, et.al, Evaluation of Estuarine Site Development Lagoons (New Brunswick, N.J.: Rutgers-Water Resources Research Institute, 1976). Thousands of undeveloped building lots exist in the Bay and

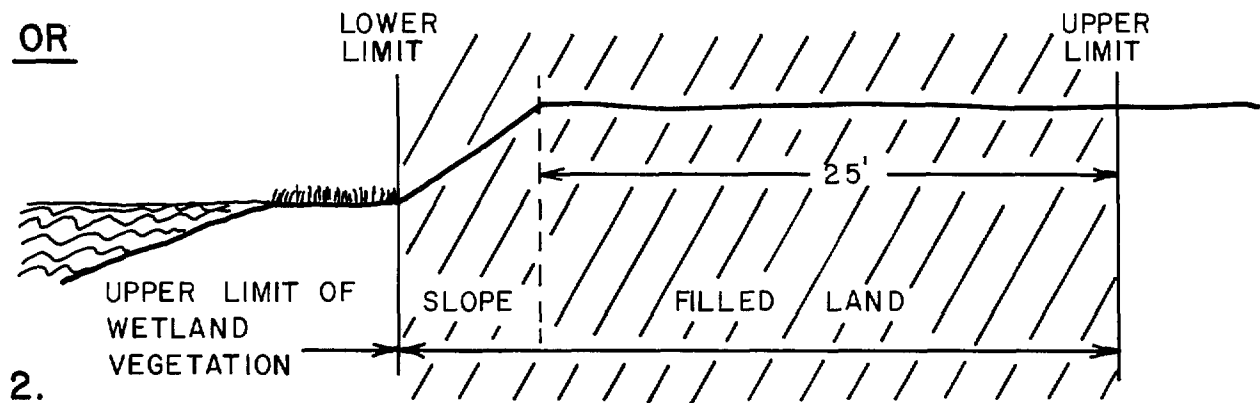
Figure 14

FILLED WATER'S EDGE (No Bulkhead)

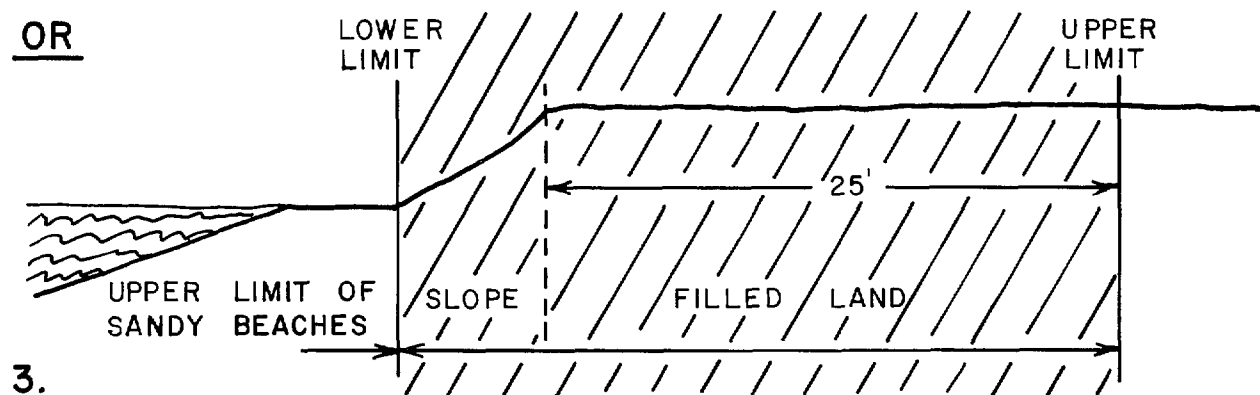
EITHER



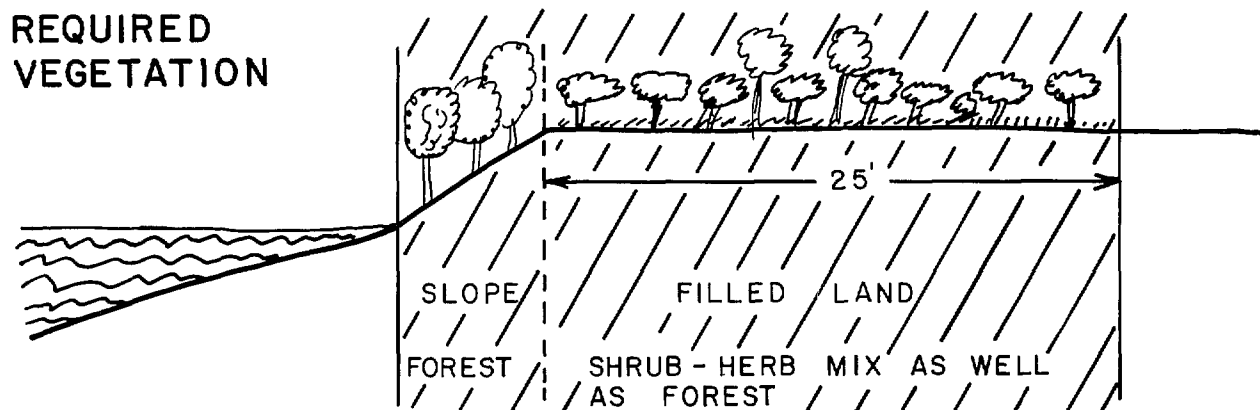
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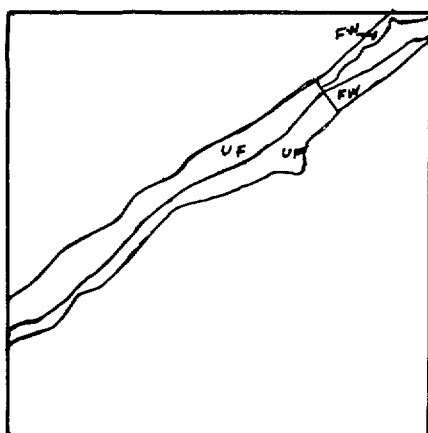
REQUIRED VEGETATION



Ocean Shore Segment along stabilized and unstabilized lagoons created by destroy wetlands in the 1950's and 1960's. Development of these residential lots is acceptable provided that water quality standards are met and the banks of the filled areas are revegetated, since the fundamental and near irretrievable damage to the environment of these areas took place a decade or more ago.

6.5.5 Illustrative Example: Water's Edge Areas

The map below shows, to a scale of 1:24,000 the Water's Edge Areas present in the illustrative example. The areas included in this site are filled Water's Edge Areas and Forested Upper Water's Edge Areas. The data source for the filled waters edge is the SCS County Soil survey and aerial photographs.



Water's Edge Areas

Legend:

FW = Filled Water's
Edge Area
UF = Forested Upper
Water's Edge Area.

6.6 Land Areas

6.6.1 General Definition of Land Areas

All areas inland from the upper boundary of the Upper Water's Edge are defined as Land Areas.

6.6.2 General Policy

The acceptability for development, i.e. the specific location policy, of Land Areas is based upon the combinations of the following six factors which affect the environmental sensitivity or development potential of a site:

- (a) Depth to Seasonal High Water Table
- (b) Soil Permeability
- (c) Soil Fertility
- (d) Vegetation Index

(e) Development Potential

(f) Regional Growth Potential

Each factor has several levels, as defined below. In analyzing the acceptability of Land Areas, the appropriate level of each factor must first be identified and mapped for the different parts of a site at a scale of 1:24,000 for pre-application purposes and at least 1:2,400 scale for application purposes. The specific information of requirements of each section are also stated below for each variable. Second, a combination of the six variables, using the Land Acceptability Tables (presented below), indicates the acceptable levels of development for the different parts of the site.

6.6.3 Depth to Seasonal High Water Table Factor

6.6.3.1 Definition

The Depth to Seasonal High Water table is the least distance in feet, between the land surface and the water table that occurs at any time during the year. This distance typically occurs in early spring after snow melt.

The Depth to Seasonal High Water Table (SHWT) variable has two levels as defined below and depicted in Figure 15 which illustrates the difference between wet terraces and uplands.

- (a) Wet Terraces - areas with a SHWT of less than three feet, including soils with a seasonal high water table at the surface which are not contiguous with stream corridors or bayshores.
- (b) Uplands - areas with a SHWT of more than three feet.

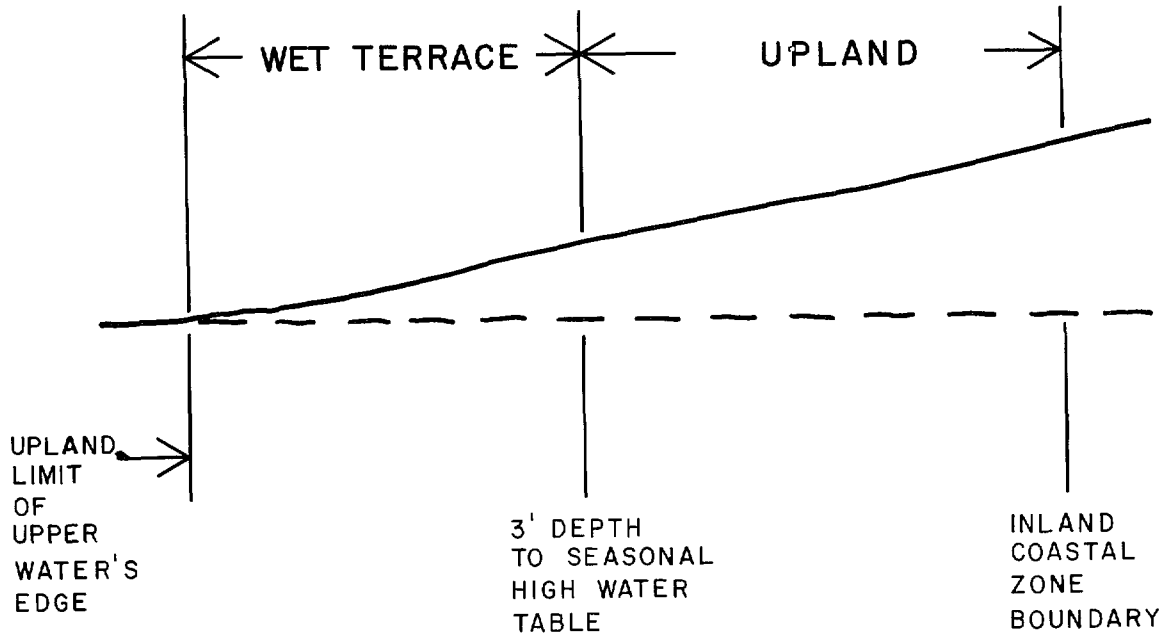
6.6.3.2 Rationale

Variations in water table have a number of important planning implications. Shallow depths to water table (wet terraces) occur either close to surface water bodies or as water tables above surface layers of impervious clay (clay lenses). When adjacent to coastal waters, these shallow water tables offer little filtration capacity for surface contaminants passing from surface runoff to the groundwater. These areas therefore have a high potential for transmitting potentially polluting material to coastal waters.

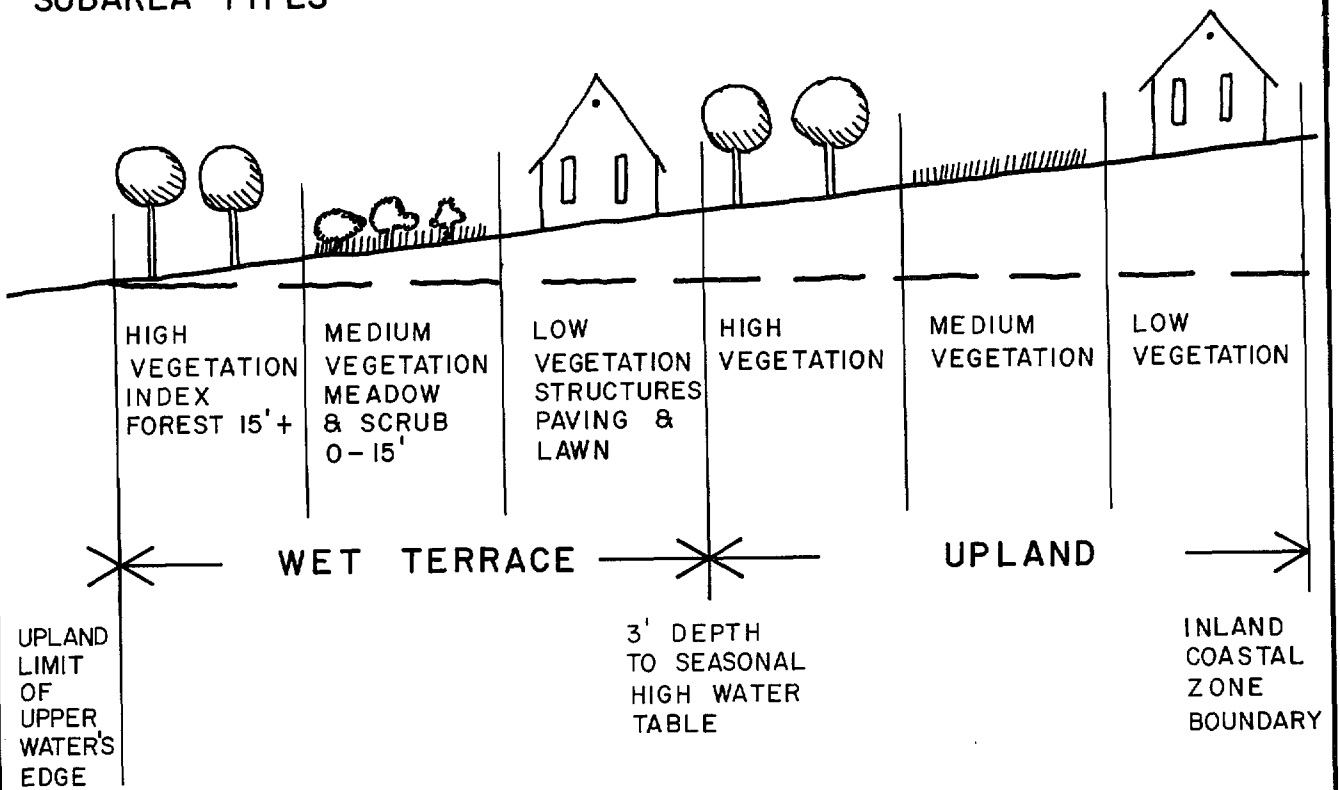
A shallow water table also reduces load bearing capacity of soils and increases the possibility of foundation movement and frost heave that would adversely affect structures. Heavy rainstorms may create surface ponds, rendering these areas unsuit-

Figure 15

WET TERRACE AND UPLAND GENERAL TYPES



SUBAREA TYPES



N.B. WET TERRACES & UPLANDS ARE ALSO SUBDIVIDED BY SURFACE PERMEABILITY AND SOIL FERTILITY.

able for open space use. Wet Terrace areas are also unsuitable for structures or utilities, unless special construction techniques are used. The three foot threshold is selected because this is the limit of frost penetration in temperate climates.

Wet soils also have implications for septic tank placement but these are discussed separately in the resource policies.

6.6.3.3 Information Requirements

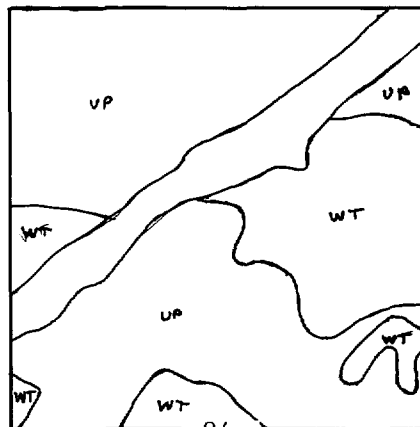
Data for the distribution of these areas may be obtained from the U.S. Soil Conservation Service (SCS) surveys by linking the distribution of soil types to the tables listing the depth to seasonal high water table (SHWT). When the surveys do not list three feet SHWT, the next highest figure shall be used, such as four feet. When the surveys indicate a range of SHWT such as one to five feet, any soils with a range that falls below three feet SHWT shall be indicated as wet terraces such as a range of such as a range of one to five feet SHWT.

Soil borings may be used to verify SCS data at the pre-application stage if the applicant wishes and shall be conducted to provide more precise data at the application stage. Site surveys to establish water table levels shall be conducted preferably in the early spring after snow melt. Testing in the late fall will also be acceptable.

Applicants shall prepare a map showing the line separating soils with SHWT of less than three feet from those with SHWT of greater than three feet. Areas outside the Water's Edge with SHWT less than three feet shall be labeled WET TERRACE. Those with SHWT of three feet or more shall be labeled UPLAND.

6.6.3.4 Illustrative Example: Land Areas: Depth to Seasonal High Water Table

The map below shows, to a scale of 1:24,000 the land area (SHWT) present in the illustrative example. The data source is the SCS County, Soil Survey.



Depth to Seasonal High Water

Legend:

UP = Uplands (SHWT > 3')

WT = Wet Terraces (SHWT < 3')

6.6.4 Soil Permeability Factor

6.6.4.1 Definition

Soil permeability is the rate of vertical movement of water through a surface sediments, expressed in inches per hour. The permeability variable has three levels:

- (a) High 2"+ per hour
- (b) Medium 0.2" - 2" per hour
- (c) Low 0 - 0.2" per hour

Where permeability varies from soil horizon to soil horizon, the lowest permeability level shall be used.

6.6.4.2 Rationale

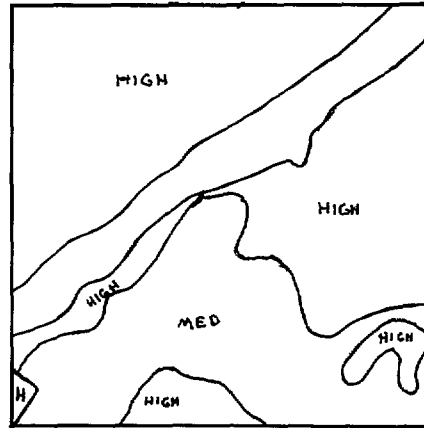
The permeability of soils has several implications for planning. Buildings and impermeable paving reduce surface permeability to zero, increasing surface runoff and decreasing aquifer recharge. This will have the greatest adverse impact on the hydrologic system in high permeability soils and least effect in low permeability soils. In high permeability soils, inadequate filtration of runoff may cause contamination of groundwater, wells, and discharge areas. In low permeability soils, inadequate drainage may cause flooding. Soils of moderate permeability and high ion exchange have the highest nutrient absorption capacity and are therefore prime areas for land application of nutrients. Upland (SHWT 3 +) soils of high permeability are prime aquifer recharge areas. Soil permeability also affects the suitability of soils for subsurface sewage disposal systems but this is discussed separately in the resource policy section.

6.6.4.3 Information Requirements

Data for the distribution of these permeability levels may be obtained from the Soil Conservation Service (SCS) surveys by linking the soil type distribution maps to the tabular data indicating the permeability of soil types. Site survey data from a percolation test program will be accepted as an alternative data source for surface permeability, provided that there is at least one test pit central within each soil type area indicated by SCS data (where available) and at least one test pit per five acres overall. An applicant shall prepare a map showing the distribution of surface permeability for all areas outside the water's edge.

6.6.4.3 Illustrative Example: Land Area - Permeability

The map below shows to a scale of 1:24,000 the permeability factor included in the illustrative example. The data source is the SCS County Soil Survey.



Permeability

6.6.5 Soil Fertility Factor

6.6.5.1 Definition - Soil fertility indicates the degree of suitability of soils for producing field crops and wood.

The Soil Fertility variable has three levels:

- (a) High - Soil Conservation Service (SCS) Agricultural Capability Classes I and II, Special Soils for Blueberries, Cranberries, and Woodland Suitability Class 1.
- (b) Moderate - Agricultural Capability Class III and Woodland Suitability Class 2.
- (c) Low - Agricultural Capability Class IV and below, Woodland Suitability Class 3 and below.

The U.S. Soil Conservation Service uses two ranking systems to describe the potential of soils for plant growth. The Agricultural Capability classes estimate the soil productivity for agricultural crops and the Woodland Suitability classes estimate the soil productivity for timber.

6.6.5.2 Rationale

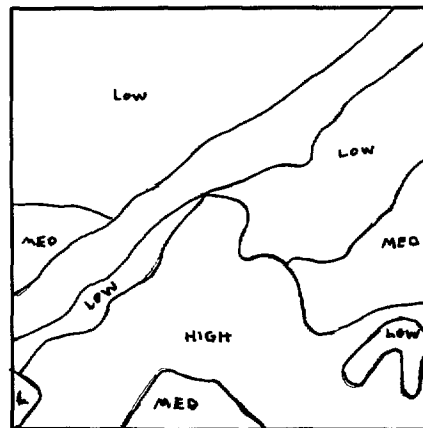
Fertile soils are a valuable and irreplaceable resource for food, fiber, and timber production. They are the product of millenia of soil forming processes and, once paved, are irreperably lost. The capacity of an area to produce food or other living resource harvest is proportional to the area of unpaved fertile land. Minimizing paving and structures on these fertile soils follows the Basic Coastal Policy to protect the coastal ecosystem for this and succeeding generations.

6.6.5.3 Information Requirements

Data for the distribution of fertility levels may be obtained from U.S. Soil Conservation Service surveys by linking the soil type distribution maps to the tabular data indicating the agricultural capability and woodland suitability for each soil type. The classification of the site by three levels of fertility shall be mapped at a scale of 1:24,000 at the pre-application stage and 1:2,000 at the time of application submission.

6.6.5.4 Illustrative Example: Land Areas - Soil Fertility

The map below shows to a scale of 1:24,000 the soil fertility in the illustrative example. The data source is the SCS County Soil Survey.



Soil Fertility

6.6.6 Vegetation Index Factor

6.6.6.1 Definition - The Vegetation Index indicates the height of vegetation on the site, using three levels:

- (a) High - Areas of mature forest or early successional forest with a tree canopy height of 15 feet or more, or pygmy forest growth in the Pine Barrens.
- (b) Medium - Open lands, agricultural lands, fields, successional meadows, areas with scrub vegetation of up to 15 feet in height, and vacant lots in settled areas.
- (c) Low - Developed land with structures, paving, mown lawns, and open areas immediately adjacent to structures, which may include some highly maintained landscaped or vegetated areas.

6.6.6.2 Rationale

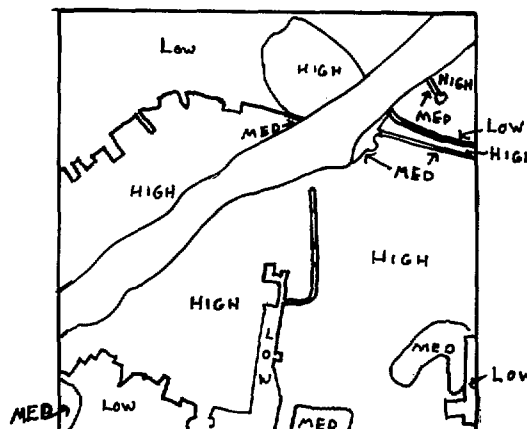
The Vegetation Index is included as a sensitivity variable due to the importance of conserving forest and vegetation resources for numerous reasons, including soil stabilization, air and water purification, surface runoff and flood control, wildlife habitat, and visual quality. As abandoned meadows succeed through scrub to early successional forest the vegetation index changes from medium to high. The 15' level was selected because at this height the vegetation provides significant visual screening and the extent of tree growth is sufficient to provide the valued environmental functions of a forest.

6.6.6.3 Information Requirements

The classification of the site by the three levels of Vegetation Index shall be mapped using recent aerial photography or site surveys as data sources.

6.6.6.4 Illustrative Example: Land Area - Vegetative Index

The map below shows to a scale of 1:24,000 the vegetative index in the illustrative site. The data source is aerial photographs.



6.6.7 Development Potential Factors

6.6.7.1 Definition

The Development Potential factor has three levels -- High, Medium and Low -- depending upon the presence or absence of certain development-oriented elements at or near the site of the proposed development, as defined below.

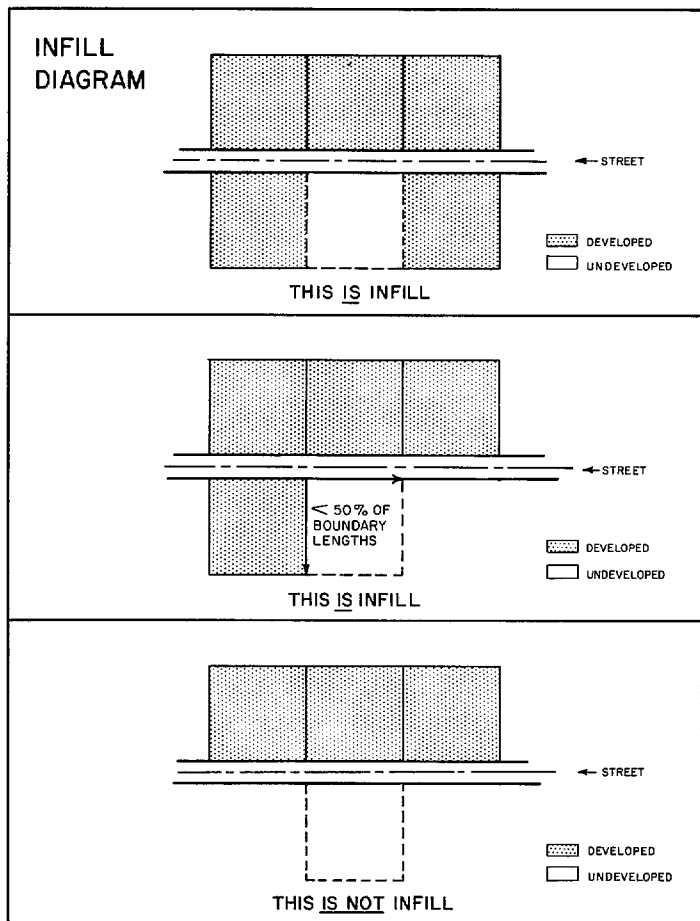
Different Development Potential criteria are defined below for different categories of development. If specific Development Potential criteria are not defined for a particular category or type of development, then the Location Policy assumes a Medium Potential for that category until specific criteria are adopted. Recommended criteria may be considered in the course of the permit application process for a particular development prior to adoption of a complete set of criteria.

6.6.7.2 Residential Development Potential Criteria

6.6.7.2.1 High Potential sites meet all of the following criteria:

- (a) Roads - Direct access from the site to a paved public road with sufficient capacity to absorb satisfactorily the traffic generated by the proposed development, or in Growth Areas direct access to roads which either in their existing state, or with improvements included in the proposal, provide adequate capacity. Road improvements which may induce further development by providing capacity beyond that required for the proposed development must satisfy the secondary impact policies of Section 8.14,
- (b) Water Supply - Direct access to an adequate public potable water supply, or to on-site, potable groundwater as defined by applicable water quality standards,
- (c) Sewage - Direct access to a wastewater treatment system, including collector sewers and treatment plant, with adequate capacity to treat the sewage from the proposed development, or soils suitable for on-site sewage disposal systems that will meet applicable ground and surface water quality standards,

Figure 16



(d) Infill - At least 50% of the boundaries of the site are either immediately adjacent to or directly across public road from sites with existing residential developments or a closely related and associated type of development (such as schools).

(e) Shopping - Shopping facilities for daily household needs, including food, located within two miles of the site,

(f) Schools - Adequate elementary school facilities located within two miles of the site, the distance beyond which under State law the transportation of pupils to public schools must be provided.

This specification may be used for marinas by omitting shopping and schools and adding:

(g) (Marinas only) Direct access to water harbor of adequate depth and navigation channels within 1,000 feet.

6.6.7.2.2 Medium Potential sites do not meet all of the criteria for High Potential sites and do not meet any of the criteria for Low Potential sites.

6.6.7.2.3 Low Potential sites meet any one of following criteria:

- (a) Roads - Site located more than 1,000 feet from the nearest paved public road,
- (b) Sewage - Site located more than 1,000 feet from adequate wastewater treatment system, or soils unsuitable for on-site sewage disposal systems,
- (c) Infill - No development is adjacent to the site boundary
- (d) (Marinas only) No direct access to harbor water of adequate depth.

6.6.7.3 Commercial and Industrial Development Criteria

6.6.7.3.1 High Potential sites meet all of the following criteria:

- (a) Roads - Direct access from the site to a paved public road with sufficient capacity to absorb satisfactorily the traffic generated by the proposed development, or in Growth Areas direct access to roads which either in their existing state, or with improvements included in the proposal, provide adequate capacity. Where the improvements provide surplus capacity that may induce further development the secondary impact requirements of Section 8.14 shall be satisfied.

Sites shall also be within one mile of an existing intersection with a limited access parking or expressway.

- (b) Railroads - This is not required for high potential ranking, but may replace the requirement for access to expressway roads for industrial development. Sites within one-half mile of a freight rail line with adequate capacity for the needs of the development and with agreement to construction a spur to serve the development.

- (c) Water Supply - Direct access to an adequate public water supply or on-site ground water availability of sufficient capacity to supply the development without causing unacceptable impacts to ground water table levels. Applicants shall provide calculations to demonstrate the extent of the cone of depression anticipated from peak withdrawal. In growth areas where the water supply is inadequate, an applicant may include in the proposal an agreement with a public water supplier to provide the necessary supply and qualify for high potential status, providing that secondary impact analysis is performed to establish that any development that

may be induced by the increase of water supply above the needs of the proposal is acceptable.

(d) Sewage - Direct access to a wastewater treatment system, including collector sewers and treatment plant, with adequate capacity to treat the sewage from the proposed development, or soils suitable for on-site sewage disposal systems that will meet applicable ground and surface water quality standards. In growth areas where the existing sewage collection or treatment capacity is inadequate and the soils are unsuitable for septic systems, an applicant may include an agreement with a sewage authority to increase service to provide the required capacity. This will qualify the proposal for a high potential rating, provided that secondary impact analysis demonstrates that any development likely to be induced by new sewage capacity above the requirements of the proposal is acceptable.

(e) Infill - A part of the site boundary shall be either immediately adjacent to, or immediately across a road from, existing industrial development.

6.6.7.3.2 Medium Potential sites do not meet all of the criteria for High Potential sites and do not meet any of the criteria for Low Potential sites.

6.6.7.3.3 Low Potential sites meet any one of the following criteria:

(a) Roads - A site located more than 1,000 feet from the nearest paved public road and/or a site located more than 5 miles from the nearest intersection with limited access parkway or expressway.

(b) Infill - A site located more than one-half mile from the nearest existing industrial development of more than 20,000 square feet building area.

6.6.7.4 Campground Development Criteria

Two types of campground commonly occur in coastal area. The first type is a campground associated with urban or intensive resort facilities, basically an inexpensive place to stay while visiting such places as Atlantic City. This type shall use the development potential criteria for residential development, detail in Section 6.6.7.2 above.

The second type is a campground that provides facilities for visitors to enjoy the natural resources of the coast. Typically, this type of development seeks sites somewhat isolated from other development and with access to water, beach, forest and other natural amenities. The development potential criteria for this kind of campground is as follows:

6.6.7.4.1 High Potential sites meet all of the following criteria:

- (a) Roads - Sites shall have direct access to a paved public road of adequate capacity to serve the needs of the development. The part of the site where camping facilities are provided shall be set back from the public road and screened by vegetation sufficient to block view of one from the other.
- (b) Water Supply - Direct access to an adequate public potable water supply or to on-site, high-quality groundwater.
- (c) Sewage - Direct access to a wastewater treatment system, including collector sewers and treatment plant, with adequate capacity to treat the sewage from the proposed development, or soils suitable for on-site sewage disposal systems that will meet applicable ground and surface water quality standards.
- (d) Region - The surrounding region shall be natural and undeveloped and contain one of the following natural amenities: beach, stream, or forest. Surrounding region shall be accessible to campground users.

6.6.7.4.2 Medium Potential sites do not meet all of the criteria for High Potential sites and do not meet any of the criteria for low potential sites.

6.6.7.4.3 Low Potential sites meet any one of the following criteria:

- (a) Roads - More than one-half mile to the nearest public paved road.
- (b) Sewage - More than 1,000 feet to the nearest sewer with sufficient capacity for the needs of the development and soils insuitable for subsurface sewage disposal systems.
- (c) Water Supply - More than 1/2 mile to the nearest public water supply and inadequate on-site groundwater supply.
- (d) Region - Either the natural environment of the surrounding region would be unacceptably degraded by off-site impacts or developed surrounding region or surrounding region in private ownership which forbids recreational access from the campsite.

6.6.7.5 Energy Facility Criteria

[This section is reserved pending completion of joint coastal energy facility siting studies by DEP and DOE. In the interim, the development potential of energy facilities is assumed to be moderate.]

6.6.7.6 Rationale

High Development Potential sites satisfy the major siting requirements of coastal uses and are most desirable from the developer's viewpoint. The Location Policies permit higher intensity development in these areas to address the needs of developers. One of the basic policies of the Coastal Program is to concentrate the pattern of development at the regional scale. Use of the development potential factor stresses the advantages of existing settled areas and emphasizes the disadvantages of sparsely settled areas in determining the acceptability of locations. This factor promotes efficient capital investment in public infrastructure and community facilities, as well as conservation of open space.

6.6.7.7 Information Requirements

The entire site of the proposed development has a single development potential level, which shall be noted by an applicant, together with a justification in terms of the absence or presence of the required development-oriented criteria.

6.6.7.8 Illustrative Example: Development Potential for Residential Development

The map below shows to a scale of 1:24,000 the Potential rankings for the illustrative example.

Data sources are as follows:

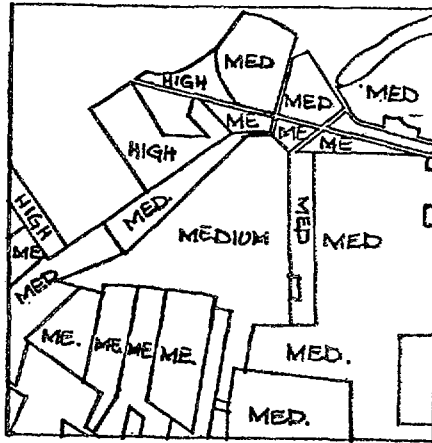
Roads: position: USGS 7 1/2 minute quadrangle-
of Toms River
capacity: The Assumption is made for this
illustration that road capacity
is adequate.

Water supply and
Sewage: position
and capacity: The assumption is made for this
illustration that all sites have
direct access to sewer and water
supplies.

Infill: Property boundaries from the County Tax
maps.

Shopping and
Schools: U.S.G.S. 7 1/2 minute quadrangle of Toms
River.

Harbors and
Navigation Channels: U.S.G.S. 7 1/2 minute quadrangle.



6.6.8 Regional Growth Potential Factor

6.6.8.1 Definition

The Regional Growth Potential factor divides mainland municipalities within the Bay and Ocean Shore Segment into either Growth Areas or Limited Growth Areas. This classification does not apply to that portion of municipalities located on barrier islands, such as Atlantic City, Brigantine, Long Beach Township, Stone Harbor, and Wildwood Crest. Only the Development Potential Factor (See Section 6.6.7) is used in determining the acceptability for development on the Central Barrier Island Corridor.

6.6.8.1.1 Growth Areas include those mainland section that lie within the Bay and Ocean Shore Segment of the following municipalities, listed below by county:

- (a) Atlantic County
Absecon, Linwood, Northfield, Pleasantville, Somers Point
- (b) Burlington County
None
- (c) Cape May County
None
- (d) Cumberland County
Bridgeton, Millville
- (e) Middlesex County
Old Bridge

(f) Monmouth County
All municipalities within Bay and Ocean
Shore Segment

(g) Ocean County
Beachwood, Berkeley, Brick, Dover,
Island Heights, Lakewood, Ocean Gate,
Pine Beach, Point Pleasant, South Toms
River

(h) Salem County
Salem

6.6.8.1.2 Limited Growth Areas include those mainland sections that lie within the Bay and Ocean Shore Segment of all municipalities outside Growth Areas.

6.6.8.1.3 Figure 17 indicates the areas within the Bay and Ocean Shore Segment included in the Growth and Limited Growth Area categories.

6.6.8.2 Rationale

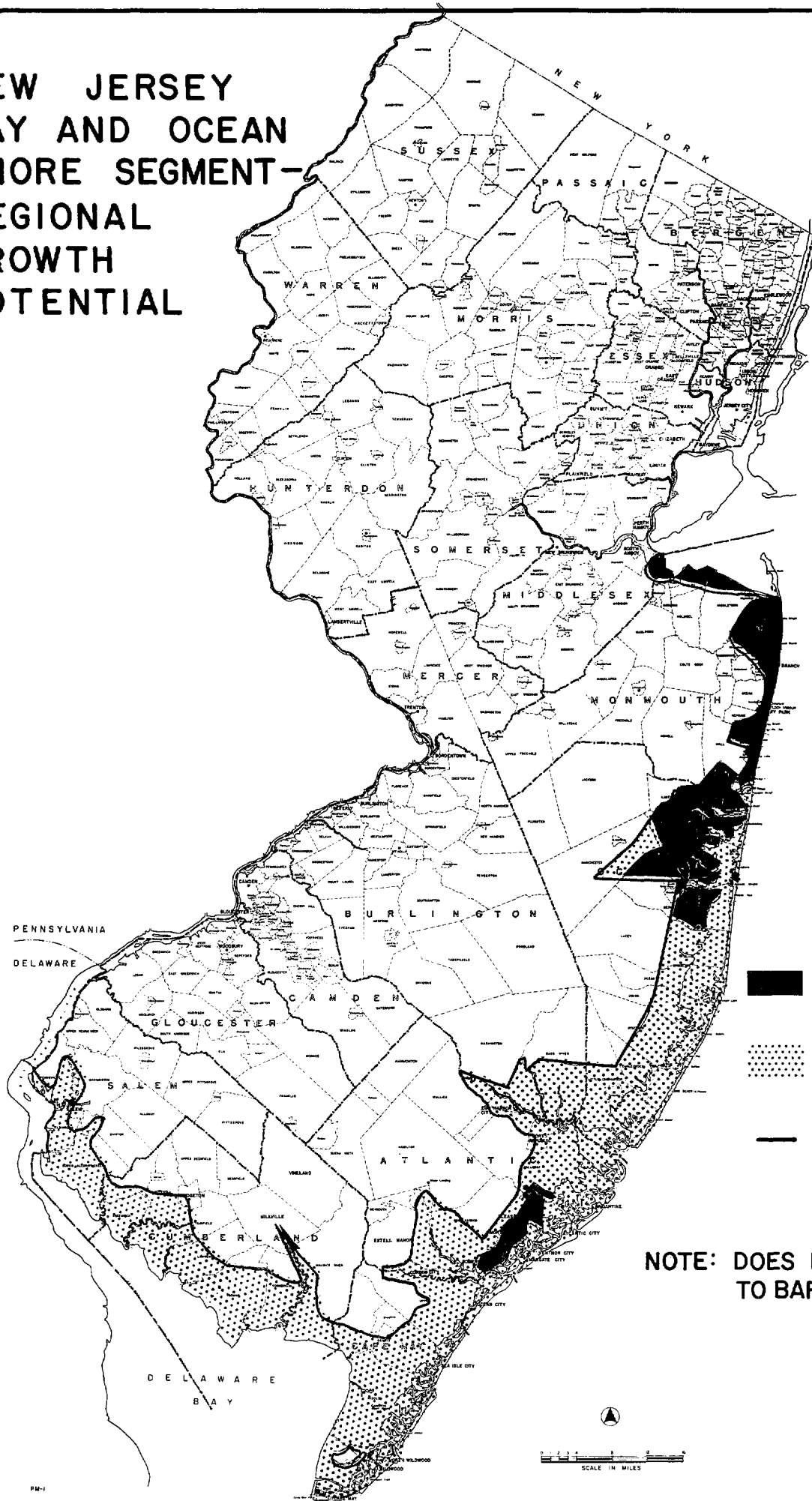
Growth Areas are municipalities where extensive development has already occurred and there is a history of high development pressure on remaining undeveloped sites. Access to infrastructure, transportation and major employment centers is good. Because of the increased development potential associated with growth areas, a higher intensity of development is acceptable than in Limited Growth Areas. The Regional Growth Potential factors helps carry out the Basic Coastal Policy to concentrate the pattern of developments at a regional scale.

The classification of municipalities into Growth Areas and Limited Growth Areas for the purposes of the Location Policies is based in part on the proposed Growth Areas and Limited Growth Areas presented in the State Development Guide Plan (Preliminary Draft - September 1977), prepared by the Department of Community Affairs, Division of State and Regional Planning, as well as upon DEP-OCZM analysis of likely areas of development pressure based on the experience from 1973-1978 in the CAFRA permit program of regulating major residential development.

6.6.8.3 Information Requirements

The entire site is either in a growth or limited growth municipality, if not on a barrier island. The applicant shall note in which type of municipality the site is located.

NEW JERSEY BAY AND OCEAN SHORE SEGMENT— REGIONAL GROWTH POTENTIAL



6.6.8.4 Illustrative Example: Regional Growth Potential

The illustrative area includes parts of two municipalities, Berkeley Township and Pine Beach, both of which are Growth Areas. The data source for Regional Growth Potential is the NJDEP Regional Growth Type Map.

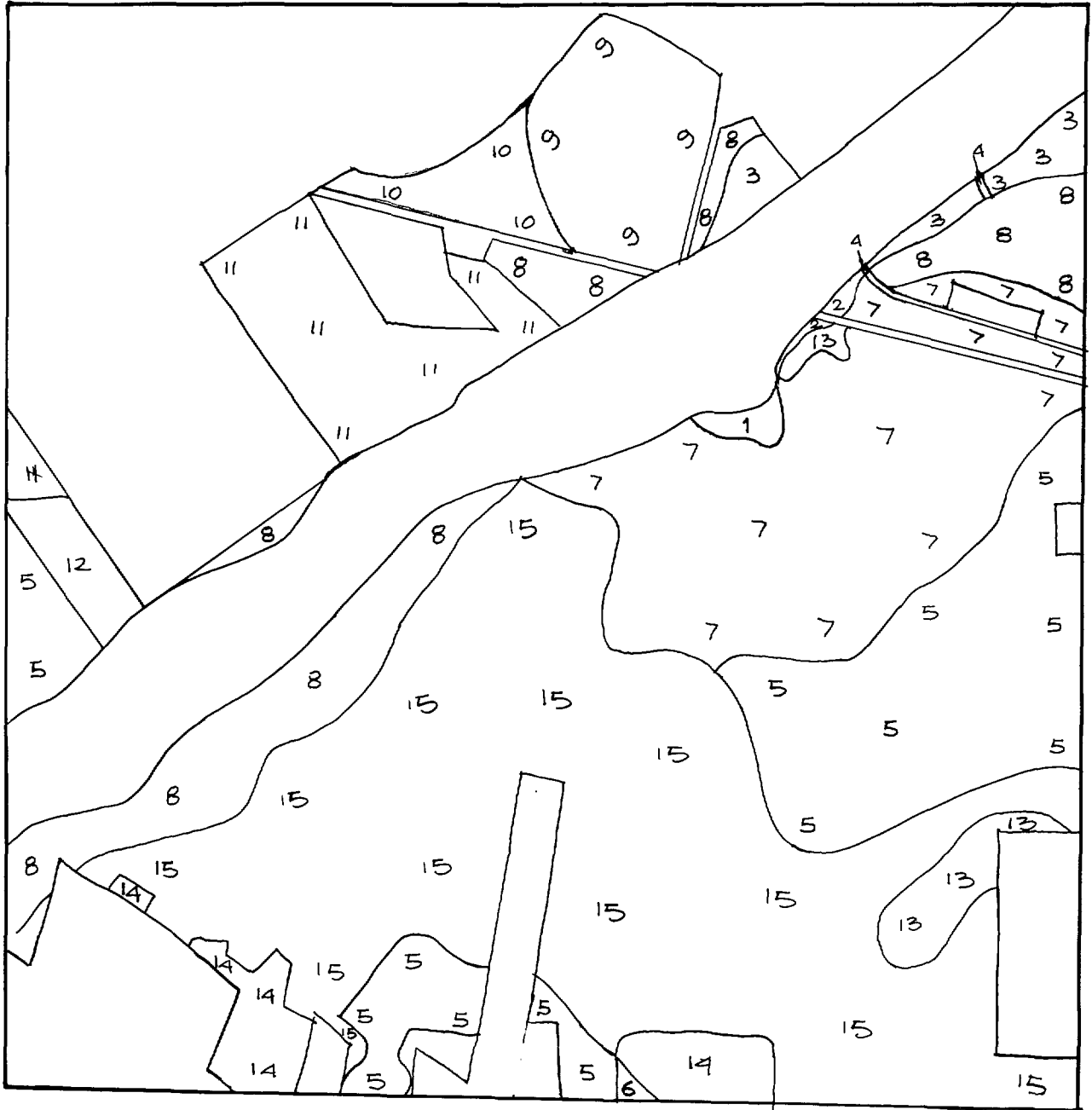
6.6.9 Land Factor Composite Map

6.6.9.1 Purpose

The analysis of Land Areas under Section 6.6 above will produce four maps showing the distribution throughout the site of the four land acceptability factors -- depth to seasonal high water table, permeability, soil fertility and vegetation -- and an indication of the appropriate development potential and regional growth potential factors that apply to the entire site. The next step is to combine and map these six variables to obtain the specific location policy for each part of the site upland from the water's edge.

6.6.9.2 Preparation

To produce a composite map, the four maps of the land acceptability factors shall be overlain and all of the areas outlined on each map shall be transferred to a single, composite map. Each subarea on the composite map shall then be labeled to indicate the combination of factors that describes a particular area for example, the complete label for a combination of factors would describe a subarea as: Upland, Low Perm, Low Fert, and Med Veg. After the map has been prepared, the appropriate development potential variables that describe the entire site shall also be noted. Actual preparation of the composite map may be simplified by overlaying a single soil type mosaic map on a map of the vegetation index variable. The soil type mosaic map, prepared by the U.S. Soil Conservation Service, provides the geographic base of the data used to classify parts of a site according to the depth to seasonal high water table, soil permeability, and soil fertility factors. By overlaying the vegetation map on the soils map and referring to the maps prepared for the other three sensitivity factors, the areas or subareas grouping different combinations of the four factors can be quickly delineated and mapped.



LAND FACTOR COMPOSITE

6.6.9.3 Illustrative Example: Land Factor Composite Map

The map below shows at a scale of 1:24,000 a combination SHWT, soil permeability, soil fertility, vegetation index, development potential, and Regional Growth potential, which is the Land Factor Composite Map. The data sources have been discussed as each separate factor is introduced. Because several properties are being analyzed, a fifth map; development potential, is required. When analyzing a single property, this map would not be necessary.

6.6.9.4 Subareas

The land factor composite map will usually show that there are a number of different subareas on a proposed site that show the distribution of different types of land area.

These subareas are distinguished one from another by the different mix of acceptability factors present in each. Location policies are assigned to each different factor mix that is practically possible.

I. COMPOSITE OF ACCEPTABILITY FACTORS

LEGEND FOR LAND FACTOR COMPOSITE MAP

1. Flood Prone Area, Wet Terrace, High Perm., Low Fert., High Veg., Med. Dev. Potential.
2. Flood Prone Area, Wet Terrace, High Perm., Low Fert., Med. Veg., Med. Dev. Potential.
3. Flood Prone Area, Upland, High Perm., Low Fert., High Veg., Med. Dev. Potential.
4. Flood Prone Area, Upland, Low Veg., Med. Dev. Potential.
5. Wet Terrace, High Perm., Med. Fert., High Veg., Med. Dev. Potential.
6. Wet Terrace, High Perm., Med. Fert., Med. Veg., Med. Dev. Potential.
7. Wet Terrace, High Perm., Low Fert., High Veg., Med. Dev. Potential.
8. Upland, High Perm., Low Fert., High Veg., Med. Dev. Potential.
9. Upland, High Perm., Low Fert., High Veg., Med. Dev. Potential.
10. Upland, High Perm., Low Fert., High Veg., High Dev. Potential.
11. Upland, High Perm., Low Fert., High Veg., High Dev. Potential.
12. Wet Terrace, High Perm., Med. Fert., High Veg., High Dev. Potential.
13. Wet Terrace, High Perm., Low Fert., Med. Veg., Med. Dev. Potential.
14. Upland, Med. Perm., High Fert., Med. Veg., Med. Dev. Potential.
15. Upland, Med. Perm., High Fert., High Veg., Med. Dev. Potential.

NB.

- All areas are High Growth Areas
- Unlabeled areas all already subdivided or are water or water's edge areas.
- Property boundaries have been omitted except where Development Potential Changes.

6.6.9.5 Land Acceptability Tables

The Land Acceptability Tables (Figure 19) below list all feasible mixes of the six acceptability factors (it is assumed that subareas with a low vegetation index always have a low permeability and soil fertility). This listing produces 204 lines each describing a different land type.

To each line is assigned one of four acceptable development intensities, which are discussed in detail after the tables. These lines may be used to determine DEP policy for each subarea on the land factor composite map by matching the mix of factors to the line in the table that has the same combination of land acceptability factors, and by reading which of the four acceptable development intensities (as defined in Section 6.6.9.6) is indicated for the particular line on the Land Acceptability Table.

Figure 18
LAND ACCEPTABILITY TABLES

Line	Depth to Seasonal High Water Table		Permeability			Soil Fertility			Vegetation Index			Development Potential			Regional Type		Maximum Acceptable Development Intensity			
	Upland 3'+	Wet Terrace <3'	Low	Medium	High	Low	Medium	High	Low	Medium	High	High	Medium	Low	Growth Area	Limited Growth	High Intensity Development	Moderate Intensity Development	Soil Conservation	Vegetation Conservation
1	X		X			X			X			X			X		X			
2	X		X			X			X			X				X	X	X		
3	X		X			X			X				X		X		X			
4	X		X			X			X				X			X	X	X		
5	X		X			X			X					X	X			X		
6	X		X			X			X					X	X			X		
7	X		X			X				X		X			X		X			
8	X		X			X				X		X				X	X			
9	X		X			X				X			X		X		X			
10	X		X			X				X			X			X		X		
11	X		X			X				X				X					X	
12	X		X			X				X				X					X	
13	X		X			X					X			X		X				
14	X		X			X					X				X		X			
15	X		X			X					X			X		X		X		
16	X		X			X					X				X			X		
17	X		X			X					X			X		X				X
18	X		X			X					X				X					X
19	X		X				X					X			X		X			
20	X		X				X					X				X	X			
21	X		X				X						X		X		X			
22	X		X				X						X			X				
23	X		X				X							X			X			
24	X		X				X							X					X	
25	X		X				X								X		X			

LAND ACCEPTABILITY TABLES

Line	Depth to Seasonal High Water Table		Permeability			Soil Fertility			Vegetation Index			Development Potential			Regional Type		Maximum Acceptable Development Intensity			
	Upland 3'+	Wet Terrace <3'	Low	Medium	High	Low	Medium	High	Low	Medium	High	High	Medium	Low	Growth Area	Limited Growth	High Intensity Development	Moderate Intensity Development	Soil Conservation	Vegetation Conservation
26	X		X				X				X				X			X		
27	X		X				X					X			X			X		
28	X		X				X					X			X			X		
29	X		X				X						X		X					X
30	X		X				X						X		X					X
31	X		X					X				X			X		X			
32	X		X					X				X			X		X			
33	X		X					X					X		X			X		
34	X		X					X					X		X			X		
35	X		X					X					X		X				X	
36	X		X					X					X		X				X	
37	X		X					X				X			X		X			
38	X		X					X				X			X			X		
39	X		X					X					X		X			X		
40	X		X					X					X		X			X		
41	X		X					X					X		X					X
42	X		X					X					X		X					X
43	X			X		X						X			X		X			
44	X			X		X						X			X		X			
45	X			X		X							X		X			X		
46	X			X		X							X		X			X		
47	X			X		X							X		X				X	
48	X			X		X							X		X				X	
49	X			X		X				X		X			X		X			
50	X			X		X				X		X			X		X			

LAND ACCEPTABILITY TABLES

Line	Depth to Seasonal High Water Table		Permeability			Soil Fertility			Vegetation Index			Development Potential			Regional Type		Maximum Acceptable Development Intensity			
	Upland 3'+	Wet Terrace <3'	Low	Medium	High	Low	Medium	High	Low	Medium	High	High	Medium	Low	Growth Area	Limited Growth	High Intensity Development	Moderate Intensity Development	Soil Conservation	Vegetation Conservation
51	X			X		X					X		X		X			X		
52	X			X		X					X		X			X		X		
53	X			X		X					X			X						X
54	X			X		X					X				X					X
55	X			X			X					X			X		X			
56	X			X			X					X				X	X			
57	X			X			X						X		X			X		
58	X			X			X						X			X		X		
59	X			X			X							X	X				X	
60	X			X			X							X		X			X	
61	X			X			X				X			X			X			
62	X			X			X				X				X			X		
63	X			X			X				X			X				X		
64	X			X			X				X				X			X		
65	X			X			X				X			X						X
66	X			X			X				X			X		X				X
67	X			X				X			X				X		X			
68	X			X				X			X				X			X		
69	X			X				X			X			X			X			
70	X			X				X			X				X				X	
71	X			X				X			X			X					X	
72	X			X				X			X			X					X	
73	X			X					X		X			X			X			
74	X			X						X	X				X			X		
75	X			X						X	X			X			X			

LAND ACCEPTABILITY TABLES

Line	Depth to Seasonal High Water Table		Permeability			Soil Fertility			Vegetation Index			Development Potential			Regional Type		Maximum Acceptable Development Intensity			
	Upland 3'+	Wet Terrace <3'	Low	Medium	High	Low	Medium	High	Low	Medium	High	High	Medium	Low	Growth Area	Limited Growth	High Intensity Development	Moderate Intensity Development	Soil Conservation	Vegetation Conservation
76	X			X				X			X		X		X					X
77	X			X				X			X		X	X	X					X
78	X			X				X			X		X		X					X
79	X				X	X					X		X	X				X		
80	X				X	X					X		X		X			X		
81	X				X	X					X		X	X				X		
82	X				X	X					X		X		X			X		
83	X				X	X					X		X	X					X	
84	X				X	X					X		X		X				X	
85	X				X	X					X		X	X				X		
86	X				X	X					X		X		X			X		
87	X				X	X					X		X	X				X		
88	X				X	X					X		X		X					X
89	X				X	X					X		X	X						X
90	X				X	X					X		X		X					X
91	X				X	X					X		X	X				X		
92	X				X		X				X		X		X			X		
93	X				X		X				X		X	X				X		
94	X				X		X				X		X		X			X		
95	X				X		X				X		X	X					X	
96	X				X		X				X		X		X				X	
97	X				X		X				X		X	X				X		
98	X				X		X				X		X		X			X		
99	X				X		X				X		X	X				X		
100	X				X		X				X		X		X					X

LAND ACCEPTABILITY TABLES

Line	Depth to Seasonal High Water Table		Permeability			Soil Fertility			Vegetation Index			Development Potential			Regional Type		Maximum Acceptable Development Intensity			
	Upland 3'+	Wet Terrace <3'	Low	Medium	High	Low	Medium	High	Low	Medium	High	High	Medium	Low	Growth Area	Limited Growth	High Intensity Development	Moderate Intensity Development	Soil Conservation	Vegetation Conservation
101	X				X		X				X			X						X
102	X				X		X				X			X		X				X
103*		X	X			X			X			X			X			X		
104		X	X			X			X			X				X		X		
105		X	X			X			X				X		X			X		
106		X	X			X			X				X			X		X		
107		X	X			X			X					X	X				X	
108		X	X			X			X					X		X			X	
109		X	X			X				X		X			X			X		
110		X	X			X				X		X				X		X		
111		X	X			X				X			X		X			X		
112		X	X			X				X			X			X		X		
113		X	X			X				X				X	X				X	
114		X	X			X				X				X		X			X	
115		X	X			X					X	X			X			X		
116		X	X			X					X	X				X		X		
117		X	X			X					X		X		X			X		
118		X	X			X					X		X			X				X
119		X	X			X					X			X	X					X
120		X	X			X					X			X		X				X
121		X	X				X					X			X			X		
122		X	X				X					X				X		X		
123		X	X				X						X		X			X		
124		X	X				X						X			X		X		
125		X	X				X						X		X				X	

* All lines from 103 to 204 shall satisfy the wet soil construction standards.

LAND ACCEPTABILITY TABLES

Line	Depth to Seasonal High Water Table		Permeability			Soil Fertility			Vegetation Index			Development Potential			Regional Type		Maximum Acceptable Development Intensity			
	Upland 3'+	Wet Terrace <3'	Low	Medium	High	Low	Medium	High	Low	Medium	High	High	Medium	Low	Growth Area	Limited Growth	High Intensity Development	Moderate Intensity Development	Soil Conservation	Vegetation Conservation
126		X	X				X		X					X		X			X	
127		X					X			X	X				X			X		
128		X	X				X			X	X					X		X		
129		X	X				X			X		X			X			X		
130		X	X				X			X		X				X				X
131		X	X				X			X				X	X					X
132		X	X				X			X				X	X					X
133		X	X					X		X		X			X			X		
134		X	X					X		X		X			X			X		
135		X	X					X		X		X			X			X		
136		X	X					X		X		X			X				X	
137		X	X					X		X				X	X				X	
138		X	X					X		X				X	X				X	
139		X	X					X		X	X			X				X		
140		X	X					X		X	X				X			X		
141		X	X					X		X		X			X					X
142		X	X					X		X		X			X					X
143		X	X					X		X				X	X					X
144		X	X					X		X				X	X					X
145		X		X		X				X		X			X			X		
146		X		X		X				X		X			X			X		
147		X		X		X				X		X			X			X		
148		X		X		X				X		X			X			X		
149		X		X		X				X				X	X				X	
150		X		X		X				X				X	X				X	

LAND ACCEPTABILITY TABLES

Line	Depth to Seasonal High Water Table		Permeability			Soil Fertility			Vegetation Index			Development Potential			Regional Type		Maximum Acceptable Development Intensity			
	Upland 3'+	Wet Terrace <3'	Low	Medium	High	Low	Medium	High	Low	Medium	High	High	Medium	Low	Growth Area	Limited Growth	High Intensity Development	Moderate Intensity Development	Soil Conservation	Vegetation Conservation
151		X		X		X					X	X			X		X			
152		X		X		X					X	X			X		X			
153		X		X		X					X		X		X		X			
154		X		X		X					X	X			X				X	
155		X		X		X					X		X		X				X	
156		X		X		X					X		X		X				X	
157		X		X			X				X	X			X		X			
158		X		X			X				X	X			X		X			
159		X		X			X				X		X		X		X			
160		X		X			X				X	X			X		X			
161		X		X			X				X		X		X			X		
162		X		X			X				X		X		X			X		
163		X		X			X				X	X			X		X			
164		X		X			X				X	X			X		X			
165		X		X			X				X		X		X		X			
166		X		X			X				X		X		X				X	
167		X		X			X				X		X		X				X	
168		X		X			X				X		X		X				X	
169		X		X				X			X	X			X		X			
170		X		X				X			X	X			X		X			
171		X		X				X			X		X		X		X			
172		X		X				X			X		X		X			X		
173		X		X				X			X		X		X			X		
174		X		X				X			X		X		X			X		
175		X		X				X			X	X			X		X			

LAND ACCEPTABILITY TABLES

Line	Depth to Seasonal High Water Table		Permeability			Soil Fertility			Vegetation Index			Development Potential			Regional Type		Maximum Acceptable Development Intensity			
	Upland 3'+	Wet Terrace <3'	Low	Medium	High	Low	Medium	High	Low	Medium	High	High	Medium	Low	Growth Area	Limited Growth	High Intensity Development	Moderate Intensity Development	Soil Conservation	Vegetation Conservation
176		X		X				X			X	X			X		X			
177		X		X				X			X		X		X					X
178		X		X				X			X		X		X					X
179		X		X				X			X			X						X
180		X		X				X			X		X		X					X
181		X			X	X			X			X		X			X			
182		X			X	X			X			X		X		X	X			
183		X			X	X			X				X		X		X			
184		X			X	X			X				X		X				X	
185		X			X	X			X				X		X				X	
186		X			X	X			X				X		X				X	
187		X			X	X				X		X		X			X			
188		X			X	X				X		X			X		X			
189		X			X	X				X			X		X		X			
190		X			X	X				X			X		X					X
191		X			X	X				X			X		X					X
192		X			X	X				X			X		X					X
193		X			X		X			X		X			X			X		
194		X			X		X			X		X			X		X			
195		X			X		X			X			X		X		X			
196		X			X		X			X			X		X				X	
197		X			X		X			X			X		X				X	
198		X			X		X			X			X		X				X	
199		X			X		X			X		X			X			X		
200		X			X		X			X		X			X			X		

LAND ACCEPTABILITY TABLES

Line	Depth to Seasonal High Water Table		Permeability			Soil Fertility			Vegetation Index			Development Potential			Regional Type		Maximum Acceptable Development Intensity			
	Upland 3'+	Wet Terrace <3'	Low	Medium	High	Low	Medium	High	Low	Medium	High	High	Medium	Low	Growth Area	Limited Growth	High Intensity Development	Moderate Intensity Development	Soil Conservation	Vegetation Conservation
201		X			X		X			X		X		X			X			
202		X			X		X			X		X			X					X
203		X			X		X			X			X	X						X
204		X			X		X			X			X		X					X

6.6.9.6 Definition of Levels of Acceptable Development

The location policy in land areas is established by assigning one of four acceptable maximum development intensities to each combination of the six acceptability factors:

6.6.9.6.1 Intensive Development

This level of development permits extensive development of paving and structures. Typically, if analysis showed that most of a large area was acceptable for intensive development, the landscape that would be produced would be urban or heavily industrialized. The photomaps below show examples of typical Intensive Development landscapes.



Levels of development intensity are defined by the maximum and minimum percentages of structures and impervious paving, permeable paving, herbs and shrubs and undisturbed forest permitted on a site. The acceptable ranges of these developed elements for intensive development parts of site are as follows:

Intensive Development	Structures/ Impervious Paving	Permeable Paving	Herb and Shrub	Forest
Maximum	80%	90%	95%	-
Minimum	-	-	5%	5%

(Dash symbol (-) indicates no maximum or minimum)

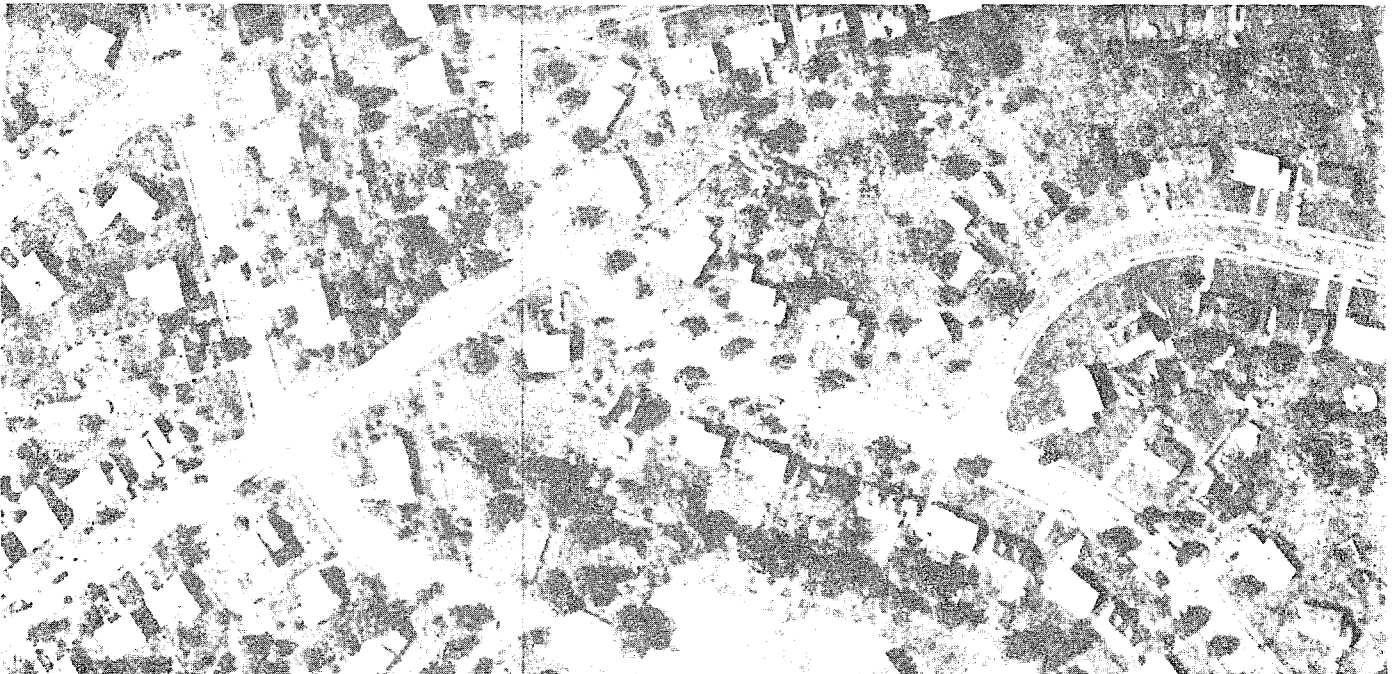
This range allows most of each part of the site in this category to be developed with structures or paving, while preserving at least a small minimum of open space in herbs, shrubs and trees for microclimate control, aquifer recharge and visual screening. A developer planning to use pervious paving can, as a bonus, develop a larger percentage of the area.

The required percentage of forest shall either be preserved, or, if there is no forest on the site, shall be planted. Tree species shall be those of the native mature forest, and saplings shall be at least 6' high as a minimum density of 1 per 100 sq. ft. Forest areas shall be protected from trampling.

Shrubs and herbs shall be suitable to the substrate conditions. In the acid sandy soils common in the coastal area this excludes many species common in more inland areas.

6.6.9.6.2 Moderate Intensity Development

At this level of development, between 30 and 40 percent of an area can be developed in paving and structures. Typically, if analysis showed that most of a large area was acceptable for moderate intensity development, the landscape that would be produced would be suburban. The photomaps below show examples of Moderate Intensity Development landscapes.



For parts of a site classified for moderate intensity development, the acceptable range of development elements is as follows:

Moderate Intensive Development	Structures/ Impervious Paving	Permeable Paving	Herb and Shrub	Forest
Maximum	30%	40%	80%	-
Minimum	-	-	-	20%

This range allows, for example, development of residential subdivisions of up to approximately 4 dwelling units per acre or, if the porous paving allowance is used and dwellings clustered, up to approximately 8 dwelling units per acre. Analysis of the amounts of paving typically found in a range of residential densities is included in Appendix O.

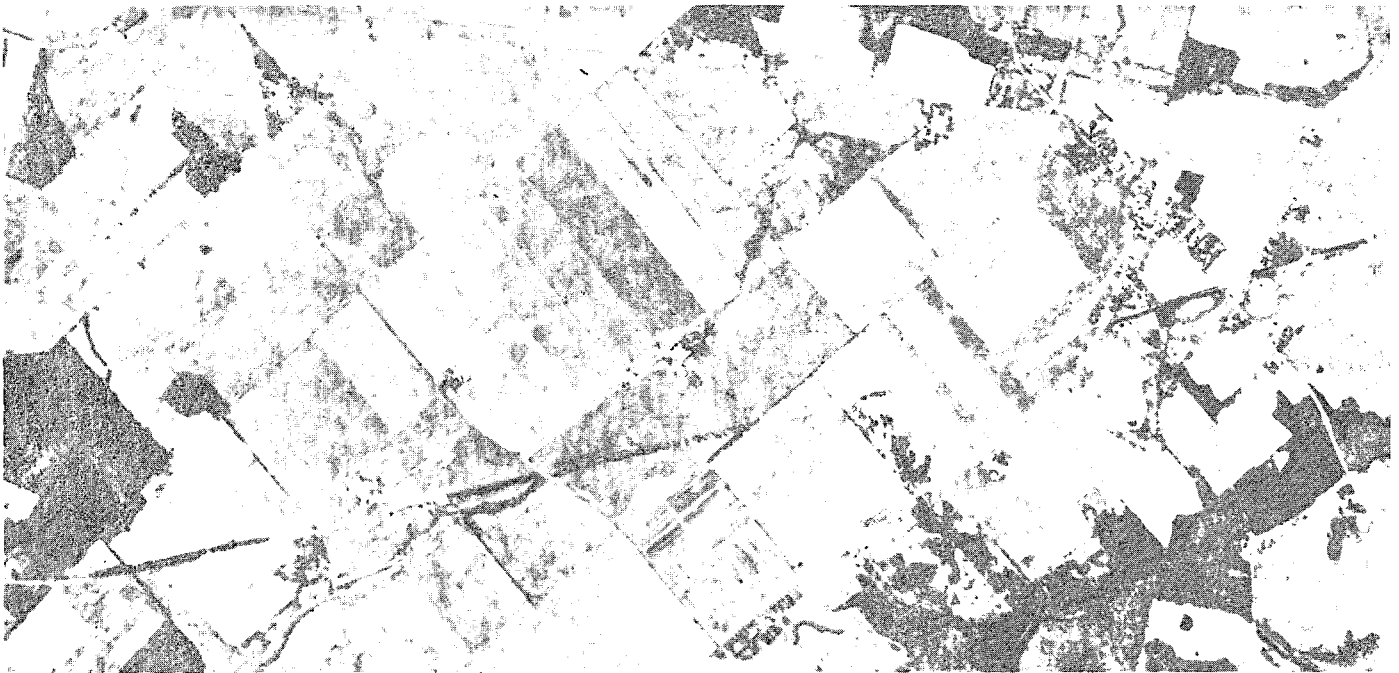
A minimum 20 percent of forest is required to ensure that forest vegetation is preserved or planted for microclimate control, energy conservation, soil stabilization, aquifer recharge and wildlife habitat. Where the site has no existing forest, this percentage shall be met by planting native forest species of the mature forest. It is not intended that this should be costly planting. Whip saplings (less than 3 feet high) at a density of 1 per 200 square feet are acceptable. The forested areas shall be protected from trampling.

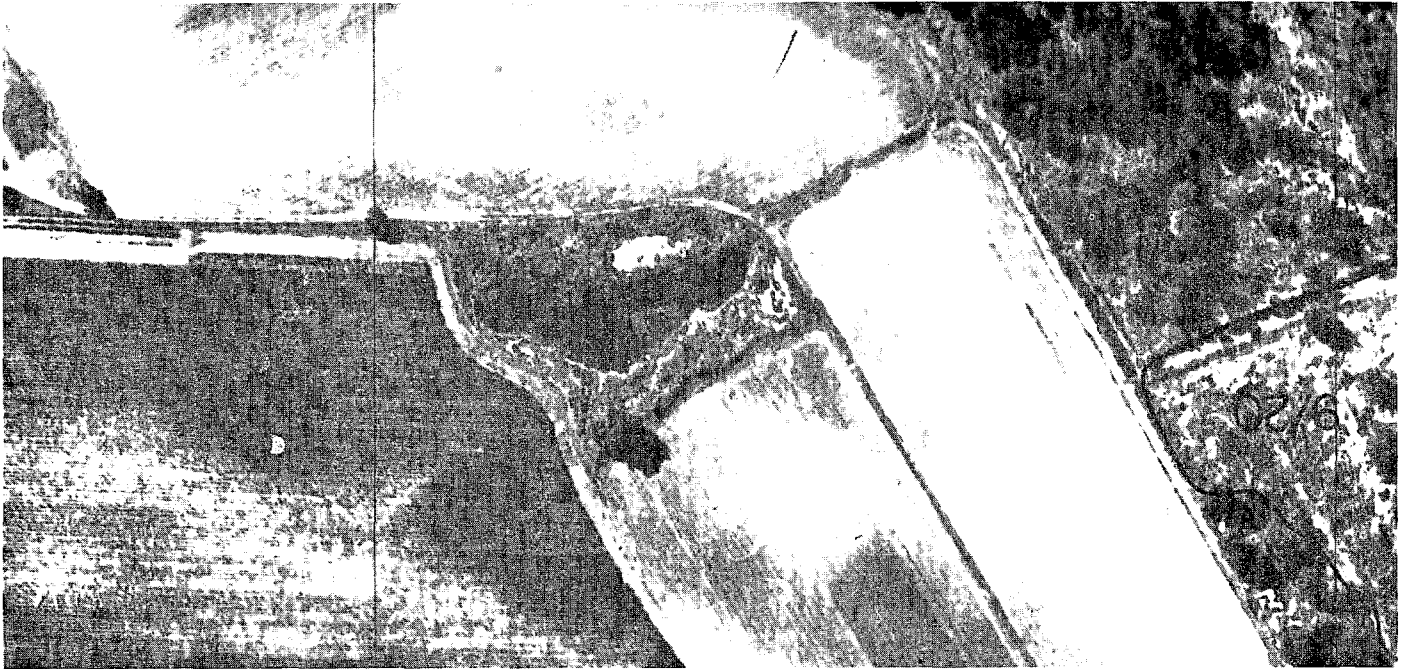
The herbs and shrubs shall be adapted to the environmental conditions of the site to reduce the adverse impacts associated with extensive liming, fertilization and irrigation. The acid sandy soils common in coastal areas this will exclude man species common in inland areas including most lawn grasses.

6.6.9.6.3 Soil Conservation

At this level of development intensity, extensive vegetation disturbance with little paving and no structures is permitted. Typically, if analysis showed that most of a large area was acceptable to Soil Conservation, the landscape that would be produced would be agricultural.

The photomaps below show examples of a typical soil Conservation landscape.





The acceptable ranges of development elements in soil conservation parts of a site is as follows:

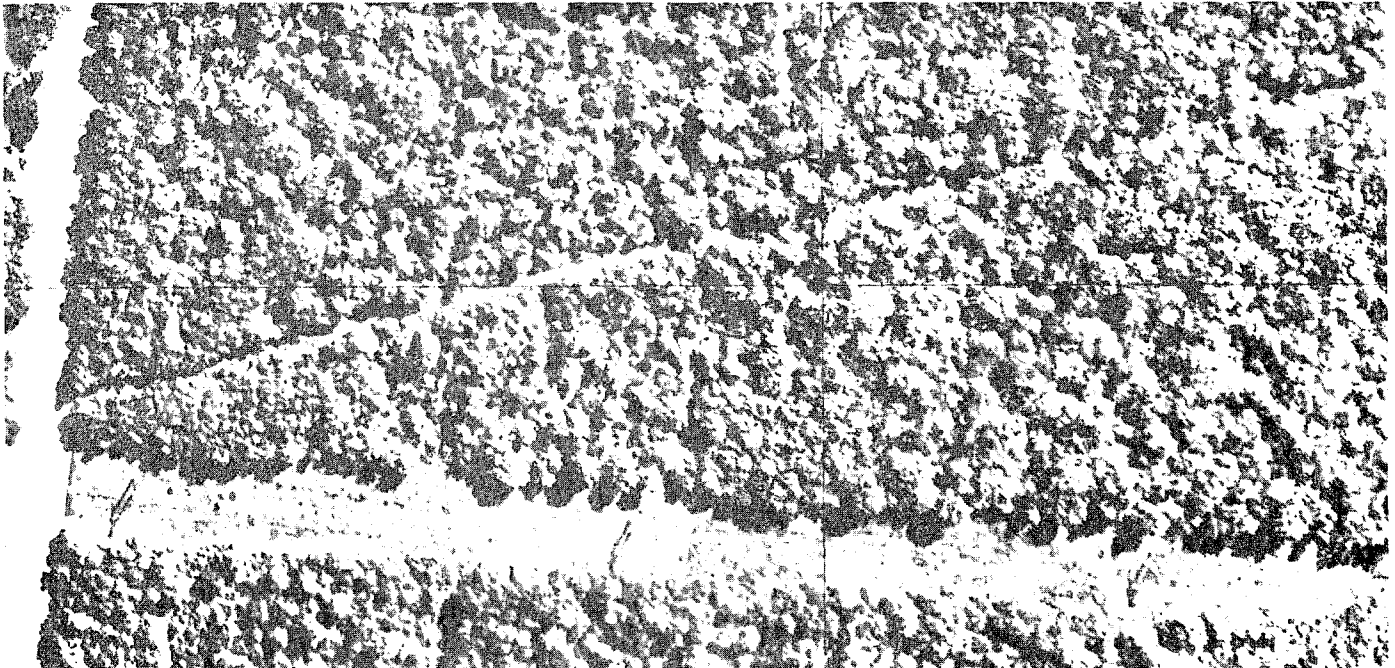
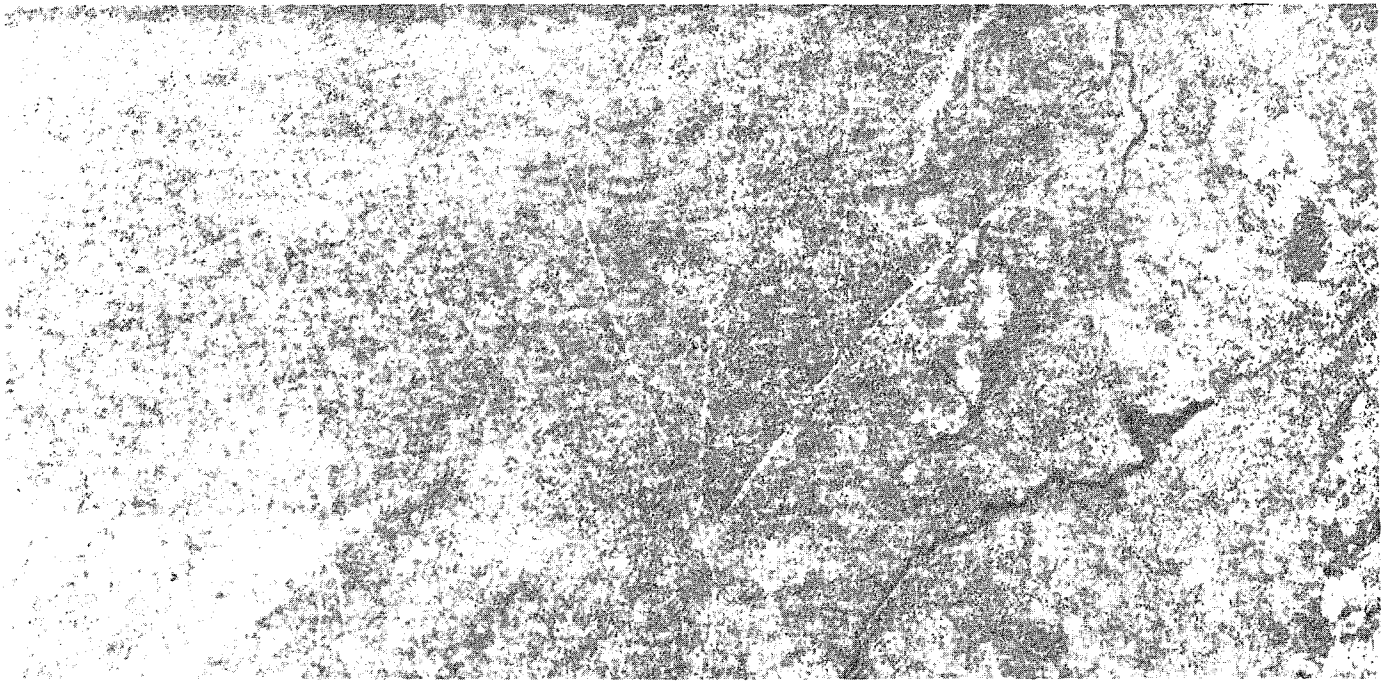
Soil Conservation	Structures/ Impervious Paving	Permeable Paving	Herb and Shrub	Forest
Maximum	0%	10%	90%	-
Minimum	-	-	-	10%

Uses appropriate in these areas would include agriculture, ball fields, golf courses and other open recreation areas. The most common reason for assigning this level of development restriction is to preserve fertile soils for landscaping purposes and possible future food or timber production.

6.6.9.6.4 Vegetation Conservation

At this level of development intensity, a very limited amount of vegetation disturbance and permeable paving is permitted with no structures or impermeable paving. If analysis showed that most parts of a large area were acceptable for Vegetation Conservation, the landscape that would typically be produced or retained would be natural forest.

The photomaps below show examples of typical Vegetation Conservation landscapes.



Vegetation Conservation	Structures/ Impervious Paving	Permeable Paving	Herb and Shrub	Forest
Maximum	0%	5%	5%	-
Minimum	-	-	-	90%

Uses appropriate in these areas would be low intensity recreation, wildlife habitats and buffering of adjacent non-compatible activities. This most restrictive level of development acceptability is assigned to protect the most valuable natural resources, particularly in areas where any development would be likely to degrade ground or surface water.

6.6.9.6.5 Summary of Acceptable Development Levels Definition

The following chart summarizes the acceptable ranges of development elements in each of the four levels of development intensity.

Figure 19: Acceptable Development Levels Definition

Levels of Development	Acceptable Percentage of Land Coverage of Subareas			
	Structures/ Impervious Paving	Permeable Paving	Vegetation Herbs & Shrubs	Forest
1. High Intensity Development				
Maximum	80%	90%	95%	-
Minimum	-	-	5%	5%
2. Moderate Intensity Development				
Maximum	30%	40%	80%	-
Minimum	-	-	-	20%
3. Soil Conservation				
Maximum	0%	10%	90%	100%
Minimum	-	-	-	10%
4. Vegetation Conservation				
Maximum	-	5%	5%	100%
Minimum	-	-	-	90%

6.6.9.6.6 Rationale

Most impacts of coastal concern vary in intensity with the percentage of a site that is paved. Vegetation and soil loss, reduction of primary productivity and disturbance of the surface and ground water regimes are directly linked to the extent of paving. Furthermore, population density is related to paving percent, and several impacts such as air and water pollution, solid waste generation, trampling and habitat disturbance, are proportional to population density. By regulating this single variable, therefore, many potential coastal impacts may be controlled.

The greater the restriction to paving, the less will be the adverse impacts of development. The Location Policies, therefore, link one of the four levels of acceptable development intensity to each possible combinations of the six land acceptability factors. This yields a location policy for every land area site in the Bay and ocean Shore Segment.

The percentages of development elements in each of the four types were based in part on studies performed by Wallace, McHarg, Roberts and Todd, a Philadelphia, Pennsylvania planning consulting firm, for the Woodlands New Community project in Texas and in part on DEP-OCZM analysis, part of which is included in Appendix O.

The Land Acceptability Tables (Figure 19) show a preliminary assignment of one of the four levels of development intensity to each feasible combination of the six planning variables.

These acceptability levels are based on current DEP policy, particularly as articulated in the detailed CAFRA permit application decisions. The acceptability level assigned to each of the lines of possible factor combinations are preliminary at this stage, and subject to revision during the federal review process for the Coastal Program Segment and the New Jersey rule making process on these policies.

DEP-OCZM has begun case studies applying these location policies to current CAFRA applications. This process will continue through the following months. Detailed comparisons will be made between the findings and the actual DEP decisions under the CAFRA, Wetlands, and riparian permit programs. This comparison will be used to tune the Location Policy tables. This exercise will develop a rationale for each line of the Land Acceptability Tables and each of the Water's Edge policies.

6.6.9.7 Special Construction Standards for Wet Soils

Where the Land Acceptability Tables indicate that development is acceptable in wet terraces, areas upland from Water's Edge areas with less than three foot depth to seasonal high water table, the following special construction standards shall apply.

- (a) Basements are prohibited.
- (b) Special engineering techniques must be used to ensure the stability of foundations and protect them from frost movement. These may include excavating organic substrates and backfilling with less compressible sediments, short-bore piles, special footings and floating slabs. The most appropriate technique to overcome these problems is left to the applicant, but evidence must be provided that the technique selected will be effective.

Construction techniques that minimize interference with natural ground and surface water movement such as short-bore pile and suspended slab techniques are encouraged.

- (c) Special care must be taken that air spaces beneath ground floor slabs are adequately ventilated with the inclusion of mechanical ventilation if necessary.
- (d) Special techniques to ensure stability of roads and paved areas may be necessary. These may include removal of compressible sediments and replacement with a firmer substrate and thicker than normal road base. The exact technique is at the discretion of the applicant but close technical scrutiny should be anticipated.
- (e) Special techniques should be employed to ensure that subsurface pipes are stable and waterproofed to avoid contamination of groundwater. Dewatering of trenches during construction, extra pipe base thickness, waterproof gaskets and sealed joints may all be necessary.

- (f) The use of porous concrete is prohibited although other porous pavements such as lattice concrete or gravel are acceptable.
- (g) The lowering of the water table by pumping that would disturb adapted vegetation is prohibited.

6.7 Composite Mapping (Analysis Step 6. Combine on a single map all the maps produced in Steps 1-5)

6.7.1 The analysis steps above will produce the following acceptability factor maps:

Step 1 (Section 6.2)	Special Water Areas
Step 2 (Section 6.3)	Water Areas
Step 3 (Section 6.4)	Special Water's Edge and Land Areas
Step 4 (Section 6.5)	Water's Edge Areas
Step 5 (Section 6.6)	Land Areas

6.7.2 This sixth step involves preparing a map of the site that combines all the previous maps to show all the different water, water's edge and land types present on the site.

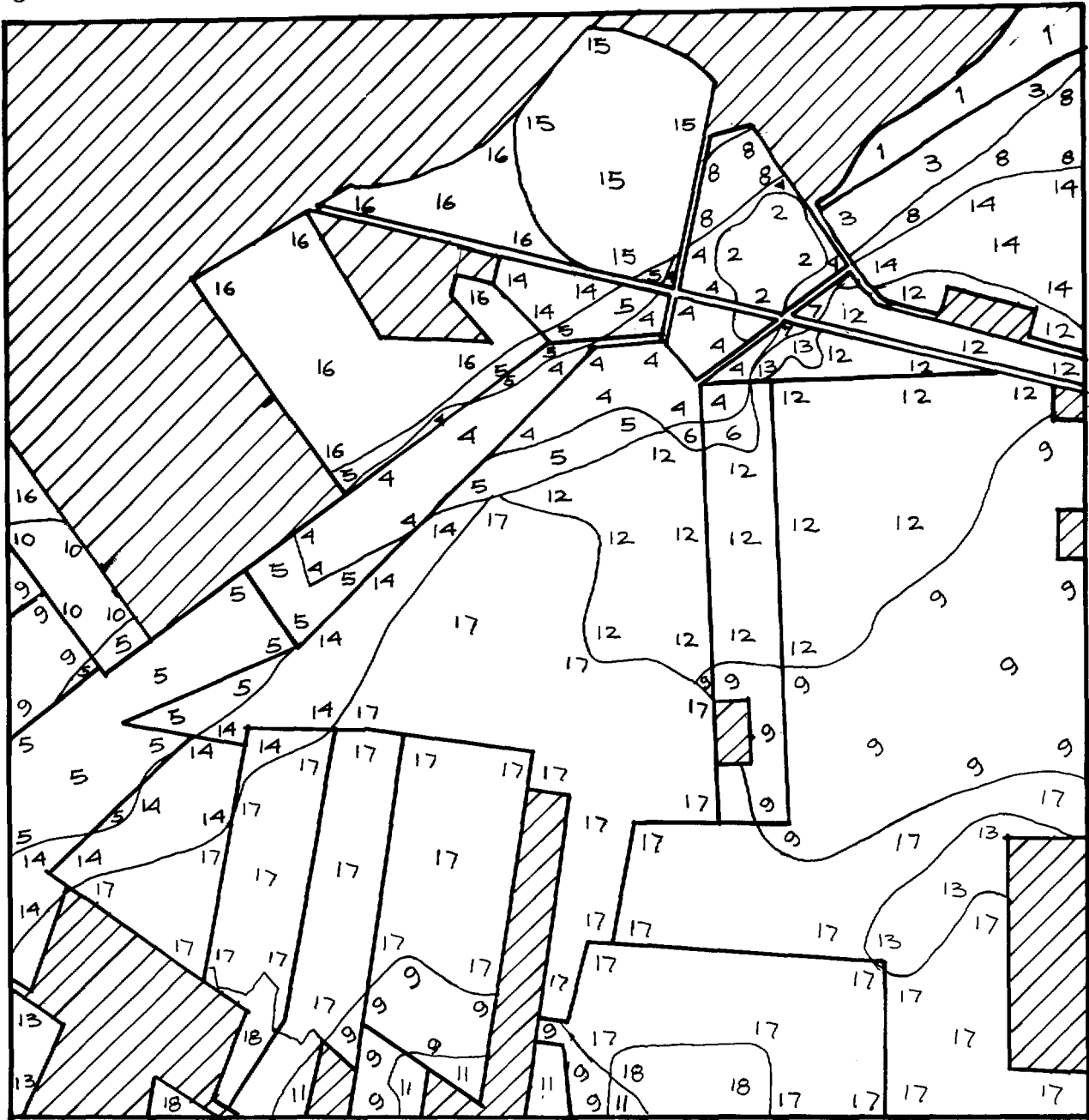
6.7.3 The scale of 1:24,000 may be too small for this purpose; an applicant may enlarge the scale to a scale of 1:12,000 or 1:8,000 as appropriate.

6.7.4 This composite map will show the distribution of all the sub areas of a site that have different DEP coastal location policies and is the geographical base on which this policy is assessed.

6.7.5 Illustrative Example: Land and Water Composite Map

The map below, Figure 20, shows at a scale of 1:24,000 all the land and water factors together, which have been discussed separately throughout the text above. The data sources are identified in the text where the factor was mapped.

Figure 20



LAND AND WATER TYPE COMPOSITE MAP

LEGEND FOR LAND AND WATER COMPOSITE

Water Types

1. Anadromous Fish Migration Path. Harbor Area.

Water's Edge Types

2. White Cedar Stand.
3. Flood Prone Area. Filled Water's Edge.
4. Flood Prone Area. Forested Upper Water's Edge.
5. Forested Upper Water's Edge.

Land Types

6. Flood Prone Area, Wet Terrace, High Perm., Low Fert., High Veg., Med. Dev. Potential.
7. Flood Prone Area, Wet Terrace, High Perm., Low Fert., Med. Veg., Med. Dev. Potential.
8. Flood Prone Area, Upland, High Perm., Low Fert., High Veg., Med. Dev. Potential.
9. Wet Terrace, High Perm., Med. Fert., High Veg., Med. Dev. Potential.
10. Wet Terrace, High Perm., Med. Fert., High Veg., High Dev. Potential.
11. Wet Terrace, High Perm., Med. Fert., Med. Veg., Med. Dev. Potential.
12. Wet Terrace, High Perm., Low Fert., High Veg., Med. Dev. Potential.
13. Wet Terrace, High Perm., Low Fert., Med. Veg., Med. Dev. Potential.
14. Upland, High Perm., Low Fert., High Veg., Med. Dev. Potential.
15. Upland, High Perm., Low Fert., High Veg., Med. Dev. Potential.
16. Upland, High Perm., Low Fert., High Veg., High Dev. Potential.
17. Upland, Med. Perm., High Fert., High Veg., Med. Dev. Potential.
18. Upland, Med. Perm., High Fert., Med. Veg., Med. Dev. Potential.

- 6.8 Preparation of Location Acceptability Map - (Analysis Step 7 - Identify and Map the DEP policy for each subarea of the site).
- 6.8.1 The composite map of all acceptability factors and land and water types at the site indicates each discrete subarea of the site.
- 6.8.2 Each different type of subarea on the composite map has a discrete location policy.
- 6.8.3 By consulting the appropriate acceptability tables, criteria, and policy statements in Sections 6.2-6.6 above, the relevant policy may be identified for each subarea and a map may be prepared that delineates the acceptability of each location of the site.
- 6.9 Determination of Location Acceptability - (Analysis Step 8 - Compare the site plan and the Location Acceptability Map).
- 6.9.1 By superimposing the Location Acceptability Map on a proposed site plan, the development proposed for each subarea may be compared with the acceptable development intensity indicated in the policies.
- 6.9.2 In both special and general water areas, acceptability is determined for specific uses in specific areas.
- 6.9.3 Any water use in the proposed layout that is shown as acceptable in the Special Water Area policies or the water acceptability table will indicate that the proposed use of the water subarea is acceptable.
- 6.9.4 Any water use in the proposed layout that is shown as conditionally acceptable in the Special Water Area policies or the water acceptability tables will indicate that the proposed use is prohibited in the sub area if the conditions are not satisfied and acceptable if they are.
- 6.9.5 Any water use in the proposed layout that is discouraged or prohibited in the special water policies or the water acceptability table will indicate that the proposed use is prohibited in the subarea unless extensive revisions are made to the proposed development.
- 6.9.6 In Special Water's Edge or Land Areas, specific policies addressed to special values must be satisfied. If the use in the proposed site plan satisfies these policies, the proposed use is acceptable in these subareas providing the general water's edge or land policies are also satisfied. If it does not, the proposed use is prohibited.
- 6.9.7 In water's edge areas, development is generally discouraged, unless certain conditions are met. If development is shown that does not meet these conditions, the proposed use of these subareas is prohibited. If the proposed development satisfies the conditions, it is acceptable.

6.9.8 In land areas, policy is set by requiring certain minimum or maximum percentages of structures, paving, or vegetation disturbance. The acceptability may be determined in two steps:

- (a) The land factor composite of each subarea is translated into an acceptable level of development by consulting the Land Acceptability Tables.
- (b) In each subarea of the site where Step 1 shows a different acceptable level of development, the proposed percentages of structures and impermeable paving, permeable paving, herb and shrub vegetation and forest vegetation are measured and compared to the acceptable ranges. If the proposed figures are within the acceptable ranges, the proposed use of the land subarea is acceptable. If the proposed percentages are outside the acceptable ranges, the proposed use of the land subarea is prohibited. Certain additional conditions must be met for proposed species and for construction standards in wet soils. In cases of conflict in the location of linear facilities, such as roads or pipelines, some prohibitions may be overridden as discussed in Section 6.9.

6.9.9 For a proposed development to be considered acceptable, the proposed use of each subarea must be acceptable.

6.9.10 Illustrative Example: Location Acceptability Map

The map below shows, at a scale of 1:24,000, the Location Acceptability of the illustrative example, assuming that all undeveloped areas are a single site.



LOCATION ACCEPTABILITY MAP.

LEGEND FOR LOCATION ACCEPTABILITY MAP

Water Location Acceptability

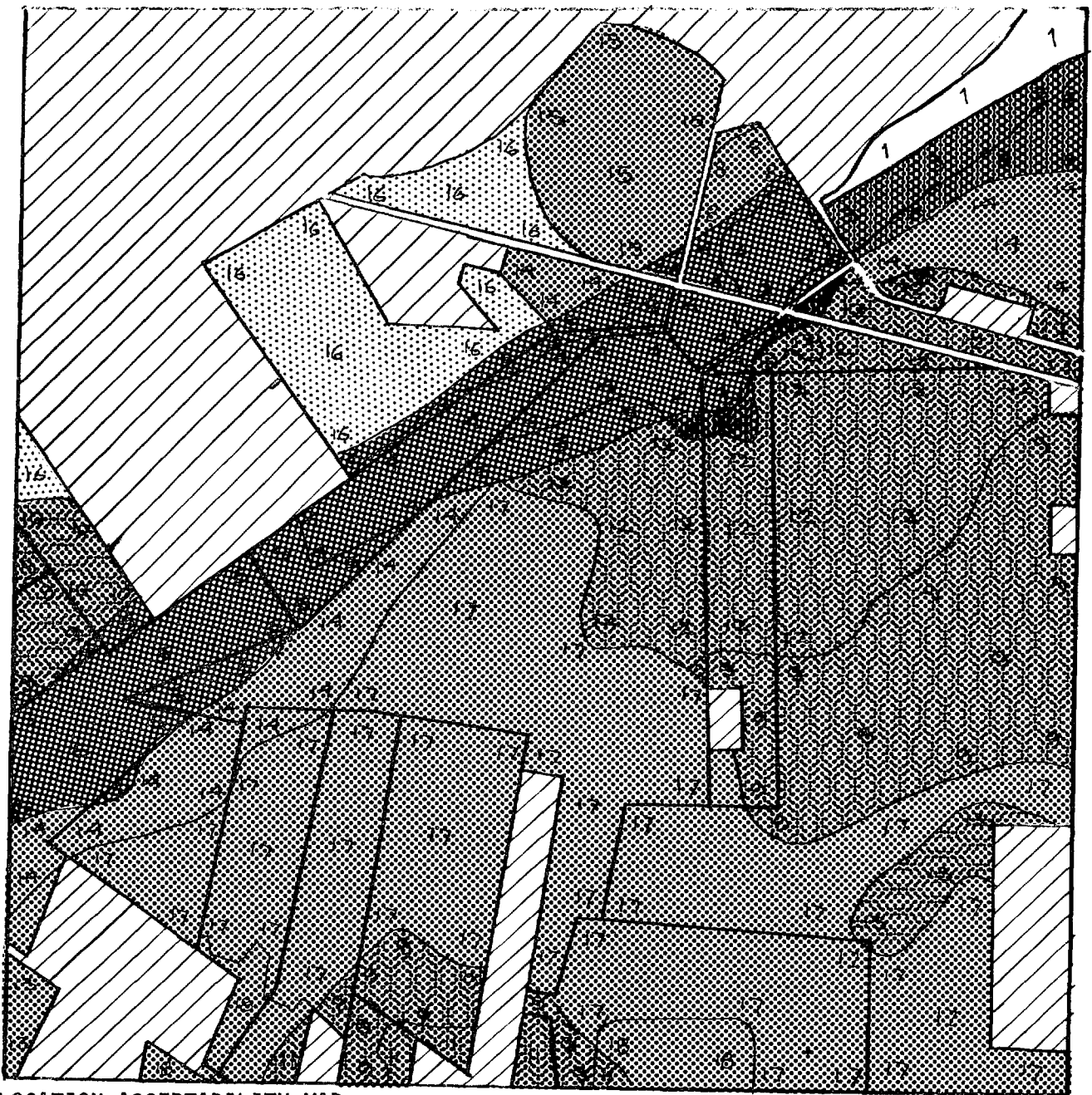
1. Boat moorings acceptable providing no interference with anadromous fish movement or new dredging.

Water's Edge Location Acceptability







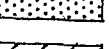
2. Vegetation Conservation (Cedar Stand Criteria)
3. Marina use acceptable provided need can be demonstrated and adverse impacts mitigated. (Filled Water's Edge Criteria)
4. Vegetation Conservation (Forested Water's Edge Criteria)
5. Vegetation Conservation (Forested Water's Edge Criteria)

Land Location Acceptability

6. Moderate Intensity residential development acceptable provided that floodway and wet soil criteria are satisfied. (Flood Prone area criteria and Line 189 of Land Acceptability Tables)
7. Moderate Intensity residential development acceptable provided that floodway and wet soil criteria are satisfied. (Flood Prone area criteria and Line 183.)
8. Moderate Intensity residential development acceptable provided that floodway criteria are satisfied. (Flood Prone area criteria and Line 87.)
9. Moderate Intensity development acceptable provided that wet soil criteria are satisfied (Line 201).
10. Moderate Intensity development acceptable provided that wet soil criteria are satisfied (Line 199).
11. Moderate Intensity development acceptable provided that wet soil criteria are satisfied (Line 195).
12. Moderate Intensity development acceptable provided that wet soil criteria are satisfied (Line 189).
13. Moderate Intensity development acceptable provided that wet soil criteria are satisfied (Line 183).
14. Moderate Intensity development (Line 87).
15. Moderate Intensity development (Line 87).
16. High Intensity development (Line 85).
17. Moderate Intensity development (Line 75).
18. Moderate Intensity development (Line 69).



LOCATION ACCEPTABILITY MAP
LEGEND

-  Vegetation Conservation
-  Moderate Intensity Development with Flood Prone & Wet Soil Standards
-  Moderate Intensity Development with Flood Prone Standards
-  Moderate Intensity Development with Wet Soil Standards
-  Moderate Intensity Development
-  High Intensity Development
-  Land already subdivided

NOTE: This map is identical to that on the previous page, but with tone added to make visually explicit the distribution of Location Acceptability.

6.10 Location of Linear Development

A linear development, such as but not limited to a road, sewer line, or offshore pipeline, that must connect between two points to function shall comply with the specific location policies to determine the most acceptable route, to the maximum extent practicable. If part of the proposed alignment of a linear development is found to be unacceptable under the specific location policies, then an alternate alignment (perhaps not the least possible distance) may be acceptable, provided the following conditions are met:

- (a) there is no prudent or feasible alternative alignment which would have less impact on sensitive areas.
- (b) there will be no loss of unique or irreplaceable areas,
- (c) appropriate measures will be used to mitigate adverse environmental impacts to the maximum extent feasible,
- (d) the alignment is located on or in existing rights-of-way and alignments, to the maximum extent practicable.

6.11 General Location Policy

A location may be acceptable for development under the specific location policies above, but the DEP may, as provided for by N.J.S.A. 13:19-11, reject or conditionally approve the proposed development of the location (under the jurisdiction of CAFRA) as reasonably necessary to:

- (a) protect the public health, safety, and welfare,
- (b) protect public and private property, wildlife and marine fisheries, and
- (c) preserve, protect and enhance the natural environment.

7.0 USE POLICIES

- 7.1 Purpose
- 7.2 Housing
- 7.3 Resort-Recreation
- 7.4 Energy
- 7.5 Public Facility
- 7.6 Industry-Commerce
- 7.7 Ports
- 7.8 Shore Protection

7.1 Purpose

Many types of development seek locations in the coastal zone. The second stage in the screening process of the Coastal Resource and Development Policies spells out a set of policies for particular uses of coastal resources. A proposed development must meet the standards of the Use Policies, in addition to the Location Policies. The Use Policies often reinforce and highlight Location Policies.

7.2 Housing Use Policies

Definition

Housing in the Bay and Ocean Shore Segment includes both large and small developments of single family detached houses, multi-family units with apartments or town houses, high rise buildings and mixed use developments. The Housing Policies which follow will apply to all proposed housing on wetlands or riparian lands and to housing projects of 25 or more units in other parts of the Bay and Ocean Shore Segment (See Chapter Four for a detailed description of the Management System).

- 7.2.1 Housing development in the water's edge is prohibited. Housing that requires lagoons, dredging, filling, or bulkheading is prohibited.

Rationale

Housing is not dependent on water access, and does not qualify for any exceptions to the policy of restricting development in sensitive areas.

- 7.2.2 Housing development that clusters dwelling units on the areas of sites most suitable for development are encouraged.

Rationale

Clustering is defined as an increase of net density realized by reducing the size of private lots. The open space that is produced by clustering can be returned to the community as common open space. The location policies define certain sensitive areas where development is prohibited. When such areas are present on a site, the acceptable gross density

may have to be reduced, unless the net density can be increased by clustering. Where municipal zoning requires minimum lot sizes that preclude clustering, applicants are encouraged to apply for a municipal variance to maintain the permissible municipal gross density by clustering. DEP will aid this endeavor by providing a rationale for the protection of sensitive areas. Cluster developments lessen the impact of construction by preserving valued soil, open space, vegetation and aquifer recharge resources. Some cluster developments also increase insulation and reduce energy consumption due to shared walls between units.

7.2.3 Housing development that provides for a mix of dwelling types and for persons of different age and income groups is encouraged.

7.2.4 Housing developments which contribute to a municipality's efforts to accommodate its fair share of low and moderate income housing are encouraged.

Rationale

In March 1975, the New Jersey Supreme Court, in Southern Burlington County NAACP v. The Township of Mount Laurel 67 N.J. 151 (1975) declared that a municipality must "presumptively make realistically possible an appropriate variety and choice of housing ... at least to the extent of the municipality's fair share of the present and prospective regional need ..." In April 1977, the Governor issued Executive Order No. 35 which directed the Division of State and Regional Planning in the Department of Community Affairs to prepare a statewide fair share housing allocation plan. Developments in the coastal zone that contribute to meeting defined municipal fair shares are encouraged.

7.2.5 Residential developments without barrier free design in public areas, and developments of more than 250 units without barrier free design in some of the units is prohibited. Further, barrier free design must be included in all buildings and spaces used by the general public according to State Law (N.J.S.A. 52:32-4). Barrier free design shall be encouraged in units of private residential developments, especially at grade changes in public space within those private developments.

Rationale

Housing in the coastal zone should be available to all people, including those whose physical handicaps have precluded such accommodation in the past. "Barrier Free Design Regulation", published by the State of New Jersey, Department of the Treasury, Division of Building and Construction on July 15, 1977 defines the barrier free design requirements of public buildings.

- 7.2.6 The development of housing at locations and densities that contribute to the feasibility of public transportation is encouraged.

Rationale

Public health and welfare concerns about air quality, as well as the necessity to limit energy consumption, require that public policies and decisions encourage public transportation.

- 7.2.7 Residential development involving the demolition and redevelopment of existing structures is discouraged, unless rehabilitation of the existing structures is demonstrated to be impractical and infeasible.

Rationale

The preservation, restoration, or rehabilitation of existing structures is preferable to demolition and redevelopment in order to save structures and neighborhoods with historic and aesthetic interest. Rehabilitation can often be more labor intensive than construction of a new building which means that more jobs are created and less energy is consumed through the production of new building materials. Applicants who build on developed sites must demonstrate why existing structures cannot be rehabilitated.

- 7.2.8 All high rise housing developments, defined as structures more than six (6) stories or more than sixty (60) feet from grade, are encouraged to locate in areas of existing high density, high-rise and/or intense settlements. High rise housing is acceptable subject to the following conditions:

- (a) high-rise structures within the view of coastal waters must be separated from coastal waters by at least one public road or an equivalent park distance,
- (b) the largest dimension of any high-rise structure must be oriented perpendicular to the beach or coastal waters,
- (c) the proposed structure must not block the view of dunes, beaches, horizons, inlets, bays, or oceans that are currently enjoyed from existing residential structures, roads or pathways,
- (d) the structure must not overshadow beaches between May and October,
- (e) the proposed structure must be in character with the surrounding transitional heights and residential densities,
- (f) the proposed structure must not have an adverse impact on traffic and air quality.

Rationale

Considerable recent residential development along the coast, from the Palisades to the barrier islands, has taken the form of high-rise, high-density towers. While conserving of land, some high-rise structures represent a visual intrusion, cause adverse traffic impacts, and casts shadows on beaches. Under CAFRA, DEP has approved three high-rise structures in Atlantic City and denied two CAFRA applications for high-rise proposals, one in downtown Toms River (Ocean County) and another in Brigantine (Atlantic County). This policy strikes a balance, between banning high-rises and allowing tall residential structures anywhere in the coastal zone.

7.3 Resort/Recreational Use Policies

Definition

Resort-recreation uses include the wide range of small and large developments attracted to and often dependent upon locations along the coast, particularly in the Bay and Ocean Shore Segment. Resort-recreation uses include hotels, motels, marinas, boating facilities, campgrounds, amusement piers, parks and recreational structures such as bath houses and fishing piers.

- 7.3.1 Resort/Recreation Uses shall have priority in the Bay and Ocean Shore Segment over all other uses, with highest priority reserved for those uses that serve a greater rather than a lesser number of people, and those uses that provide facilities for people of all ages and for people with physical handicaps.
- 7.3.2 Recreation areas shall be incorporated in the design of residential and industrial development, to the maximum extent practicable.

Rationale

The recent national recognition that recreation is physically and mentally important for people of all ages should be accommodated by new development. Recreational facilities are important near places of employment, as well as in residential areas, since many people only have opportunities for recreation during the working day.

- 7.3.3 All public and private resort-recreation development adjacent to coastal waters must provide for public access to the shore-front.

Rationale

These areas are maintained and protected by state tax revenues, as well as by local funds, and must be made available to all state residents and visitors. Access includes visual access, to the shorefront, direct physical access, and indirect physical access such as provision of transportation and supporting facilities.

- 7.3.4 New, expanded or improved hotel-motel developments shall be conditionally acceptable in existing resort-oriented areas, provided that the development: (a) complies with the high-rise housing policy, if appropriate, (b) promotes public recreational uses of the coast, and (c) is compatible in scale, site design, and architecture with surrounding development. Hotel-motel developments are discouraged in other areas.

Rationale

Hotels and motels enable New Jersey residents and tourists to visit the coast. They thereby support the tourist economy of the area. The buildings must be located, however, so they do not harm or threaten the resources which attract people to the coast.

- 7.3.5 Hotel-casino development in Atlantic City shall be located in the city's traditional resort area (along the Boardwalk), to the maximum extent practicable. Hotel-casino development is discouraged in existing residential areas and in areas where access by public transportation and between the proposed hotel-casino and the Boardwalk is limited. Rehabilitation and renovation of existing hotels for hotel-casino purposes is encouraged.

Rationale:

This hotel-casino location serves several purposes: (1) protecting Atlantic City's existing diverse neighborhoods, (2) facilitating public transportation solutions (such as bus, jitney, park-and-ride, or rail) to the problem of increased access to and in Atlantic City, (3) promoting pedestrian movements, (4) reducing pressure on vehicular systems, and (5) preserving the historic and low-rise residential character of the Gardiner's Basin and Inlet area.

- 7.3.6 New marinas for recreational boating shall be acceptable if:

- (a) the demonstrated regional demand for recreational boating facilities cannot be met by the upgrading or expansion of existing marinas, and

- (b) the proposed marina includes the development of dry storage areas, public launching facilities, and berthing spaces, and
 - (c) the proposed marina provides adequate pump out stations for wastewater disposal.
- 7.3.7 New marinas which meet the criteria of Section 7.3.6 and provide primarily for sail and oar boating will be encouraged.
- 7.3.8 Expansions of existing marinas shall be encouraged by limiting non-water dependent land uses that preclude support facilities for boating.
- 7.3.9 Expansion of existing marinas by dredging dry land is encouraged.
- 7.3.10 Recreational boating facilities are acceptable provided that they are designed and located in order to cause minimal feasible interference with the commercial boating industry.

Rationale

The location of marinas requires the use of sensitive lands at the waters edge which exist in only limited supply and are also valued for other activities. The policies aim to ensure that the area devoted to marinas is fully and efficiently utilized to keep the size of the area required to a minimum. Facilities for sail and oar boating are encouraged because such boats consume less energy and have less of a polluting impact on the water than motor boats.

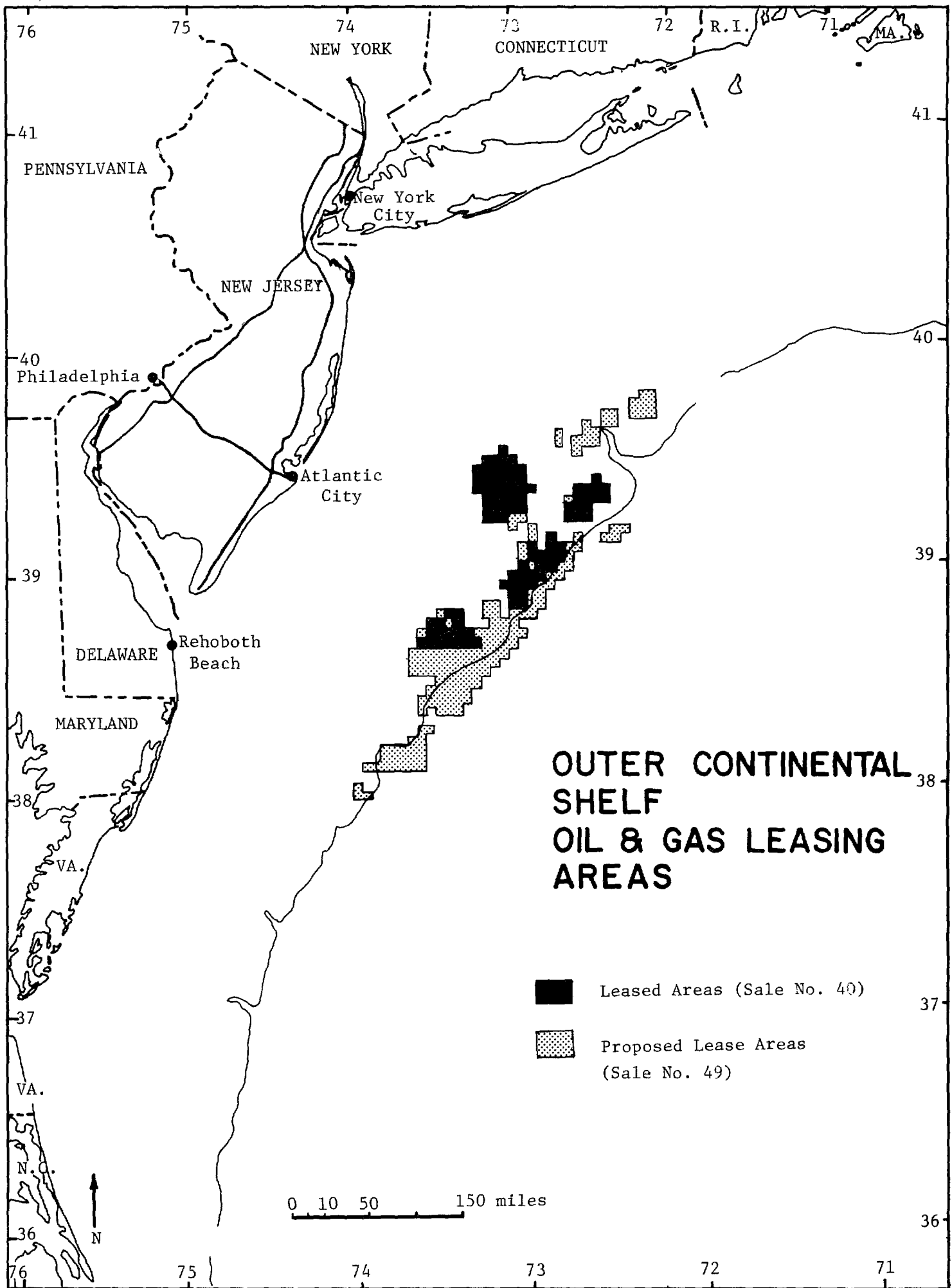
- 7.3.11 New amusement piers are prohibited, except in areas with riparian grants where they are discouraged. Expanded or extended amusement piers, parks, and boardwalks at the water's edge or in the water and the on-site improvement or repair of existing amusement piers, parks and boardwalk areas are discouraged unless the proposed development meets the following conditions:
- (a) the amusement pier, parks, or boardwalk does not conflict with aesthetic values, ocean views, other beach uses, and wildlife functions, and
 - (b) public access to the shorefront is not limited, and
 - (c) the community can adequately handle the uses to be generated by the proposed development.

7.4 Energy Use Policies

7.4.1 General Energy Facility Siting Policy

Energy facilities will be approved only after review by DEP and the New Jersey Department of Energy (N.J.S.A. 52:27-1 et seq.)

Figure 21



to ensure the protection of both the built and natural environment of the coast and of public health, safety and welfare, to the maximum extent feasible. The overlapping responsibilities of the Department of Environmental Protection and the Department of Energy require early consultation between these two agencies to promote efficiency and the orderly siting in the coastal zone of clearly needed energy facilities. (See the draft Memorandum of Understanding between DEP and DOE, in Appendix J). Energy facilities must demonstrate consistency with the master plan to be prepared by the Department of Energy for the production, distribution, consumption and conservation of energy. Prior to completion of the Energy Master Plan, need will be defined by DEP and DOE in part on the basis of information submitted by developers of proposed energy facilities.

Where the Department of Energy and the Department of Environmental Protection do not agree on a specific energy facility application (for example, on a specific proposed site for one type of energy facility), the disputed decision shall, in accord with state law, be submitted to the State's Energy Facility Review Board for final administrative action.

7.4.2 General Outer Continental Shelf (OCS) Oil and Gas Exploration and Development Policy

Rapid exploration of the Mid-Atlantic, North Atlantic, and other offshore areas with potential reserves of crude oil and natural gas is encouraged, as long as all related onshore activities do not conflict with existing land uses and are conducted in an environmentally sound manner. Onshore activities for development and production of offshore hydrocarbons shall be carried out according to the specific energy facility policies of this section.

Rationale

The decision of the U.S. Department of Interior to lease offshore tracts for crude oil and natural gas exploration presents New Jersey with new onshore and marine-related environmental problems and opportunities. (See Figure 21) New Jersey supports offshore exploration, recognizing the national need to identify new energy supplies, as long as this new industrial activity does not conflict with the State's second most important industry, tourism, which depends upon the maintenance of a high quality coastal environment.

In the event that commercial finds of oil and gas are made off the Jersey coast, there may be considerable building activity during the initial years while the industry gears up for production. This activity will drop off once production gets underway.

To minimize the impact of needed facilities, DEP encourages the location of OCS-related facilities in developed areas where the infrastructure and labor market already exist to absorb such activity.

During the construction of onshore oil and gas facilities, there may be an influx to the coastal zone of the service and engineering industry. This service sector activity will be encouraged to locate in urban centers, such as Atlantic City, which because of its proximity to Lease Sale 40 has already been selected by industry as the take-off point for helicopters to the offshore rigs and platforms. Also, the U.S. Geological Survey (U.S.G.S.) has located its mid-Atlantic field office in Atlantic City to supervise and monitor offshore operations.

Based on the best available information, oil recovered from the Baltimore Canyon and the Georges Bank is expected to be routed by pipeline and tanker to the existing New Jersey, Pennsylvania or Delaware refineries, to replace existing imported oil. Consequently, no new refineries are expected to be necessary in New Jersey. With five of the mid-Atlantic region's ten refineries (with one out-of-operation since 1974), New Jersey has already more than contributed its regional fair share of coastal lands to refineries.

7.4.3 Onshore Support Bases

Onshore support bases and marine terminals to support offshore oil and gas exploration, development, and production (including facilities for work boats, crew boats, pipeline barges, helicopters, and limited, short-term storage facilities), are encouraged at locations in built-up urban areas of the state outside of the Bay and Ocean Shore Segment. Preferable locations for water-dependent onshore support bases include urban waterfront areas, such as Perth Amboy, where onshore physical, economic, and institutional impacts will be less than the impacts likely to be placed on those less industrially development areas which are more dependent upon tourism and the resort industry, such as Atlantic City.

Rationale

Offshore exploratory activity began off New Jersey in the Baltimore Canyon on March 29, 1978. The offshore oil and gas industry is likely to seek onshore support bases closer to the offshore tracts than the present temporary bases established by the major oil, gas, and offshore service and supply companies at Davisville, Rhode Island, if exploratory drilling is successful. Because of shallow inlets in the Bay and Ocean Shore Segment, few locations in this part of New Jersey meet industry's siting requirements. This policy recognizes that the New Jersey coast is favored by proximity to the offshore tracts as a site for onshore staging bases, and carries out the basic policy to concentrate rather than disperse industrial development in the coastal zone.

7.4.4 Platform Fabrication Yards

Platform fabrication yards will be encouraged in built-up areas which have the requisite acreage, adequate industrial infrastructure, ready access to the open sea, and adequate water depth, and where the operation of such a yard would not alter existing recreational uses of the ocean and waterways in the areas.

Rationale

If offshore exploration proves successful, the development phase of OCS activity in the Mid-Atlantic may require one or more sites for constructing the steel platforms used offshore, in addition to the platform construction yard tentatively planned for Cape Charles in Virginia. Platform yards typically do not have the adverse air and water quality impacts associated with some other industries. However, platform construction yards require large tracts of land. For these reasons, offshore platform construction yards are encouraged to seek locations in the already developed areas of the New Jersey coast such as along the Delaware River in Salem, Gloucester and Camden Counties, outside of the Bay and Ocean Shore Segment.

7.4.5 Repair and Maintenance

Repair and maintenance facilities for vessels and equipment for offshore activities will be encouraged, particularly at underutilized existing ship yards within the Bay and Ocean Shore Segment.

7.4.6 Pipeline Coating Yards

Pipe coating yards are discouraged in the Bay and Ocean Shore Segment and encouraged along the Delaware River and in the area under the jurisdiction of the Port Authority of New York and New Jersey, in such communities as Middlesex, Union, Essex, and Hudson Counties.

7.4.7 Pipelines and Associated Facilities

Crude oil and natural gas pipelines to bring hydrocarbons from offshore New Jersey's coast to existing refineries, and oil and gas transmission and distribution systems will be acceptable, subject to the following conditions:

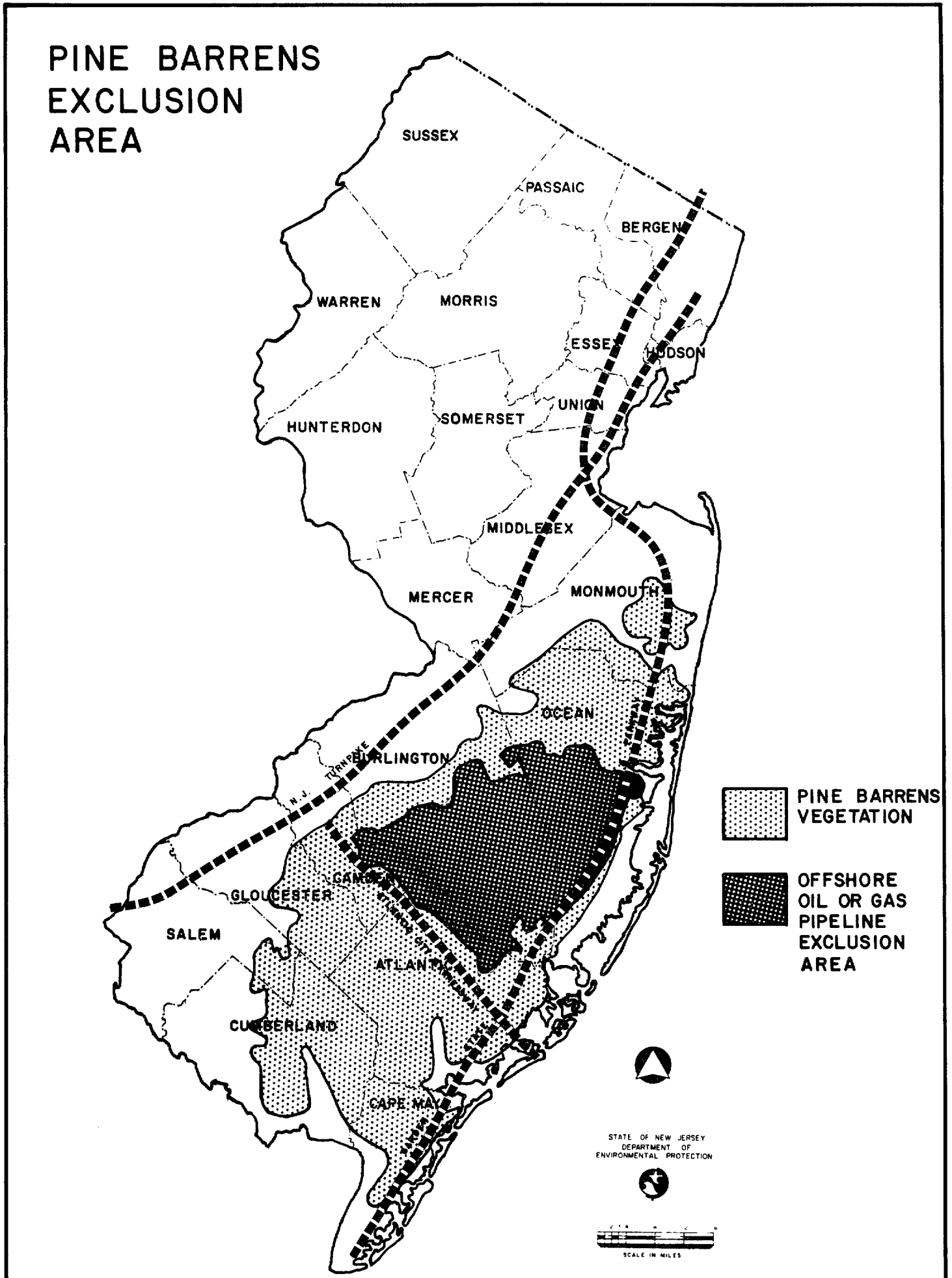
- (a) For safety and conservation of resources, the number of pipeline corridors, including trunk pipelines for natural gas and oil, shall be limited, to the maximum extent feasible, and designated following appropriate study and analysis by the Department of Environmental Protection and the New Jersey Department of Energy, and interested federal, state and local agencies and affected industries,

- (b) The pipeline corridors for landing oil or natural gas are conditionally acceptable provided they follow existing already developed or disturbed road, railroad, pipeline, or other rights-of-way (such as the Atlantic City Expressway), to the maximum extent practicable,
- (c) Pipeline corridors for landing oil are prohibited in the Central Pine Barrens area of the Mullica River, Cedar Creek watersheds and portions of the Rancocas Creek and Toms River watersheds, defined as the 760 square mile region adopted by DEP as a "critical area" for sewerage purposes and non-degradation surface and ground water quality standards -- see N.J.A.C. 7:9-4.6(i), (j), and N.J.A.C. 7:9-10.1(b) and Figure 22 -- and discouraged in other undeveloped parts of the Pine Barrens,
- (d) Pipeline corridors for natural gas are discouraged in the Central Pine Barrens as defined above, unless the developer can demonstrate that the proposed pipeline will meet the adopted non-degradation standards for water quality and cause no long term adverse environmental impacts.
- (e) Proposals to construct offshore oil and gas pipelines, including all of the contemplated ancillary facilities along the pipeline route such as, for example, gas processing plants, oil storage terminals, booster stations, and other related facilities, shall be evaluated by DEP and the Department of Energy, in terms of the entire new potential pipeline corridor through the State of New Jersey. To preserve the recreational and tourism character of the coastal areas, new major pumping stations and other ancillary facilities to the offshore oil and gas pipelines shall be prohibited from locations in the Bay and Ocean Shore Segment, except for major gas processing plants (See Section 7.4.9). Ancillary facilities shall be protected by adequate visual, sound, and vegetative buffer areas, and
- (f) Pipeline corridors through the state coastal waters shall, at a minimum and to the maximum extent feasible, avoid offshore munitions, chemical and waste disposal areas, heavily used waterways, geological faults, and significant fish or shellfish habitats. Pipelines shall be trenched to a depth sufficient to withstand exposure by scouring, shipgroundings, anchors, fishing and clamming and other potential obstacles on the sea floor.

Rationale

New Jersey recognizes that pipelines, rather than other modes of surface transportation such as tankers and barges, are the preferred and more environmentally sound method of bringing crude oil and natural gas ashore from offshore wells. Pipelines affect their immediate surroundings most dramatically

Figure 22



during construction. If construction is carried out properly, there will be short term impacts, most visible during the period of revegetation. At the same time, the potential onshore effects of pipelines on the sensitive ecosystem of the coast and the Pine Barrens, and the visual, noise, and odor impacts potentially created with the ancillary facilities associated with OCS pipelines, require that New Jersey proceed cautiously and prudently in selecting pipeline corridors, specific alignments, and locations for ancillary facilities.

7.4.8 Oil Refineries and Petrochemical Facilities

Oil refineries and petrochemical facilities are prohibited in areas where they might conflict with the resort-tourism industry or areas of recreational or biological value. New oil refineries and petrochemical facilities are prohibited in the Bay and Ocean Shore Segment. Expansion or modernization of existing oil refineries and petrochemical facilities at existing sites, outside of the Bay and Ocean Shore Segment, will be acceptable if such expansion does not violate applicable state and federal air and water quality standards.

7.4.9 Gas Processing Plants

Gas processing plants between the offshore pipeline landfall and the commercial transmission line shall be excluded from sites within the Bay and Ocean Shore Segment, to the maximum extent practicable, and shall be located the maximum feasible distance from the shoreline. Such plants should, to the maximum extent feasible, locate close to existing petrochemical plants to which they may provide feedstock. The siting of gas processing plants will be reviewed in terms of the total pipeline routing system.

Rationale

Gas processing plants will be needed if gas is found off New Jersey's shore, but these facilities do not require locations on the shoreline. Gas is best transported by pipeline. To promote the most efficient use of land, gas plants should be located close to existing gas distribution lines. Alternatively, where gas is associated with oil in oil pipelines, gas separation plants should be located close to refineries to which the oil pipelines will be routed.

7.4.10 Storage of Crude Oil, Natural Gas and Other Potentially Hazardous Liquid Substances

The storage of crude oil, natural gas and other potentially hazardous liquid substances related to offshore oil and gas production is prohibited on barrier islands. Storage facilities of crude oil and gas, in the absence of processing facilities, will be permitted only outside the Bay and Ocean Shore Segment in the Port of New York and New Jersey and the Delaware River Port and where such storage will not contribute unacceptably to overall regional air or water quality degradation.

Rationale

The storage of these substances is not coastal-dependent and will not be permitted where it might limit recreational or open space uses of the coast. The policy relating to major pumping stations will also apply to surge tanks.

7.4.11 Tanker Terminals

New and/or expansion of existing tanker facilities will be acceptable in existing ports and harbors outside of the Bay and Ocean Shore Segment. Multi-company use of existing and new tanker terminals will be encouraged in the Port of New York and New Jersey and in the area bounded by the Delaware River Port Authority, where adequate infrastructure exists to accommodate the secondary impacts which may be generated by such terminals, such as processing and storage facilities. New tanker terminals will be discouraged on other parts of the coast, including the Bay and Ocean Shore Segment.

Rationale

Onshore tanker facilities pose potential adverse environmental impacts and could encourage secondary development activity that is not necessarily coastal development.

7.4.12 Base Load Electric Generating Stations

New or expanded non-nuclear fossil fueled plants will be directed toward relatively built-up areas, consistent with applicable air and water quality standards.

7.4.13 No future nuclear electric generating stations will be approved in the coastal zone unless:

- (a) the Department of Environmental Protection and the New Jersey Department of Energy assured that storage and disposal of the spent fuel poses no unacceptable safety or environmental hazards to New Jersey residents,
- (b) the two agencies receive clear proof through the Department of Energy's Master Plan that nuclear facilities are needed and vitally important to the public health, welfare, and economic well-being of New Jersey residents,
- (c) the Department of Environmental Protection is assured that the location of the facility will not result in near-by population density increases over the operating lifetime of the facility which might make suitable protective actions in the case of serious accident impossible, and that an acceptable, approved emergency evacuation plan is filed, and
- (d) the Department of Environmental Protection and the Department of Energy are satisfied that no other feasible and economical energy alternative exists for the timely and efficient production of needed electrical power.

Rationale

The promise of nuclear power has raised strong public concern regarding human health and safety, effects on plants, wildlife and water, and public security and civil liberties. The possibility of new technological developments which would provide greater numbers of jobs and enable the production of energy at more of a community or regional scale has also raised further questions about the wisdom of nuclear energy.

While these issues are being widely debated both in New Jersey and nationally, DEP does not believe additional nuclear facilities should be built unless the rigid conditions in the policy are met. These conditions are more difficult to meet than the criteria DEP used in 1975 decision to approve the Hope Creek Nuclear Generating Station, Units 1 and 2, at Artificial Island, Salem County.

New Jersey has operating nuclear generating units at Oyster Creek in Oyster County and Artificial Island (Salem Unit I) in Salem County. Four additional plants are under construction including Salem Unit 2, Forked River in Ocean County and two additional units on Artificial Island (Hope Creek Units I and II which received a CAFRA permit in 1975). That gives New Jersey a total of six operating approved nuclear facilities. Also, the only application for a nuclear facility filed since 1975, the two floating Atlantic Generating Stations Units, has been delayed at least three years by the applicant, Public Service Electric and Gas Company.

7.4.14 Liquified Natural Gas (LNG)

The location of terminals for transferring Liquified Natural Gas (LNG) is discouraged in the Bay and Ocean Shore Segment until: (a) rigorous and consistent siting criteria are established, (b) the risks inherent in tankering LNG along New Jersey's rivers and waters and transferring LNG onshore have been sufficiently analyzed and minimized, and (c) the Federal Energy Regulatory Commission responds affirmatively to the May 1976 petition by New Jersey for the issuance of siting criteria that adequately consider the safety hazards associated with this energy technology. Even if such criteria were established, LNG terminals are nevertheless acceptable only at sites remote from population centers.

Rationale

LNG facilities have been proposed in recent years for Deptford and Logan Townships in Gloucester County, and on Staten Island, New York from where the LNG would be pipelined to New Jersey. Because tankering, transfer and storage of LNG pose significant risks to safety and health and the environment (which may not necessarily be restricted to one state), New Jersey recommends that the siting of LNG facilities be treated on an interstate regional basis.

7.4.15 Conservation and Alternative Technologies

The use of renewable sources of energy, such as solar, wind and tidal power, including experimental and demonstration projects, will be encouraged to locate in the coastal zone, to the extent that these plants do not unreasonably affect scenic or recreational values and meet existing state and federal environmental requirements. The use of recoverable energy sources such as co-generation and the use of secondary recovery systems are encouraged.

DEP will review all proposals to locate new energy facilities in the coastal zone that use non-renewable resources, such as oil, coal, gas and uranium, to ensure that: (a) only those developments necessary to meet the state's energy needs are approved, and (b) when approved, only the most efficient operating procedures are used in the interest of energy conservation.

7.5 Public Facility Use Policies

Public Facilities includes a broad range of public works for the production, transfer, transmission, and recovery of water, sewerage and other utilities, as well as public transportation facilities. The presence of an adequate infrastructure makes possible future development and responds to the needs created by present development.

7.5.1 New or expanded public facility development is conditionally acceptable provided that:

- (a) The public facility would serve a demonstrated need that cannot be met by existing public facility at the site or region, and
- (b) Alternate technologies, including conservation, are an impractical or infeasible approach to meeting all or part of the need for the public facility.

7.5.2 Proposals to build and expand existing new roads must demonstrate a need, and indicate why alternate solutions, including, as appropriate, upgrading existing roads and/or combined with use of public transit are not feasible.

7.5.3 New and improved public transportation facilities, including bus, rail, air, and boat travel and related parking facilities, are encouraged.

7.5.4 Transportation facilities are prohibited if they block physical or visual access to the waterfront.

7.5.5 The construction of bicycle and foot paths, in residential projects, and fishing catwalks and platforms on new or improved bridges, is required.

7.5.6 Solid waste conservation techniques such as recycling, resource and energy recovery and volume reduction, must be explored and proved infeasible before a solid waste disposal facility, preferably at a regional scale, is deemed acceptable.

- 7.5.7 New sanitary landfills are prohibited from locating at both water's edge and in wet terrace areas, as defined in the Location Policies.
- 7.5.8 Sanitary landfills that locate in the upland must demonstrate that the leachate will not adversely impact the ground or surface waters, by using a lining and/or a leachate filtration plant.
- 7.5.9 Coastal developments that do not employ the most energy-efficient wastewater treatment system practicable will be prohibited.
- 7.5.10 On-site sewage disposal systems are encouraged where proper design, installation, and operation will be consistent with applicable ground and surface water quality standards.
- 7.5.11 Wastewater treatment systems that recharge the groundwater with highly treated effluents are encouraged, provided that consistently high quality effluents and acceptable recharge techniques are demonstrated.

7.6 Industry-Commerce Uses Policies

The sensitive land and water features of the Segment, the relatively small amount of available land, and the significant environmental impacts of most industrial development mandate a restrictive policy towards such development in the Bay and Ocean Shore Segment.

- 7.6.1 New or expanded coastal dependent industrial or commercial development is encouraged at or adjacent to existing sites, to the maximum extent practicable. If existing sites are demonstrated to be impractical, then new sites may be acceptable provided that:
- (a) The development can demonstrate a high ratio of jobs created to the acres of the site used for the development, and
 - (b) the development poses no conflict with resort-recreation uses of the coast.
- 7.6.2 Mining is acceptable only in sites immediately adjacent to current mining operations, provided that reclamation plans are acceptable. Mining is prohibited in Water's Edge Areas, but is otherwise exempted from the Location Policies (Section 6.0).

Rationale

Although New Jersey is not known as a mining state, sand, gravel, ilmenite, and glauconite are significant state products. While mining contributes millions of dollars to the state's economy, it also causes soil erosion, water quality degradation, wildlife disturbance, and visual blight. Careful management of mining operations is therefore required.

7.6.3 Major parking lots, structures, garages and large paved areas serving industrial-commercial complexes are conditionally acceptable, provided that the extent of paved surfaces is minimized, the development does not cause unacceptable air or water quality degradation and the development is compatible with its surroundings and satisfies the Location Policies.

7.7 Ports

7.7.1 Port-related development and marine commerce shall be acceptable only in established port areas. Water dependent development shall not be preempted by non water dependent development in these areas.

New port facilities will only be permitted when there is a clear demonstration of the inadequacy of an existing port. In such cases, expansion may only occur adjacent to an existing built-up port.

Rationale

New Jersey's port areas are a regional, national and international resource. The existing ports contain unused and underused areas which can be refurbished to meet increases in demand. The state must nevertheless allow for possible unanticipated future needs for port areas.

7.8 Shore Protection Use Policies

Shore protection uses include a variety of structural and non-structural measures to manage the shoreline for natural effects of erosion, storms, and sand movement. Beach nourishment, sand fences, pedestrian control on dunes, stabilization of dunes, and dune restoration projects, as well as the reconstruction of dunes, are all shore protection uses.

7.8.1 Non-structural solutions to shoreline erosion problems are preferred over structural solutions. The infeasibility and impracticality of a non-structural solution must be demonstrated before structural solutions may be deemed acceptable.

7.8.2 Dune restoration and beach nourishment projects are encouraged to rebuild destroyed dunes and remedy a beach's deficiency in natural sand supply.

7.8.3 The construction of new shore protection structures, including jetties, groins and seawalls, and the modification, repair or removal of existing structures, is acceptable only under the following conditions:

- (a) The structure is essential to protect heavily used public recreation beach areas in danger from erosion,
- (b) The structure is essential to protect coastal-dependent uses,
- (c) The structure is essential to protect existing structures and infrastructure in built-up, urban shorefront areas in danger from erosion,

- (d) The structure is designed to eliminate or mitigate adverse impacts on local shoreline sand supply,
- (e) The structure will not create net adverse shoreline sand movement conditions downdrift, including erosion or shoaling,
- (f) The structure will protect and enhance public access to the shorefront, including fishing and other recreation opportunities, and
- (g) The structure will cause minimum feasible adverse impact to living marine resources.

8.0 RESOURCE POLICIES

8.1 Purpose

The third step in the screening process of the Coastal Resource and Development Policies involves a review of a proposed development in terms of its effects on various resources of the built and natural environment of the coastal zone, both at the proposed site as well as in its surrounding region. These policies serve as standards to which proposed development must adhere.

8.2 Marine Fish and Fisheries

8.2.1 Policy

Development is conditionally acceptable to the extent that minimal feasible interference is caused to the natural functioning of marine fish and fisheries, including the reproductive and migratory patterns of estuarine and marine estuarine dependent species of finfish and shellfish.

8.2.2. Rationale

Fishery resources provide recreation and economic activity in the coastal zone. Finfish (freshwater, estuarine, and marine) and shellfish resources provide significant recreation experiences for residents of New Jersey and interstate visitors. These resources also help the State's economy. DEP estimated that marine fishing in New Jersey provides 36.07 million/person days of recreation annually, with approximately \$10.42 in expenditures per day, yielding a total of \$375.8 million to the state economy. Of this total, fishing yields approximately \$217.2 million and shellfishing \$158.6 million. DEP also estimates that 1,868,000 people participated in marine/estuarine recreational fishing in 1976 in New Jersey. Commercial landings for all finfish and shellfish in New Jersey during 1976 were 226,988,000 lbs., valued at \$34.55 million dockside and an estimated \$86.3 million retail value, according to Department of Commerce statistics.

Indices of interference with fish resources include actions that cause: blockage of anadromous finfish spawning runs, reduction in the critical capacity of estuaries to function as finfish nursery areas, reduction of summer dissolved oxygen level below 4 ppm, introduction of heavy metals or other toxic agents into coastal water, rise in ambient water temperature regime especially during summer and fall periods, increases in turbidity levels, siltation, or resuspension of toxic agents, and introduction of untreated effluents from domestic and industrial sources.

8.3 Water Quality

8.3.1 Policy

Coastal development shall conform with all applicable surface and groundwater quality standards, as established and administered by DEP's Division of Water Resources (see N.J.A.C. 7:9-4.0 et seq.).

8.3.2 Rationale

Most of the natural, commercial, recreational, industrial, and aesthetic resources of the coastal zone affect or are affected by surface and ground water quality. Specific coastal zone water quality problems include pollution by nutrients, pathogenic organisms, toxic and hazardous wastes, thermal discharges, suspended sediments, and saline intrusion into freshwater resources. These pollutants can lower water quality sufficiently to prevent desired water uses.

8.4 Surface Water Use

8.4.1 Policy

Proposed coastal development shall demonstrate that the anticipated surface water demand of the facility will not exceed the capacity of the local potable water supply system or reserve capacity and that construction of the facility will not cause unacceptable surface water disturbances.

8.4.2 Rationale

The surface waters of the New Jersey coastal zone are an invaluable natural resource. Fresh waters maintain the propagation of established and natural biota. They serve as commercial, recreational, industrial, agricultural, and aesthetic resources. Any development that affects surface water quality will have a negative impact on these uses.

8.5 Groundwater Use

8.5.1 Policy

Proposed coastal developments shall demonstrate that the anticipated groundwater withdrawal demand of the facility will not cause salinity intrusions into present potable groundwater well fields or significantly lower the water table.

Coastal developments shall conform with all applicable DEP requirements for groundwater withdrawal and water diversion rights.

8.5.2 Rationale

Groundwater, defined as water beneath the land surface is a primary source of water for drinking and industrial use. In some areas of the coastal zone, especially areas in Monmouth, Salem and Cape May Counties, excessive amounts of groundwater are being withdrawn. The problem stems from the overpumping of groundwater and reduction of aquifer recharge caused by increased development and population. This has led to a lowering of the water table that may change the base flow conditions of streams, or increase salt water intrusion into the groundwater.

8.6 Runoff

8.6.1 Moderate Intensity Development Area Policy

In areas designated for moderate intensity development runoff crossing a site boundary shall not exceed the rate that would occur if the site were covered with mature forest vegetation.

8.6.2 Intensive Development Area Policy

In areas designated for intensive development the amount of runoff from the roofs and walls of structures that crosses the site boundary shall not exceed the rate that would occur if the area of structures were covered with mature forest vegetation. Runoff from paved areas may be sewered and discharged off site provided that:

- (a) The applicant demonstrates that it is not feasible to recharge pavement runoff on-site either for reasons of the quantity or quality of the effluent,
- (b) The storm water pipes do not carry sewerage waste or discharge into, or otherwise interconnect with sanitary sewer systems,
- (c) The storm water pipes do not discharge water into surface or ground water without passing the effluent through treatment facilities,
- (d) The applicant demonstrates that the effluent from treatment facilities whether on or off-site, meets all applicable water quality standards, and
- (e) The applicant demonstrates that the volume of treated effluent will not cause adverse impacts in the receiving water body.

8.6.3 Rationale

In principle, it is desirable to apply the same standard of runoff detention to all developments. However, in practice,

intensively developed sites pose several difficulties. The land area required for detention basins may be difficult to attain. The general location policy requires that a minimum of 5% of any site is preserved in herb or shrub vegetation and calculations indicate that this could be enough for detention basins on a site with the maximum 80% allowance of impervious surfaces. For this reason, applicants are required to demonstrate why a storm water sewer system is essential.

The runoff from urban pavement is highly polluted. Waste petrochemicals, heavy metals, sulphuric acid and other contaminants are usually present. Recent DEP statistics show that the rate of cancer mortality is related to the extent that surface water is used as a source of drinking water. Known carcinogens are present in pavement runoff which makes it imperative to introduce adequate filtration between paving and any source of drinking water whether on the surface or in the ground. If pavement runoff is concentrated in a small detention basin area, particularly on porous sandy soils with low filtration capacity, the pollutants may reach the groundwater aquifer and discharge into wells or surface water bodies. Applicants are encouraged to maximize the on-site recharge of pavement runoff but should provide evidence that unacceptable groundwater pollution will not result.

The runoff from the roofs and walls of structures is considerably less polluted than that from pavement areas and the land required to recharge this element of runoff is more easily incorporated. Such techniques as swales and detention basins, land drains and gabions are encouraged to recharge this runoff. In permeable sandy soils, it may be possible to discharge runoff from structures to the ground beneath impermeable paving. Applicants shall include calculations to show that the runoff volume from a 100 year 24 hour storm shall not damage paving or cause frost heave. Porous paving is also encouraged in permeable soils providing that the applicant can show that the filtration capacity between the surface and the water table is sufficient to prevent pavement contaminants from reaching the aquifer.

8.7 Soil Erosion and Sedimentation

8.7.1 Policy

Coastal development will be required to restrict soil loss and control soil erosion and sedimentation during the construction of development to the standards specified in the Soil Erosion and Sediment Control Act (Chapter 251, P.L. 1975), as administered jointly by DEP and the N.J. Department of Agriculture, State Soil Conservation Committee.

The sediment crossing a site boundary from a completed development shall not exceed the amount which would occur if the site were covered with medium density forest with understory in a 24 hour storm of 25 year recurrence frequency.

8.7.2 Rationale

Erosion is the detachment and movement of soil or rock particles by water, wind, ice or gravity. Erosion can be significantly increased by human activities including construction practices such as the clearance of vegetation, excavation, grading, and stockpiling, agricultural cultivation and silviculture (timber harvesting).

Erosion and sedimentation causes numerous adverse environmental impacts, such as loss of productive soils, destabilization of slopes, increased flooding due to reduced capacity of storm sewers and natural drainage channels, increased turbidity and siltation of streams, and decreased wetland productivity. By retaining the erosion generated on a site within the site boundary, these adverse impacts are contained and prevented from reaching and affecting coastal waters.

Many techniques are available to control sediment loss, including minimizing the area of soil exposed at one time, baling and contour terracing the edge of construction, mulching and using swale lagoon drainage systems, and building wet and dry detention basins. Other illustrative techniques are found in Standards for Soil Erosion and Sediment Control in New Jersey available from the State Soil Conservation Committee.

Applicants shall use the Universal Soil Loss Equation to calculate the maximum acceptable sediment loss during the operation phase of a project. The figures for rainfall, soil erodability and slope appropriate to the site shall be entered and the cover index factor for Medium Stocked Woods (Canopy 40-70%) with Managed Understory (no grazing or burning) shall be used. This figure is the ratio of soil loss from land under forest conditions to land under fallow conditions. The maximum value is 0.004.

How a project design meets this standard is at the discretion of the applicant. The same techniques used to control runoff may also satisfy this standard.

Applicants shall demonstrate the adequacy of a maintenance program to periodically remove silt from detention basins.

8.8 Vegetation

8.8.1 Policy

Coastal development shall preserve, to the maximum extent practicable, existing vegetation within a development site. This includes conformance with appropriate municipal tree preservation ordinances, and where necessary, planting of appropriate native coastal species.

8.8.2 Rationale

The steady loss of vegetation is a nearly inevitable result of urbanization. Terrestrial vegetation stabilizes soil, retards erosion and runoff, promotes infiltration of surface water, reduces the force of wind, provides foods, shelter and breeding sites for wildlife, and adds to aesthetic values for recreation and domestic life. Trees release life-giving oxygen, filter particulate pollutants, provide foods and fuel, with no energy input necessary by man.

Because each site is unique, the percentages of vegetative preservation required will depend upon the environmental conditions within and adjacent to the development site. The percentage of the site to remain naturally vegetated must be compatible with levels described in Location Policy. In general, the greater the intensity of development permitted, the less vegetation preservation required.

"Appropriate native coastal species" means that species selection must reflect the natural physiological limitations of species to survive in distinct habitats, which include all environmental processes (natural and artificial) that operate within a site. Non-suitable species plantings will do poorly or die, or if preserved through an intensive maintenance program of 'ph' adjustment fertilization and irrigation, will cause unacceptable ground and surface water impacts.

New vegetative plantings will reflect regional geophysical suitability and can be grouped into three categories:

- (a) Barrier Beach Sites - Plants tolerant of salt spray and occasional saline flooding, such as American holly, red cedar, black cherry, beach plum, beach grass, bay berry, beach heather, etc.
- (b) Pine Barrens Sites - Plants tolerant of infertile sandy soils, frequent fires, and acidic water, such as pitch and short-leaf pines, Atlantic white-cedar, dogwood, American holly, oaks, blueberry, etc.
- (c) Inner Coastal Plain and Southern Outer Coastal Plain - Plants compatible with fertile, well drained soils; such as eastern hemlock, oaks, beach, hickory, dogwood, black cherry, white pine, white birch, laurel, etc.

Within these regional groupings, the selection of individual species should take into consideration the depth to seasonal high groundwater table. Species which provide food for wildlife or other desirable traits will be favored for new planting. Species selection should be made through consultation with a consulting state forester or landscape architect.

8.9 Wildlife

8.9.1 Policy

The design of coastal development shall incorporate management techniques which favor or maintain native wildlife habitats, diversity, and numbers, to the maximum extent practicable.

8.9.2. Rationale

Wildlife is important natural resource of the coast. Desirable on-site wildlife management techniques which could mitigate adverse impacts, and favor minimal feasible interference include preservation and dedication to open space of sensitive habitats of sufficient width, especially along drainageways and waterways, to preserve wildlife movement corridors, placement of nesting boxes, and planting of vegetative wildlife food species.

8.10 Air

8.10.1 Policies

Coastal development shall conform to all applicable state and federal emissions regulations, ambient air quality standards, and deterioration criteria established to meet requirements of the federal Clean Air Act as amended in 1977.

8.10.2. Rationale

The attainment and maintenance of high air quality is vital for the health of and welfare of New Jersey's residents and visitors. The federal Clean Air Act Amendments of 1977 require almost all states to develop a State Implementation Plan (SIP) to attain National Ambient Air Quality Standards (NAAQS) for photochemical oxidants.

Since the principal source of hydrocarbons and oxides of nitrogen, the precursors of oxidants, is the automobile, the strategies to attain the NAAQS must include, in addition to emission control on vehicles and industrial sources, measures to reduce vehicle miles travelled, by inducing a shift to car pools and other modes of transportation. The Coastal Program policies on transportation address these objectives, as do the policies concerning concentration of development.

Furthermore, new major stationary sources of hydrocarbons will continue to be subject to restrictions, such as the current requirement to offset emissions. The severity of the restrictions will depend on the progress made in reducing emissions during the next decade.

The problem of attainment and maintenance of carbon monoxide NAAQS in urban areas such as Atlantic City is one primarily of traffic congestion.

Also, under the Clean Air Act Amendments of 1977, major wilderness areas of over 5,000 acres are mandatory Class I-Prevention of Significant Deterioration (PSD) or pristine Areas. In New Jersey's Bay and Ocean Shore Segment, this designation applies to the wilderness areas of the Brigantine National Wildlife Refuge, and restricts industrial activities within the region that could significantly affect the air quality of the wilderness areas. This may pose conflicts in the future as the pace and intensity of the development of the Atlantic City region increases.

8.11 Public Services

8.11.1 Definition

Variety of essential facilities provided by either public or private institutions. Health, education, welfare, fire, police and community facilities are principal examples. Others such as child care and home services for the elderly may be important for certain developments.

8.11.2 Policy

Applicants shall demonstrate through agreements with the relevant agencies that adequate levels of service can be provided for the additional demands of the proposed development.

8.11.3 Rationale

New development places additional demands on public services. Unless the existing supply can satisfy these demands or extensions to the supply can be available when development is complete, the deficiencies may adversely effect the health, safety, or welfare of the proposed new users.

In coastal areas there are special problems associated with the high seasonal population fluctuation and the relatively high percentage of senior citizens who typically make greater demands on health services. These coastal issues make the demonstration of adequate service supply during peak demand periods an especially critical issue.

8.12 Public Access to the Shorefront

8.12.1 Policy

Coastal development adjacent to coastal waters shall provide maximum practicable public access to the shorefront, including both beach and built-up waterfront areas and both visual and physical access. Shorefront development that limits public access and the diversity of shorefront experiences is discouraged.

8.12.2 Rationale

New Jersey's coastal waters and adjacent shorelands are valuable public resources which are limited in area. They are protected and patrolled by New Jersey's Shore Protection and Waterway Maintenance Program and the New Jersey Marine Police which are both financed by all state residents.

Past developments have often blocked the waters from public view and/or made physical access to the waterfront difficult or impossible. In addition, some municipalities which own land immediately inland of the state-owned riparian land have enacted laws or regulations making waterfront access inconvenient, expensive or impossible for non-residents. These policies have served to limit the opportunity of inland residents for waterfront recreational activities.

Projects such as the experimental Beach Shuttle operated by DEP in the summer of 1977 to Island Beach State Park from Toms River serve to carry out the policy of providing maximum practical public access to the shorefront.

The basis for the Shorefront Access policy came from the research in the report entitled Public Access to the Oceanfront Beaches: A Report to the Governor and the Legislature of New Jersey. April 1977, prepared in part by DEP-OCZM.

8.13 Scenic Resources and Design

8.13.1 Policy

New coastal development shall be visually compatible, in terms of scale, height, materials, color, texture, and geometry of building and site design, with surrounding development and coastal resources, to the maximum extent practicable.

8.13.2 Rationale

Inappropriate design that ignores the coastal landscape and existing patterns and scale of development can degrade the visual environment and appearance of communities. New Jersey's coastal regions have strong architectural traditions which should be encouraged.

8.14 Secondary Impacts

8.14.1 Policy

The probable secondary impacts of proposed development will be considered part of an application for a development. The probable secondary impacts as well as the proposed development itself must conform with the Resource and Development Coastal Policies.

8.14.2 Rationale

The construction of some coastal developments and public facilities in particular, lead almost inevitably to predictable pressures or needs for other types of development. This kind of development also tends to alter significantly the development potential of surrounding areas, which often quickly leads to new proposals for housing or other facilities. A responsible decision on a particular proposal must consider explicitly such predictable secondary impacts.

By noting the position and surplus capacity of the proposal, an assessment can be made of the type and position of further development likely to be induced by the enlarged service capacity. This area will be analyzed using the Location Policies. If this secondary impact analysis reveals insufficient acceptable acreage or capacity for the amount and type of development likely to result from the enlarged service capacity, the proposal for the public facility shall be denied.

8.15 Buffers and Compatibility of Uses

8.15.1 Policy

Development shall be compatible with adjacent land and water types, as defined in the Location Policies, to the maximum extent practicable. In particular, development that is likely to adversely affect adjacent or surrounding Water's Edge Areas, Special Land Areas, or Special Water Areas is discouraged.

Developments that are incompatible with adjacent developments shall provide vegetated and other types of buffers at the site boundary of sufficient width to reduce the incompatibility, to the maximum extent practicable.

Industrial developments shall provide the following minimum buffers:

Site Boundary Buffer. Around the perimeter of the site there shall be a minimum of 50 feet width between the boundary and the edge of structures, paving or vegetation disturbance. This buffer shall be preserved as planted with, whip saplings (minimum of three feet high) of native forest vegetation, at a minimum of 1 per 100 square feet.

Lot Boundary Buffer. When an industrial site is subdivided into two or more building lots there shall be a minimum 12'-6" buffer on either side of the lot line from which structures paving or vegetation disturbance is excluded. This 25 foot buffer shall be preserved, or planted with native forest vegetation as in the Site Boundary Buffer.

8.15.2 Rationale

The juxtaposition of different uses may cause various problems. One activity may cause people to experience noise, dust, fumes, odors, or other undesirable effects. The most common incompatibility of this type in the Segment are housing developments adjacent to industry, high speed roads or railroads. The juxtapositions of very different housing densities or of housing and agriculture also have potential for conflict. Vegetated buffer areas between uses can overcome, or at least ameliorate, many of these problems, especially if earth berms are included. Buffers can benefit users of both areas. Where farms operate near a residential area, for example, a buffer can protect the residents from the noise and smells of farming, while protecting the farmers from local regulations controlling the hours in which machinery can be used.

Industrial developments are typically involve large areas of paving and large structures with high visual impacts. The provision of vegetated buffers provides a number of beneficial effects:

- the visual impacts of the development are contained by stands of forest trees.
- microclimate is improved by providing wind breaks and shade, increasing comfort in open spaces, reducing heating and cooling costs and shading parking lots.
- Aquifer recharge areas are provided throughout a site.
- An interconnected greenway system is possible in the buffers providing recreational opportunities for the workforce and the possibility of a multi-purpose use of the site in the evenings and on the weekends for use by the adjacent residential neighborhoods.
- Wildlife habitats are provided, especially for songbirds, increasing the quality of the working environment.

8.16 Solid Waste

8.16.1 Policy

Coastal development recovers material and energy from solid waste, to the maximum extent practicable as indicated in the State's Solid Waste Management Act (N.J.S.A. 13:1E-1 et seq.) and the federal Resource Conservation and Recover Act (P.L. 94-580). If resource and energy recovery impractical, solid waste, including litter, trash, refuse, and demolition debris shall be handled and disposed of in a manner acceptable to the standards of DEP's Solid Waste Administration.

8.16.2 Rationale

Solid waste is a valuable resource to be recovered and managed on a district-wide basis.

8.17 Energy Conservation

8.17.1 Policy

Energy conservation techniques are encouraged in coastal development, to assist the Departments of Energy and Community Affairs in implementing New Jersey's Energy Conservation Plan and the energy subcode of the Uniform Construction Code. (N.J.S.A. 52:27D-119 et seq.).

8.17.2 Rationale

New Jersey's 1977 Energy Conservation Plan administered by the Department of Energy derives from the federal Energy Policy and Conservation Act of 1975. It contains 22 measures to reduce the state's energy use by 6% by 1980. The measures include thermal and lighting efficiency standards, provision of car and van pools, and waste oil recycling. These measures are intended to save New Jersey approximately 110 trillion British Thermal Units annually (or the equivalent of 5,000 barrels a day). The Department of Community Affairs is responsible for the implementation of the energy subcode of the state building code.

8.18 Neighborhoods and Special Communities

8.18.1 Policy

Coastal development that protects and enhances the physical coherence and quality of life in neighborhoods and special communities is encouraged. Development that would adversely affect neighborhoods and special communities is discouraged.

8.18.2 Rationale

Neighborhoods, small towns, and communities are discrete districts and areas along the coast with a degree of social stability as well as special architectural, ethnic, cultural, aesthetic, or historical qualities that distinguish these places from other areas along the coast. The diversity of the coast is in part due to the existence and vitality of various small towns, communities, and neighborhoods within larger urban areas. Places such as Bivalve and Shellpile along the Maurice River bear eloquent testimony to the heritage of the shell-fishing industry in New Jersey just as the ethnic neighborhoods of Atlantic City display a strong sense of community that should be valued, reinforced, and preserved.

8.19 Traffic

8.19.1 Policy

Development that induces marine and/or land traffic is acceptable provided that it causes minimal practicable congestion and safety problems.

8.19.2 Rationale

The improper location of development may exacerbate existing traffic problems or produce new difficulties in the marine and/or land traffic system. Coastal development should be designed and located in a manner to cause the least possible disturbance to traffic systems, or be rejected.

Chapter Four: MANAGEMENT SYSTEM - POLICIES ON DECISION-MAKING PROCESS

Introduction

Department of Environmental Protection (DEP)

Division of Marine Services

Coastal Area Facility Review Act (CAFRA)

Wetlands Act

Riparian Statutes

Shore Protection Program

Other Programs in DEP

Division of Water Resources

Division of Environmental Quality

Division of Parks and Forestry

Green Acres Program

Division of Fish, Game and Shellfisheries

Solid Waste Administration

Office of the Commissioner

Department of Energy

Other State Departments

Department of Agriculture

Department of Community Affairs

Department of Labor and Industry

Department of the Public Advocate

Department of Transportation

Municipal and County Government

Regional and Interstate Agencies

Public Participation

Conflict Resolution - Appeals

Introduction

The Coastal Resource and Development Policies defined in Chapter Three will be implemented through State legal authority by the Department of Environmental Protection (DEP). Energy siting decisions will be made jointly by DEP and the Department of Energy. The actions of other State agencies will also follow the Coastal Policies to the maximum extent permitted by law. The enforcement of the Coastal Policies will be assured by their formal adoption as substantive rules and regulations.

The New Jersey approach to coastal decision making corresponds to management technique B - "Direct state land and water use planning and regulations" - described in Subsection 306(e)(1) of the federal Coastal Zone Management Act. The Coastal Policies also will form the basis for New Jersey's discussions with, and responses to local governments, regional and interstate agencies and agencies from other states with an interest in the coast.

This chapter describes New Jersey's coastal management system. The public, whose role is described in a section of the Chapter, is important for all coastal decisions. The chapter concludes with an analysis of potential decision-making conflicts and the methods for their resolution.

Department of Environmental Protection

The Department of Environmental Protection (DEP) is responsible for implementing the New Jersey Coastal Program, and for continuing coastal planning. This responsibility was delegated by the Legislature and Governor in 1970 when it created the Department giving it broad authority to "formulate comprehensive policies for the conservation of the natural resources of the State..." (N.J.S.A. 13:1D-9). Specific authority for the coastal program was delegated by the Governor when he designated DEP as New Jersey's coastal planning agency under Section 305 of the federal Coastal Zone Management Act. DEP will also serve as New Jersey's lead agency to administer the federally approved program, under Section 306 of the Act.

Division of Marine Services

The Department's Division of Marine Services is specifically responsible for the development and implementation of the New Jersey Coastal Program. In the Division, the Office of Coastal Zone Management (DEP-OCZM) is the lead agency for coastal planning. DEP-OCZM also administers the Coastal Area Facility Review Act (CAFRA) permit program, and the Division's Office of Wetlands Management administers the Wetlands permit program. The Division's Office of Riparian Lands Management administers the waterfront development permit and riparian real estate programs. Decisions made under all three coastal permit programs are signed by the Director of the Division of Marine Services. The "90-Day Construction Permit Regulations" (N.J.A.C. 7:1C-1 et seq.) apply to the three programs ensuring that coastal permit decisions will be made in a timely manner. The Division also regulates water activities such as clamming, skin diving and vessel anchoring to protect human health and safety. Failure to comply with any of these laws results in fines and injunctions. Violations are reported to the Department by inspectors of the Division of Marine Services and concerned citizens.

DEP has proposed that Chapter Three of this document be formally adopted as substantive rules under the general powers of the Department as well as the Department's specific coastal management powers under CAFRA, the Wetlands Act, and the riparian statutes. Adoption of the rules will bind DEP to issue decisions under the three permit programs consistent with the Coastal Policies.

Public review of the proposed rules will coincide with review of this document. The proposed rules will be announced in the May 1978 issue of the New Jersey Register and will be subjected to public comment during the 60 day comment period on the Coastal Program for the Bay and Ocean Shore Segment, including the three public hearings to be held in Bridgeton, Toms River and Trenton.

Coastal Area Facility Review Act (CAFRA) - The Coastal Area Facility Review Act provides a list of selected facilities which must be reviewed and approved by DEP before they can be constructed within the statutorily-defined "Coastal Area", which includes the entire area of the Segment except for approximately six square miles of regulated wetlands. The list, which is available in detail in the Act (N.J.S.A. 13:19-1 et seq.) and in the CAFRA Procedural Rules and Regulations (N.J.A.C. 7:7D 2.0 et seq.), includes all facilities proposed for the following purposes:

- 1) Electric power generation, including oil, gas, coal fired, or nuclear facilities.

- 2) Public facilities and housing, including housing developments of 25 or more dwelling units, roads and airports, parking facilities with 300 or more spaces, waste water treatment systems, and sanitary landfills;
- 3) Food and food by-products production, paper production and agri-chemical production;
- 4) Mineral products, chemical processes, metallurgical processes and inorganic salt and salts manufacture;
- 5) Marine terminals and cargo handling facilities, and storage facilities.

The application process begins with an optional pre-application conference at which an applicant and DEP staff will candidly discuss the applicability of the Coastal Resource and Development Policies to the contemplated project, and possible revisions or alternatives which would increase the likelihood of permit approval. DEP staff then send the applicant a letter reiterating the conclusions of the conference.

An application for a CAFRA permit must include twenty copies of an environmental impact statement (EIS). Often discussion at the pre-application conference can lead to a reduction in the amount of information required in the EIS. The twenty copies are necessary so that other appropriate state and local agencies can review and comment upon the application. Copies of the application are distributed to offices within the Departments of Community Affairs, Energy, Labor and Industry, the Public Advocate, Transportation and other agencies within DEP, as well as to the relevant county and municipal planning boards and environmental commissions, soil conservation district and regional planning agencies. DEP-OCZM staff review the responses of the commenting agencies and issue a preliminary analysis. Next a public hearing is held near the site of the proposed project, after which the Director of DEP's Division of Marine Services issues the permit decision.

In addition to the facilities managed under CAFRA, the Coastal Program will manage a more extensive range of facilities proposed on coastal wetlands and riparian lands. These activities are described in detail by the Wetlands Act of 1970 and the state's riparian statutes, and are summarized here. The application process for these two permit programs is similar to that for CAFRA permits, except that a public hearing is required only for major projects.

Wetlands Act - New Jersey's authority to regulate activities on wetlands is derived from the Wetlands Act of 1970 (N.J.S.A. 13:9A-1 et seq) and the Procedural Rules and Regulations (N.J.A.C. 7:7A-1 et seq.) adopted in 1972. The Act defines "coastal wetlands", and maps of the regulated wetlands are available from DEP's Office of Wetlands Management. The activities on wetlands regulated by the Act include virtually any form of development or disturbance, except for mosquito control and continued commercial production of salt hay or other agricultural crops or activities.

Riparian Statutes - Riparian lands, defined as lands now or formerly flowed by the tides, are owned by the State of New Jersey. An individual or municipality wishing to develop or improve these lands in any way must first receive the approval of the Natural Resource Council to buy or lease the tidelands from the State.

The Council is composed of twelve citizens appointed by the Governor with the advice and consent of the State Senate. The Coastal Resource and Development Policies will be the basis for DEP staff recommendations to the Council. If the Natural Resource Council makes a real estate decision inconsistent with the Coastal Program, the Commissioner of DEP will block the action by refusing to sign the minutes of the Council meeting.

After applicants receive a lease or license from the Natural Resource Council, they must obtain a Waterfront Development Permit for any planned development from DEP's Office of Riparian Lands Management. The types of development construction generally contemplated on riparian lands include dredging or the construction or alteration of a dock, wharf, pier, bulkhead, bridge, pipeline, or cable.

While the Natural Resource Council will use the Coastal Resource and Development Policies in making its real estate decisions, the consistency of riparian actions with the Coastal Program will be assured by DEP's authority to approve, condition, or deny the Waterfront Development Permit applications.

Shore Protection Program - The fourth element of New Jersey's authority to implement the Coastal Program is the state's Shore Protection and Waterway Maintenance Program. This program is administered by the Office of Shore Protection which is also in DEP's Division of Marine Services. The Office is the lead agency for beach erosion control programs and efforts to maintain state waterways. This Office also establishes priorities for spending shore protection and harbor cleanup funds. The Coastal Resource and Development Policies on High Risk Erosion Areas, Central Barrier Island Corridors, and Shorefront Access will, in part, be implemented through this program.

Other Programs In DEP

The other divisions in the Department of Environmental Protection will contribute to the Coastal Program in four ways. First, like a private developer, any development projects they initiate, sponsor or propose which are regulated by CAFRA, the Wetlands Act or riparian statutes will have to be consistent with the Coastal Resource and Development Policies to receive the appropriate permits. The Division of Parks and Forestry, for example, would need a Wetlands Permit before a structure could be built on a regulated wetland within a state park.

Second, the activities of the Department's other divisions will follow the Coastal Policies, to the extent statutorily permissible under their enabling legislation. Permit programs administered by the Division of Water Resources, for example, may be able to apply some of the Coastal Policies, or perhaps the entire three-step decision-making process, to facilities or areas not regulated by the Coastal Program. Strictly speaking, this consistency is not necessary for federal approval of New Jersey's program since the three permit programs administered by the Division of Marine Services provide authority sufficient to enforce the program. Such consistency, however, is desirable within New Jersey to ensure that decisions by the different parts of DEP are coordinated and predictable.

Third, the other divisions in DEP will help the Division of Marine Services to suggest and carry out projects which can be funded with federal coastal Program Administration grants after New Jersey's Coastal Program is approved. A program management grant could, for example, fund selected studies by the Division of Fish, Game and Shellfisheries.

Fourth, the Green Acres Program and the Division of Fish, Game and Shellfisheries can further Coastal Program objectives and policies by acquiring land for recreation, open space or endangered species protection.

The sections which follow summarize the functions of DEP's divisions most likely to effect, or be effected by the Coastal Program. The Coastal Program is one of the first major plans to be completed and, therefore, can serve as a focal point for more specific discussions to insure consistent and cooperative planning.

Division of Water Resources - The Division of Water Resources is responsible for water quality planning and maintenance and flood plain management. The Division is the designated water quality planning agency under Section 208 of the Federal Water Pollution Control Act and will soon administer the National Pollutant Discharge Elimination System (NPDES) permits under the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) The Division also administers the Stream Encroachment Act (N.J.S.A. 58:1-26 et seq.), the Flood Hazard Areas Act (N.J.S.A. 58:16A-50 et seq.) and the New Jersey Spill Control and Compensation Act (N.J.S.A. 58:1-23.11 et seq.).

Water quality planning is being conducted by planning boards in six counties and by the Division of Water Resources. The plans are being completed between 1978 and 1980 in different parts of the state. Through a federal agreement between the Department of Commerce and the Environmental Protection Agency, and through a working relationship at the state level between the Office of Coastal Zone Management and the Division of Water Resources, the policies of the two programs will be coordinated and made consistent. The water quality planning seeks institutional and technical alternatives to control and abate water pollution. The key policies of the program are to protect the sources of potable water supply, control toxic and hazardous substances, control pollution from areawide sources, and protect environmentally sensitive areas. Coordination between the Coastal Program and the water quality planning programs may enable the greater use and refinement of the Coastal Location Acceptability Method for activities not essential for program approval, and in parts of the state outside the coastal zone. This could be particularly beneficial for decision-making for land and water uses on or near the parts of the Delaware River north of the coastal zone proposed by DEP.

The Division of Water Resources is also responsible for supervising the development of a Water Supply Master Plan. The plan, financed by the State Water Conservation Bond Fund, will assess near and long term water needs, evaluate various alternatives for meeting those needs, and provide a framework for the future planning and management of the State's water supplies. Specific recommendations will be made including those for near term water supply development projects, conservation and management policies, interconnection programs, and drought and emergency response plans. The plan is expected to be completed by December of 1979.

Division of Environmental Quality - The Division of Environmental Quality is responsible for air quality planning and monitoring and is the agency designated to administer the federal Clean Air Act in New Jersey. The Division also is responsible for the State's radiation, noise, and pesticide control programs. Under the requirements of the Clean Air Act, the Bureau of Air Pollution Control in the Division has enacted and is developing programs to attain National Ambient Air Quality Standards. The attainment of standards for photochemical oxidants for the entire state, for carbon monoxide in central business districts, and for particulates in Camden and Jersey City, and the maintenance of clean air levels throughout the state are the major problems to be addressed. The strategies for the attainment of standards and the analysis of maintenance issues are required to be submitted to EPA by the end of 1978.

Division of Parks and Forestry - The Division of Parks and Forestry manages the state's parks and is responsible for acquiring, operating and maintaining historic sites. The Division reviews CAFRA permit applications, in addition to coordinating with DEP-OCZM on park and recreation policies. The Office of Historic Preservation within the Division evaluates the potential impact of CAFRA permit applications on cultural resources.

Green Acres and Recreation - The Green Acres Program determines where and how state funds should be spent for park and open space acquisition, development and maintenance. DEP can purchase land under this program, and through the Division of Parks and Forestry. DEP-OCZM reviews expenditures of Green Acres funds proposed in the coastal zone.

The New Jersey Comprehensive Outdoor Recreation Plan (SCORP), being prepared by the Green Acres Program, addresses the adequacy of open space for existing and projected demands, and the accessibility of recreation resources for all segments of the population. The plan will qualify New Jersey for funding under the Federal Land and Water Use Conservation Fund Program. In addition to studying recreation needs and uses, SCORP will also include inventories of federal, state, county, municipal and private recreation resources. The major policies in SCORP include emphasizing open space in urban areas, recreation facility development, increasing public access to recreation resources through mass transit, and developing barrier free recreation facilities.

Division of Fish, Game and Shellfisheries - The Division of Fish, Game and Shellfisheries is responsible for managing the fish and wildlife resources of the State. This includes research and educational programs as well as enforcement of state fish and game laws and maintenance of state fish and wildlife management areas. The Division also administers the federal Endangered Species Act of 1973 which provides funds for the purchase or management of land for research, and for other activities to protect wildlife.

Solid Waste Administration - The Solid Waste Administration (SWA) in DEP is responsible for the development of a statewide plan to maximize use of resource recovery and minimize the adverse environmental impacts of solid waste. The state has been divided into twenty-two districts (21 counties and the Hackensack Meadowlands Development Commission District). Each district is responsible for developing a ten-year plan to meet the solid waste needs for each municipality within the region. The SWA is responsible for coordinating the district planning through the development of a statewide plan and for providing guidelines, especially in the area of hazardous waste, for use by the twenty-two planning districts.

Office of the Commissioner - Lastly, the Office of the Commissioner in DEP conducts a number of functions relating to the Coastal Program. First, the Office of Environmental Review coordinates the review of major development proposals likely to require more than one DEP-administered permit, as well as applications circulated through the A-95 Project Notification and Review Process. This coordinated review helps speed the permit review process and insures the application of consistent policies. This Office reviews CAFRA applications in terms of possible archaeological impacts. In addition, the Commissioner of DEP serves as the State Historic Preservation Officer.

The Office of Cancer-Causing and Toxic Pollutants is conducting research with the assistance of computer facilities funded by the U.S. Council on Environmental Quality. The information produced by this research will be incorporated into the Coastal Policies, and could conceivably alter certain siting policies. In addition, the computer is serving as a model for DEP to test the feasibility of digitizing much of the information necessary to apply the Coastal Policies.

Third, the Tidelands Delineation Program, conducted by the Office of Environmental Analysis under the direction of DEP's Assistant Commissioner for Science, is a multi-year project to map the extent of State-owned tidelands by delineating the mean high tide line. The program will require several years to complete because of the complex issues of land ownership to be resolved.

Department of Energy

While serving as the lead coastal agency, DEP will continue to work closely with other state agencies. The most important agency will be the Department of Energy (DOE). Because the Department was recently established on July 11, 1977, its procedures and policies are not yet fully developed. The Department of Energy Act, (N.J.S.A. 52:27F-1 et seq.), however, makes clear that the new Department will be considered a part of any decision regarding energy in the state. For the coastal zone, this means that the Department must have an opportunity to comment on any energy facility permit application pending before DEP. If it disagrees with the decision, the Department of Energy may request that the Governor establish an Energy Facility Review Board composed of the Director of DOE's Division of Energy Planning and Conservation, the Commissioner of DEP and a third member appointed by the Governor. The Review Board will make the final decision on the energy facility permit application. A draft memorandum of understanding between DEP and DOE which will establish the procedures necessary to insure coordination and consistency is included in this document as Appendix J.

The Department of Energy is also the lead agency for the Coastal Energy Impact Program (CEIP). The 1976 Amendments to the federal Coastal Zone Management Act created Section 308, the CEIP, to provide financial assistance to help coastal states respond to the growth and impacts of new energy exploration and development. A second objective of the CEIP is to balance the two national goals of encouraging development of domestic energy resources to further energy self-sufficiency, and protecting and managing the nation's coast in a manner consistent with the objectives of a state's coastal management program. To be eligible for assistance under the CEIP, a coastal state must be receiving a grant under Section 305 of the Act, have a coastal management program which has been approved under Section 306 or be making satisfactory progress which is consistent with the policies set forth in Section 303 of the Act. New Jersey meets these criteria.

As the lead agency for CEIP, the Department of Energy will be responsible for developing and implementing the intrastate allocation process, which is the mechanism for allotting CEIP funds throughout the State of New Jersey.

The Department of Energy will also be responsible for administering the program; this includes soliciting applications, providing technical assistance, and evaluating and approving project applications according to the criteria of the intrastate allocation process. Furthermore, DOE will assume responsibility for monitoring all CEIP projects. DOE and DEP coordination is essential to fulfilling federal regulation governing the CEIP program.

Federal regulations state that CEIP assistance cannot be awarded without certification for compatibility with the developing goals and policies of the coastal zone management program. As a result, all applications for CEIP monies accepted for review by DOE will be evaluated in conjunction with the DEP for consistency and compatibility with developing goals and policies of the coastal zone management program.

Lastly, the Department of Energy must complete an Energy Master Plan by July 1978. This plan will consider the production, distribution, consumption and conservation of energy in the state. The Plan will become a primary resource for energy facility siting decisions by DEP.

Other State Departments

In addition to the Departments of Environmental Protection and Energy, five other state departments have responsibilities which relate to the Coastal Program. These are the Departments of Agriculture, Community Affairs, Labor and Industry, the Public Advocate, and Transportation. Coordination between the departments provides greater consistency of state policy, as well as opportunities to test the application of the Coastal Policies on activities and areas not regulated under the Coastal Program.

Department of Agriculture - This Department shares with DEP the regulatory responsibility of the Soil Erosion and Sediment Control Act (N.J.S.A. 4:24-39 et seq.). The Act, which is administered by the State Soil Conservation Committee which includes the Commissioners of the two Departments, controls erosion and sediment during the construction phase of development.

Department of Community Affairs (DCA) - The Department of Community Affairs will continue to participate in the review of CAFRA permit applications, as it has since the beginning of the permit program. Although this review is not required by law, as it now is for the Department of Energy, DCA can provide valuable information on the potential impact of a proposal on nearby social services. In addition, because DCA is responsible for the development of a State Development Guide Plan under Section 701 of the Federal Housing and Community Development Act, they can evaluate the consistency of a permit application with that plan. The major policies of the Guide Plan are to maintain the quality of the environment, preserve the open space necessary for an expanding population, provide space and services to support continued economic expansion and enhance the quality of life in urban areas.

In preparing the Coastal Program, DEP adopted the Guide Plan's distinction between "growth" and "limited growth" areas, but chose different criteria for defining each category. As a result, the Coastal Program's list of "growth" and "limited growth" areas differs from those indicated in the Guide Plan. The Housing and Community Development Act also required that DCA prepare a housing element of the Guide Plan. The housing element is the policy document for identifying housing needs and setting housing goals in the state, and provided input for the Coastal Program's housing policies.

Lastly, the Department of Community Affairs is also responsible, under Executive Order No. 35, for developing a fair share state allocation process for low and moderate income housing. DEP will continue to work with DCA officials to promote such housing in the coastal zone segment.

Department of Labor and Industry - The Department of Labor and Industry also participates in the review of CAFRA permit applications. The Office of Business Advocacy in the Department plays a particularly important role during the pre-application phase of the CAFRA permit process in helping to guide industry to appropriate locations. In addition, the Department's Division of Travel and Tourism shares a common goal with DEP-OCZM of seeking to promote the resort and tourism industry of the coast.

Department of the Public Advocate - This Department has taken positions on the appeal of several CAFRA permit applications. In addition, the Public Advocate has a particular interest in planning for the coastal zone and offered the most extensive comments of any state agency on the Coastal Management Strategy. DEP will continue to include the Public Advocate in coastal planning activities.

Department of Transportation (DOT) - The principal involvement of DOT in the Coastal Program is as an applicant for a permit for the construction of roads, highways, or airports. All but minor transportation projects in the Bay and Ocean Shore Segment require a CAFRA permit and projects crossing wetlands or riparian lands require the appropriate additional permit as well.

DOT administers additional permit programs for transportation facilities as well as having grants for transportation projects and eminent domain powers. The Department also engages in long term planning for the state's transportation needs.

Municipal and County Government

Municipal and county land use authority will continue without change under the New Jersey Coastal Program. Development proposed in the coastal zone will be subject to all applicable local regulations as well as to state standards or permits. A locally approved proposal cannot be constructed without receipt of relevant state approvals, and likewise, a state-approved project must receive appropriate local approvals. All municipalities in the Segment, and in the proposed coastal zone, will have an opportunity to comment on this Draft Environmental Impact Statement, the program for the entire coastal zone, and any proposed policy or procedural amendments or additions to the program. DEP-OCZM will solicit local comment, at least in part through use of its mailing list which includes the Mayor, Planning Board, and Environmental Commission of each municipality and county in the Segment.

In addition, as required by the CAFRA Procedural Rules and Regulations, DEP will continue to offer CAFRA permit applications for comment to county and municipal planning boards and environmental commissions.

The 1978 contracts between DEP and twelve coastal counties are designed to foster increased state-county coastal coordination. Under the contract, the counties will more actively take advantage of the opportunity to comment on CAFRA, Wetlands and riparian permit applications, and will review the consistency of State, county and municipal plans. After the contract is completed, DEP may choose to adopt the county and municipal plans which adequately address coastal issues and do not conflict with state policy as specific elements of the State Coastal Program.

The New Jersey Coastal Program can influence other levels of government with coastal responsibilities, even though it may have no direct statutory power over their decisions. Municipal and county governments, and regional and interstate agencies have significant planning and, in some cases, regulatory roles in the Segment. DEP and other state agencies will use the Coastal Resource and Development Policies as a basis for advice, discussion and debate with these other governmental agencies. This advisory role must be distinguished from the already mentioned regulatory tools which will be used to implement the Coastal Program, but it is, nevertheless, important for the long-term improvement and acceptance of the Coastal Policies.

Regional and Interstate Agencies

Twelve interstate and regional agencies have jurisdictions which include part of the coastal zone. Some have largely a planning and advisory function, while others have significant decision-making responsibility. The past and future decisions and sharing of draft and final documents with these agencies, together with DEP's regulatory authority in the coastal zone, will ensure that regional agency actions will not be inconsistent with the Coastal Program.

The planning agencies and organizations include the Mid-Atlantic Regional Fisheries Management Council, the Wilmington Metropolitan Area Planning Coordinating Council (WILMAPCO), Tri-State Regional Planning Commission, the Delaware Valley Regional Planning Commission (DVRPC) and the South Jersey Resource Conservation and Development Council. These agencies have professional planning staffs and a strong interest in the future of the Delaware, Pennsylvania, New Jersey, and New York region. DEP-OCZM will continue to solicit and welcome their comments and advice. The Tri-State Regional Planning Commission has specific responsibility for assessing consistency between state plans funded by the U.S. Departments of Housing and Urban Development, and Transportation, and federally funded state coastal programs.

Other agencies with administrative and regulatory responsibilities will be more formally integrated into the implementation of the New Jersey Coastal Program. Memoranda of understanding between DEP-OCZM and selected regional agencies may be desirable or necessary to insure consistency between state and regional coastal policies. These agencies include the Port Authority of New York and New Jersey, Interstate Sanitation Commission, Palisades Interstate Park Commission, Delaware and Raritan Canal Commission, Delaware River and Bay Authority, South Jersey Port Corporation and Delaware River Basin Commission. As appropriate, specific agreements will be made with each agency.

Public Participation

The Department of Environmental Protection will work to involve the many individuals and public groups concerned about the coast in decisions on proposed development and in the continued coastal planning.

Decisions under the New Jersey Coastal Program will be made primarily through the three coastal permit programs. DEP will ensure public notice of pending applications through notification of the appropriate county planning board, county environmental commission, municipal planning board, county environmental commission, soil conservation district, and the Delaware Valley Regional Planning Commission and Tri-State Regional Planning Commission for proposals in Burlington or Monmouth County respectively. In addition, owners of land adjacent to the site proposed for development will be informed of the application. All pending applications are also listed in the DEP Weekly Bulletin which is distributed free and has a current circulation of 1,600 people.

Any interested person can review DEP's file on a pending application and submit written comments. Decisions to lease or sell riparian lands are made by the Natural Resource Council at meetings which are open to the public. In addition, DEP holds a public hearing near the site of a proposal for every CAFRA permit application, and for major Wetlands and Waterfront Development permit applications.

DEP will continue to involve coastal residents, workers and visitors in planning for the future of the Bay and Ocean Shore Segment and the other parts of the coastal zone. This involvement will take several forms, and the Department will remain open to additional public participation techniques which may be suggested.

The Office of Coastal Zone Management will continue to publish The Jersey Coast several times each year to inform interested people of future public meetings, available reports, and coastal planning and regulatory activities. DEP-OCZM staff will continue to make themselves available to meet with interested groups and the Office will continue to convene a series of public meeting throughout the coastal zone at least twice a year. In addition, DEP-OCZM staff will continue to meet periodically with the leaders of statewide environmental groups, builders groups, and other representative groups which express interest.

Part of public participation is public education, and DEP will continue to try to prepare and to assist others in preparing, informative, understandable publications about the coast and the coastal zone management program. The Department will attempt to supplement governmental publications with the use of newspapers, magazines, radio and displays in public places such as libraries, shopping areas and conventions.

Conflict Resolution - Appeals

The permit decisions made under the New Jersey Coastal Program, as described in this chapter, can be appealed administratively. A CAFRA permit decision can be appealed by any interested person within 21 days of the final DEP action, to the DEP Commissioner or to the Coastal Area Review Board composed of the Commissioners of Environmental Protection, Community Affairs, and Labor and Industry. The decision of the Commissioner or of the Review Board can be further appealed through the courts. A Wetlands permit decision can be appealed to the DEP Commissioner and then to the courts. A Waterfront Development permit decision can be appealed to the Natural Resource Council, and then to the courts.

The Department of Energy (DOE) can appeal decisions affecting the construction or location of an energy facility to the Energy Facility Review Board described previously. Under the Department of Energy Act, the Board can be called into existence by the Department of Energy if it disagrees with the decision of any state agency to grant or deny a permit for an energy facility.

The Management System of the Coastal Program does not appear likely to raise other conflicts which will require a resolution mechanism. If a proposal requires approval under several laws with different sets of criteria, the applicant will have to meet them all. A project managed by the Coastal Program and encouraged by the plans or actions of another agency could not be constructed unless it received the required coastal permits. At the same time, a project which conforms with all the Coastal Resource and Development Policies could not be constructed until the applicant received all other required state, federal, and municipal approvals.

The next chapter describes how the New Jersey Coastal Program will avoid the exclusion from the coastal zone of "uses of regional benefit". The chapter also discusses Federal Consistency and New Jersey's consideration of the national interests.

CHAPTER FIVE: MANAGING THE COAST: NATIONAL INTERESTS, CONSISTENCY
OF FEDERAL ACTIONS, AND REGIONAL BENEFIT DECISIONS

Introduction
National Interests
Consistency of Federal Actions
Regional Benefit Decisions

Introduction

This chapter describes the national interests which were considered during program development, how various conflicts between the national interests are balanced in the program, and the process to assure the continued considerations of such issues. The Chapter then describes the process of assuring that federal actions are consistent with the Coastal Program to the maximum extent practicable. The third part of this Chapter describes how the New Jersey program ensures that uses of regional benefit are not excluded from the Bay and Ocean Shore Segment.

National Interests

The federal Coastal Zone Management Act requires that the State's program provide "for adequate consideration of the national interest involved in planning for, and in the siting of, facilities ... which are necessary to meet requirements which are other than local in nature." [Subsection (306) (c)] Although this document focuses only on the first segment of the Coastal Program, this section describes New Jersey's consideration of the national interest for the entire coastal zone.

The "national interest" is a collection of the diverse, and occasionally conflicting, interests of the 13 United States departments, councils, and commissions with involvement in the preservation or development of New Jersey coastal lands and waters. To determine and balance the national interests, New Jersey has met with representatives of the federal agencies with responsibilities affecting the coastal zone. The comments of those agencies choosing to submit written statements and comments or testimony at public meetings on New Jersey's evolving coastal program have contributed to New Jersey's understanding of the national interests. Contacts with federal agencies are summarized in Appendix C. In addition to the comments of federal agencies, the New Jersey program used Presidential statements, federal legislation and federal, state, and interstate agency reports to help its consideration of the national interests.

The New Jersey program recognizes that national, as well as state, interests and priorities may shift in response to new and/or unforeseen circumstances. Under an approved program, New Jersey will, therefore, continue to seek and evaluate information from the same sources. Changes in the national interest will be reflected in the Coastal Program through administrative action including amendments to the substantive rules and regulations which will incorporate the Coastal Resources and Development Policies.

The process for balancing the national interests in the coastal zone will be the employment of the three-step decision-making process of Location Policies, Use Policies, and Resource Policies described in Chapter Three. The decision will

follow the four Basic Coastal Policies: (1) Protect the coastal ecosystem, (2) Concentrate rather than disperse the pattern of coastal residential, commercial, industrial, and resort development and encourage the preservation of open space. (This does not apply to nuclear and LNG facilities); (3) Employ a method of decision-making which allows each coastal location to be evaluated in terms of both the advantages and the disadvantages it offers for development; and (4) Protect the health, safety and welfare of people who reside, work and visit in the coastal zone. The decisions will reflect the first Congressional finding enunciated in the Coastal Zone Management Act that "there is a national interest in the effective management, beneficial use, protection and development of the coastal zone" [Section (302)(a)]. If disputes arise, interested aggrieved persons may appeal coastal decisions.

The Process for Continued Consideration of National Interest Issues

The New Jersey program has considered, and will continue to monitor, the national interests raised by the planning and siting of five types of uses and the treatment of twelve categories of resources. The CAFRA permit procedure will serve as the process for assuring continued consideration of planning for and siting of facilities which may be in the national interest.

All of the facilities identified below (national defense, energy production and transmission, recreation and transportation) are of sufficient size to require a CAFRA permit if they occur on non-federally owned land. Furthermore, these facilities and any other development which would significantly effect the eleven resources described below as in the national interest, (e.g. water, air, etc.) are required to receive a CAFRA permit. Although other state permits would be needed in some resource areas, i.e., wetlands, the CAFRA permit would cover all these issues and thus has been identified as the single process during implementation of the Coastal Program Segment for assuring the continued consideration by identified national interests.

The CAFRA law states that the Commissioner of DEP "shall issue a permit only if he finds the proposed facility...is located or constructed so as to neither endanger human life or property nor otherwise impair the public health, safety and welfare." The Commissioner has interpreted "public welfare" to include a full consideration of national interests as described in this program. This interpretation is contained in Chapter Three of this document which will be adopted as regulations prior to 306 Segment approval.

The following have been defined as facilities or resources which may be in the national interest. Greater specificity on the policies described below can be found in Chapter Three.

National Defense

National defense is of obvious importance to all states. To define the national interest in national defense, DEP-OCZM shared reports, received comments from, and met with the designated representatives of the U.S. Air Force, U.S. Navy, U.S. Army, and U.S. Army Corps of Engineers.

The New Jersey Coastal Program excludes from the coastal zone all federally owned or leased lands, where defense operations are concentrated. The Coastal Program will actively consider the national interest for defense only when agencies of the Department of Defense propose to buy additional land or to build new facilities with potential impacts beyond the borders of the federally owned land. The New Jersey program will not question the national security justification for such proposals. Rather, DEP will review the proposal for consistency with the Coastal Program, and will approve it if it can make one of two findings:

1. The proposal is consistent with the Coastal Resource and Development Policies, or
2. The proposed facility is coastal dependent and will be constructed with maximum possible consistency with the Coastal Resource and Development Policies.

In addition, the New Jersey program will seek to involve local Department of Defense representatives in planning the use of lands and waters surrounding military installations. The only current or projected defense activity addressed by the Coastal Program is the possible purchase of land by the U.S. Navy in the vicinity of the Leonardo-Earle Naval Ammunition Depot. DEP has reviewed with Navy representatives the uses of this site that would be acceptable under the Coastal Program, although Federal Consistency will not apply until the Program is approved.

Energy Production and Transmission

In determining the national interest in energy production and transmission, the following legislation and federal agencies were consulted:

- The National Energy Plan, April 29, 1977
- U.S. Department of Energy
- Energy Research and Development Administration
- Federal Energy Administration
- Federal Power Commission
- Federal Energy Administration
- Bureau of Land Management
- Maritime Administration
- U.S. Geological Survey
- U.S. Department of Transportation
- U.S. Army Corps of Engineers
- Nuclear Regulatory Commission

The most useful articulation of the national interest in energy is found in the National Energy Plan, which has three overriding objectives:

- as an immediate objective that will become even more important in the future, to reduce dependence on foreign oil and vulnerability to supply interruptions;
- in the medium term, to keep U.S. imports sufficiently low to weather the period when world oil production approaches its capacity limitation; and
- in the long term, to have renewable and essentially inexhaustible sources of energy for sustained economic growth. (Plan Overview, page IX)

The salient features of the National Energy Plan are:

- conservation and fuel efficiency,
- national pricing and production policies,
- reasonable certainty and stability in Government policies,
- substitution of abundant energy resources for those in short supply; and
- development of nonconventional technologies for the future (Plan Overview, page IX-X)

Elements of the National Energy Plan with particular application to the New Jersey Coastal Zone Segment are as follows:

Conservation - "The cornerstone of the National Energy Plan is conservation." (Page 35 of the Plan).

New Jersey's recognition of the need for energy conservation was one factor leading to the second Basic Coastal Policy which states: "Concentrate rather than disperse the pattern of coastal residential, commercial, industrial, and resort-oriented development, and encourage the preservation of open space". Specifically, the Coastal Program encourages the clustering of development within a site, the use of renewable and recoverable sources of energy, mass transportation, and the incorporation of energy conservation techniques into all proposed coastal development. (See Chapter Three, Sections 7.2.2, 8.16, 8.19 and 8.17)

Oil and Gas Facilities

Given the national interest in recreational and resource protection in the Bay and Ocean Shore Segment, major oil and gas facilities (other than pipelines) are discouraged. This position has been reached as a result of weighing the competing and conflicting national interest in recreation and resource protection with energy as called for in the CZMA. The decision to discourage oil and gas facilities other than pipelines in the Segment was reached in part because areas of the state outside the Segment already house many oil and gas production facilities including five refineries, one of which is out of operation due to inadequate demand, and New Jersey believes these areas will be better able to support needed additional facilities than will areas within the Segment. A study undertaken for DEP by Rutgers University Center for Coastal and Environmental Studies contributed to this decision by concluding that possible sites for oil and gas facilities exist along the Raritan Bay and River which may be acceptable to industry, DEP and local officials.

Onshore Support Bases - are necessary to support off-shore oil and gas exploration and development. New Jersey encourages the location of onshore support bases in built-up urban areas of the state outside of the Segment. Applications for the siting of such bases must comply with all applicable laws and are reviewed in the same manner as other facilities of similar impact and size.

Oil Refineries - could be necessary to process oil and gas discovered through current exploration in the Baltimore Canyon. The Coastal Program prohibits the location of refineries in the Segment. Application for oil refineries outside the Segment will be subject to all applicable laws and will be handled in the same manner as other facilities of similar impact and size. New Jersey has been assured by the Department of the Interior, on page 17 of the Final Environmental Statement for OCS Lease Sale No. 40 that the state's existing refinery capacity is sufficient to handle the likely output from the Baltimore Canyon since any new oil or gas will lessen the amount the nation imports.

Pipelines - The National Energy Plan notes on pages 58-59 that "It is clear that energy transportation routes built in the first half of the century will have to be supplemented by new routes." New Jersey will permit the location of pipelines in the Bay and Ocean Shore Segment on the conditions that the number of pipelines is limited to the maximum extent feasible, that the pipelines use existing rights of way to the maximum extent feasible and avoid the undeveloped regions of the Pine Barrens, that any pipeline proposal is evaluated in terms of the entire new potential pipeline corridor, and that the pipeline avoids to the maximum extent feasible offshore munitions, chemical and waste disposal areas, heavily used waterways, geologic faults and significant fish or shellfish habitats. Although many possible pipeline routes have been proposed, New Jersey expects no new pipelines to be proposed until the potential yield from the Baltimore Canyon is better known. (See Chapter Three, Sections 7.4.1 and 7.4.7)

Electric Power - New Jersey currently has four operating fossil fuel plants in the Segment. The Coastal Program directs additional non-nuclear, fossil fueled plants towards relatively built-up areas, consistent with applicable air and water quality standards. (See Chapter Three, Policy 7.4.12).

In considering the national interest in the development of nuclear power, New Jersey found applicable the following two quotes from the National Energy Plan:

"The United States will need to use more light-water reactors to help meet its energy needs. The Government will give increased attention to lightwater reactor safety, licensing, and waste management so that nuclear power can be used to help meet the U.S. energy deficit with increased safety." (page 70)

"In addition, the President is requesting that the (Nuclear Regulatory) Commission develop firm siting criteria with clear guidelines to prevent siting of future nuclear plants in densely populated locations, in valuable natural areas, or in potentially hazardous locations." (page 72)

New Jersey was one of the first states to recognize the potential of nuclear power to meet U. S. energy needs. The State has six operating or fully approved nuclear plants including the Hope Creek I and II Generating Stations which were given a CAFRA permit by DEP in 1975.

The only application for a nuclear facility filed in New Jersey since 1975, for two floating plants, has been postponed by the applicant. The New Jersey Coastal Program states in Chapter Three, Section 7.4.13, that "No future nuclear electric generating stations will be approved in the coastal zone unless:

- (a) the two agencies (N.J. DEP and the N.J. Department of Energy - DOE) are assured that operation and disposal of the spent fuel poses no unacceptable safety or environmental hazards to New Jersey residents;
- (b) the two agencies receive clear proof through the Department of Energy's Master Plan that nuclear facilities are needed and vitally important to the public health, welfare, and economic well-being of New Jersey residents;
- (c) The Department of Environmental Protection is assured that the location of the facility will not result in near-by population density increases over the operating lifetime of the facility which might make suitable protective actions in the case of serious accidents impossible, and that an acceptable, approved emergency evacuation plan is filed; and

- (d) the Department of Environmental Protection and the Department of Energy are satisfied that no other feasible and economical energy alternative exists for the timely and efficient production of needed electrical power.

Liquified Natural Gas - The National Energy Plan contains the following statements applicable to New Jersey:

"Due to its extremely high costs and safety problems, LNG is not a long-term secure substitute for domestic natural gas. It can, however, be an important supply option through the mid-1980s and beyond, until additional gas supplies may become available...The previous Energy Resources Council guidelines are being replaced with a more flexible policy that sets up no upper limit on LNG imports. Under the new policy, the Federal Government would review each application to import LNG so as to provide for its availability at a reasonable price without undue risks of dependence on foreign supplies. This assessment would take into account the reliability of the selling country, the degree of American dependence such sales would create, the safety conditions associated with any specific installation, and all costs involved." (p. 57)

LNG facilities have been proposed in recent years for Deptford and Logan Townships in Gloucester County, and on Staten Island, New York from where the LNG would be pipelined to New Jersey. The New Jersey Coastal Program states that LNG terminals shall be acceptable only at sites remote from substantial concentrations of human populations. As noted by the former Federal Power Commission, such sites may exist in the more rural parts of the Segment. No LNG terminal shall be approved in the coastal zone until the Federal Energy Regulatory Commission (former Federal Power Commission) within the Department of Energy, responds affirmatively to the May 1976 petition by New Jersey and its neighboring states for the issuance of siting criteria that adequately consider the safety hazards associated with this energy technology. If the Commission does not respond positively to the petition by New Jersey and others, and if there is a pressing need for LNG as determined by the New Jersey DOE Master Plan, New Jersey will then attempt to create an interstate task force to define appropriate siting criteria for this type of energy facility. (See Chapter Three, Section 7.4.14)

Recreation

The New Jersey coast is a national recreational resource. In considering the national interest in recreation, New Jersey reviewed the Nation-wide Outdoor Recreation Plan, the evolving New Jersey State Comprehensive Outdoor Recreation Plan (SCORP), the Land and Water Conservation Fund Act, and the Historic Preservation Act (P.L. 89-665). In addition, New Jersey offered draft coastal documents including the Coastal Management Strategy (September 1977) for review to the National Marine Fisheries Service, Bureau of Outdoor Recreation and its successor National Heritage Program, Fish and Wildlife Service, National Park Service and staff of Gateway National Recreational Area-Sandy Hook, and the Advisory Council on Historic Preservation.

Major objectives of the national interest in recreation are:

- To consider recreation as an equal among competing uses of the coastal region.
- To provide high quality recreational opportunities to all people of the United States, while protecting the coastal environment.
- To increase public recreation in high density areas

- To improve coordination and management of recreation areas.
- To protect existing recreation areas from adverse contiguous uses.
- To accelerate the identification and no-cost transfer of surplus and under-utilized federal property.

New Jersey will consider the recreational potential of a site in each decision under the Coastal Program. The highest priority for use of waterfront sites will be recreation, and residential and industrial projects will include recreation areas to the maximum extent practicable. The Policies are consistent with the New Jersey SCORP, which was also prepared by DEP.

Recreation is particularly important in New Jersey where tourism is the state's second largest industry. The recreational use of the ocean waterfront has long been recognized, while the use of bay and river waterfront, particularly in urban areas is of growing importance in New Jersey. (See Chapter Three, Sections 6.6.7.4 and 7.3)

Transportation and Ports

The need for adequate transportation both to, and within, the coastal zone is an important national interest. To determine the national interest in transportation, and ports, New Jersey consulted the U.S. Department of Transportation, U.S. Coast Guard, Federal Aviation Administration, Federal Highway Administration, Federal Railroad Administration, Urban Mass Transit Administration, Maritime Administration and U.S. Army Corps of Engineers. The maintenance of existing transportation facilities is unaffected by the New Jersey Coastal Program. New public transportation facilities will be encouraged while additional roads will be permitted only if a need for them is demonstrated and alternative solutions are not feasible. Transportation facilities which block access to the waterfront will be prohibited. In addition, other types of proposals, such as residential projects and development in Atlantic City will be evaluated in terms of their potential impact on transportation.

New Jersey's ports also contribute to the national transportation interest. Ports will be encouraged only in established port areas. New facilities will be permitted when there is a clear demonstration of the inadequacy of an existing port. In New Jersey, the existing ports contain unused and under-used areas which can be refurbished to meet increases in demand. The Coastal Policies nevertheless allow for possible unanticipated future needs for port areas. (See Chapter Three, Sections 7.5.1, 7.5.2, 7.5.3, 7.5.4, 7.5.5, and 7.7)

Water

The New Jersey Coastal Program has been designed to support the attainment of national water quality goals. New Jersey has considered the national interest in water quality by review of the Federal Water Pollution Control Act and consultation with the Environmental Protection Agency, Fish and Wildlife Service, National Marine Fisheries Service and the Council on Environmental Quality. These goals, and the other resources in which there is a national interest which follow in this section, are recognized by the first Basic Coastal Policy which states "Protect the coastal ecosystem", as well as by other more specific policies. Water quality is addressed by the Location Policy on Water Areas and Special Water Areas, by Use Policies on Wastewater Treatment, and by Resources Policies on Soil Erosion, Runoff, Water Use, and Water Quality. DEP's Division of Marine Services has a

close working relationship with the Division of Water Resources. The former has responsibility for the Coastal Zone Management Act in New Jersey and the latter administers New Jersey's participation under the Federal Water Pollution Control Act. (See Chapter Three, Sections 6.2 and 6.3)

Air

The New Jersey Coastal Program supports the attainment and maintenance of clean air. The State has considered this national interest through review of the federal Clean Air Act and consultation with the Environmental Protection Agency and the Council on Environmental Quality. A policy on Air in the Resources Policies section of the Coastal Resource and Development Policies requires that all development subject to the Coastal Program must conform with the Clean Air Act and other applicable air regulations and standards. DEP's Division of Environmental Quality is responsible for improving and maintaining air quality in New Jersey. (See Chapter Three, Section 8.10)

Wetlands

The New Jersey Coastal Program has considered the national interest in wetlands through review of the President's Executive Order 11990 on Protection of Wetlands of May 24, 1977, Section 404 of the Federal Water Pollution Control Act, and the National Environmental Policy Act, as well as through consultation with the Soil Conservation Service, U.S. Army Corps of Engineers, Fish and Wildlife Service, Environmental Protection Agency, National Marine Fisheries Service, and the Council on Environmental Quality.

The major objectives of the national interest in Wetlands are:

- To protect basic values of wetlands as habitat and food sources for waterfowl and aquatic life;
- To protect the functioning of wetlands for flood prevention, storm buffering, water supply, and nutrient exchange, and as a recreational resource.
- To regulate alteration of wetlands and the disposal of dredged materials in U.S. waters and associated wetlands.

The New Jersey Coastal Program addresses the national interest in protection of wetlands through their designation as a Geographic Area of Particular Concern. Wetlands are also addressed in a Use Policy on Housing discouraging lagoon development, a Resource Policy on "Buffers" which states that adjacent development must allow a buffer to protect sensitive areas such as wetlands, and the Location Policy which specifically identifies wetlands as areas where development proposals must meet very high standards. The use of New Jersey's Wetlands Act of 1970 in the Coastal Program will allow enforcement of these policies. In New Jersey, considerable wetlands acreage was being lost to development each year until the Wetlands Act was passed. (See Chapter Three, Section 6.5.1.2)

Endangered Flora and Fauna, and Wildlife Refuges and Reserves

New Jersey has addressed the national interest in endangered flora and fauna, and wildlife refuges and reserves by reviewing the Endangered Species Act of 1973, and the Federal Aid to Wildlife Restoration Act of 1938 (Pittman-Robinson), and by seeking the advice and comments of the U.S. Forest Service, Environmental Protection Agency, Fish and Wildlife Service and the Council on Environmental Quality.

The major objectives of the national interest in endangered flora and fauna are:

- To provide a means whereby the ecosystems upon which endangered and threatened species depend may be conserved.
- To provide a program for the conservation of such endangered and threatened species.
- To take steps as may be appropriate to achieve the purposes of treaties and conventions in which the United States has pledged its support for the worldwide conservation of wild flora and fauna.

The national importance of wildlife is addressed in the Coastal Program by Resource Policies on "Vegetation", "Wildlife", and "Buffers" which state that development must protect and preserve vegetation and wildlife by use of buffers and other techniques to the maximum extent practicable. The Coastal Program also discourages development of sites with endangered species. (See Chapter Three, Sections 8.8, 8.9 and 8.15)

Living Marine Resources

In determining the national interest in living marine resources, the following documents, specific legislation, and agencies were consulted:

- Fishery Conservation and Management Act of 1976.
- A Compilation of Federal Laws relating to Conservation and Development of our Nation's Fish and Wildlife Resources, Environmental Quality, and Oceanography. The Library of Congress, Congressional Research Service. January, 1975.
- Living Coastal Resources; A Marine Fisheries Program for the Nation. U.S. Department of Commerce/NOAA, National Marine Fishery Service and U.S. Department of Interior, Fish and Wildlife Service; July, 1976.
- U.S. Fish and Wildlife Service.
- U.S. Army Corps of Engineers
- National Marine Fisheries Service
- Marine Mammal Commission

The major objectives of the national interest in living marine resources are expressed as follows:

- To conserve, enhance and manage in a rational manner commercial fishing which constitutes a major source of employment and contributes significantly to the food supply, economy and health of the nation.
- To strengthen the contribution of marine resources to recreation and other social needs.
- To develop and protect all species of wildlife and their habitat, and to control losses by damage to habitat areas through coordination with other features of water resource development programs.

The key features of the national interest in living marine resources are, therefore:

- emphasis on commercial fisheries
- relationship of marine resources to recreation
- protection of marine resources
- protection of wildlife habitat

The Coastal Program addresses these issues in the Location Policies and Resource Policies in Chapter Three. Development will be discouraged in shellfish beds, submerged vegetation, surf clam areas, navigation channels, finfish migration pathways, and prime fishing areas. In addition, development will be required to cause minimal feasible interference with marine fish and fisheries. In addition to continuing coordination with the appropriate federal agencies, DEP is working with NOAA to identify and plan for the management of marine sanctuaries in the state. (See Chapter Three, Sections 6.2.1, 6.2.5, 6.2.2, 6.2.6, 6.2.4, 6.2.3 and 8.2)

Floodplain and Erosion Hazard Areas

New Jersey has considered the national interest in flood plains and erosion hazard areas through review of the Flood Disaster Protection Act (P.L. 93-234), National Flood Insurance Act of 1968 and the President's Executive Order of May 24, 1977 on Floodplain Management, and through consultation with the Federal Insurance Administration, U.S. Geological Survey, Federal Disaster Assistance Administration and the National Heritage Program. The major objectives of the national interest in these areas is to avoid the long and short term adverse impacts associated with the occupancy and modification of floodplains.

The national interest in flood control is reflected in the Coastal Program's restrictive designation of the Upper Water's Edge land area in the Location Policies in Chapter Three. Flood plains protection is also addressed by the Special Land Area of Flood Hazard Areas and by the Resource Policy which prohibits certain uses of the floodway including construction of housing. (See Sections 6.5.2 and 6.4.4)

Barrier Islands

The national interest in barrier islands was considered through consultation of the same sources noted under "Floodplain and Erosion Hazard Areas" as well as participation in the efforts of the national Barrier Island Task Force. This national interest is directly reflected in the Coastal Program through the Special Land Areas designated as High Risk Erosion Areas, Dunes, and Central Barrier Island Corridor which restrict or prohibit development, and through the Use Policy on "Shore Protection" which gives preference to non-structural over structural approaches to shore protection. The protection of barrier islands is particularly crucial in New Jersey after the damaging winter storms of 1977-78. (See Chapter Three, Sections 6.4.1, 6.4.2, 6.4.3 and 7.8)

Historic Sites and Districts and Areas of Unique Cultural Significance

The national interest in historic sites and districts and areas of unique cultural significance was considered through review of the Archaeological and Historical Preservation Act of 1974 (P.L. 93-29) and National Historic Preservation Act of 1966 (Executive Order 11593), and consultation with the National Park Service and the Advisory Council on Historic Preservation.

The major objectives of the national interest in historic sites and districts are:

- To afford protection from adverse impacts to designated historic and archaeological sites.
- To consider cultural resources in assessing the environmental impacts of proposed activities.

The New Jersey Coastal Program recognizes the national interest of preserving representative and unique archaeological, historical and cultural resources of the coast. The Program reflects this recognition, through the designation of Historic Places as a Special Land Area and in a Resource Policy addressing "Historic Preservation" which encourage the protection of historic and cultural resources. (See Chapter Three, Section 6.4.5)

Minerals

New Jersey has considered the national interest in minerals through consultation with the U.S. Bureau of Mines and the U.S. Geological Survey. Although mining is not a major industry in New Jersey, its national importance is reflected by the Use Policy on "Mining" which states that mining is acceptable only in sites immediately adjacent to current mining operations.. DEP will continue to coordinate with U.S. Bureau of Mines on the Coastal Program. (See Chapter Three, Section 7.6.2)

Prime Agricultural Lands

New Jersey has considered the national interest in agriculture through consultation with the Soil Conservation Service and the Fish and Wildlife Service. The national importance of prime agricultural lands is reflected in the Coastal Program by the Location Policy on Prime Agricultural Land in Chapter Three which discourages development of prime farmland unless continued farming is infeasible or incompatible with surrounding land uses. The Location Policies also consider soil fertility as an important variable in determining the acceptability for development of a site. (See Chapter Three, Section 6.4.11)

Forests

New Jersey has considered the national interest in forests through consultation with the National Forest Service. The state's major forest -- the Pine Barrens -- is located in the central portion of New Jersey, most of which is just outside the coastal zone. The Coastal Program, through the Location Policies and the "Secondary Impact" Resource Policy in Chapter Three, encourages the protection of prime forest areas. (See Chapter Three, Section 6.4.7)

FEDERAL CONSISTENCY

Federal agencies play a significant role in the coastal zone. They issue permits and licenses for activities such as dredging and the siting of nuclear power plants, as well as activities associated with exploration and development of the Outer Continental Shelf. They also provide financial assistance such as grants for watershed protection and flood prevention, and undertake direct activities and development projects such as national parks and highway construction.

Federal consistency is intended to benefit the state and federal governments by maximizing communication and coordination between the two levels of government on coastal land and water use decisions. The Coastal Zone Management Act provisions require federal actions to be consistent with an approved state program, to the maximum extent practicable. Specifically, New Jersey will consider an activity consistent, to the maximum extent practicable, if:

- (1) The activity does not inherently conflict with the Coastal Resource and Development Policies, and is the available alternative most supportive of the New Jersey Coastal Program; or

- (2) The activity is clearly necessary in the interest of national security and is carried out in a manner which minimizes conflict with the Coastal Resource and Development Policies.

Certain federal actions conducted outside of the Bay and Ocean Shore Segment may have coastal impacts, and therefore require state review for consistency. This interpretation will apply to all 17 counties that have waters with tidal influence.

New Jersey will provide public notice on pending consistency determinations through the same mechanisms used for the three state coastal permit programs: CAFRA, wetlands, and riparian. Written notice will be sent to landowners adjacent to the site proposed for development, appropriate municipal and county agencies and newspapers. Each project requiring a consistency determination will also be listed in the DEP Weekly Bulletin. The public notice will state that more detailed information is available from DEP and that comments to DEP on the proposal are welcome.

In addition, a public hearing will be held in the local area concerned on all projects requiring a CAFRA permit and on major projects requiring a Wetlands or Waterfront Development Permit. A public hearing will also be held in the event of a serious disagreement between DEP and a federal agency concerning a federally licensed or permitted activity described in OCS production and development plans.

DEP will work with each Federal agency to provide joint written notices and public hearings on proposals whenever possible.

Both DEP and the New Jersey Department of Energy (DOE) will participate in the decision of the State of New Jersey to issue a determination of consistency. As required by federal regulation (15 CFR 930.18), DEP shall receive, and forward promptly to DOE, all materials necessary for consistency determination on coastal energy facilities. In the event of a disagreement, the Energy Facility Review Board will be convened to make a recommendation to the Governor, who shall make the final determination within the applicable time limits. As required by federal regulations (15 CFR 930.18), DEP will then transmit the final federal consistency determination to the appropriate federal agency.

Below are lists of federal activities and development projects, federally licensed and permitted activities, federally licensed and permitted activities described in OCS Plans, and federal programs providing assistance to state and local governments likely to occur in, or affect, New Jersey's coastal zone. Preceding each list are the procedures New Jersey will employ to enhance state-federal cooperation and to insure consistency. New Jersey will use the federal consistency procedures described in 15 CFR 930. (Federal Register, Vol. 43, No. 49, March 13, 1978, pp. 10510-10533).

Federal Activities and Development Projects

The federal agencies shall notify the New Jersey Department of Environmental Protection in writing of all proposed activities and development projects to be located in or significantly affect the Bay and Ocean Shore Segment. The agencies will also notify DEP of all proposed activities or projects on federal lands which may have an impact in the Segment on water quality, air quality, noise levels, visual amenities, transportation and infrastructure network, or the need for housing and support services.

The following federal activities and development projects will be subject to the federal consistency provisions.

GENERAL SERVICES ADMINISTRATION

Location and design of proposed federal government property acquisition and building construction.

Disposal of surplus federal lands.

DEPARTMENT OF DEFENSE

Army Corps of Engineers - Proposed project authorization for dredging, channel works, breakwaters, other navigation works, erosion control structures, reservoirs, dams, beach nourishment and other public works projects in the coastal zone or with the potential to impact coastal lands and waters.

Air Force, Army and Navy - Location, acquisition and design of new or enlarged defense installations. Actions conducted on federal lands with potential impact on coastal lands and waters.

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service - Management of national wildlife refuges and proposed acquisition.

National Park Service - National Park and seashore management and proposed acquisition.

- Preservation of historic and cultural sites.

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration - Highway construction.

Federally Licensed and Permitted Activities

An applicant may demonstrate, for a federally licensed or permitted activity, consistency by receipt of an approved CAFRA, Wetlands, or waterfront development permit.

Prior to or concurrent with submission of the application to the federal agency, the applicant must submit to DEP the appropriate state permit, application and material describing the proposal, including maps, sufficient to allow DEP to evaluate independently the proposal's consistency. The applicant should include an assessment relating the probable coastal zone effects of the activities and their associated facilities to the relevant elements of the management program. From the assessment, the applicant should indicate how the proposed activities and associated facilities are consistent with the management program. DEP will circulate the list of permits and licenses which are subject to a state consistency certification to all federal agencies. This will enable the federal agency to alert all potential applicants of the need to obtain a DEP consistency certification. DEP will adhere to the same schedule for responding as described for Federal Activities and Development Projects. If DEP finds the proposal inconsistent with the Coastal Program, the federal agency will not issue the requested permit or license, unless and until the proposal is revised to eliminate the inconsistencies.

In addition to the permits and licenses listed below, DEP reserves the right to review and comment on the consistency of other federal permit and license applications which may significantly affect the coastal zone. DEP will request appropriate information on the proposal within 45 days from the notice date of the federal application.

The following federal permits and licenses will be subject to the federal consistency provisions.

DEPARTMENT OF DEFENSE

Army Corps of Engineers

- Permits to regulate dredging and other dredging construction work under Section 9 and 10 of the Rivers and Harbors Act of 1899.
- Permits and licenses to transport dredged material under Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972.
- Permits and licenses to dispose of dredged materials under Section 404 of the Federal Water Pollution Control Act of 1972 and amendments.

DEPARTMENT OF ENERGY

- Permits and licenses required for the siting and operation of nuclear and fossil fuel power plants and transmission lines.
- Permits and licenses required for the construction and operation of facilities needed to import or export natural gas.
- Permits and licenses required for the construction and operation of interstate gas pipelines, both onshore and offshore.

DEPARTMENT OF THE INTERIOR

U.S. Geological Survey

- Permits and licenses for geological and geophysical exploration.

DEPARTMENT OF TRANSPORTATION

U.S. Coast Guard

- Permits for construction and operation of deepwater ports under the Deepwater Port Act of 1972 (PL 93-627).
- Permits for construction of bridges under USC 401, 491-507 and 525-534.

Federal Aviation Administration

- Permits and licenses for construction or alteration of airports.

ENVIRONMENTAL PROTECTION AGENCY

- National Pollutant Discharge Elimination System (NPDES) permits.
- Prevention of Significant Deterioration Permits.

Federally Licensed and Permitted Activities Described in OCS Plans

The 1976 Amendments to the Federal Coastal Zone Management Act added Section 307(c)(3)(B), stating in part that:

"... any person who submits to the Secretary of the Interior any plan for the exploration or development of, or production from any area which has been leased under the Outer Continental Shelf Lands Act ... and regulations under such Act shall ... attach to such plan a certification that each activity which is described in detail in the plan complies with such state's approved management program and will be carried out in a manner consistent with such program."

Applicants for federal licenses or permits, described in detail in OCS exploration or, development plans, which significantly affect the coastal zone must supply to DEP a detailed description of all proposed federally licensed or permitted activities and facilities for OCS activities including, but not limited to, construction and operation of drilling platforms, other structures in navigable waters, waste and dredged material disposals, temporary or permanent service bases, repair and maintenance yards, steel or concrete platform fabrication yards, steel platform or pipeline installation service bases, pipelines and landfalls, pipe coating yards, partial processing facilities, gas processing and treatment plants, marine terminals and tank farms, and petrochemical complexes.

Federally licensed and permitted activities described in OCS plans include the following:

DEPARTMENT OF DEFENSE

Army Corps of Engineers

- Permits for artificial islands and fixed structures located on the Outer Continental Shelf under the Rivers and Harbor Act of 1899 as extended by 43 U.S.C. 1333(f).

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

- Permits and licenses for rights-of-way for common carrier pipelines.

U.S. Geological Survey

- Permits and licenses for rights of easement to construct flow and gathering lines offshore.
- Permits and licenses for all post-leasing activities including activities associated with exploration, development, and production of mineral resources.

Federal Assistance to State and Local Governments

DEP will use the A-95 review process to monitor proposed federal assistance projects in the coastal zone. The State also reserves the right to comment on other federal assistance projects brought to its attention through the media and other avenues.

When such monitoring indicates a potentially significant impact on the state's coastal zone, DEP shall notify the applicant agency, involved federal agencies, and the federal Assistant Administrator for Coastal Zone Management of its intention to make a consistency determination. At that time, DEP will also ask the applicant agency for any additional information necessary for the consistency determination.

DEP will notify the applicant agency and the New Jersey Department of Community Affairs, in its role as State A-95 Clearinghouse, of its objection, if any, to proposed projects. The Department of Community Affairs is required to forward notification of any consistency objections to appropriate federal agencies. The DEP comments will describe how the proposed project is inconsistent with specific Coastal Resource and Development Policies and, where possible, will recommend alternatives which would alleviate the inconsistencies. The DEP comments will also refer to the appeal procedures set forth under Subpart G of the adopted NOAA regulations on federal consistency published (15 CFR 930, Federal Register, Vol. 43, No. 49, March 13, 1978).

DEP will employ these procedures for federal assistance applications to aid the financing of any of the following facilities anywhere in New Jersey. This expansive geographic area is appropriate because of the direct and significant impact such facilities could have on coastal lands and waters:

Chemical or petroleum processing, transfer or storage facilities

Mineral extraction facilities

Sewage treatment and disposal and solid waste disposal facilities

In addition, NJDEP will monitor state and local federal assistance applications affecting the coastal zone including, but not limited to the following programs:

DEPARTMENT OF AGRICULTURE

Soil Conservation Service - Watershed protection and flood protection.

DEPARTMENT OF COMMERCE

Economic Development Administration - Economic Development Planning Grants, and Economic Development Grants for Public Works and Development Facilities.

DEPARTMENT OF ENERGY

- State Energy Conservation Program

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

- Housing Assistance Grants, Community Development Block Grant, and Section 701 Planning Assistance Grants

DEPARTMENT OF THE INTERIOR

Heritage Conservation and Recreation Service - Land and Water Conservation Fund

Fish and Wildlife Service - Endangered Species Act of 1973.

DEPARTMENT OF TRANSPORTATION

Because of the regional impact of transportation projects, NJDEP reserves the right to review for consistency applications under the following programs anywhere in the 17 counties with coastal waters.

Federal Aviation Administration - Airport Development Aid Program

Federal Highway Administration - Federal Aid Highway Program

Urban Mass Transportation Administration - Urban Mass Transportation Grants

ENVIRONMENTAL PROTECTION AGENCY - Air Pollution Control Program Grants, Construction Grants for Wastewater Treatment Works, and State and Interstate Program Grants for Water Pollution Control.

REGIONAL BENEFIT DECISIONS

The federal Coastal Zone Management Act requires that states provide a "method of assuring that local land and water use regulations within the coastal zone do not unreasonably restrict or exclude land and water uses of regional benefit." (Subsection 306(e)(2)).

In New Jersey, uses of regional benefit include energy facilities using oil (not including refineries), gas, electric and renewable sources of energy, water and sewer facilities, solid waste collection and disposal systems, roads and highways, parks, housing for people with low or moderate incomes, facilities necessary for state or national defense, and the use of wetlands and wet beach areas. Oil refineries are not listed because of the assurance by the U. S. Department of the Interior that New Jersey already has adequate refinery capacity to meet anticipated needs. (See Final Environmental Statement - OCS Lease Sale No. 40; Volume 3, page 17)

Local governments are prevented from unreasonably excluding these uses by one or more of four factors. The most significant factor is the state's power to overrule a local decision denying approval to any public utility.

The Board of Public Utilities in the Department of Energy can overrule a local decision if the "present or proposed situation of the building or structure in question is reasonably necessary for the service, convenience or welfare of the public." (N.J.S.A. 40:55-50) "Public Utility" includes every individual or corporation which now or hereafter owns, operates, manages, or controls any of the following facilities: road, street railway, traction railway, autobus, canal, express subway, pipeline, gas, electric light, heat, power, water, oil, sewer, solid waste collection, solid waste disposal, telephone or telegraph system, or plant or equipment for public use." (N.J.S.A. 48:2-13) The state can also overrule the local exclusion of a solid waste facility, under the Solid Waste Management Act. (NJ.S.A. 13:1E- 1 et seq.)

Second, the State of New Jersey has the power of eminent domain for any facilities necessary for state or national defense (N.J.S.A. 20:1-3.1), Airports (N.J.S.A. 20:1-3.1), State highways (N.J.S.A. 27:7-44.6) and parks and open space under the Green Acres Program (N.J.S.A. 13:8A-24).

Third, New Jersey has addressed the regional benefit provided by housing for people with low and moderate incomes largely through the Judiciary since low and moderate income housing often does not provide great economic benefits to a municipality and cannot be required by a state agency. The New Jersey Supreme Court has established in Southern Burlington County NAACP v. Township of Mt. Laurel, 67 N.J. 151 (1975) that municipalities must "presumptively make realistically possible an appropriate variety and choice of housing ... at least to the extent of the municipality's fair share of the present and prospective regional need ...". The Department of Community Affairs is developing guidelines to implement this ruling. A developer whose application is denied local permits to build such housing has legal standing to appeal the denial on the grounds that the municipality has not provided its fair share of low cost housing. A recent Superior Court decision in New Jersey, though not in the coastal zone, has demonstrated the validity of this technique. (Round Valley Inc. v. Clinton Township, Superior Court (January, 1978)).

The fourth protection against local exclusion of uses of regional benefit is provided by two of the state's three coastal permit laws. These laws protect the use of wetlands and wet beaches, which are both designated as Geographic Areas of Particular Concern in Chapter Six, by requiring a Wetlands or riparian permit for development which could otherwise, with municipal approval, jeopardize natural and open areas.

Chapter Six: SPECIAL COASTAL RESOURCE AND DEVELOPMENT POLICY REQUIREMENTS OF
THE FEDERAL COASTAL ZONE MANAGEMENT ACT

Introduction
Geographic Areas of Particular Concern
Areas of Preservation and Restoration

Introduction

The federal Coastal Zone Management Act contains five requirements relating to specific uses or areas of the coastal zone. This chapter describes how the New Jersey Coastal Program meets the requirements for Geographic Areas of Particular Concern and for Areas of Preservation and Restoration. The other three requirements, relating to Energy Facility Siting, Shorefront Access Planning and Shoreline Erosion Planning, were added to the Act by the Amendments enacted in 1976. New Jersey will describe how its coastal program meets these requirements for the entire coastal zone in its program to be submitted for the other parts of the coastal zone; states are not required under federal law to include these elements in a management program until after October 1978.

The New Jersey Coastal Program addresses many of the issues raised by all five requirements in other Chapters. For this reason, the sections which follow liberally refer the reader back to other parts of the document, particularly Chapters Three and Four.

Geographic Areas of Particular Concern

Section 305 (b)(3) of the federal Coastal Zone Management Act requires that the state provide "an inventory and designation of areas of particular concern within the coastal zone." A draft paper prepared by NOAA-OCZM (May 24, 1976) indicates that the designation must lead to "specific recognition and action within the framework of the management program".

New Jersey is designating Geographic Areas of Particular Concern (GAPC) on the basis of the following three criteria:

- A. Regional or state-wide significance of the area;
- B. Need for special attention based on threat to the preservation of the area or obstacles to its development consistent with the policies of the New Jersey Coastal Program, and
- C. Availability of State legal authorities to promote desired uses of the areas.

Using the criteria, New Jersey proposes two generic GAPCs and one specific GAPC. Clearly, many other areas in the coastal zone are important. When DEP-OCZM asked the public to nominate areas of particular concern, virtually every possible site in the potential coastal zone was mentioned. The Coastal Program recognizes the importance of many of these areas primarily through the Location Policies and the Special Management Areas described in Chapter Three.

1. All Coastal Wetlands - Wetlands are valuable to New Jersey because they serve as natural flood controls, water purifiers, and essential nurseries for marine creatures. (See also the rationale for the Wetlands policies in Chapter Three). The threat to wetlands posed by development was recognized by the Governor and Legislature in 1970 when they enacted the Wetlands Act. This Act has effectively reduced the average annual loss of wetlands to development from 1900 acres to 55 acres. Under the Coastal Program, New Jersey will continue to use the Wetlands Act to preserve coastal wetlands.

The priority of uses in coastal wetlands is as follows:

- (a) No development or disturbance.
 - (b) Development which (a) requires water access or is water oriented as a central purpose of the basic function of the activity, (b) has no prudent or feasible alternative on a non-wetland site, (c) will result in minimum feasible alteration or impairment of natural tidal circulation, and (d) will result in minimum feasible alteration or impairment of the natural contour of the natural vegetation of the wetlands.
2. Higbee Beach - Pond Creek Meadow Area - This unique area of 440 acres, in Lower Township in Cape May, includes five mini-ecosystems of bayshore beaches, dunes, wooded uplands, fields, and freshwater and tidal meadows. The area is valued by residents of, and visitors to southern New Jersey as a place to sunbathe and swim, and to observe wildlife. Over 200 species of birds have been recorded in the area. The area has been threatened by repeated efforts to build a campground within it. New Jersey is using the CAFRA permit program and funding from the Green Acres Program and the Endangered Species Act administered by the Division of Fish, Game and Shellfisheries described in Chapter Four, to protect the area exclusively for recreation and wildlife.

The set of uses with priority in the Higbee Beach-Pond Creek Area includes only recreation compatible with protection of the area's wildlife.

3. Wet Sand Beaches - New Jersey's 137 miles of ocean shorefront form a natural resource which is valued directly by residents and indirectly as the mainstay of the state's tourism industry. The wet sand beach area seaward of the mean high water line is known as Public Trust Land and is a Geographic Area of Particular Concern. This area is owned by the State of New Jersey unless the State has conveyed a "riparian grant" for the tide-flowed land. In all parts of the area, whether or not it is owned by the State, public access must be provided for navigation, commerce and recreation, and any new development requires a riparian "waterfront development" permit, as described in Chapter Four.

The priority of uses in the wet sand beaches areas is:

- (a) recreation
- (b) navigation and commerce
- (c) development with no prudent or feasible location on a non-beach (wet sand) location.

Areas of Preservation and Restoration

Section 306 (c)(9) of the federal Coastal Zone Management Act requires that the state establish "procedures whereby the specific areas may be designated for the purpose of preserving or restoring them for their conservation, recreational, ecological or esthetic values". This is a requirement that a process to identify areas for preservation or restoration, rather than a list of areas themselves, be available to the state coastal agency.

The Department of Environmental Protection administers several approved programs through which areas can be designated for preservation or restoration. Through the Green Acres Program (N.J.S.A. 13:8A-35 et seq.), DEP can purchase land or provide grants to local governments for land purchase and park development. The amount of money available is established by voter approved bond issues and legislative appropriations.

The Green Acres Program also administers two other programs which provide DEP with the ability to indicate concern for the preservation or restoration of an area without the absolute certainty of success provided by land purchase. Under the Natural Areas Systems Act (N.J.S.A. 13:1B-15.12a et seq.) passed in 1976, DEP must identify natural areas within DEP-owned and managed lands in need of preservation or protection and available implementation options. The Wild and Scenic Rivers System Act, passed in 1977, requires that DEP classify, designate, and administer river areas as wild, scenic, recreational, or developed recreational rivers. Planning for the two systems is coordinated through conforming rules and regulations.

The Division of Fish, Game and Shellfisheries can apply funding available under the federal Endangered Species Act to the preservation of species habitats through land purchase or management. This is one of the major tools being used to preserve the Higbee Beach - Pond Creek Geographic Area of Particular Concern.

Another procedure for the designation of areas for preservation or restoration is through the New Jersey Register of Historic Places and the National Register of Historic Places. The Commissioner of DEP, the State Historic Preservation Officer, may approve nominations of publicly or privately owned areas and sites for inclusion on the Register. Such inclusion prohibits any federal, state, county, or municipal agency from undertaking a project which would harm the historic place, without the approval of DEP, and, in the case of the National Register, the approval of the Advisory Council on Historic Preservation. These historic places are also identified as a Special Land Area in the Location Policies of Chapter Three.

Completing the Bay and Ocean Shore Segment
Completing the State's Coastal Management Program
Changing the Coastal Management Program

Completing the Bay and Ocean Shore Segment

Submission of the New Jersey Coastal Management Program for the Bay and Ocean Shore Segment to NOAA-OCZM for the federal review and approval process is a major, but not the final step toward completing coastal planning for the Segment. First, Chapter Three's substantive Coastal Resource and Development Policies will be proposed and adopted as administrative regulations of the Department of Environmental Protection, according to the requirements of the Administrative Procedures Act (N.J.S.A. 52:14B-1 et seq.) under the Commissioner's authority under CAFRA and the DEP enabling act to adopt regulations. The adopted regulations must be in place prior to federal approval of the Bay and Ocean Shore Segment, expected by late September 1978, in order to insure the enforceability of the Coastal Program.

Comments on these proposed rules as well as comments on the combined Coastal Management Program - Bay and Ocean Shore Segment and Draft Environmental Impact Statement may lead to revisions to the Program, which will be reflected in the Final Environmental Impact Statement, expected to be completed by August 1978, and in New Jersey's adopted coastal management regulations.

At the same time, DEP will continue its coastal planning efforts under the Fourth Year Coastal Zone Management Program Development Grant. In particular, DEP will carry out a major Estuarine Study, with the expert assistance of Jack McCormack and Associates to increase the specificity of the environmental sensitivity factors considered in the Program's Location Policies. Also, DEP will initiate a Development Potential Study, complementing the Estuarine Study, by identifying the key siting factors for a wide range of coastal development activities from the developer perspective. The study will concentrate on the conventional types of development that take place in the coastal zone. The results of these two projects should markedly increase the level of detail of the standards in the Location Policies. DEP and DOE will take steps to conduct a joint Major Energy Facility Study, to specify appropriate energy facility development potential criteria and candidate areas for use in the Coastal Program's Location Policies.

DEP will also continue its analysis of coastal land and water features, pressures, and development opportunities, in cooperation with State and local planning agencies, in order to articulate increasingly specific coastal policies, concerning the appropriate function and character of various coastal regions. DEP will continue the elaboration of a prospective concept of the coast, providing a context for decision-making that recognizes the appropriate and desirable differences between regions and communities of the coast.

The expertise and insights of the coastal planning agencies participating in the 1978 cooperative DEP-County Coastal Planning project should provide valuable information for this prospective effort. The 1978 project involves three major

elements. First, the counties will be responsible for reviewing the coastal management program and recommending county specific revisions. Second, the counties will submit comments and recommendations on specific coastal permit decisions pending before DEP. Third, the counties will act as a regional coastal clearing house to the public, thereby increasing public participation and promoting intergovernmental coordination.

While the Coastal Program for the Segment is beginning the federal review process, New Jersey will prepare its first Coastal Zone Management Program Administration (Section 306) Grant Application to NOAA-OCZM. The application will define a series of projects for the twelve months following the program approval to add increasingly greater specificity to coastal resource and development policies, as well as improved coastal awareness and monitoring of coastal decisions. Greater specificity will come in part from mapping programs, and will build upon the environmental sensitivity and development potential studies to be carried out as part of the further development of the Location Policies and the Coastal Location Acceptability Method (CLAM).

DEP also plans to explore many other possible uses of the funding available under Program Administration Grants. The use of a relatively small amount of coastal zone management funds in the summer of 1977, for example, enabled DEP to run a Beach Shuttle to Island Beach State Park. Similar projects might be feasible in the future.

The Division of Marine Services and the Division of Fish, Game and Shellfisheries will work with the Mid-Atlantic Regional Fisheries Management Council to promote interstate coordination of plans for the management of fishery resources. Specifically, DEP will identify and establish priorities for a set of fishery management tasks including preparation of an inventory of living coastal resources, and may then request funding from NOAA-OCZM under the Coastal Fisheries Assistance Program.

Lastly, the Department of the Public Advocate has strongly encouraged a program to fund people wishing to actively participate in the permit review of particular applications. DEP will work with the Public Advocate to explore whether this idea would be workable and beneficial.

The Bay and Ocean Shore Segment will be complete and the management phase can begin, after the Assistant Administrator finds that the program Segment meets all of the requirements of Section 306, and the Program Administration Grant has been approved.

Completing the State's Management Program

Completion of the Bay and Ocean Shore Segment marks a major achievement, but the entire management program for New Jersey's coastal zone must also be completed promptly. The second major DEP-OCZM staff coastal planning effort in 1978, in addition to work on the Segment, is preparation of the management program for the Delaware Waterfront, Northern Waterfront and Hackensack Meadowlands portions of the prospective coastal zone, as defined in Appendix F. Considerable coastal planning has taken place in these more built-up, urbanized coastal regions, and many of the coastal policies in Chapter Three are equally applicable to these areas. However,

detailed coastal planning in terms of the boundary, policies, and management system will be carried out in order to prepare a draft coastal management program for the entire state's coastal zone, incorporating the Bay and Ocean Shore Segment by late 1978.

DEP's contract with coastal counties will produce results contributing to the program for these areas since Hudson, Union, Middlesex, Burlington, Camden, Gloucester and Salem Counties are among the participants. In addition, as part of the development of the coastal program for the Northern Waterfront area, DEP-OCZM will be undertaking an analysis of the Hackensack Meadowlands Development Commission's (HMDC) master plan to determine consistencies with the coastal management program. The study will help define an appropriate coastal zone boundary, based in part on water quality, wetlands, and aerial photographic analyses.

New Jersey's Fourth Year Coastal Zone Management Program Development Grant Application to NOAA-OCZM defines the specific tasks and timetable for DEP's coastal planning for 1978.

Changing the Coastal Management Program

The last five years of coastal planning in New Jersey have amply demonstrated the dynamic nature of the issues and opportunities that confront the coast. Onshore planning for offshore oil and gas activities, sound management of barrier islands, revitalization of all New Jersey's urban areas, including the special case of Atlantic City, and other policy areas have moved to the top of the coastal management agenda in 1978, but the future may bring new management needs. The federal Coastal Zone Management Act wisely recognizes the importance of change and flexibility and provides mechanisms for states to refine or amend approved coastal management programs.

In the short term, changes to the Bay and Ocean Shore Segment will be considered and proposed, as appropriate, in the course of drafting the management program for the Delaware River, Northern Waterfront and Meadowlands regions of the coastal zone, and integrating the boundary, policies, and management system for those regions with the initial Coastal Program for the Bay and Ocean Shore Segment. In the long term, New Jersey will seek federal approval for major changes in the management program when such changes seem imperative to maintain a responsive, coherent, and up-to-date approved coastal management program.

PART III

PROBABLE IMACTS OF THE PROPOSED ACTION ON THE ENVIRONMENT

Introduction

Section 1 - Summary of Environmental Impacts

Section 2 - Summary of Socio-Economic Effects and their Associated Environmental Impacts

A) Impacts on New Development and Land Values

B) Resorts/Recreation

C) Social Effects and their Associated Environmental Impacts

Section 3 - Impacts of the Coastal Resource and Development Policies

A) Location Policies

1. Water Area

2. Water's Edge Area

a) Lower Water's Edge

1. Wetlands

2. Beaches

b) Upper Water's Edge

c) Retained Water's Edge

3. Land

4. Special Water's Edge and Special Land Areas

B) Use Policies

1. Housing

2. Resort/Recreation

3. Energy

4. Public Facilities

5. Ports

C) Resource Policies

INTRODUCTION

Significant environmental, social and economic impacts will result from federal approval of the New Jersey Bay and Ocean Shore Segment. In order to fully understand the impacts associated with federal approval, it is necessary to evaluate the probable impact of program implementation by the State of New Jersey. The following description of program impacts is divided into three sections. Section One summarizes the environmental impacts associated with program approval. Section Two summarizes the socio-economic effects and their associated environmental impacts associated with program approval. Section Three is a more detailed analysis of the Coastal Resource and Development Policies and their probable impacts.

Section 1 - SUMMARY OF ENVIRONMENTAL IMPACTS

The DEP's regulation of activities in the Segment's coastal waters, as strengthened by the Segment policies, will continue to minimize many of the detrimental environmental effects associated with coastal development and will have a positive long range impact on the productivity of natural resources. Dredging activities in port areas will be conditioned to minimize possible adverse effects on water quality and aquatic habitats. Transportation of oil and transfer of gas and oil in coastal water will be conditioned to reduce the possibility of oil spills. Pipelines on land are specifically prohibited from being located in sections of the coastal segment that would lead through the Pine Barrens and must be located to avoid sensitive areas where possible.

The Segment policies will facilitate protection and management of certain natural resources of the coast, such as salt marshes, beaches, barrier islands, fish and shellfish spawning grounds, endangered species habitats and prime agricultural land. The policies will help preserve the coast's aesthetic qualities for public enjoyment and promote the various types of recreational opportunities available along the shore. By preserving these valuable natural resources, Segment policies will discourage further inappropriate development in hazardous areas which could result in destruction of property and loss of life. Costs associated with these policies include short term increases in construction costs for new development and long term changes in land values depending on the level of development considered appropriate under the Coastal Policies.

The Segment policies are intended to preserve natural processes and resources; however, DEP also recognizes that the coast will continue to experience significant new growth. Water dependent energy development, off-shore mineral mining, and port and harbor development with their attendant dredging, spoil disposal and bulk-heading activities will be permitted in certain locations to the extent practicable. The impacts of these activities include reducing water quality and fishery productivity as a result of habitat destruction and increased water turbidity, deterioration of coastal aesthetic amenities, and potential interference with recreational uses of the beaches. Policies used for evaluating the costs and benefits of proposed developments are designed to mitigate these impacts.

The Location Policies include a methodology for determining the acceptability of a site for development. Implementing these policies should have a positive long term environmental impact by preserving unique, exceptionally productive or irreplaceable resources and assuring that development will be compatible with the environment in which it is located. In particular, development will be restricted in areas with a high potential to degrade water quality. The costs associated with these policies will be a trade-off of coastal natural resources for inland natural resources, which are more abundant. Location of activities inland will require commitment of resources in other parts of New Jersey.

Under the Use Policies, most types of major development located in the Segment will be regulated by the State of New Jersey. However, community character and the intensity of urban development for projects of 24 units, or less, not proposed for riparian lands or wetlands locations, will remain the responsibility of local governments. The Segment leaves land use decisions of predominantly local impact to the discretion of local governments. Thus, residential or commercial developments that may not be detrimental individually could well have cumulative adverse impacts on the coastal zone. This problem is not addressed by the Bay and Ocean Shore Segment.

The Resource Policies address prevention or mitigation of adverse environmental impacts on both natural and cultural resources. Implementing these policies should result in long term beneficial environmental impacts related to protecting water quality and water supply, preventing the loss of prime agricultural land through erosion, protecting air quality, protecting historic sites and other recreational attractions, and increasing effective management of fisheries and wildlife resources. The costs associated with these policies would include the potential for adverse impacts on air and water quality or natural resources outside the coastal zone as a result of shifting development pressures inland.

Special policies have been developed for managing the barrier islands. The policies reflect the unique properties of these areas. The policies for barrier islands prohibit construction of oil refineries, petrochemical facilities and crude oil storage facilities on the islands. In addition, the Location Policies address beach erosion and central barrier island corridors. These policies will protect the islands from disruption, thus protecting the coastline from beach erosion and wave damage. The short term cost for shoreline protection will be borne by the industries which have to develop facilities inland.

Section 2 - SUMMARY OF SOCIO-ECONOMIC EFFECTS AND THEIR ASSOCIATED ENVIRONMENTAL IMPACTS

Within the context of a statewide coastal zone management strategy, the New Jersey Bay and Ocean Shore Segment has been developed to conserve and protect key renewable natural resources and recreational amenities that form the economic base of the area. Under these policies, large scale energy production and storage facility siting, heavy industrial uses and most additional port development must locate in the region outside the Segment's boundaries.

Other types of new development will be encouraged to locate in the already developed areas. Implementing the Segment policies will not reduce either development pressures or the rate of growth in New Jersey, especially the rate of housing development. However, policy implementation may shift some development activity, such as energy storage facilities, to more suitable inland locations. Short term costs of energy development may increase as a result of these policies, but, over the long term, concentrating development near existing infrastructure and away from coastal flood prone areas will be more cost effective.

Implementing the Segment policies will improve the process for determining coastal land and water uses, siting facilities in the national interest and predicting what types of development will be allowed in the coastal region. Over the long term, as land suitable for development along the coast is committed to that development, the need for public investment will become more critical to future development. Thus, a key impact of the Segment will be that the public sector investments in infrastructure will increasingly determine the location of growth in the coastal zone. In addition, the need for these investments can be anticipated and planned for in an efficient way. Since the Segment plan is designed to concentrate development in or adjacent to developed areas, development may occur in higher densities and in fewer places, reducing the long term costs for infrastructure to support this development. Short terms costs to developers, such as land prices, may increase.

A. Impacts on New Development and Land Values

Managing sensitive coastal resources will enhance the desirability of some coastal areas for future development, while limiting the use of other land for development. Property owners with land designated as acceptable for development which is also located adjacent to open space or recreation areas, or historic or cultural amenities will realize an increase in the value of their property. Owners of land which include endangered species habitat, productive wetlands, prime agricultural land or eroding shoreline may not be able to realize the level of financial gain they had anticipated. Examples of these patterns in New Jersey can already be seen in wetlands areas, where the resale price of land declined markedly after passage of the Wetlands Act of 1970, and in Atlantic City, where land values

rose dramatically after passage of the Casino Referendum in November 1976. Long term effects on property values are harder to predict. For example, the value of property in areas designated for preservation by the Segment policies may decline initially, but may later rise on selected parcels either because of increased tourism or because acceptable development techniques may become economically feasible.

Requirements to minimize environmental disruption during construction of new developments may increase the short term costs of housing and increase infrastructure investments. The long term benefits of avoiding construction on hazardous sites and preventing shoreline erosion will be a reduction in destruction of property and loss of life. Other long term economic benefits include maintenance of viable recreation, agriculture and fisheries industries in the coastal zone.

B. Resorts/Recreation

Recreation and tourism will continue to be the largest industry in the Bay and Ocean Shore Segment of New Jersey' coastal zone and will perhaps expand as a result of development in Atlantic City. Other industries will be located in inland parts of the coastal zone or outside the Segment boundaries altogether. Single family detached housing will continue to be common, but the Bay and Ocean Shore Segment will have increasing numbers of cluster development which will contribute to more efficient settlement patterns for recreational and year round use.

The ocean waterfront from Sandy Hook to Cape May will be devoted almost exclusively to recreational uses and commercial fishing. An exception may be made for limited areas near Atlantic City to serve as onshore support bases for oil and gas exploration and development of outer continental shelf resources. The inland areas of the coastal zone nearest the ocean will continue to provide housing and commercial services for seasonal and year round residents. Portions of the coast further inland will accommodate housing and agricultural operations as well as some industries.

As the Segment policies are implemented, some of the benefits will be immediately visible, such as a halt in the indiscriminate high-rise construction along the Atlantic Ocean shoreline. Other changes will occur over a longer period of time, but will ultimately have greater benefits for recreational uses of the shore, such as improved water quality to permit resumption of swimming in areas currently designated as unsuitable for body contact sports, and reduction of condemned shellfish areas. In addition to the land value changes discussed above, implementing policies in the Segment will have other costs related to recreational development. These will be a need for public infrastructure investments for transporting people to and from recreation areas, providing water and sanitary facilities and maintaining the land and facilities under the pressures of increased public use.

C. Social Effects and their Associated Environmental Impacts

Several Segment policies require that public and private developments provide both physical and visual access to the shorefront. Use policies related to transportation address the need for alternatives to automobile dependence in coastal areas and encourage the development of clustered facilities which encourage the use of public transportation. The cumulative benefits of these policies will be to open more coastline for public use and provide better access to it with less public cost for infrastructure such as roads and parking facilities. The costs

associated with these policies include the potential for overuse of some shore areas and an increase in public costs for maintenance of the beaches, water and sanitary facilities to accommodate more users.

Policies requiring barrier free design for large scale housing developments and beach access pathways will have long term benefits for handicapped persons and residual benefits for society by increasing their productive participation in the economy. Short term increases in construction costs to provide these facilities will also be an impact of implementing this policy.

Policies which encourage development of campgrounds in appropriate locations will offer the benefit of low cost shelter for families who otherwise might not be able to vacation within the coastal area with a residual benefit to the coastal economy. Costs associated with these policies include the potential for overuse of natural areas opened for recreation and increases in local public investments for maintenance of infrastructure and campground facilities.

Section 3 - IMPACTS OF THE COASTAL RESOURCE AND DEVELOPMENT POLICIES

The Coastal Resource and Development Policies form a three-stage screening process designed to increase the predictability of coastal decision-making. The policies are based on the three key regulatory authorities - CAFRA, the Wetlands Act, and the riparian statutes, as well as the Shore Protection Program. This discussion is divided into three parts to coincide with the three-stage screening process. (See Part II, Chapter Three for greater detail on this process).

A. Location Policies

One of the basic goals of the Bay and Ocean Shore Segment policies is to aid decision makers in determining the acceptability of locations for development. The location policies were developed to evaluate the advantages and disadvantages of sites for development, and to determine the types and intensities of development suitable for a site.

Basically, the method integrates an analysis of the natural and cultural features of a coastal area site along with its growth and development potential. The system is generally outlined as follows:

1. Delineate Special Water Areas
2. Delineate Water Areas
3. Delineate Special Water's Edge and Land Areas
4. Delineate Water's Edge Areas
5. Delineate Land Acceptability Factors
 - (a) depth to seasonal high water table
 - (b) permeability
 - (c) soil fertility
 - (d) vegetation index
 - (e) development potential
 - (f) regional growth potential
 - (g) prepare composite map of land areas

6. Prepare composite map of Water, Water's Edge and Land Areas
7. Prepare location acceptability map by consulting acceptability criteria and tables
8. Determine location acceptability, by comparing the site plan with the location acceptability map

The table below shows graphically how the system works for each coastal area:

THE LOCATION ACCEPTABILITY PROCESS

<u>WATER</u>	<u>EDGE</u>	<u>LAND</u>
Delineate Special Water Types	Delineate Special Edge Types	Delineate Special Land Types
Delineate Water Area Type and Map	Delineate Edge Areas	Delineate Land Acceptability Factors
Identify Use		Prepare Composite Map of Land Types
	Prepare Site Composite Map	
	Consult Acceptability Criteria and Tables for Each Site Area and	
	Prepare Location Acceptability Map	

Comparison and Determination

This process works within the framework of the Location Policies which address the water, water's edge and land areas of the ocean and bay area of New Jersey discussed below.

1. The Water Area

Within the Coastal Location Acceptability Method, various types of water areas are identified:

Ocean	Back Bay
Open Bay	Inland Basin
Semi-Enclosed Bay	Channel Types

Specific policies address certain water uses and are incorporated on a Water Acceptability Table which indicates whether a use is prohibited, discouraged, conditionally acceptable, encouraged or impractical within the type of water area. Policies sensitive to resource protection and development potential specify conditions for acceptability and govern the following uses:

Aquaculture	Piling
Boat Ramps	Offshore Sand and Gravel Mining
Bulkheads, Revetments, and Sea Walls	Bridges
Docks and Piers	Cable Routes
Maintenance Dredging	Overhead Transmission Lines
New Dredging	Pipeline Routes
Dredged Material Disposal	Effluent Release
Dumping	Water Withdrawal
Filling	Offshore Power Generation
	Dams and Impoundments

The conditions are discussed in detail in Part II, Chapter Three. Short and long term environmental, economic and social benefits should be derived from these policies by the protection of productivity of marine flora and fauna and their sensitivity to the importance of water quality. The short term costs to developers or units of government should be offset by the long term gains.

2. Water's Edge Area

a) Lower Water's Edge.

1. Wetlands

In general, development is prohibited in wetlands. Some exceptions are outlined in Chapter Three of Part II. Dumping solid or liquid wastes and storing pesticides on wetlands are prohibited. The benefits of preserving wetlands accrue to the major coastal industries. Fish and shellfish industries depend directly on wetlands which are the main support of estuarine and marine food webs and provide spawning grounds for valuable commercial and sport species of fin and shellfish. Since filling is required to build in wetlands, avoiding wetlands on a project site can reduce the development costs. Prohibiting wetlands development reduces land available for new growth in the coastal area and reduces the value of real estate with large areas of wetlands. However, the value of land adjacent to wetland areas may be enhanced.

2. Beaches

Paving and structures are prohibited on beaches unless the proposed development has no prudent or feasible alternative elsewhere. This policy provides vital support to maintaining the recreational assets of the shoreline.

The policies specific to barrier islands address the problems of the tourist industry, energy siting, and the natural functions of the islands with their associated water bodies. The tourist industry has produced a highly developed set of islands which are having difficulty protecting their private investments from the ravages of the ocean. The policies identify high risk erosion areas, dunes, and the central Barrier Island Corridor. The former two policies discuss the vulnerability of the islands and the need to protect them, while the latter discusses where location of uses can occur with minimal expected drainage. Other policies in the housing and resort/recreation sections identify the desired water dependent

uses, public access, and special Atlantic City development, while the shore protection policies attempt to protect the existing development and non structural land uses through dune restoration and then through structural means.

Since beaches are subject to coastal storms and erosion from offshore currents, prohibiting development protects property as well as public health and safety. The short term costs associated with restricting development on beaches will be the same as those associated with the restrictions on wetlands.

b) Upper Water's Edge

In general, development within the jurisdiction of the Segment is prohibited in upper water's edge areas. (Exceptions are outlined in Chapter Three of Part II.) These areas are flood prone zones adjacent to surface waters, such as streams, bays and the ocean. They act as buffers to protect coastal ecosystems as well as public health and safety in several ways. These buffer areas provide natural water purification to protect surface water quality from the adverse effects of erosion, and contaminated surface runoff. The vegetation provides stream channel stabilization by reducing bank erosion, thereby preserving water quality. These zones also provide natural flood control by reducing the variations in water flow during heavy rains thereby reducing property loss. Other benefits include detritus production which is the base of estuarine food webs, provision of habitat for wildlife, and provision of open space greenways for public recreation. The costs are the same as those for not developing wetlands.

c) Retained Water's Edge

Development is acceptable in bulkheaded water's edge areas providing that it is either water dependent or is proposed for public recreation or resort use. This policy will have long term positive environmental, economic and social benefits by restricting uses that would not be water dependent and reserving the water's edge for public recreation.

3. Land Area

The specific location policies regarding Land Areas are based upon the determination of the acceptability of a site for the proposed development. By analyzing the soils, vegetation and other acceptability factors, along with specified criteria regarding such factors as paving and ground cover, the intensity of use best suited to the site is spelled out. The acceptable development of each sub-area of a site will fall in one of four categories: Intensive, Moderate, Soil Conservation or Vegetation Conservation.

Conformance to the standards which outline the allowable intensity of use will have long and short term positive impacts by protecting and conserving the land resource in question and the surrounding areas, especially by minimizing development in areas where impacts on surface or groundwater may degrade coastal water quality.

4. Special Water's Edge and Special Land Areas

There are land and water areas with a resource value so great that special policies are merited. These areas are listed below:

High Risk Erosion Areas	Shellfish Beds
Dunes	Submerged Vegetation

Central Barrier Island	Surf Clam Areas
Corridor	Navigation Channels
Flood Hazard Areas	Finfish Migration Pathways
Historic Places	Spawning Areas
Specimen Trees	Prime Fishing Areas
White Cedar Stands	Ship Wrecks
Prime Wildlife Habitats	Marine Sanctuaries
Public Open Space	Steep Slopes
Prime Farmland Areas	Bogs, Fresh Water Marshes
Stream Heads	Airport Flight Corridors

Location of any development in these areas is discouraged if the development would harm the special values associated with these areas. Most of these special areas have unique properties or provide basic needs of the fishing and recreation industries which require protection. They are described in more detail in Chapter Three of Part II.

If all the areas listed in the Segment functioned within their assessed resource capacity, the waterways would be corridors of vegetation, wildlife, and water, with limited, concentrated development for water dependent uses; the land prime for farming in contiguous acreages would grow food; the dunes would be preserved or restored to enable them to protect beaches and inland areas against the storms; unique places would remain undisturbed; and food-producing water areas would be managed for increased productivity and recreation.

Protection of special natural and cultural resources will have positive environmental, economic and social benefits depending on the resource protected. The costs and tax loss resulting from non-development of an area will be shared by the developer and the local municipality in the short-term, but the long-term cumulative gain by protection and enhancement of the resources should offset the immediate loss.

B. Use Policies

Use policies describe how decisions will be made for various types of development permits. Decisions will be made to prohibit, discourage, conditionally accept, accept, or encourage a use. The criteria for determining the acceptability of a proposed use are described in detail in Chapter Three of Part II and summarized below.

(1) Housing

The Bay and Ocean Shore Segment policies will control decisions on all new development of 25 or more dwelling units and on all housing in coastal wetland and riparian areas. Housing managed by the program will be located and constructed to minimize disruption of coastal environmental resources. Most new housing will be located within or close to existing developed areas. Housing developments of greater than 250 units must include barrier free public space and some barrier free units to accommodate handicapped persons. New high rise housing will be constructed only where it will be in character with surrounding transitional heights and residential densities. Near the water's edge, high rises will be constructed only if they can provide the public physical and visual access to the water and avoid casting shadows on the beach areas. New development involving construction of lagoons, or other bulkheading, or the filling or dredging of wetlands is prohibited.

The Segment policies also encourage, but do not require, certain other housing considerations: clustering dwelling units; constructing housing for low and moderate income families, providing for the needs of senior citizens by locating housing near services such as shops and health care facilities and locating housing on sites suitable for public transportation, and providing on-site energy generation from sun and wind.

The impacts of the housing policies can best be seen from the pattern of past decisions under CAFRA. In the four years from September 1973 through September 1977, CAFRA permit decision on 95 proposals used many of the policies contained in the Segment program. Eighty proposals for a total of 13,314 units were approved, while 15 proposals for 3,309 units were denied. Many of the approvals were contingent on meeting specified conditions. Since the passage of the Wetlands Act in 1970, twelve residential Wetland permit applications have been approved for a total of 134 units, 9 have been withdrawn by the applicants and none have been denied.

The policies regarding concentration of development and barrier free design were not in effect before September 1977, and can be expected to alter the location and design of new housing developments.

The housing policies reinforce the location policies in preserving open space by encouraging concentrated development. Other benefits include preserving shorefront views and water access which increase the attractiveness of the coastal area for recreation. The prohibitions on certain types of development may limit the number of new housing units in the coastal area which would increase the price of housing. This cost should be offset by the policy encouraging construction of low and moderate income housing.

The Segment policies will not regulate housing developments of less than 25 units except in coastal wetland and riparian areas. Adverse impacts could result over the long term if developers choose to build in increments of 24 units. The costs would be uncontrolled sprawl development with its attendant water quality problems, destruction of special land and water areas, and increases in demand for public services. The local governments must bear the major responsibility for ensuring that these impacts do not occur as a result of their decisions. The secondary impact analysis required for the construction of roads and utilities, as well as the resource policies, will also help to control cumulative impacts.

(2) Resort/Recreation

The Bay and Ocean Shore Segment indirectly manages the use of some land for recreation through its direct authority over facilities regulated under CAFRA and its coordination with funding decisions made under the Green Acres Program.

Under Segment policies, more waterfront land will be allocated for recreational use. No new development regulated by CAFRA, the Wetlands Act or riparian statutes will block visual or physical access to the water. In addition, new residential and industrial development will include recreational use areas whenever possible. New amusement and theme parks will be limited. Dredging to maintain existing navigation channels will be encouraged. New marinas for recreational boating will be allowed if the demand cannot be met by expanding existing facilities, in which case the new marinas will be adjacent to existing waterfront

development. Campgrounds will be prohibited from locating in sensitive areas defined by the Location Policies or in areas which would contribute to traffic congestion and air pollution. All resort/recreation facilities are required to be consistent with the Resource Policies.

The benefits of these policies are related to concentrating new recreational development in already developed areas. In addition to preserving open space and natural habitat, the costs for public services and infrastructure investments can be kept to a lower level so the costs to year round residents of expanding recreational uses of the coastal zone may be offset by the economic benefit of bringing more tourists into the area. Impacts of water runoff from roads and parking lots, disposal of dredge spoil, air quality degradation and local costs for wastewater treatment facilities can be reduced by concentrating recreational activities in already developed areas. The policies also provide the long term benefit of preserving public access to the water. The costs associated with these policies are related to imposing limits on the use of waterfront land. Private land owners may not realize the economic gains from development or resale of their land they had anticipated as a result of implementing these policies. As use of facilities increases, the concentration may lead to further air quality problems. In addition, costs of maintaining the public areas will increase with increased use; these costs must be borne by the communities where the facilities are located. These communities are usually the ones which also realize the economic benefit of tourism.

(3) Energy

The Segment policies direct the location of major energy development and production facilities and their support facilities, such as storage tanks and construction yards, to already built up areas outside the Segment area to protect the environmental and recreational values of the bay/shore region. Only marine terminals and pipeline landfalls which are coastal-dependent, and gas processing plants and pumping stations, which may need to be sited in the coastal zone for technical and economic reasons, will be permitted. Crude oil refineries are prohibited from barrier islands and liquified natural gas (LNG) storage tanks can be built only at sites remote from concentrations of human population. Since existing refineries have unused capacity and New Jersey has five of the ten refineries in the region, requests for new refinery permits are not anticipated, although gas processing is a possibility. The DEP and Department of Energy will both review applications for new facilities to ensure they are also consistent with the state energy master plan, being developed to direct orderly growth to the most suitable sites.

Pipelines and associated facilities will be subject to a number of conditions. Since New Jersey has 40 percent of the oil refineries and storage facilities in the region, the number of pipeline corridors will be limited and must be located along existing rights-of-way whenever possible. New pipeline corridors will be routed to avoid undeveloped areas and will be prohibited from locating in certain parts of the Pine Barrens.

Tanker terminals will be encouraged to locate in either the New York/New Jersey port or the Camden/Philadelphia port where induced growth and new support facilities can be accommodated. Location of terminals will be discouraged from other parts of the coast.

Since there are six nuclear facilities existing or under consideration in the Segment, no further facilities will be approved until DEP and the Department of Energy have had time to investigate the feasibility of alternative energy production methods. Location of fossil fuel stations will be discouraged in special land areas and environmentally sensitive areas.

Concentrating major energy facilities inland of the coastal region will benefit both the coastal environment and the inland employment centers which have a ready work force. Resort areas would be unable to provide schools, hospitals, fire and police protection and other public services to the influx of population associated with energy development, while these services are already in place in many inland urbanized areas. The cost is that of trading off protecting natural resources in the coastal area at the expense of potential loss of natural resources inland. Other environmental costs, such as water quality and air quality degradation associated with energy facility development, will be borne by inland communities.

(4) Public Facilities

New and improved public transportation and related facilities will be encouraged. Bike and footpaths as well as fishing catwalk construction is encouraged. Transportation facilities will be prohibited if they block physical or visual access to the waterfront. These policies should have positive long-term and social impacts by fostering alternative transportation and by making the coast more accessible to a greater number of people.

Public utilities, such as sewer lines and railroads, will be additionally allowed in environmentally and culturally sensitive areas provided that special impact control measures are used assuring that these facilities do not create short or long-term negative impacts.

(5) Ports

Port related development and marine commerce will be located adjacent to already developed waterfront areas, and will be allowed only when a need is demonstrated. Non-water dependent development shall be allowed only if water dependent marine commerce uses are not pre-empted. Dredging of existing navigation channels will continue to take place as necessary, and dredging elsewhere will occur only in selected situations where the bottom disturbance is acceptable. Subaqueous disposal is generally discouraged.

By concentrating port development and controlling dredging activity, positive long term environmental impacts will accrue by preserving marine life and the undeveloped coastline. Long term economic and social benefits will be derived by the concentration of marine commerce in high employment and industrial areas.

C. Resource Policies

The Resource Policies stand in partnership with the Location and Use Policies previously discussed -- a third filter through which a permit application must pass. They form a body of policies designed to mitigate the adverse impact of coastal development on the natural and built environment and thus, taken as a whole, have positive long and short term impacts on the environment. In many

instances, negative economic impacts will fall on the party who must pay for the added protective measures. Very often the developer pays, but equally as often the cost is passed on to the consumer. By encouraging a more healthful and viable environment, these policies should have positive social benefits.

Policies which address the problem of soil erosion and sedimentation and runoff call for development to control the adverse impacts to the maximum extent practicable by adherence to specified performance standards. The need to protect ground and surface water is articulated. Coastal development must conform with all applicable effluent and ambient air quality and deterioration standards. Vegetated and other types of buffer must be provided to protect sensitive natural features, screen impacts and separate incompatible uses. Design which encourages energy conservation is encouraged. Where practical, solid waste should be recycled.

Flora and Fauna are protected by the policies calling for the preservation of existing vegetation and planting of new vegetation in accordance with the site area where development occurs. To protect habitats and spawning areas, coastal development shall incorporate techniques which preserve wildlife and maintain diversity.

Public and private actions and developments adjacent to coastal waters must provide for public access (both physical and visual) to the shorefront. This policy has beneficial social impacts as it assures public access to the shorefront and prevents exclusionary practices. In the short-term, land owners who must forfeit desired building dimensions will experience negative economic impacts. In the long run, however, increased access and the overall enhancement of the environment created by the Segment policies will increase property values.

The visual compatibility of new development sensitive to scenic resources and design in terms of scale, height, materials and color is stressed. The protection of historical and cultural resources is called for. Measures taken to protect these values will result in positive social and economic impacts by preserving the integrity of the built environment and the cohesiveness of the area's heritage. The shortterm negative economic impacts will be offset in most cases by increased property values, and commercial and residential interest in areas as well as the multiplier effect that restoration activity generates. Development is encouraged that protects the special features of neighborhoods and communities.

The probable secondary impacts of a development will be considered along with the proposed development itself.

PART IV

ALTERNATIVES TO THE PROPOSED ACTION

This Part describes the four most likely reasons the Assistant Administrator might deny or delay program approval, as well as the five most likely State alternatives to submitting the proposed program. In order to determine the full implications of these alternatives, the reader should consider the impacts described under each Federal alternative.

The proposed action is Federal approval of the New Jersey Coastal Management Program - Bay and Ocean Shore Segment. The essential alternative to be considered by the Assistant Administrator is whether to approve the Segment. He must determine whether or not to approve the Segment as submitted. In deciding whether to approve the Bay and Ocean Shore Segment he must determine whether the Program meets the requirements of the Coastal Zone Management Act as specified in the twenty-six findings needed for Program approval. This determination ultimately requires that discretion be used in interpreting the intent of Congress as expressed in the Act. This environmental impact statement and public comments are intended to assist the Assistant Administrator in determining the adequacy of the proposed program.

A variety of alternatives are available to the State, represented by all possible amendments to the Bay and Ocean Shore Segment that might be adopted. Clearly, however, the alternatives that will be considered by the State will depend on what action is taken by the Assistant Administrator. In particular, if the Assistant Administrator delays or denies approval the State will be required to consider a wide range of options. If the Segment is approved, the State is unlikely to consider alternatives to Program implementation.

These Federal and State alternatives could be carried out in several different ways. As indicated, Federal approval would probably lead to implementation of the Segment under Section 306. On the other hand, a decision by the Assistant Administrator not to approve the Segment as submitted could lead New Jersey to withdraw from the Federal Program and wait to submit an entire State Coastal Zone Management program.

A. FEDERAL ALTERNATIVES

1. The Assistant Administrator could delay or deny approval if the State does not have the authority necessary to implement the Bay and Ocean Shore Segment at the time of segment approval.

The Federal Office of Coastal Zone Management has made an initial determination that the authorities that will be in place at the time of Segment approval will be adequate to carry out the Bay and Ocean Shore Segment management program and meet the objectives of the CZMA. This impact statement solicits the views of the public and affected government agencies on the specific issues outlined below.

The Coastal Area Facility Review Act (CAFRA) of 1973 (N.J.S.A. 13:19-1 et seq.) is New Jersey's major coastal law. In CAFRA, the Legislature entrusted the Department of Environmental Protection with the responsibility to regulate the location and construction of housing developments of 25 or more units and most

major industrial, sewer and energy producing facilities in a defined "Coastal Area" stretching from Raritan Bay and Sandy Hook to Cape May and from Cape May to the Delaware Memorial Bridge. The inland boundary established by the Legislature varies from several thousand feet to 24 miles. This coastal area includes 17 percent of the land and more than 75 percent of the waters in New Jersey, including coastal waters out to the three mile limit of the State's jurisdiction in the Atlantic Ocean. Other relevant laws that apply include the Wetlands Act, Riparian Statutes and Shore Protection Statutes.

If the Assistant Administrator determines that these authorities were not adequate to meet the requirements of the Coastal Zone Management Act, he could delay or deny approval until the state submitted the entire State program, unified through legislation the Wetlands Act, Riparian Statutes and CAFRA, or waited until new legislation was passed for the entire coastal zone of New Jersey.

The implications of this alternative include a delay in Bay and Ocean Shore Segment implementation, no increase in Federal funds for New Jersey under Section 306, and the possibility that Federal actions affecting the New Jersey Segment might be inconsistent with the policies of the Segment. Therefore, under this alternative, the monetary and Federal consistency benefits of Federal approval would be deferred for some period of time. Improved environmental protection anticipated under a Federally approved program would not be achieved as rapidly. Momentum for effective protection of the State's coastal resources, gained through preparation of this Bay and Ocean Shore Segment might be lost.

2. The Assistant Administrator could delay or deny approval of the New Jersey Bay and Ocean Shore Segment if the segment does not adequately achieve the goals of the Coastal Zone Management Act as expressed by Congress in Section 303 of the Act.

Section 303 of the Coastal Zone Management Act states that it is national policy

"... to achieve wise use of the land and water resources of the coastal zone giving full consideration to ecological, cultural, historic and esthetic values as well as to needs for economic development."

The initial determination of approval on this issue was based on the policies adopted pursuant to this program regarding housing, major facility policies, recreation, performance standards and case law under CAFRA (i.e. Toms River Condominium high rise case CA #73-003 decided July 10, 1974, CAFRA Opinion No. 1).

The majority of visual and cultural concerns are left to the discretion of local governments if they do not involve major facilities as defined by CAFRA. However, the Department of Environmental Protection will have a direct role in determining the visual aspects of the New Jersey coast by precluding certain major facilities in some areas, while encouraging development in other areas.

The implications of selecting this alternative include a delay in Segment implementation, no increase in Federal funds for New Jersey under Section 306, and the possibility that Federal actions affecting the New Jersey coast might be inconsistent with the policies of the Segment. Therefore, under this alternative, the monetary and Federal consistency benefits of Federal approval would be deferred for some period of time. Improved environmental protection anticipated under a Federally approved coastal program would not be achieved as rapidly.

3. If the national interest in the siting of facilities in the Bay and Ocean Shore Segment were not adequately considered, the Assistant Administrator could delay or deny approval of the Program Segment.

The Federal Coastal Zone Management Act states that prior to granting approval of a segmented management program the Secretary shall find "the segmented management program provides for adequate consideration of the national interest involved in planning for, and in the siting of, facilities (including energy facilities...) necessary to meet requirements which are other than local in nature."

No major facility is excluded from the coast through the CAFRA permit application program. However, each facility must be consistent with the policies and performance criteria established by the Department of Environmental Protection. The Assistant Administrator has undertaken a review of the general process and results of the Program's consideration of and responses to Federal agency and national interest views. Based on the information presented, the Bay and Ocean Shore Segment appears to have considered adequately these matters. However, the review process which is initiated with the distribution of this Draft Environmental Impact Statement and Program document is designed to provide further opportunity for interested parties to comment on whether New Jersey has adequately considered the national interests. If it is shown that New Jersey has not adequately considered the national interests in the planning for and siting of facilities which are other than local in nature, then the Assistant Administrator could delay or deny the Program.

This Federal alternative could result in a delay in Program implementation, loss of Federal funding that would otherwise be available, and allow Federal actions in the coastal zone to be inconsistent with the management program.

4. The Assistant Administrator could deny or delay approval of the Bay and Ocean Shore Segment if the Segment could not be unified with the entire state program.

This alternative would encompass a finding by the Assistant Administrator that a delay in Segment approval was necessary until it was unified into the entire State program, so that all necessary authorities were in place.

The Assistant Administrator could find that the Bay and Ocean Shore Segment could not be unified into the entire state program due to a lack of adequate authorities outside the Segment area.

The Federal Office of Coastal Zone Management has made an initial determination that the Segment does meet the minimum requirements. However, the Office will review specific comments on the consistency of the New Jersey coastal program with the requirements outlined in the Federal Act and with the specific standards for Section 306 approval provided in 40 CFR 923.

The three primary impacts of a negative decision would be that New Jersey would not receive necessary funds to implement the Program; Federal consistency would not apply to Federal agencies' activities in the coastal zone; and national interest would not be taken into account.

In addition some delay in Program implementation would occur; the length of the delay would depend on the type of Program deficiency that was found and the types of remedial action taken by the State.

B. STATE ALTERNATIVES

1. The State would withdraw its application and not seek Federal assistance.

The State could withdraw its application and not seek Federal assistance. The Department of Environmental Protection would continue to manage that area of the New Jersey coast under its regulatory jurisdiction. The State has spent \$1.2 million in Federal money in preparation of its State coastal zone management program. Without Federal assistance, the DEP would continue to operate the coastal program, but at reduced funding levels. The State under this alternative would not be subject to Federal regulations in the management of the Segment.

The coastal management efforts in New Jersey began prior to the passage of the Coastal Zone Management Act and will continue even if Federal approval is not received. However, the State would not receive (1) Federal money to assist in the day to day management of the program, (2) the provisions of the Federal consistency section of the Coastal Zone Management Act and (3) loan guarantees and credit assistance to help mitigate onshore impacts of outer continental shelf development. Federal funding support will greatly help in the DEP's implementation of the Segment.

2. The State could wait to submit the Bay and Ocean Shore Segment as part of the entire State Coastal Program.

The State could wait until early 1979 to submit a unified State coastal zone management program including the areas outside CAFRA jurisdiction, along the Delaware River and in Northern New Jersey and the area under the Hackensack Meadows Development Commission. Section 306(h) allows a state to submit a segment of the management program as long as it is consistent with the State's coastal program. This will allow Section 306 funds to be used in managing the Bay and Ocean Shore portion of the coastal zone. Tasks for this area have been completed under Section 305, and the State can now implement the policies and plans in this region of the coast. The negative impact of this alternative include: (1) the State will lose Section 305 funding by December, 1978, and (2) the DEP and DOE can implement the program now.

3. The State could wait until new legislation is passed combining the three key coastal laws.

The State could submit legislation recodifying the present Wetlands Act, Riparian Statutes and CAFRA into one unified Act. This alternative might eliminate any conflicts which might develop between these three Acts. The negative impacts include: (1) the uncertainty of legislative action and (2) the State will lose Section 305 funding by December, 1978.

4. The State could diminish the CAFRA boundary and then submit a segmented management program.

The area under CAFRA permit jurisdiction was established by the New Jersey legislature in 1973. It extends from the Raritan Bay east to Sandy Hook, south to Cape May Point and north and west up the Delaware estuary almost to the Delaware Memorial Bridge near Wilmington, Delaware. The total land area is 1,376 square miles or 17 percent of New Jersey's land area. The coastline is more than 215

miles in length, with 126 miles along the Atlantic oceanfront from Sandy Hook to Cape May. Inland the CAFRA boundary ranges from a few thousand feet from the ocean in Monmouth County, to 24 miles around the Mullica River at Batsto in Burlington County. Major roads and rights-of-way, such as the Garden State Parkway and county roads, define the boundary. A small segment around the Cape May County airport was excluded from the Coastal Area by the law.

A change in this boundary would require an amendment being passed by the Legislature.

5. The State could seek legislation delegating authority for major facility siting in the coastal zone to the local governments.

The State could seek legislation which would delegate authority for major coastal facilities to local governments. The coastal program could wait until this legislation was passed and then submit an expanded program. The Legislature chose in 1973 not to delegate this authority to local governments, but to give this authority to the DEP.

PART V

PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH
CANNOT BE AVOIDED

The probable effects of New Jersey Bay and Ocean Shore Segment implementation will, on the whole, be environmentally beneficial. However, there will probably be a number of adverse impacts to both the natural and socio-economic environments which cannot be avoided.

Numerous adverse impacts will continue to be associated with the siting of major facilities for purposes of defense, transportation, energy requirements and others in which both the State and Federal governments have interest. The Program makes provisions for consideration of the siting of facilities which are in the national interest. It is important to note, however, that under the federal Coastal Zone Management Act and related Federal Acts (e.g., National Environmental Policy Act), each such project will be evaluated as to the impacts on the natural coastal environment. That is, investigations will be made, alternatives considered, etc.

PART VI

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT
AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

While approval of the New Jersey Coastal Management Program - Bay and Ocean Shore Segment will restrict some local, short-term uses of the environment, it will also provide long-term assurance that the natural resources and benefits provided by the Bay and Ocean Shore Region will be available for future use and enjoyment, by more effectively administering existing resource protection laws.

The New Jersey Bay and Ocean Shore Segment does the following:

A. Short-Term Uses

1. Does not prohibit future development but encourages medium-high intensity growth to occur in existing developed areas or areas contiguous to them.
2. Recognizes that some energy facilities and coastal-dependent developments have adverse environmental consequences, but that they may still have to be located in the coastal zone to protect the inland environment as well as help provide for orderly economic development, and meet national interest.

B. Long-Term Uses

1. Recognizes the coastal zone as a delicately balanced ecosystem.
2. Establishes a process of balanced management of coastal resources.
3. Allows growth to continue while protecting key resources.
4. Provides for a framework which can protect regional State and national interests by assuring the maintenance of the long-term productivity and economic vitality of coastal resources necessary for the well-being of the public, and to avoid long-term costs to the public and a diminished quality of life resulting from the misuse of coastal resources.

PART VII

IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS OF RESOURCES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

The approval of the New Jersey Coastal Management Program - Bay and Ocean Shore Segment will not in itself lead to the loss of resources, while resources might be lost if a specific development proposal were approved under the program. Trade-offs will have to be made based on the policies of the program. For instance, some urbanized areas or less intensive industrial areas may receive greater development pressures and a commitment of the surrounding resources because of the policy to concentrate development of sewer projects to serve already developed areas.

Also, the program provides that priority will be given to coastal-dependent development (certain energy facilities, port and harbor development, etc.) which in turn is often the most damaging to the environment and is located in the coastal zone to utilize its resources. Most of the nine environmentally critical developments will occur outside the Bay and Ocean Shore area and are encouraged to do so. However, the Segment establishes standards for siting and requires that alternatives be considered and mitigation measures be taken in the Segment area itself. The New Jersey Bay and Ocean Shore Segment will continue to channel such activity toward environmentally suited land areas.

Without the implementation of rationally based land and water uses management programs, some intense short-term uses and gains, such as provided by residential or industrial development, might be realized in natural resource areas of the coastal zone. However, such uses would most likely result in long-term limitations on coastal resource use and benefit because of degradation of the environment. Without proper management, the traditional conflicts between shoreline resources uses -- residential, commercial, industrial, recreational, and wildlife -- could be expected to occur.

Implementation of the Bay and Ocean Shore Segment will result in minimization of the social costs which inevitably accompany environmentally destructive development, the mitigation of which requires public investment.

PART VIII

CONSULTATION AND COORDINATION

Extensive consultation, coordination, and input has been received in developing the New Jersey Coastal Management Program. Because the Program was developed with the natural and human environment in mind, many alternatives have been considered.

The Federal Office of Coastal Zone Management requires that a State conduct an environmental impact assessment on its coastal management program prior to any approval of the Program. This assessment was used in developing the draft Environmental Impact Statement. Additional input has been received from various Federal agencies throughout the duration of the State's Program development period, on such things as the impact of the Program on the Federal agency program, as well as an analysis of the Program.

Coordination with all local, State, public, and private interests remains a key component of the New Jersey Coastal Management Program. The Program will provide for the public notice of major State actions, provide technical assistance to coastal communities as to how local plans may be made consistent with the Coastal Management Program, assist the private sector through the publication of handbooks and other means of communication on meeting coastal management policy requirements, and continue coordination with Federal agencies to resolve potential conflicts during implementation.

Appendices

APPENDIX A: SECRETARIAL FINDINGS INDEX

The Federal Coastal Zone Management Act of 1972, as amended (16 U.S.C. 1451 et seq.) and the program approval regulations adopted as an interim final rule by NOAA-OCZM (15 CFR Part 923, Federal Register, Vol. 43, No. 41, March 1, 1978, pp. 8378-8432) define twenty-six required findings that must be made before the Secretary of Commerce may approve a state's coastal management program. This appendix identifies these requirements and provides an index to the appropriate section or sections in Part II page or pages where the New Jersey Coastal Management Program, Bay and Ocean Shore Segment presents the information required for the secretarial findings.

<u>SECTION OF THE FEDERAL COASTAL MANAGEMENT ACT</u>		<u>ASSOCIATED SECTION(S) OF PROGRAM APPROVAL REGULATIONS</u>	<u>SEGMENT SECTION</u>
305(b)(1)	boundaries	923.31, 923.32, 923.33, 923.34	Chapter Two, Appendix F
305(b)(2)	uses subject to management	923.11, 923.12	Chapter Three, Section 7.0
305(b)(3)	areas of particular concern	923.21, 923.23	Chapter Six
305(b)(4)	means of control	923.41	Chapter Four
305(b)(5)	guidelines on priorities of uses	923.22	Chapter Three
305(b)(6)	organizational structure	923.45	Chapter Four
305(b)(7)	shorefront planning process	923.25	Not Included
305(b)(8)	energy facility planning process	923.14	Not Included
305(b)(9)	erosion planning process	923.26	Not Included
306(c)(1)	notice; full participation; consistent with section 303	923.58, 923.51, 923.55, 923.3	Appendix B,C,D,E
306(c)(2)(A)	plan coordination	923.56	Chapter Four
306(c)(2)(B)	continuing consultation mechanisms	923.57	Chapter Four
306(c)(3)	public hearings	923.58	Back Cover
306(c)(4)	gubernatorial review and approval	923.47	Not Included
306(c)(5)	designation of recipient agency	923.46, 923.47	Chapter Four
306(c)(6)	organization	923.45, 923.47	Chapter Four
306(c)(7)	authorities	923.41, 923.47	Chapter Four
306(c)(8)	adequate consideration of national interests	923.52	Chapter Five
306(c)(9)	areas for preservation/restoration	923.24	Chapter Six
306(d)(1)	administer regulations, control development; resolve conflicts	923.41	Chapter Four
306(d)(2)	powers of acquisition, if necessary	923.41	Chapter Four
306(e)(1)	technique of control	923.41, 923.42	Chapter Four
306(e)(2)	uses of regional benefit	923.13, 923.41, 923.43	Chapter Five
306(h)	segments	923.61	Chapters Two, Five, and Seven and Appendix F

APPENDIX B: THE COASTAL PLANNING PROCESS: 1973-1978

The New Jersey Coastal Management Program Bay and Ocean Shore Segment is based on DEP-OCZM staff research, contractual studies by private consultants, university research teams, and state and local government agencies, and considerable public debate, suggestions, questions, and comments over the past five years. The most tangible evidence of the coastal planning process is this document, together with numerous studies and reports published by DEP-OCZM. Many of the planning reports produced and widely distributed by DEP-OCZM are available upon request, while others, intended as in-house working documents, are available for review by interested people. Other evidence of the coastal planning process may be less visible, but just as significant as printed documents. This appendix sketches some of the highlights of the coastal planning process to date, both the clearly tangible reports and the public participation efforts.

Major Planning Documents

Since 1975, DEP-OCZM has prepared five major coastal planning reports which were widely shared with public groups, individuals, and agencies. These reports and the reaction to them have shaped the direction and policies of the Coastal Program.

In September 1975, DEP published an Inventory of the New Jersey Coastal Area which defines and discusses the diverse resources, problems and opportunities of New Jersey's coast in order to indicate the range of issues that constitute the agenda for coastal zone management.

In July 1976, DEP released Interim Land Use and Density Guidelines for the Coastal Area of New Jersey, prepared with the assistance of Rivkin Associates of Washington, D.C. This document classifies land and water features in the coastal area in terms of relative suitability for development. The Interim Guidelines and the companion publication, Guiding the Coastal Area of New Jersey -- The Basis and Background for Interim Land Use and Density Guidelines, provided an advance indication to developers, municipal officials, and others, of the likely decision on CAFRA permit applications, and have also served as a focal point for discussion and debate in the development of the Coastal Management Strategy (September 1977) and this Draft Environmental Impact Statement.

In October 1976, Alternatives for the Coast - 1976 was published to indicate the scope of policy alternatives DEP-OCZM was evaluating for the coastal zone, their implications and the principles that helped shape them. DEP-OCZM expanded upon the policy alternatives in twenty-two issue papers published between November 1976 and early 1977. The topics covered were: Agriculture and the Coast, Air Resources, Cultural Resources, Flooding, Groundwater Quantity and Quality in the New Jersey Coastal Zone, Housing, Ocean Resources (Living, Mineral, and Physical Resources), Sand Movement and the Shoreline, Solid Waste and the Coast, Surface and Coastal Water Resources of New Jersey, Upland Living Resources (Endangered, Threatened and Rare Animals, Endangered and Rare Vegetation, and Upland Wildlife Habitats), and Upland Mineral Resources and the Coast. A separate paper on the values of Atlantic White-Cedar Stands was completed in May 1976.

In December 1976, DEP-OCZM released Alternative Boundaries for New Jersey's Coastal Zone. This report presented ten possible coastal zone boundaries and served as a basis for debate on the issue.

DEP's most recent coastal planning document was the Coastal Management Strategy, for New Jersey-CAFRA Area (September 1977), submitted to the Governor, Legislature, and public in the fall of 1977. Prepared in part to satisfy the statutory mandate of the Coastal Area Facility Review Act of 1973 that called for the selection of an environmental management strategy for the coastal area in four years, the document also served as a discussion draft of the Coastal Management Program for the Bay and Ocean Shore Segment. The Strategy introduced the Coastal Location Acceptability Method (CLAM), a method of coastal resource management developed by DEP-OCZM in 1976-1977 using a pilot study area in Lower Cape May County. DEP distributed 3,000 copies of the Coastal Management Strategy, conducted eight public meetings throughout the state to discuss and debate the coastal program, held twenty additional informal meetings with public agencies and received nearly one hundred written statements with comments on the Strategy. DEP then revised the Strategy substantially in the course of preparing the Bay and Ocean Shore Segment document.

Public Shorefront Access and Erosion

DEP's Office of Coastal Zone Management served as staff to the Commissioner of DEP in his capacity as an active ex-officio member of the New Jersey Beach Access Study Commission. In 1976-1977, DEP-OCZM staff helped prepare the Commission's report to the Governor and Legislature on beach access in April 1977. This report, entitled Public Access to the Oceanfront Beaches, examined beach use, budgets, and fees and ownership.

A study on shoreline erosion was prepared under contract to DEP-OCZM by Rutgers University - Center for Coastal and Environmental Studies. The Coastal Geomorphology of New Jersey, in two volumes printed in December 1977, deals with the management techniques, strategies, and the technical basis and background for shoreline erosion management strategies. The study was a large step forward in understanding how to make decisions regarding development along the shoreline. Its influence is seen in many of the policies (high risk erosion, shore protection, dune protection) of Chapter Three of the Bay and Ocean Shore Segment.

Energy

In December 1975, the Department of Environmental Protection invited energy industry representatives to provide basic information on coastal energy siting to be used in preparing the energy facility element of New Jersey's coastal zone management program. The results of this "Call for Information" were published by DEP-OCZM in March 1977. The state's three major electric utilities responded in considerable depth to the "Call".

DEP-OCZM's concern with the development of energy facilities is further reflected in two contractual studies undertaken by research groups at Princeton and Rutgers Universities. The study by Princeton's Center for Environmental Studies, entitled Who's in Charge? - Governmental Capabilities to Make Energy Siting Decisions in New Jersey, received financial support from the Federal Energy Administration, which sponsored a similar effort in each of the states associated with the Mid-Atlantic Governors Coastal Resources Council (New York, New Jersey, Delaware, Maryland and Virginia). It was published in September 1977. The Rutgers study, prepared by the Center for Coastal and Environmental Studies and entitled

Onshore Support Bases for Offshore Oil and Gas Development Implications for New Jersey, was released in February, 1978. In addition, DEP-OCZM staff completed a report entitled Energy Facility Siting Issues in New Jersey's Coastal Zone, which was released for distribution in December 1977.

Legal Framework

In June 1976, DEP-OCZM compiled "An Inventory of Environmental Law in New Jersey", which includes a description of major New Jersey land use, water quality, air pollution, and living resources laws related to coastal zone management. This is an in-house document which is continually updated.

In June 1977, DEP-OCZM completed "Area (208) Water Quality Planning and the New Jersey Coastal Zone Management Program: Opportunities for Interagency Coordination," a paper detailing the relationship between coastal zone management planning and water quality planning being conducted under Section 208 of the Federal Water Pollution Control Act in New Jersey.

Economics and Land Use

DEP-OCZM had contracts in 1975 and 1976 with the New Jersey Department of Community Affairs (DCA) and the Department of Labor and Industry (DLI) to prepare background land use and socio-economic studies about the coast. DCA produced information concerning: "Coastal Zone Housing Issues", County Land Use Issues in: Atlantic, Cape May, Cumberland, Monmouth, Ocean and Salem Counties (six papers), "Growth Centers and Their Implications", "Sewerage Facilities", "Transportation Systems", and "Water Supply".

The Department of Labor and Industry prepared the following papers: "Background Paper: Economic Perspectives on New Jersey Tourist Industry", "Economic Inventory", "Economic Issues and Problems in Northeastern Region of New Jersey Coastal Zone", "Some Taxes", "Economic Profiles" on Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Monmouth, Ocean, and Salem Counties (nine papers), and "Municipalities in Burlington and Middlesex Counties".

Information Systems and Public Participation

In February, 1975, in cooperation with the American Arbitration Association, DEP began an experiment to validate the environmental data for the Coastal Program. This experiment involved two large public meetings and several subsequent workshops. By January 1976, agreement was reached on data in nine natural resource categories. The categories are: bathymetry, flood areas, geology, groundwater, land use, slope, soils, tidal wetlands and vegetation.

DEP-OCZM also tested the development of information packages on an automated basis, in cooperation with the American Arbitration Association, Rockefeller Foundation, Rutgers University, and Princeton University. The 1976-1977 project, called the "Intuitive-Interactive Model", produced draft information packages on air pollution, construction noise, physical impact, industrial energy demand, odor pollution, residential energy demand, solid waste and waste demand, and urban runoff. One distinctive feature of the model is the ability of interested users such as developers or municipal officials to work directly, or "interact", with the computer. The findings of the project will be used by DEP in considering the ultimate design of an information system to assist coastal and perhaps statewide land and water use decision-making.

Nominated Areas of Particular Concern

In December 1977, DEP-OCZM completed a report for public release entitled Nominated Areas of Public Concern in the New Jersey Coastal Zone. The report describes 176 areas of the state nominated by 140 interested individuals and organizations in 1976-1977, in response to DEP's invitation that the public suggest sites and areas for preservation, development, historic, recreation, visual, or other purposes.

The enthusiastic public response to this invitation led to detailed and wide ranging nominations, which were used in part to confirm and refine the DEP-OCZM staff recommendations on Special Land Areas and Special Water Areas in preparing the Location Policy of Chapter Three. Also, the Geographic Areas of Particular Concern identified in Chapter Six were among those areas nominated by the public. Finally, the information DEP-OCZM gained about specific sites through the Nominated Areas of Particular Concern program has been used in the past and will be used in the future as supplemental information to be reviewed in individual coastal permit decisions.

Coastal Awareness

Rutgers University-Center for Coastal and Environmental Studies, under contract to DEP-OCZM, produced four booklets on coastal issues for public distribution in 1976-1977. The booklets, which are available from DEP are: "State Government and Coastal Zone Management", "Coastal Zone Legislation", "Oil Spills Reaction and Responsibility in New Jersey", and "New Jersey's Fishing Industry".

Mapping

During 1976-1978 DEP-OCZM published several map series, which are available to the public. The Inventory of the New Jersey Coastal Area - 1975 describes where these maps are located and how to use them. The Third Year Coastal Zone Management Program Development Grant Application provides a detailed list of the mapping in the first two years of the program. During the third year (1976-1977), extensive mapping was also done as part of DEP-OCZM's pilot study in Lower Cape May County. Samples can be found in Appendix Four of the Coastal Management Strategy (September 1977).

The Interim Land Use and Density Guidelines also includes maps of developed and selected environmentally sensitive areas in the Bay and Ocean Shore Segment. Wetlands maps are on file with each county recording officer and are also available for public inspection or purchase in DEP's Office of Wetlands Management. Flood hazard area maps, as delineated by DEP's Division of Water Resources, are available for public inspection.

In addition, DEP-OCZM funded a study by Rutgers University - Center for Coastal and Environmental Studies to develop an underwater aerial photographic methodology suitable for surveying submerged vegetation in the coastal estuaries of New Jersey. The study culminated in the report, entitled Analysis and Delineation of the Submerged Vegetation of Coastal New Jersey: A Case Study of Little Egg Harbor (January 1978), which describes the aerial underwater photographic method, identifies and maps distributions of species, and discusses the ecological functions and associated problems of each of the dominant species.

Public Participation

DEP's Office of Coastal Zone Management is committed to wide public participation by law, by practicality, and by principle. DEP-OCZM's involvement efforts have two objectives, to raise the level of public awareness regarding both threats to, and attributes of the coast, and to identify and meet with individuals and groups who can contribute knowledge and opinions to coastal planning efforts.

DEP-OCZM works to involve people early in the planning process and continues to encourage such involvement. Draft documents are made available. Possible policies are discussed in public long before they are even formally proposed, much less adopted. The objective is for the DEP-OCZM staff to be exposed to as much information as possible, and for initial staff ideas and work products to receive a wide and critical reading. The reason is simple: a coastal zone management program cannot be prepared just from Trenton. The state's coastal zone is too large and too diverse. Public input and feedback is critical. Ideas which appear attractive on a planner's desk may be impossible to apply.

DEP-OCZM uses varied forums and publications to hear and explore varied information and viewpoints. To attract coastal residents, DEP-OCZM convened several series of public meetings in coastal counties during 1975-1977. The first meetings, held in Toms River and Trenton in February and May 1975, were focused on introducing the program and DEP's Data Validation Project. A second series of meetings were held in the summer of 1976 following publication of the Interim Land Use and Density Guidelines for the Coastal Area. A third series of seven meetings were held in the early winter of 1976 after release of Alternatives for the Coast. A fourth series of eight public meetings took place around the state in November-December 1977, following public release of the Coastal Management Strategy. These public meetings often began with a slide presentation and talk by a DEP-OCZM staff member and then turned to the specific concerns of the assembled. Discussion at these meetings flows from the questions, and many topics are each discussed relatively briefly. In addition, DEP-OCZM holds periodic workshops focused on specific, pre-announced subjects. Workshops on Agriculture, for example, were held in October 1976 in two locations (Bridgeton and New Brunswick). Additional workshops were held in February 1977 in Trenton and Toms River on Biological Resources, Physical Resources, Housing, Air Resources and Transportation, and Recreation and Boating.

DEP also meets regularly with representatives of builders and environmental groups. Officials of the New Jersey Builders Association and leaders of New Jersey's environmental groups hold regular meetings with the Commissioner, which are often focused on coastal management. DEP-OCZM has shared and discussed with these groups early drafts of several coastal reports including the Interim Land Use and Density Guidelines, CAFRA Procedural Rules and Regulations and the Coastal Management Strategy. Most recently, DEP-OCZM distributed 150 copies of a pre-publication version of this document for quick review and comment by other state agencies, the 12 coastal county planning boards, and builder, energy, industry and environmental groups representatives who have been active in the coastal planning process. Recipients of the pre-publication draft were also invited to a special Saturday review working session.

Since November 1976, DEP-OCZM has held monthly meetings with an Environmental Advisory Group composed of leaders of statewide civic and environmental groups. These meetings have been regularly attended by representatives of the American Littoral Society, League for Conservation Legislation, Sierra Club, Association of New Jersey Environmental Commissions, Citizens Association to Protect the Environment, League of Women Voters, New Jersey Audubon Society, New Jersey Conservation Foundation, and the New Jersey Public Interest Research Group.

In addition, DEP-OCZM has met periodically with national representatives of the Natural Resources Defense Council Inc. (NRDC). NRDC has reviewed and commented upon drafts of DEP-OCZM publications, and has offered lessons learned from their work with coastal programs in other states.

DEP-OCZM also convened a series of workshops on energy involving oil and gas industry representatives from Louisiana and Texas, as well as from the New Jersey Petroleum Council and the American Petroleum Institute in Washington, D.C., county energy planning representatives, researchers from Rutgers and Princeton, fishing groups, representatives from several state agencies and representatives from environmental groups. As the Newark Star Ledger noted on April 24, 1977, "It comes as somewhat of a surprise to find many of the combatants meeting across tables to discuss the issue informally, almost casually, in New Jersey."

The hearings held by DEP-OCZM on each CAFRA permit application provide another forum for public input. The hearings are held near the site proposed for development, and range, depending on the interest aroused by the application, from five minute meetings attended only by the applicant to four hour sessions with up to 300 people.

The coastal meetings and workshops are announced primarily through The Jersey Coast, the DEP-OCZM newsletter. This periodical is mailed to all interested persons and organizations known to DEP-OCZM. The mailing list currently includes more than 5,000 names. Meetings are also announced through press releases and the DEP Weekly Bulletin.

DEP-OCZM recognizes that reliance on a mailing list may neglect many potentially interested persons. To expand interest and knowledge of coastal management issues, the DEP-OCZM staff have spoken before a wide variety of municipal, county, state, and regional agencies, and civic, interest and professional groups in New Jersey and in other states. This provides an opportunity to talk with many people who may be well aware of some of the problems, but unaware of the coastal zone management program and possible solutions. Through these meetings, proposed policies are debated, interested individuals identified, and new people added to the mailing list who may later contribute to an element of the program.

DEP-OCZM also participates in other events to raise public awareness of coastal issues and again to identify more people who are interested in participating in the coastal management process. DEP-OCZM has had exhibits at boat shows and five county fairs. In addition, in June, 1976, the DEP Commissioner led federal, state and local officials, interested citizens, and reporters on a six day walk along New Jersey's 125 mile ocean shoreline. This innovative event sparked considerable publicity and interest in the coast both in New Jersey and nationally. The Beach Shuttle experiment operated by DEP in the summer of 1977 provided another vehicle for probing public views on selected coastal management issues.

Finally, DEP-OCZM shared a pre-publication, working draft of the Bay and Ocean Shore Segment document with a number of federal, state, and local agencies, and business, industry, builders, energy, and environmental groups for review, comment, and discussion at workshops, prior to submission of the final document.

APPENDIX C: FEDERAL AGENCY PARTICIPATION: 1975-1978

Sections 306 and 307 of the federal Coastal Zone Management Act require that the state coordinate coastal management program development and implementation efforts with all interested federal agencies. This Appendix documents New Jersey's compliance with this requirement and notes federal comments on the Coastal Management Strategy (September 1977). New Jersey recognized the importance of having well integrated policies and plans with all levels of government at the start of the coastal planning process. Early federal involvement in New Jersey's program can be traced to public meetings held in 1975 and to the request for responses to the Call for Information in early 1975. The chart on the following page, Figure 23, summarizes federal agency participation since 1975.

Intensive effort to seek federal participation in New Jersey's coastal program began with DEP-OCZM's meeting with federal agencies potentially interested in coastal zone management in New Jersey in August 1976. Following the August meeting, DEP-OCZM sent a questionnaire to thirty-one federal agencies identified as having an interest in New Jersey's coast, requesting them to indicate their activities and level of involvement in a broadly defined New Jersey coastal area. All but three federal agencies responded to the questionnaire by March 1977.

In November 1976, DEP-OCZM invited all federal agencies to attend a meeting to discuss the Alternatives for the Coast, a compilation of the issues to be addressed in the evolving coastal program. In addition, through late fall and early winter 1976-77 each federal agency was invited to attend six series of workshops conducted on numerous issues concerning coastal zone management. To stimulate discussion, DEP-OCZM forwarded to each federal agency copies of the particular staff issue papers pertinent to its interests and work.

Throughout the process, representatives of federal agencies have been encouraged to contact and meet with DEP-OCZM staff. On several occasions, DEP-OCZM staff arranged and attended meetings with individuals or groups of agencies including the Federal Regional Council (Summer 1976), Department of the Interior (September 1976), Environmental Protection Agency (December 1976), U.S. Fish and Wildlife (February 1977) and the U.S. Navy (July 1977) to discuss special issues and policies. In addition, a DEP-OCZM staff person was designated as the federal coordinator to maintain open communication with each of the federal agency representatives and notify them of all New Jersey coastal program developments.

In September 1977, each of the federal agencies received a copy of New Jersey's Coastal Management Strategy. New Jersey encouraged federal comment on the Strategy to provide further input into the document DEP-OCZM was preparing to submit to NOAA-OCZM as the first New Jersey Coastal Management Program. In addition to providing written comments, the federal agencies were invited to attend a meeting with DEP-OCZM in Trenton in November 1977 to discuss the Strategy in general and to meet with individual staff responsible for preparing various parts of the document. As a result, DEP-OCZM received comments, which have been incorporated into the New Jersey Coastal Program, from the following 14 agencies:

Figure 23

	Attend Public Agency Advisory Conference, Feb. 21, 1975	Attend Second NJ CZM Conference, May 2, 1975	Respond to 1975 "Call for Information," Dec. 1975	Receive Proposed CAFRA Rules and Regulations	Provide comments on CAFRA Rules and Regulations	Attend Federal Agency Meeting, Aug. 31, 1976	Attend meeting with Dept. of Interior, Sept. 1976	Attend meeting with energy related agencies, Oct. 1976	Return completed questionnaire on agency's involvement in CZM	Attend public meetings on Alternatives for the Coast, Nov.-Dec. 1976	Provide comments on Alternatives for the Coast	Attend workshops on Alternative Boundaries, Jan.-Feb. 1977	Receive Staff Issue Papers	Provide comments on Issue Papers	Receive the Coastal Management Strategy for New Jersey	Provide comments on Strategy	Attend meeting on Strategy, Nov. 21, 1977	Meet individually with DEP-OCZM staff during program development, 1975-1978
Dept. of Agriculture																		
Soil Conservation Service	x	x		x		x			x	x		x	x		x	x	x	
Dept. of Commerce								x										
NOAA			x	x									x					x
National Marine Fisheries Service				x		x			x			x	x		x	x	x	
Economic Development Adm.				x					x						x			
Maritime Administration				x		x			x			x			x			x
Dept. of Defense																		
Air Force				x	x	x			x						x	x	x	
Army Corps of Engineers	x	x		x		x			x	x		x	x		x	x	x	x
Navy	x	x				x			x						x	x	x	x
Dept. of Energy																		
Formerly FPC			x			x		x	x									
ERDA				x		x		x	x									
FEA			x	x	x	x		x	x									
Dept. of Health, Education, Welfare				x														
Dept. of Housing and Urban Development	x	x		x					x				x		x	x	x	x
Dept. of Interior		x	x	x		x					x				x	x	x	x
Bureau of Land Management	x	x	x	x			x		x						x	x	x	x
Bureau of Mines				x		x			x						x	x	x	x
Bureau of Outdoor Rec.				x		x	x		x				x	x	x	x	x	x
Fish and Wildlife Service	x	x		x		x	x		x	x		x	x		x	x		x
National Park Service				x	x	x	x		x						x	x		x
U.S. Geological Survey	x	x		x		x	x		x						x	x		x
Dept. of Transportation			x			x								x	x	x	x	x
U.S. Coast Guard		x	x	x					x	x		x					x	
Federal Aviation Adm.															x	x		
Federal Highway Adm.									x						x			
Federal Railroad Adm.									x						x			
National Hwv. Traffic Safety									x						x			
Urban Mass Trans. Adm.									x						x			
Material Trans. Bureau									x				x	x	x			
Nuclear Regulatory Comm.				x		x		x	x				x	x	x			x
General Services Adm.				x					x						x			
Environmental Protection Agency	x	x	x	x		x		x	x				x	x	x	x		x
Council of Env. Quality	x			x											x			
Advisory Council on Historic Preservation															x			
Marine Mammal Commission															x			

Department of Agriculture
Soil Conservation Service
Department of Commerce
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
Department of Defense
US Air Force
US Army Corps of Engineers
US Navy
Department of Energy
Department of Housing and Urban Development
Department of the Interior
Bureau of Land Management
Bureau of Mines
Fish and Wildlife Service
Department of Transportation
US Coast Guard
Federal Aviation Administration
Environmental Protection Agency

Comments from the Federal agencies touched on all sections of the Coastal Management Strategy from use and resource policies, to particular questions on federal consistency and excluded federal land. More general comments on the Strategy included a question on DEP's authority over land and water uses in the coastal zone. Another commentor praised the Strategy for its emphasis on concentration of development and preservation of open space.

The comments and DEP responses are summarized in detail in a separate document entitled Coastal Management Strategy for New Jersey - CAFRA Area; Public Comments and DEP Responses, available from DEP-OCZM. Several of the specific comments are summarized below.

BOUNDARY

Comment: The Navy noted that Fort Dix, Lakehurst and the Naval Weapons Station-Earle were not in the coastal zone.

DEP-OCZM Response:

Lakehurst and Fort Dix were deleted from the list of federal lands. The pier at Earle and part of the road and railroad running to Earle are within the Segment and were therefore left on the list of excluded federal lands. See Chapter Two.

Comment: The National Marine Fisheries Service noted the existence of regulated wetlands inland of the CAFRA boundary. The Fish and Wildlife Service asked if all wetlands along the Delaware River had been included.

DEP-OCZM Response:

The boundary of the Segment has been changed to include the indicated wetlands. See Chapter Two.

LOCATION POLICIES

SPECIAL WATER'S EDGE AND LAND AREAS

DUNES

Comment: The U.S. Department of Agriculture commented that the coastal program should further address dune restoration, stabilization and protection.

DEP-OCZM Response:

The location policy for Dunes under Special Land Areas encourages restoration, stabilization, protection and creation of new dunes. See Chapter Three.

WATER'S EDGE

LOWER WATER'S EDGE

WETLANDS

Comment: EPA said the Strategy should stress that Atlantic City redevelopment avoid the taking of any wetlands.

DEP-OCZM Response:

In general, the Coastal Program discourages development of all kinds in wetlands. For further clarification refer to the wetlands policy included in the Lower Water's Edge policy in Chapter Three.

USE POLICIES

General

Comment: Fish and Wildlife Service said the use policies should be more specific and definitive.

DEP-OCZM Response:

Use policy section has been reorganized to include a definition of uses, succinct policy statements, and basis and background for the statement.

HOUSING

Comment: HUD recommended that motel, hotel and other visitor-serving facilities be located only in existing non-residential areas, to the maximum extent practicable.

DEP-OCZM Response:

The hotel-motel development policy in Chapter Three reflects HUD's comment.

Comment: HUD asked that DEP-OCZM take affirmative steps to ensure that low and moderate income housing development will occur in the CAFRA Area.

DEP-OCZM Response:

The program's policies encourage accommodation of low and moderate income housing. Affirmative steps will be taken during the implementation phase of the program and by the N.J. Department of Community Affairs.

Comment: HUD further suggested the program encourage new or expanded road or highway projects in developing areas to allow for the development of efficient regional settlement patterns.

DEP-OCZM Response:

The Coastal Program encourages locations suitable for public transportation and does not promote continued car dependent development.

ENERGY

Comment: The Department of Energy praised the Strategy for consideration of advanced energy resource development and encouragement of conservation of energy in the development of facilities in the coastal zone.

Comment: EPA asked that the Great Bay area and mouth of the Mullica River be specifically included as areas to be avoided in pipeline construction.

DEP-OCZM Response:

The pipeline energy policy does not list specific sites to be avoided but the policy does say the initial corridor shall, to the maximum extent feasible, specifically avoid the Mullica River watershed.

INDUSTRY-COMMERCE

Comment: The Department of Transportation suggested that New Jersey's program include regulatory procedures for commercial vessels or other activities not directly involving land use decisions.

DEP-OCZM Response:

The New Jersey Coastal Program will be concerned primarily with land and water use activities or funding authority. Also, the U.S. Supreme Court recently ruled in Ray v. Atlantic Richfield Company that states could not regulate the size and operating conditions of oil tankers, with some exceptions for pilot and tug requirements.

SHORE PROTECTION

Comment: EPA supported the program's beach nourishment program along as the extraction method of the sand used for replacement is not environmentally degrading.

DEP-OCZM Response:

The shore protection policies address the beach nourishment issue. See Chapter Three.

RESOURCE POLICIES

Comment: The National Marine Fisheries said the program should have greater recognition of the value and importance of fisheries.

DEP-OCZM Response:

The Coastal Program does recognize the importance of fish in its resource policy which specifically addresses marine fish and fisheries. The program also identifies Special Water Areas related to fish productivity, commercial use of fish stocks and recreational fish areas. See Chapter Three.

BUFFERS AND COMPATABILITY OF USES

Comment: EPA and DOT said the Program should consider noise impacts.

DEP-OCZM Response:

The Coastal Program policy on buffers and compatibility of uses requires the project applicant to analyze the use and adjacent uses and where juxtapositions occur that could cause compatibility problems, the analysis is to demonstrate that a buffer will adequately ameliorate the impact.

MANAGEMENT SYSTEM

DIRECT AUTHORITY

Comment: BLM questioned DEP's authority to insure control of land and water uses within the coastal zone.

DEP-OCZM Response:

CAFRA, coupled with the Wetlands Act and the riparian statutes, give DEP significant land and water use authority within the coastal zone.

LOCAL GOVERNMENT ROLE

Comment: EPA suggested the coastal program require local government to comply with the coastal policies formulated by the State, rather than only be urged to follow them.

DEP-OCZM Response:

New Jersey is opting for Technique B - Direct State Control, to implement the Coastal Management Program. DEP-OCZM is continuing to explore the feasibility of new legislation which would improve weaknesses of the current division of authority between State and local governments.

OTHER STATE RESOURCE MANAGEMENT PLANS

Comment: HUD suggested adding a fifth policy to the four Basic Coastal Policies to assure to the maximum extent practicable, consistency with the policies in the Department of Community Affairs State Development Guide Plan.

DEP-OCZM Response:

DEP-OCZM has been working with the New Jersey Department of Community Affairs and the two agencies intend to have consistent policies for managing the resources and development of New Jersey. This coordination was not considered to be of the same broad scope as the Basic Coastal Policies.

FEDERAL CONSISTENCY

Comments: DOT suggested a more detailed description of Federal Consistency procedures. The U.S. Air Force and the U.S. Navy said the coastal program should clearly state that federal agencies make consistency determinations on their projects.

DEP-OCZM Response:

The Coastal Program includes more detailed and specific consistency procedures. The procedures spell out who should make the consistency determination regarding various federal activities. The procedures were written to comply with the adopted federal consistency regulations issued by NOAA/OCZM. See Chapter Five.

FEDERAL LAND

Comment: DOT said the Strategy should include the procedure the State intends to follow to gain access to federal lands. The Navy and Air Force reiterated the coastal program should exclude all federal lands, owned, leased, or held in trust by the United States.

DEP-OCZM Response:

Regarding DOT's concern of access to Federal lands, there may be cases in which activities on federal lands could encourage access to shorefront not federally owned. In response to the Air Force and Navy, the Coastal Program clearly excludes all lands, owned, leased, or held in trust by the United States. See Chapter Two.

NEXT STEPS IN COASTAL MANAGEMENT

Comment: U.S. Fish and Wildlife Service said the Strategy cannot be successfully implemented until new regulatory legislation addressing sub-threshold development in the CAFRA area and all upland development outside of the CAFRA area is enacted.

DEP-OCZM Response:

CAFRA, the Wetlands Act, Riparian Statutes, and Shore Protection Program give DEP significant coastal land and wateruse authority.

APPENDIX D: LOCAL GOVERNMENT PARTICIPATION: 1975-1978

DEP-OCZM has worked to involve county and municipal officials in coastal planning for New Jersey. The involvement has taken many forms, including sharing draft documents, convening and attending meetings in many localities and conducting many one-on-one conversations.

County governments have participated largely through the offices of the county planning directors. In particular, the New Jersey County Planners Association organized a Coastal Committee to work closely with DEP-OCZM on coastal zone management. The major product of this cooperation to date has been a special state-county partnership in 1977 to study and plan for possible onshore impacts of offshore oil and gas exploration and development and coastal energy facility siting in general.

DEP contracted with twelve coastal counties, including all eight counties in the Bay and Ocean Shore Segment, to provide assistance to DEP in developing the energy facility siting element of the New Jersey Coastal Program. Each county was awarded \$15,000, for the 12 month study. The joint State-county project had three main objectives. The primary purpose was for counties to become familiar with oil and gas industry operations and the other energy facilities likely to locate in the coastal area. A second objective was for counties to identify sites that might be potentially suitable or non-suitable for energy facilities and provide documentation for their findings. The study also became a learning experience for both DEP and the counties. DEP, for example, invited representatives and arranged field trips for the study team to visit energy facilities. DEP also held monthly meetings with the county representatives around the state, in order to increase communications between the two levels of government.

The final reports submitted by the counties reflected this learning process and showed an increasing grasp of the greater than local issues involved in energy facility siting. While not all the county reports were site specific, the counties did demonstrate an understanding of the concepts involved in coastal energy facility siting. This knowledge should provide a useful background for further energy siting studies and specific siting decisions. As expected, counties with local economies largely based on tourism showed a greater concern for the environment than did other counties.

In 1978, DEP has continued this cooperative relationship by passing through funds to most of the same coastal county planning boards to allow them to contribute county and municipal input to the entire range of issues addressed by coastal management. The counties will comment on state coastal planning documents, evaluate their consistency with municipal plans and ordinances, and comment on specific coastal permit applications.

DEP-OCZM relied heavily upon county planning directors in the preparation of the Interim Land Use and Density Guidelines for the Coastal Area, particularly in the period from October 1975 through March 1976, for critical review and comment on drafts of working papers. County officials have also commented on Alternatives for the Coast, Alternative Boundaries for New Jersey's Coastal Zone, selected issue papers and the Coastal Mangement Strategy in both draft and final form, and the prepublication draft of this document.

At the municipal level, DEP-OCZM has worked closely with the mayor, planning board and environmental commission of the municipalities in which CAFRA permit applications or other coastal issues have been particularly prominent. Dover Township in Ocean County is the location of considerable CAFRA permit activity and was also the site used for DEP-OCZM's demonstration project on coastal decision-making called the "Intuitive-Interactive Model". Lower Township was the site used for DEP-OCZM's pilot study of Lower Cape May County. Atlantic City has been subjected to many potentially conflicting development initiatives, and DEP-OCZM staff have participated in many meetings with city officials. In addition, DEP-OCZM staff have met with officials from many other municipalities both within, and outside the proposed coastal zone, to discuss the coastal program in general and in terms of its local implications.

County and municipal groups and officials in the coast are included on the DEP-OCZM mailing list. They have each received copies of the CAFRA Rules and Regulations, Interim Land Use and Density Guidelines, Alternatives for the Coast, Coastal Management Strategy and issues of The Jersey Coast.

DEP-OCZM has intentionally held and attended public meetings in varied locations so that officials and other citizens of many municipalities would have an easy opportunity to learn about, and comment on the evolving coastal program. From 1975 to 1977, DEP-OCZM staff attended public meetings in 38 municipalities, in addition to holding public hearings in 59 municipalities on CAFRA permit applications. Officials from neighboring municipalities also attended many of these meetings.

DEP-OCZM's implementation of CAFRA has created a working relationship with many county and municipal governments. With the county energy facility planning project, this direct involvement has spread beyond the CAFRA boundary to include jurisdictions covering all of the potential coastal zone.

APPENDIX E: COMMENTS ON THE COASTAL MANAGEMENT STRATEGY FOR
NEW JERSEY - CAFRA AREA; SEPTEMBER 1977

In September, 1977, the Department of Environmental Protection submitted the report, Coastal Management Strategy for New Jersey - CAFRA Area to the Governor, Legislature, and public. Prepared by DEP's Office of Coastal Zone Management, the document was required by the Coastal Area Facility Review Act of 1973 and represented the first major step toward submission of a coastal management program for New Jersey's Bay and Ocean Shore Segment.

DEP-OCZM distributed 3,000 copies of the Strategy and an additional 5,000 copies of a four page summary to federal and state agencies, regional authorities, county and municipal agencies, industry and environmental groups, and interested citizens. In November, 1977, DEP-OCZM conducted a series of eight public meetings throughout the state to review and discuss the Strategy with interested citizens. During the same month, the staff met individually with representatives of approximately 20 state agencies and interest groups.

These meetings provided a forum in which individuals could discuss their concerns and suggestions for revisions to the Strategy. Their comments were recorded by DEP-OCZM staff members. In addition, the Office received more than 80 letters and statements commenting on the Strategy. The chart at the end of this Appendix lists the agencies and groups who provided comments at a public meeting and/or in writing.

DEP-OCZM addressed these many statements by grouping the comments within each statement according to the subject or policy to which they referred. A single letter might contain comments on several different parts of the Strategy. The result was a workbook with more than 450 individual comments, organized in the order of the relevant sections of the Strategy. This format allowed DEP-OCZM staff to analyze and respond to the comments raised by each section of the report.

DEP cannot reproduce all the comments in this Appendix, but the Department will make copies of its workbook of comments available to interested people. It is called Coastal Management Strategy for New Jersey - CAFRA Area; Public Comments and DEP Responses. Several major themes and concerns emerged from the comments.

The most prevalent comment, which was expressed in several ways, was that the Strategy lacked sufficient specificity and predictability. This led to concern that a potential land owner, developer or otherwise concerned person could not have advance certainty of the outcome of an application for a coastal permit. Others feared that the policies of the Strategy did not have to be enforced and would leave too much discretion in the hands of the officials who happened to work in DEP at a given time. A related concern was that the Strategy did not provide maps indicating where different types of development would or would not be allowed.

DEP responded to these comments in two ways. First, a concerted effort has been made to make the Coastal Resource and Development Policies in this document more specific and clear. The description of the Coastal Location Acceptability Method (CLAM), which was cited by many as intriguing but confusing, was totally reorganized and rewritten (see Chapter Three). In addition, the policies were rewritten so that they could be formally adopted by DEP as substantive administrative rules and regulations.

Second, some of these comments represented unrealistic expectations for the coastal management program. The level of funding for coastal zone management in New Jersey would not allow the level of detailed, site specific planning for the entire 1,382 square miles in the Segment which some people apparently expected. Nor would New Jersey, with its strong reliance on municipal zoning, be able to use such plans at a state level. Furthermore, unlike such a plan which can quickly become outdated by changing events, the New Jersey Coastal Program is designed to be sufficiently specific to provide predictability, but sufficiently flexible to accommodate new ideas and information.

The second major concern raised by comments on the Strategy addressed the extent of regulation it would produce. Some observers had the mistaken impression that the coastal zone management program would lead to additional permits and obstacles to development, and others believed the existing permit programs cover too large a geographic area and are too great a hindrance to development.

Third, some people felt that the policies for what is now called the Bay and Ocean Shore Segment would have the effect of channelling industrial development to the waterfront areas outside the CAFRA Area. This implication was alternately criticized and applauded by different people. In response, DEP noted that development in the other parts of the coastal zone, which will be addressed by the second phase of the coastal program, to be prepared later in 1978, will be required to follow a similar set of policies. Thus, while certain types of energy facilities may be encouraged for location in the urban waterfront area rather than in the CAFRA Area, such facilities would still have to meet air and water quality standards and many of the other policies listed in Chapter Three.

Many comments suggested specific additions, changes, and corrections, while others addressed more general aspects of the coastal planning process, such as public participation. Although these comments are not each described in this Appendix, they are the reason that this Draft Environmental Impact Statement contains many structural and substantive changes from the Coastal Management Strategy (September 1977).

List of Commenting Agencies and Groups on Coastal Management Strategy

(Individuals who submitted comments are not listed here, but are listed in the companion report on Coastal Management Strategy, Public Comments and DEP Responses)

Regional Agencies

Delaware River Basin Commission
Delaware State Office of Management, Budget, and Planning
Delaware Valley Regional Planning Commission
Port Authority of New York and New Jersey
Tri-State Regional Planning Commission
Wilmington Metropolitan Area Planning Council

State Agencies

Department of Agriculture
Department of the Public Advocate
Division of Energy Conservation and Planning, NJ DOE
Division of Environmental Quality, DEP
Division of Fish, Game, and Shellfisheries, DEP
Division of State and Regional Planning, Department of Community Affairs
Division of Water Resources, DEP
Green Acres Program, DEP

County and Municipal Agencies

Atlantic County Executive Offices
Burlington County Board of Chosen Freeholders
Burlington County OCS Study Team
Camden City Department of Economic Development
Cape May County Board of Health
Cape May County Environmental Council
Cape May County Planning Board
Cumberland County Board of Freeholders
East Brunswick Township Planning Board
Jersey City Planning Department
Lawrence Township Planning Board (Cumberland County)
Lower Raritan / Middlesex County Policy Advisory Committee
(208 Water Quality Management Planning Board)
Middlesex County Planning Board
Monmouth County Planning Board
Ocean County Planning Board
Salem County Planning Board

Industrial and Energy Development Organizations

Asarco Inc.
Association of General Contractors
Atlantic City Electric Company
Dredge Harbor Yacht Basin
Hartz Mountain Industries, Inc.
Jersey Central Power and Light Company
Mercer County Building Construction Trades Union
New Jersey Asphalt and Pavement Association
New Jersey Builders Association
New Jersey Marine Trades Association
New Jersey Petroleum Council
New Jersey State Chamber of Commerce
Public Service Electric and Gas Company
Pureland Industrial Complex
Society for Economic and Environmental Development (SEED)
Utility Contractors Association of New Jersey

Environmental Groups

American Littoral Society
Association of New Jersey Environmental Commissions
Atlantic Audubon Society
Bayonne Against Tanks
Citizens Association to Protect the Environment (CAPE)
Conservation Society of Long Beach Island
League for Conservation Legislation
League of Women Voters
Natural Resource Defense Council, Inc.
New Jersey Conservation Foundation
New Jersey Shore Audubon Society
Save Our River Environment
Sierra Club

APPENDIX F: COASTAL ZONE BOUNDARY

Introduction
History of CAFRA Boundary
Municipalities within the Bay and Ocean Shore Segment
Wetlands Landward of the CAFRA Boundary
Preliminary Boundary of the Coastal Zone - Entire State
Municipalities within the Preliminary Boundary of the Coastal Zone
of the Entire State

Introduction

One of the fundamental requirements of the federal Coastal Zone Management Act is the definition of the state's coastal zone for purposes of the federal law. In December 1976, DEP-OCZM released a staff working paper entitled Alternative Boundaries for New Jersey's Coastal Zone, which began public discussion on New Jersey's approach to addressing this requirement. That discussion has culminated in the Bay and Ocean Shore Segment boundary presented in Chapter Two. This Appendix describes the background of the CAFRA boundary, lists the municipalities within the CAFRA Area, identifies the coastal wetlands considered part of the Bay and Ocean Shore Segment, and presents the preliminary boundary for the coastal zone of the entire state.

History of the CAFRA Boundary

New Jersey defined the present CAFRA boundary in 1972-1973 by a process combining scientific analysis, public hearings, and legislative compromise. In early 1972, a bill was introduced in the Legislature (A-722) proposing a "Coastal Area" from the head of tide of the Delaware River around the state's shoreline to the center line of the Raritan River at its mouth, with an inland boundary at the 10 foot contour interval above mean sea level and a seaward boundary at the mean high water line. An alternative inland boundary, recommended by DEP, was included in a substitute bill (A-1429) introduced in mid-1972. The DEP prepared the recommended "Coastal Area" boundary by analyzing the geography of New Jersey in terms of five criteria:

- (1) Limit the Coastal Area to the Coastal Plain geological province,
- (2) Include Wetlands,
- (3) Include tidal portions of streams, and their adjacent fast lands, that empty into the Raritan Bay, Atlantic Ocean, Delaware Bay, and Delaware River,
- (4) Include areas with soils limitations such as poor drainage, propensity for flooding, poor septic tank suitability, poor landfills suitability, limited agricultural value, regions with muck, tidal marsh, swamp, and bog soils, and areas with depth to seasonal high water table, and
- (5) Include densely populated areas whose sanitary wastes could affect water quality.

DEP then interpreted aerial photography and soil surveys to delineate a recommended inland boundary by using fixed, legally-describable cultural features such as roads and railroads to define the land area that met the boundary criteria. This recommended boundary also extended along the Delaware River from Trenton around the bay and ocean shorelines to the Raritan River.

Various legislators, local government officials, business interests, organized public interest groups and citizens expressed strong and often conflicting views on the DEP-prepared inland boundary for the "Coastal Area" during the legislative process of hearings and debate in 1972-1973. In June 1973, after numerous amendments to the bill revising the boundary, the Legislature passed what is now known as the Coastal Area Facility Review Act. The revised and final "Coastal Area" boundary deleted the Delaware River waterfront, excluded a small area around the Cape May County Airport to facilitate economic development, and reduced the scope of the Coastal Area in Middlesex and Monmouth counties.

Eight of New Jersey's 21 counties are represented in the CAFRA Area, including parts of Middlesex, Monmouth, Ocean, Burlington, Atlantic, Cape May, Cumberland, and Salem. The portions of each county within the area vary considerably from less than one percent of Middlesex to 57 percent of Ocean and 93 percent of Cape May. A total of 126 municipalities, as diverse as urban Asbury Park in Monmouth County, suburban Dover Township in Ocean County, and rural historic Greenwich Township in Cumberland County, are wholly or partially within the statutory Coastal Area. This appendix lists these 126 municipalities.

Municipalities Within the Bay and Ocean Shore Segment

All or parts of 126 of New Jersey's 567 municipalities lie within the CAFRA Area, and are included within the geographic scope of the Bay and Ocean Shore Segment. In addition, part of Alloway Township in Salem County is included in the Bay and Ocean Shore Segment as it contains coastal wetlands inland of the CAFRA boundary. The 127 municipalities included, in whole or in part, within the Bay and Ocean Shore Segment are listed below, by county:

Atlantic County

Absecon City	Longport Borough
Atlantic City	Margate City
Brigantine City	Mullica Township
Corbin City	Northfield City
Egg Harbor City	Pleasantville City
Egg Harbor Township	Port Republic City
Estell Manor Township	Somers Point City
Galloway Township	Ventnor City
Hamilton Township	Weymouth Township
Linwood City	

Burlington County

Bass River Township	Washington Township
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Cape May County

Avalon Borough
Cape May City
Cape May Point Borough
Dennis Township
Lower Township
Middle Township
North Wildwood City
Ocean City
Sea Isle City

Stone Harbor Borough
Upper Township
West Cape May Borough
West Wildwood Borough
Wildwood City
West Wildwood Crest Borough
Woodbine Borough

Cumberland County

Bridgeton City
Commercial Township
Downe Township
Fairfield Township
Greenwich Township

Hopewell Township
Lawrence Township
Maurice River Township
Millville City
Stow Creek Township

Middlesex County

Old Bridge Township (Madison)

Monmouth County

Aberdeen Township (Matawan)
Aberdeen Borough (Matawan)
Allenhurst City
Asbury Park City
Atlantic Highlands Borough
Avon-by-the-Sea Borough
Belmar Borough
Bradley Beach Borough
Brielle Borough
Deal Borough
Eatontown Borough
Fair Haven Borough
Hazlet Township
Highlands Borough
Holmdel Township
Interlaken Borough
Keansburg Borough
Keyport Borough
Little Silver Borough

Loch Arbour Village
Long Branch City
Manasquan Borough
Middletown Township
Monmouth Beach Borough
Neptune City
Neptune Township
Ocean Township
Oceanport Borough
Red Bank City
Rumson Borough
Sea Bright Borough
Sea Girt Borough
Shrewsbury Borough
South Belmar Borough
Spring Lake Borough
Union Beach Borough
Wall Township
West Long Branch Borough

Ocean County

Barnegat Light Borough
Barnegat Township (Union)
Bay Head Borough
Beach Haven Borough
Beachwood Borough
Berkeley Township
Brick Township
Dover Township
Eagleswood Township
Harvey Cedars Borough
Island Heights Borough

Jackson Township
Lacey Township
Lakehurst Borough
Lakewood Township
Lavallette Township
Little Egg Harbor Township
Long Beach Township
Manchester Township
Mantoloking Borough
Ocean Gate Township
Ocean Township

Ocean County - Cont.

Pine Beach Borough
Point Pleasant Beach Borough
Point Pleasant Borough
Seaside Heights Borough
Seaside Park Borough

Ship Bottom Borough
South Toms River Borough
Stafford Township
Surf City Borough
Tuckerton Borough

Salem County

Alloway Township (not in CAFRA Area)
Elsinboro Township
Lower Alloways Creek Township
Mannington Township

Pennsville Township
Quinton Township
Salem City
Upper Penns Neck

Wetlands Landward of the CAFRA Boundary

Parts of 45 of DEP's wetlands maps include wetlands areas considered to be within the inland boundary of the Bay and Ocean Shore Segment, as defined in Chapter Two. The numbers of these maps are listed below:

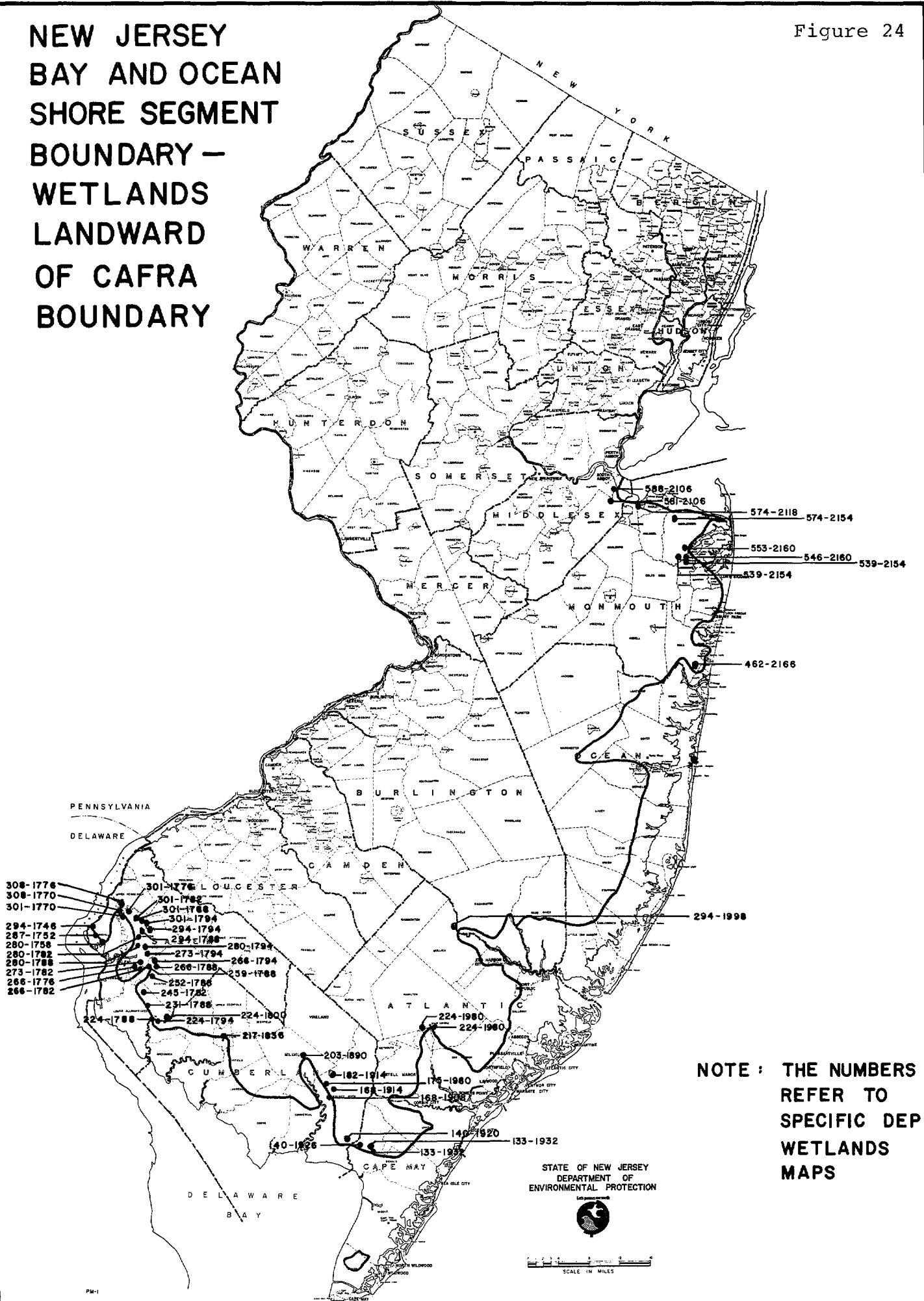
133-1932	259-1788	294-1998
140-1920	266-1766	301-1770
140-1926	266-1787	301-1776
168-1914	266-1788	301-1787
175-1980	273-1782	301-1794
182-1914	273-1794	308-1770
203-1880	280-1758	308-1776
224-1788	280-1782	462-2166
224-1794	280-1788	546-2160
224-1980	280-1794	553-2160
231-1789	287-1752	574-2118
245-1782	294-1788	574-2154
252-1788	294-1794	581-2106
		588-1106

Figure 24 shows the approximate locations of these wetlands, by map number.

Preliminary Boundary of the Coastal Zone - Entire State

While New Jersey is submitting only the Bay and Ocean Shore Segment for federal review and approval at this time, federal regulations [15 CFR 923.61(a)(3)] require the coastal zone boundary to be determined initially for the entire coastal zone throughout the state at the time of segment submission. The Coastal Management Strategy for New Jersey - CAFRA Area (September 1977) defined an initial, proposed state-wide "coastal zone", under the federal Coastal Zone Management Act. That proposal included the entire CAFRA Area, as well as all coastal waters to the limit of tidal influence, a narrow strip of adjacent shorelands, and the Hackensack Meadowlands Development Commission District. Figure 25 depicts generally this proposed coastal zone, and its four regions. This proposed "coastal zone" is based on a definition of coastal waters, an inland boundary drawn along easily-recognized roads and railroads immediately landward of the defined coastal waters, and the jurisdiction of the Hackensack Meadowlands Development Commission.

NEW JERSEY BAY AND OCEAN SHORE SEGMENT BOUNDARY — WETLANDS LANDWARD OF CAFRA BOUNDARY



**NOTE : THE NUMBERS
REFER TO
SPECIFIC DEP
WETLANDS
MAPS**

STATE OF NEW JERSEY
DEPARTMENT OF
ENVIRONMENTAL PROTECTION

SCALE IN MILES

The coastal waters of New Jersey include: the Atlantic Ocean to the limit of New Jersey's seaward jurisdiction; the Hudson River, Upper New York Bay, Newark Bay, Arthur Kill, and Raritan Bay to the New York boundary; Delaware River and Bay to the State of Delaware boundary; Delaware River to the Pennsylvania boundary; and the tidal portion of the Delaware Raritan, Passaic, and Hackensack Rivers, including the tidal portions of their tributaries and other tidal streams of the Coastal Plain.

The landward extent of coastal waters can be defined either by the limit of waters containing a specified percentage of salinity, the extent of the salt wedge, or tidal influence. Figure 26 displays selected salinity levels at various points along New Jersey's coastal waters, using the limited available data. Salinity levels are highly variable geographically throughout the seasons and from year-to-year, and therefore not appropriate for fixed boundaries, given the complexity and diversity of New Jersey's estuaries. The landward penetration of tidal influence in a watercourse does, however, provide a readily measurable dividing line for coastal and non-coastal waters. (The tidal limit also coincides with the extent of State-owned tidelands and permit regulation under the riparian lands management program).

Two methods have been used to define the upstream limit of tidal activity. First, the approximate tidal limits specified in the annual Compendium of New Jersey Fish Laws, published by DEP's Division of Fish, Game, and Shellfisheries have been used where available. These limits are typically defined as bridges or dams. Second, the point where the 20 foot contour interval crosses the water course is used to define the approximate limit of tidal influence along other tidal water courses. In the future, DEP's completed tidelands delineation maps, prepared by the Office of Environmental Analysis in the Office of the Commissioner, will precisely and legally define New Jersey's tidal limits. These delineations will become part of the official boundary of the coastal zone.

This proposed coastal zone includes at least a small part of a total of 243 municipalities in seventeen of New Jersey's twenty-one counties, including municipalities in the Bay and Ocean Shore Segment. The next section of this appendix lists these municipalities. Only Hunterdon, Morris, Sussex, and Warren counties have no coastal waters and are excluded from the coastal zone. This relatively large zone, united by the presence of coastal waters, is quite diverse, stretching from the port at Camden to the vast wetlands along Delaware Bay, to the beaches of the barrier islands along the ocean, to the industrialized waterfront of northern New Jersey.

Tidal influence makes the Delaware River region immediately adjacent to these waters "coastal" in the sense intended by the federal Coastal Zone Management Act. Although the CAFRA boundary stops south of the Delaware Memorial Bridge, the tidal influence on the Delaware River extends 60 miles further north to Trenton. Because of the flat topography of the Coastal Plain, tidal tributaries from the Delaware River extend up to 10 miles inland. NOAA-OCZM does not require inclusion of the Delaware River within New Jersey's coastal zone as the quantity of seawater is less than 5 parts per thousand. However, the State of New Jersey does today manage the wetlands and riparian lands along this part of the coast and prefers to include these areas within the proposed coastal zone for the second phase of New Jersey's coastal management program under federal law.

Figure 25

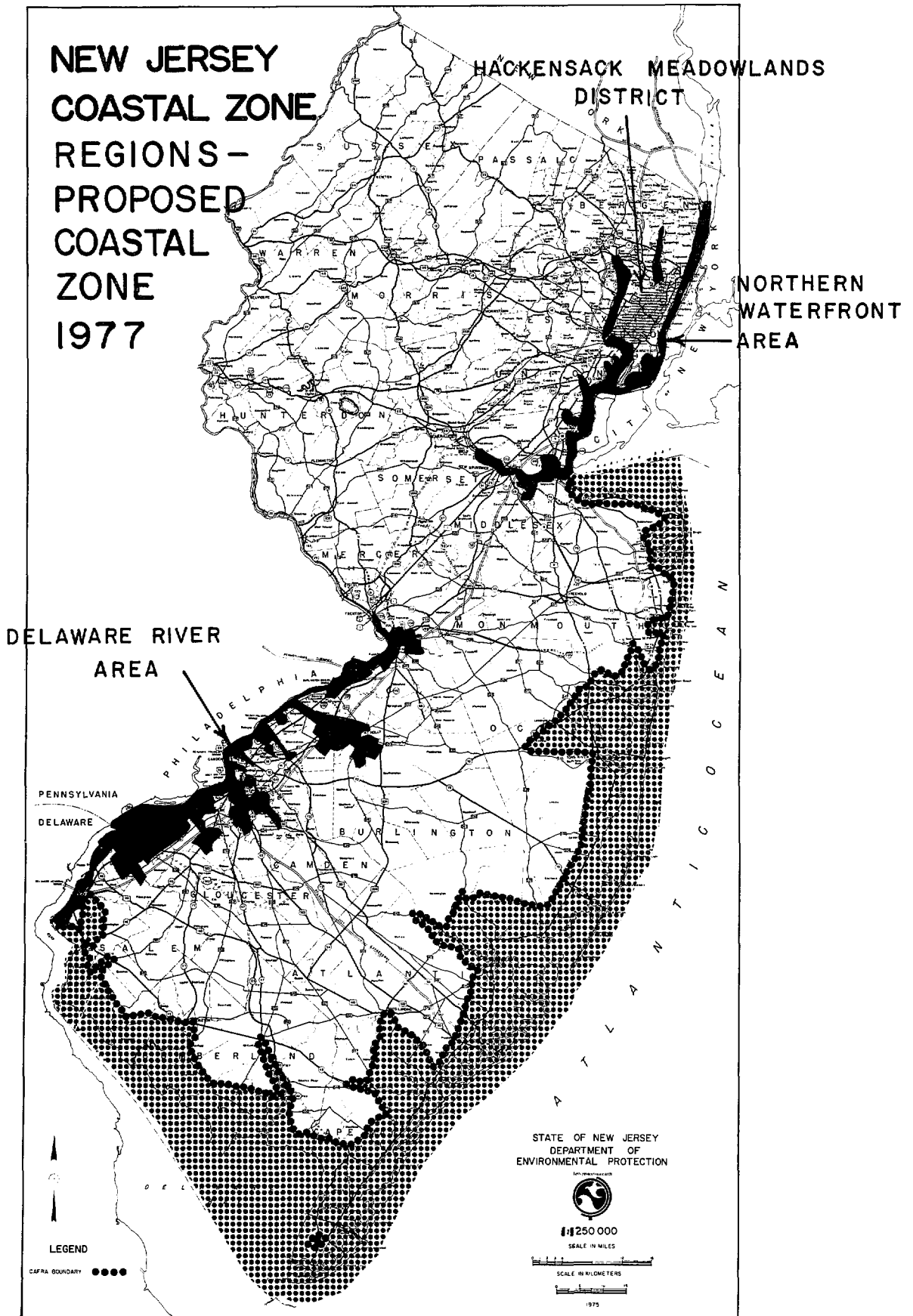
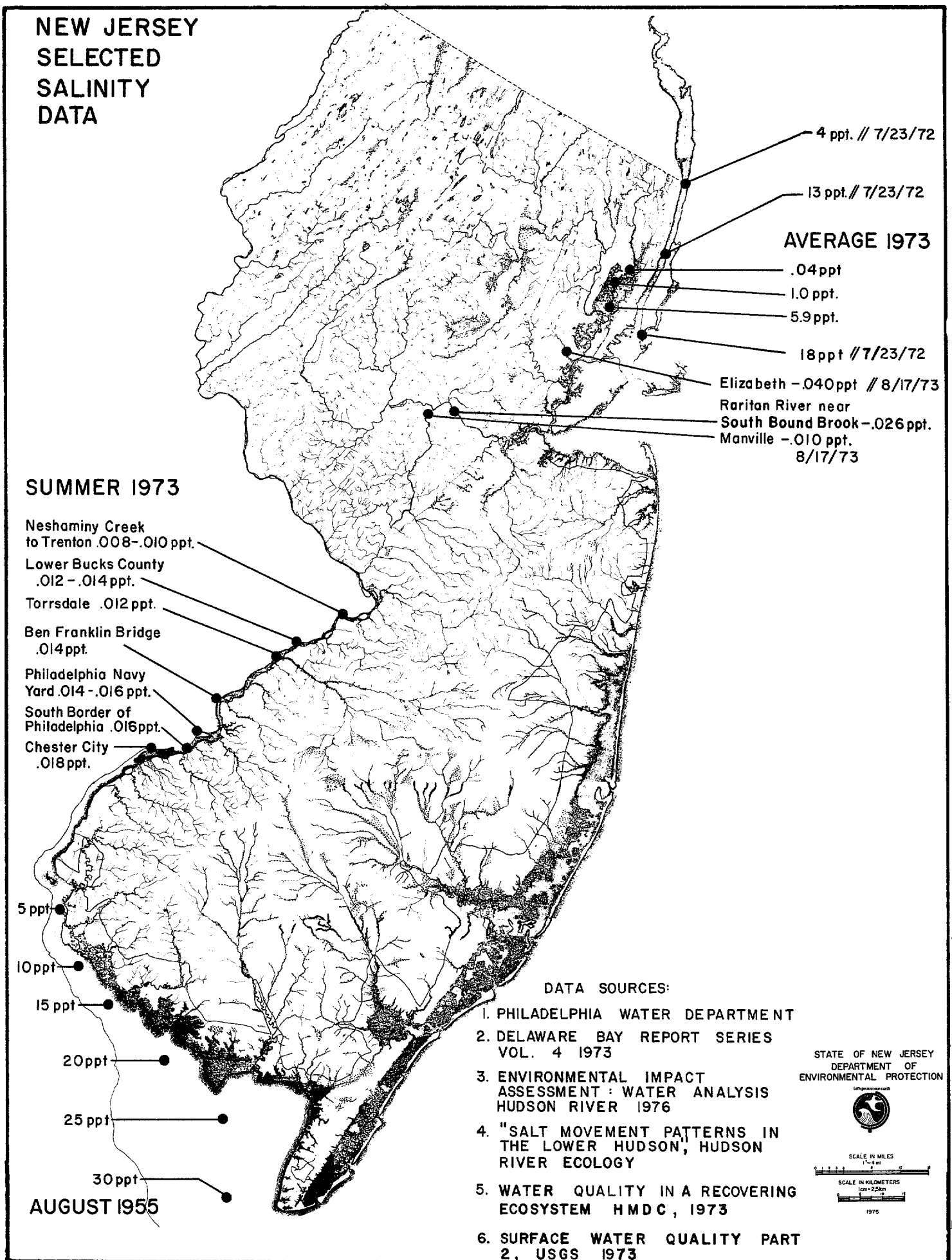


Figure 26



Municipalities Within the Preliminary Boundary of the Coastal Zone of the Entire State

All or part of 238 of New Jersey's 567 municipalities are included in the preliminary state-wide coastal zone. These municipalities, in addition to those listed above for the Segment, are listed below, by county, by regions, either Delaware River Area or Northern Waterfront Area (which includes the Hackensack Meadowlands District). It is important to note that this is only a proposal at this stage. The definition of the state-wide or the coastal zone will become final only after the Governor's submission of the coastal management program for the entire State to NOAA-OCZM, which will take place in late 1978 at the earliest.

DELAWARE RIVER AREA

Burlington County

Beverly City
Bordentown City
Bordentown Township
Burlington City
Burlington Township
Chesterfield Township
Cinnaminson Township
Delanco Township
Delran Township
Edgewater Park Township
Fieldsboro Borough
Florence Township
Hainesport Township

Lumberton Township
Mansfield Township
Maple Shade Township
Medford Township
Moorestown Township
Mount Holly Township
Mount Laurel Township
Palmyra Borough
Riverside Township
Riverton Borough
Southampton Township
Westhampton Township
Willingboro Township

Camden County

Audubon Park Borough
Barrington Borough
Bellmawr Borough
Brooklawn Borough
Cherry Hill Township
Gloucester City
Gloucester Township
Haddon Township
Hi-Nella Borough

Laurel Springs Borough
Lindenwold Borough
Mount Ephraim Borough
Oaklyn Borough
Pennsauken Township
Runnemede Borough
Somerdale Township
Stratford Borough

Gloucester County

Deptford Township
East Greenwich Township
Greenwich Township
Mantua Township
National Park Borough
Paulsboro Borough

Swedesboro Borough
Wenoah Borough
West Deptford Township
Westville Borough
Woodbury City
Woolwich Township

Mercer County

Hamilton Township

Trenton City

Salem County

Olmans Township
Penns Grove Township

Pennsville Township
Pilesgrove Township

NORTHERN WATERFRONT AREA

Bergen County

Alpine Borough
Bogota Borough
Carlstadt Borough
East Rutherford Borough
Edgewater Borough
Englewood Cliffs Borough
Fairview Borough
Fort Lee Township
Garfield City
Hackensack City
Little Ferry Borough

Lyndhurst Township
Moonachie Borough
New Milford Borough
North Arlington Borough
Oradell Borough
Ridgefield Borough
River Edge Borough
Rutherford Borough
Teaneck Township
Teterboro Borough
Walington Borough

Essex County

Belleville Town
Newark City

Nutley Town

Hudson County

Bayonne City
East Newark Borough
Guttenberg Town
Harrison Town
Hoboken City

Jersey City
Kearny Town
North Bergen Township
Secaucus Town
West New York Town

Middlesex County

Carteret Borough
East Brunswick Township
Edison Township
Highland Park Borough
New Brunswick City
Old Bridge Township

Perth Amboy City
Piscataway Township
Sayreville Borough
South Amboy City
South River Borough
Woodbridge Township

Passaic County

Clifton City

Passaic City

Somerset County

Franklin Township

Union County

Elizabeth City
Linden City

Rahway City

The preliminary inland boundary of the proposed coastal zone in this region is, therefore, the first road or cultural feature (such as a railroad or transmission line) that is parallel to the coastal watercourse, usually a river or stream. This definition includes wetlands and transitional areas between the tidal waters and the appropriate road or cultural feature. Moreover, this area should be part of the coastal zone under federal law because several land use activities are dependent on coastal waters, such as marine terminals. In addition, the area's coastal location provides certain attributes for recreation and industry. The Delaware River Area includes parts of Camden, waterfront residential communities such as Riverside, historical areas in Roebing and Bordentown, and two oil refineries in West Deptford and Greenwich Townships.

Tidal influence in New Jersey also extends north of the Bay and Ocean Shore Segment on the east side of the state. The tidally influenced water bodies in this region includes the Hudson River, Upper New York Bay, Newark Bay, Kill van Kull, Arthur Kill, Passaic River, Hackensack River, and Raritan River and Bay, and their tributaries. The proposed inland coastal boundary in the Northern Waterfront Area would be the first road or cultural feature as along the Delaware River. This narrow preliminary boundary is appropriate because the highly developed state of this area confines direct coastal impacts. This region includes the industrialized waterfront with outmoded docks, abandoned piers, and closed industrial plants, as well as modern container ports, refineries, tank farms, shipyards, and new industrial facilities. The area also includes the developing Liberty State Park and other waterfront sites which could one day accommodate future parks.

The Hackensack Meadowlands Development District is a 19,600 acre area in Bergen and Hudson counties defined by the 1968 legislation establishing the Hackensack Meadowlands Development Commission (N.J.S.A. 13:17-1 et seq.), an autonomous agency associated with the New Jersey Department of Community Affairs. The District includes a large undeveloped expanse of salt marsh, disturbed land and built-up areas covering parts of 14 municipalities. The District also includes the New Jersey Sports Complex. Inclusion of some portion of the shorelands of the Meadowlands District within the coastal zone is required under the federal Coastal Zone Management Act because the salinity level of some of the tidal waters of the District is above the NOAA-OCZM threshold of 5 parts per 1000. Also, DEP already exercises coastal management responsibilities in the Meadowlands District in the riparian lands management program, as much of the District includes land now or formerly flowed by the mean high tide. Further, DEP's present riparian lands management and tidelands delineation programs in the Meadowlands are already carried out in close coordination with staff of the Hackensack Meadowlands Development Commission.

In conclusion, the inland boundary of the coastal zone beyond the boundary of the Bay and Ocean Shore Segment is a proposal to be debated and refined as DEP conducts further coastal planning in 1978. The final boundary for the entire coastal zone will depend in part upon the legal authority to carry specific coastal policies to be defined for these regions of the coast. At this stage, however, the most important boundary is the one defined in Chapter Two for the Bay and Ocean Shore Segment.

APPENDIX G: EXCLUDED FEDERAL LANDS - BAY AND OCEAN SHORE SEGMENT

Under the federal Coastal Zone Management Act, lands that are owned, leased, held in trust or whose use is otherwise by law subject solely to the discretion of the Federal Government, its officers, or agents are excluded from New Jersey's coastal zone. Several large-scale federal holdings are located within New Jersey's statutory "Coastal Area" and are excluded from the Bay and Ocean Shore Segment under federal law. Below is a list of all major federal lands located entirely or partially in the area defined by the Bay and Ocean Shore Segment. "Major" is defined as greater than 100 acres. These areas are also indicated in Figure 27. In addition to the areas noted, numerous Coast Guard stations and smaller federal land holdings are excluded from the Bay and Ocean Shore Segment. The listing below notes the federal agency responsible for the land and the county in which it is located.

Army Corps of Engineers

Artificial Island Disposal Area (Salem)
Cape May Canal (Cape May)
Kilcohook Spoil Disposal Area (Salem)

Army

Fort Monmouth (Monmouth)
Highlands Army Air Defense Site (Monmouth)

Navy

Leonardo-Earle Naval Ammunition Depot (Monmouth)

Fish and Wildlife Service

Barnegat National Wildlife Refuge (Ocean)
Brigantine National Wildlife Refuge (Atlantic)
Kilcohook National Wildlife Refuge (Salem)
Supawana Meadows National Wildlife Refuge (Salem)

National Park Service

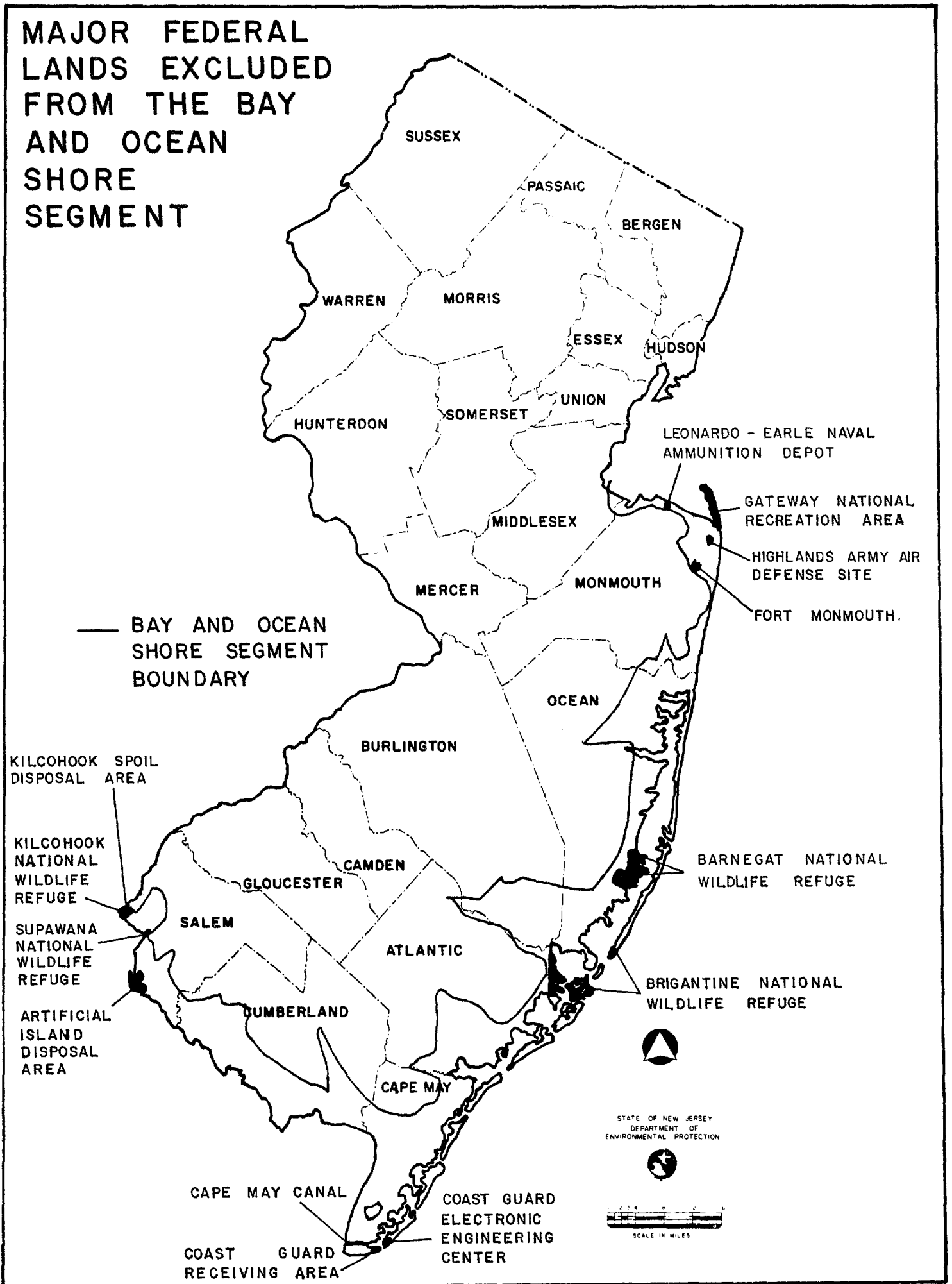
Gateway National Recreation Area - Sandy Hook (Monmouth)

Coast Guard

Coast Guard Receiving Center-Cape May (Cape May)
Coast Guard Electronic Engineering Center (Cape May)

The State of New Jersey considers the acquisition of new federal lands to be a direct federal action subject to the consistency provisions of Section 307 of the federal Coastal Zone Management Act. Also, federal actions on excluded lands that have spillover impacts that significantly affect coastal resources subject to the jurisdiction of the Bay and Ocean Shore Segment must also be consistent with State coastal policies. Chapter Five discusses the Program's federal consistency provision in greater detail.

MAJOR FEDERAL LANDS EXCLUDED FROM THE BAY AND OCEAN SHORE SEGMENT



APPENDIX H: RECIPIENTS OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

Comments on this Draft Environmental Impact Statement have been requested from the following Federal, State, and local agencies, interest groups and individuals. In addition, the 5,000 groups and individuals on the DEP-OCZM mailing list are being offered copies for review and comment.

Federal

U.S. Senate and House of Representatives - New Jersey Congressional Delegation
Advisory Council of Historic Preservation
Council on Environmental Quality
Department of Agriculture
 Soil Conservation Service
Department of Commerce
 Economic Development Administration
 Maritime Administration
 National Marine Fisheries Service
 National Oceanic and Atmospheric Administration
Department of Defense
 Air Force
 Army Corps of Engineers
 Navy
Department of Energy
Department of Health, Education, and Welfare
Department of Housing and Urban Development
Department of Interior
 Bureau of Land Management
 Bureau of Mines
 Heritage Conservation and Recreation Service
 Fish and Wildlife Service
 Geological Survey
 National Park Service
Department of Transportation
 Coast Guard
 Federal Aviation Administration
 Federal Railroad Administration
 Federal Highway Administration
 Urban Mass Transportation Administration
 Materials Transportation Bureau
 National Highway Traffic Safety Administration
Environmental Protection Agency
General Service Administration
Marine Mammal Commission
Nuclear Regulatory Commission
U.S. Water Resources Council

State of New Jersey

Governor
All State Senators and Members of the Assembly
Department of Agriculture
Department of Banking
Department of Civil Service
Department of Community Affairs

State of New Jersey - Cont.

Department of Defense
Department of Education
Department of Energy
Department of Health
Department of Human Services
Department of Insurance
Department of Labor and Industry
Department of Law and Public Safety
Department of the Public Advocate
Department of State
Department of Transportation
Department of the Treasury
Delaware and Raritan Canal Commission
Governor's Pinelands Review Committee
Hackensack Meadowlands Development Commission

Local and Regional Government

Coastal Counties (17) -- Executives, Freeholder Directors,
Planning Agencies, and Environmental Agencies:

Atlantic County
Bergen County
Burlington County
Camden County
Cape May County
Cumberland County
Essex County
Gloucester County
Hudson County
Mercer County
Middlesex County
Monmouth County
Ocean County
Passaic County
Salem County
Somerset County
Union County

Coastal Municipalities (242) -- (Mayors, Planning Boards, and
Environmental Commissions, for municipalities in the Bay and Ocean Shore
Segment and preliminary Coastal Zone, listed in Appendix J)

Delaware River Basin Commission
Delaware River Port Authority
Delaware Valley Regional Planning Commission
Mid-Atlantic Regional Fishery Management Council
Port Authority of New York and New Jersey
Regional Plan Association
South Jersey Resource Conservation and Development Council
Tri-State Regional Planning Commission
Wilmington Metropolitan Area Planning Council (WILMAPCO)
Berkeley Department of Parks and Recreation
Brick Town Recreation Department
Camden City Division of Planning
Cape May County Department of Health
Monmouth County Park System
North Jersey District Water Supply Commission

National Special Interest Groups

American Association of Port Authorities
American Farm Bureau Federation
American Fisheries Society
American Institute of Architects
American Institute of Planners
American Littoral Society
American Mining Congress
American National Cattlemen's Association
American Petroleum Institute
American Right of Way Association
American Shore and Beach Protection
American Society of Civil Engineers
American Society of Planning Officials
American Waterways Operators
Atlantic States Marine Fisheries Institute
Atomic Industrial Forum
Boating Industry Association
Chamber of Commerce of the U.S.
Coastal Society
Coastal States Organization
Conservation Foundation
Council of State Planning Agencies
Cousteau Society
Edison Electric Institute
Environmental Defense Fund, Inc.
Environmental Policy Center
Friends of the Earth
Isaak Walton League
League of Women Voters of the U.S.
Marine Technology Society
Mortgage Bankers Association of America
National Association of America
National Association of Counties
National Association of Electric Companies
National Association of Engine & Boat Manufacturers
National Association of Home Builders
National Association of Realtors
National Association of Regional Councils
National Association of State Boating Law Administration
National Audubon Society
National Boating Federation
National Cannery Association
National Coalition for Marine Conservation, Inc.
National Commission on Marine Policy
National Conference of State Legislators
National Environmental Development Association
National Farmers Union
National Federation of Fishermen
National Fisheries Institute
National Forest Products

National Special Interest Groups - Cont.

National Governors Conference
National League of Cities
National Ocean Industries Association
National Parks and Conservation Association
National Recreation and Parks Association
National Science Foundation
National Science Teachers Association
National Waterways Conference
National Wildlife Federation
Natural Resources Defense Council
Nature Conservancy
Sierra Club
Society of Real Estate Appraisers
Soil Conservation Society of America
Sport Fishing Institute
United Brotherhood of Carpenters and Joiners of America
U.S. Conference of Mayors
Western Oil and Gas Association
Wilderness Society
Wildlife Management Institute
Wildlife Society
World Dredging Association

State and Local Interest Groups

Environmental Groups

American Littoral Society
Association of New Jersey Environmental Commissions (ANJEC)
Atlantic Audubon Society
Atlantic County Citizens Council on Environment
Bayonne Against Tanks
Citizens Association to Protect the Environment (CAPE)
Concerned Citizens for Clean Water
Conservation Society of Long Beach Island
Delaware Raritan Canal Coalition
Hoboken Environment Committee
League for Conservation Legislation
New Jersey Audubon Society
New Jersey Conservation Foundation
New Jersey Sierra Club
Ocean County Sierra Club
Oceanic Society
Passaic River Coalition
S.A.V.E. - Stockton College
Save Our River Environment (SORE)
South Branch Water Shed Association
Stony Brook - Millstone Watershed Association
Upper Raritan Watershed Association
Waterfront Coalition of Bergen and Hudson
West Jersey Sierra Club

Private Sector

Asarco Incorporated
Atlantic City Electric Co.
Cold Spring Realty
Dredge Harbor Yacht Basin
P. Evanson Yacht Co., Inc.
Exxon Corporation
Gordon Terminal Service Corporation
Hardeis Electrical Contracting
Hartz Mountain Industries, Inc.
Jersey Central Power and Light Co.
Leisure Technology Corporation
Mobil Oil Corporation
National Association of Office and Industrial Park
Developers - New Jersey Chapter
New Jersey Asphalt Pavement Association
New Jersey Builders Association
New Jersey Business and Industry Association
New Jersey Marine Trades Association
New Jersey Petroleum Council
New Jersey Shore Builders Association
New Jersey State Chamber of Commerce
Northville Linden Terminal Company
Public Service Electric and Gas Co.
Pureland Industrial Complex
Society for Economic and Environmental Development (SEED)
Somers Point Yacht Harbor, Inc.
Utility Contractors Association of New Jersey
Winter Yacht Basin, Incorporated.

Public Interest Groups

League of Women Voters of New Jersey
New Jersey Beach Buggy Association
New Jersey League of Municipalities
Public Interest Research Group
Princeton University Center for Environmental Studies
Rutgers University Center for Coastal and Environmental
Studies

Library

The document will be available in all New Jersey depository libraries as well as many university and public libraries throughout New Jersey and the country.

APPENDIX I: DATA SOURCES FOR LOCATION POLICIES

This appendix lists sources of the data needed to apply the Location Policies (also referred to as the Coastal Location Acceptability Method or CLAM), of Chapter Three of the New Jersey Coastal Management Program - Bay and Ocean Shore Segment. Data sources are indicated by groups, according to the sequence of steps in using CLAM, with the same reference number (in parentheses) that appeared in Chapter Three. In some cases, different data sources are indicated for the pre-application and application stages of the coastal decision-making process.

DATA ELEMENT	PRE-APPLICATION	APPLICATION
<u>SPECIAL WATER AREAS (6.2)</u>		
Shellfish Beds (6.2.1)	NJDEP Shellfishing Areas Charts 1-10 Haskin "Distribution of Shellfish Resources in Relation to New Jersey Intracoastal Waterway"	Site survey
Surf Clam Areas (6.2.2)	NJDEP Condemned Area Charts 1-10	Site survey
Prime Fishing Areas (6.2.3)	B. L. Freeman & L. A. Walford "Angler's Guide to the United States Atlantic Coast Fish, Fishing Grounds and Fishing Facilities, Sections III and IV"	The same
Finfish Migratory Pathways (6.2.4)	H. E. Zich "New Jersey Anadromous Fish Inventory"	The same
Submerged Vegetation (6.2.5)	NJDEP "A Case Study of Little Egg Harbor of the Submerged Vegetation"	Site survey
Navigation Channels (6.2.6)	NOAA/National Ocean Survey Navigation Charts	The same
Shipwrecks and Artificial Reefs (6.2.7)	NOAA/National Ocean Survey Navigation Charts W. Krotee, R. Krotee "Shipwrecks off the New Jersey Coast"	The same
Marine Sanctuary (6.2.8)	(to be designated)	

DATA ELEMENT	PRE-APPLICATION	APPLICATION
<u>WATER AREAS (6.3)</u>		
<u>Basin Types</u>		
Ocean	<u>Either</u> NOAA/National Ocean Survey Survey Navigation Charts <u>or</u> USGS 7 1/2 minute Quads <u>or</u> NJDEP Photo Quads	The same
Open Bay	<u>Either</u> NOAA/National Ocean Survey Survey Navigation Charts <u>or</u> USGS 7 1/2 minute Quads <u>or</u> NJDEP Photo Quads	The same
Semi-Enclosed Bay	<u>Either</u> NOAA/NOS Charts <u>or</u> USGS 7 1/2 minute Topo Quads <u>or</u> NJDEP Photo Quads	The same
Back Bay	<u>Either</u> NOAA/NOS Charts <u>or</u> USGS 7 1/2 minute Topo Quads <u>or</u> NJDEP Photo Quads	The same
Inland Basins	<u>Either</u> NOAA/NOS Charts <u>or</u> USGS 7 1/2 minute Topo Quads <u>or</u> NJDEP Photo Quads	The same
<u>Channel Types</u>		
Large River, Medium Rivers and Streams	<u>Either</u> NOAA/NOS Charts <u>or</u> USGS 7 1/2 minute Topo Quads <u>or</u> NJDEP Photo Quads	The same
Small Creek and Streams	<u>Either</u> USGS 7 1/2 minute Topo Quads <u>or</u> SCS County Soil Survey	Site survey
<u>SPECIAL WATER'S EDGE AND LAND AREAS (6.4)</u>		
<u>Special Water's Edge Areas</u>		
High Risk Erosion Areas (6.4.1)	Rutgers University "Coastal Geomorphology of New Jersey". Volumes I & II	The same
Dunes (6.4.2)	<u>Either</u> USGS 7 1/2 minute Quads <u>or</u> NJDEP Wetlands Map where available	Site survey
Central Barrier Island Corridor (6.4.3)	<u>Either</u> USGS 7 1/2 minute Quads <u>or</u> NJDEP Wetlands map or NJDEP Photo Quad	The same
Flood Hazard Areas (6.4.4)	<u>Either</u> DEP Flood Hazard Areas where available, <u>or</u> Army Corps of Engineers Flood Hazard Areas where available, <u>or</u> USGS Flood Prone Area supplemented with alluvial soils, <u>or</u> in tidal areas, 100 year tidal elevations defined by Army Corps of Engineers.	NJDEP Flood Hazard Areas where available <u>or</u> site survey

DATA ELEMENT	PRE-APPLICATION	APPLICATION
Bogs (6.4.12)	<u>Either</u> SCS County Soil Surveys in combination with/ <u>or</u> NJDEP Wetlands map where available <u>or</u> NJDEP Photo Quads <u>or</u> site survey.	Site Survey
Stream Heads (6-4-13)	<u>Either</u> SCS County Soil Survey <u>or</u> site survey	Site Survey
<u>Special Land Areas</u>		
Historic Places (6.4.5)	NJ State Register of Historic Places and National Register of Historic Places DEP/Office of Historic Preservation, Historic Sites Inventory	The same plus Site survey
Specimen Trees (6.4.6)	NJDEP-Bureau of Forestry (New Jersey Outdoors, Sept.-Oct 1977)	Site survey
Prime Forest Areas (6.4.7)	<u>Either</u> J. McCormick and L. Jones, "The Pine Barrens Vegetation Geography", <u>or</u> NJDEP Bureau of Forestry Maps	Site survey
Prime Wildlife Habitats (6.4.8)	Site survey	Site survey
Public Open Space (6.4.9)	<u>Either</u> REDI Tax Maps <u>or</u> NJDEP Major Public Open Space and Recreation Areas in N.J. as of Oct. 1977	The same plus Municipal Planning Boards
Steep Slopes (6.4.10)	NJDEP 7 1/2 minute Slope Maps and SCS County Soil Survey	NJDEP 7 1/2 minute Slope Maps and site survey
Prime Agricultural Areas (6.4.11)	SCS County Soil Survey	The same
<u>WATER'S EDGE AREAS (6.5)</u>		
<u>Lower Water's Edge (6.5.1)</u>		
1. Wetlands	NJDEP Wetlands map	NJDEP Wetlands Map
2. Beaches:		
(a) Lower Limit Mean High Water Line	<u>Either</u> USGS 7 1/2 minute Quads <u>or</u> NJDEP Riparian, <u>or</u> maps where available	<u>Either</u> NJDEP Riparian maps where available <u>or</u> Topographic site survey identifying mean high water level as established by the National Ocean Survey of the National Oceanic and Atmospheric Administration (NOAA-NOS)

DATA ELEMENT	PRE-APPLICATION	APPLICATION
(b) Upper Limit Natural limit of unvegetated sandy beach	<u>Either</u> NJDEP Photoquads (1972) <u>or</u> A more recent air photograph <u>or</u> Site survey <u>or</u> NJDEP Wetlands Maps where available	Site survey
(c) Developed first cultural feature	<u>Either</u> NJDEP Photoquads (1972) <u>Or</u> A more recent air photograph <u>Or</u> Site survey	Site survey
<u>Upper Water's Edge (6.5.2)</u>		
1. Lower Limit:		
(a) Mean High Water Line	<u>Either</u> USGS 7 1/2 minute Quads <u>or</u> NJDEP Riparian maps where available	
(b) Upper Limit of lower waters edge	As for lower water's edge wetland or Beach	As for Lower Water's Edge Wetlands or Beach
2. Upper Limit:		
(a) Inland limit of soils with water table at surface	<u>Either</u> SCS County Soil Surveys <u>or</u> Site survey	Site survey
(b) 50' horizon- tally from Mean High Water or Up- per Limit of Lower Water's Edge	Scaled from appropriate line estab- lished from data sources listed above for wetlands, Mean High Water or Upper Limit Beach.	Scaled from appro- priate lines estab- lished from data sources listed above for Wetlands, Mean High Water or Upper Limit of Beach
<u>Retained Water's Edge (6.5.3)</u>		
1. Lower Limit: retaining structure line	<u>Either</u> USGS 7 1/2 minute Quads <u>or</u> NJDEP Photoquads (1972) <u>or</u> More recent air photo <u>or</u> Site survey	Site survey
2. Upper Limit:		
(a) First cultural feature	<u>Either</u> USGS 7 1/2 minute Quads <u>or</u> NJDEP Photo Quads 1972 <u>or</u> More recent air photo <u>or</u> site survey	Site survey
(b) 100' from bulkhead line	Scaled from bulkhead line	Scaled from bulkhead line

LAND AREAS (6.6)

1.	Depth to seasonal high water table	<u>Either</u> SCS County soil survey <u>or</u> Site survey	Site survey
2.	Soil Permeability	<u>Either</u> SCS County soil surveys <u>or</u> Site survey	Site survey
3.	Soil Fertility	<u>Either</u> SCS County soil surveys <u>or</u> SCS test results of soil samples	SCS test results of soil samples
4.	Development Potential Factors		
(a)	Road Location	<u>Either</u> USGS 7 1/2 minute Quads <u>or</u> Site survey	Site survey
(b)	Road Capacity	<u>Either</u> NJDOT capacity estimates <u>or</u> County of municipal surveys where available <u>or</u> On-site traffic counts	On site traffic counts
(c)	Sewers Location	<u>Either</u> NJDEP Atlas of New Jersey sewer overlays <u>or</u> County or municipal surveys <u>or</u> Utility company surveys	The same as pre-application
(d)	Sewers Capacity	<u>Either</u> NJDEP Atlas of New Jersey sewer overlays <u>or</u> County or municipal surveys <u>or</u> Utility company surveys or NJDEP Division of Water Resources	The same as pre-application
(e)	Water Supply: Surface, Location, and Capacity	NJDEP - Division of Water Resources Water Supply and Flood Plain Management-Bureau of Potable Water Water Policy and Supply Council	The same as pre-application
(f)	Ground Water Supply	NJDEP - Division of Water Resources Water Supply and Flood Plain Management-Bureau of Potable Water, Water Policy and Supply Council, NJDEP Bureau of Geology	Site survey
(g)	Water Quality	Reports and Water Samples by NJDEP - Division of Water Resources Water Resource Planning and Management, Water Supply and Flood Plain Management-Bureau of Potable Water, USGS - Trenton Office, EPA - New York	Site survey

DATA ELEMENT	PRE-APPLICATION	APPLICATION
(h) Adjacent Development for infill/extension Determination	<u>Either</u> NJDEP Photoquads <u>or</u> A more recent air photograph <u>or</u> Site survey	Site survey
(i) Shops	Municipal Clerk	The same as pre-application
(j) Schools	Municipal Clerk	The same as pre-application
5. Regional Growth Type	NJDEP Regional Growth Type Map	The same as pre-application

Much of the data for the site acceptability factors may come from the SCS soil surveys at the pre-application stage. SCS Soil Surveys have been completed, at the interim or final stage, for all counties in the Bay and Ocean Shore Segment, with the exception of Monmouth, which will not be complete for four years. Soil distribution maps are available for Monmouth County dating from 1943. These maps will suffice for preliminary analysis.

Memorandum of Understanding
Between
New Jersey Department of Energy
and
New Jersey Department of Environmental Protection
on
Coastal Zone Management

Purpose

This Memorandum of Understanding sets forth the areas of responsibilities and operating procedures to be followed effective immediately by the Department of Energy (DOE) and Department of Environmental Protection (DEP) under the State of New Jersey's coastal management program, as developed and as to be administered under the federal Coastal Zone Management Act of 1972 as amended (16 U.S.C. 1451 et seq.).

Statement of Existing Agency Responsibilities

1. The DEP is responsible for formulating comprehensive policies for the conservation of the natural resources of the State, promoting environmental protection, and preventing pollution of the environment (N.J.S.A. 13:1D-9).
2. The DEP is the agency designated by the Governor to develop and administer the State's coastal management program under Sections 305 and 306 of the federal Coastal Zone Management Act.
3. The DEP has selected and presented to the Governor and Legislature the Coastal Management Strategy for New Jersey - CAFRA Area (September 1977) as required by the Coastal Area Facility Review Act (hereafter CAFRA) (N.J.S.A. 13:19-16).
4. The DEP exercises regulatory responsibility over the construction of energy facilities in the coastal zone under three coastal permit programs: the Coastal Area Facility Review Act (N.J.S.A. 13:19-1 et seq.), the Wetlands Act (N.J.S.A. 13:9A-1 et seq.), and waterfront development permit program (N.J.S.A. 12:5-3).
5. The Coastal Area Review Board (hereafter CARB), in but not of DEP, may hear appeals of CAFRA permit decisions by DEP (N.J.S.A. 13:19-13, N.J.A.C. 7:7D-1 et seq.). DEP also provides a plenary hearing appeals procedure complying with the Administrative Procedures Act for CAFRA (N.J.A.C. 7:7D-2.8), Wetlands (DEP Administrative Order No. 12, December 8, 1977), and waterfront development (N.J.A.C. 7:1C-1.9(b)) permit decisions by DEP's Division of Marine Services.
6. The DOE is responsible for the coordinated regulation and planning of energy-related matters in the State (C. 146, L. 1977, N.J.S.A. 52:27F-1 et seq.).

7. The DOE, through its Division of Energy Planning and Conservation, is preparing the Energy Master Plan for the production, distribution, consumption, and conservation of energy in the State, which will include the siting of energy facilities in the coastal zone (N.J.S.A. 52:27F-12).
8. The DOE, Division of Energy Planning and Conservation is empowered and directed to intervene in any proceeding and appeal from any decision of DEP with respect to the siting of energy facilities in the coastal zone. The DOE is a party of interest in any proceeding before DEP on coastal energy facility siting (N.J.S.A. 52:27F-13(a)).
9. The DOE has coextensive jurisdiction with DEP over permit applications on the siting of any energy facility in the State, including the coastal zone. The DEP must solicit the views of DOE prior to making a decision on the siting of an energy facility in the coastal zone. DOE's views must be transmitted to DEP in a report (hereafter Energy Report) within 90 days of DOE's receipt of the application. If the Energy Report differs from the decision of DEP, the conflict may be referred for resolution to the Energy Facility Review Board (N.J.S.A. 52:27F-13(c)).
10. The DOE is the agency designated by the Governor to administer the State's participation in the Coastal Energy Impact Program (CEIP) under Section 308 of the federal Coastal Zone Management Act. DEP, as the state coastal management agency, must be involved in the CEIP Intrastate Allocation Process.

Responsibilities Under the New Jersey Coastal Management Program

The DOE and DEP agree to the procedures and responsibilities that follow, recognize the statutory limitations of both agencies, and do not intend this Memorandum of Understanding to expand or limit their existing statutory powers in any way.

1. Coastal Planning and Energy Planning

DOE and DEP agree to work together, to the maximum extent practicable, to formulate, review, and revise plans, policies, and guidelines on the siting of energy facilities in the coastal zone, including but not limited to planning documents such as the State Energy Master Plan, Coastal Mangement Strategy for New Jersey - CAFRA Area, and New Jersey Coastal Management Program - Bay and Ocean Shore Segment.

2. Joint DEP-DOE Coastal Permit Application Processing Sequence

DEP and DOE agree that coastal permit applications for energy facilities over which DOE has coextensive jurisdiction shall be processed according to the following sequence of steps and timetable.

- (a) DEP receives energy facility permit application and begins internal DEP permit application review process.
- (b) DEP promptly refers a copy of the energy facility permit application to DOE, Division of Energy Planning and Conservation for its review and submission to DEP of an Energy Report on the application within

90 days of DOE receipt of the application. The DOE Energy Report shall be transmitted to DEP at least thirty (30) days prior to the applicable statutory or regulatory deadline for decisions by DEP on CAFRA, Wetlands, or waterfront development permits (see the 90 Day Construction Permits Law, C. 232, L. 1975, N.J.A.C. 7:1C-1.8) in order to insure both timely consideration by DEP of DOE's views as well as expeditious decision-making on energy facility permit applications.

- (c) For CAFRA permit applications, DEP shall request additional information from applicants, as reasonably requested in a timely manner by DOE, prior to declaring an application complete for filing (N.J.A.C. 7:7D-2.3(e)1.), at the required public hearing (N.J.A.C. 7:7D-2.3(e)5.iv.), or within 15 days after the public hearing (N.J.A.C. 7:7D-2.3(e)6.i.), prior to declaring the application complete for review (N.J.A.C. 7:7D-2.3(e)6.iii.), to insure that DOE has adequate information to prepare its Energy Report. At its discretion, DOE may submit a Preliminary Energy Report to DEP at least 15 days prior to the date of a scheduled public hearing on a CAFRA permit application, in order to assist DEP in preparing its Preliminary Analysis of the application (N.J.A.C. 7:7D-2.3(e)4.).
- (d) For Wetlands and waterfront development permit applications, DEP shall request additional information from applicants, as reasonably requested in a timely manner by DOE, before declaring an application complete (N.J.A.C. 7:1C-1.7(a)2.), to insure that DOE has adequate information to prepare its Energy Report.
- (e) For proposed coastal energy facilities that require a CAFRA permit and either or both of a Wetlands and waterfront development permit, DEP shall coordinate the review process, including review of the adequacy of submitted information, public hearings, and decision documents, under the auspices of the review process for the CAFRA permit application, including its information requirements. Specifically, a Wetlands or waterfront development permit application shall not be declared complete, triggering the 90 day permit decision period under the 90 Day Construction Permits Law (C. 232, L. 1975), until the CAFRA permit application is declared complete for review (N.J.A.C. 7:7D-2.3(e)6.iii.).
- (f) DEP issues decision on the coastal permit application. If DOE has submitted an Energy Report in a timely manner, the DEP decision document shall refer to the Energy Report and indicate DEP's reasons for differences, if any, between the DEP decision and the DOE Energy Report.

3. Appeals of DEP Coastal Energy Facility Permit Application Decisions

DEP's decisions on CAFRA, Wetlands, and waterfront development permit applications may be appealed administratively by an applicant or an interested third party. DOE may refer a DEP decision that differs with DOE's Energy Report to the Energy Facility Review Board for a decision binding upon DEP. Since multiple possible avenues of appeal exist, DEP and DOE agree that appeals shall be heard according to the following procedure (to be incorporated by appropriate regulations of DEP, the Coastal Area Review Board, and DOE).

- (a) DOE may convene the Energy Facility Review Board only if its Energy Report submitted to DEP differs with the DEP decision.
- (b) If an applicant and/or an interested third party appeals a CAFRA permit decision to the Coastal Area Review Board, or appeals a CAFRA or Wetlands decision by DEP's Division of Marine Services to the Commissioner for a plenary (quasi-judicial) hearing, or appeals a waterfront development permit decision by DEP's Division of Marine Services to the Natural Resource Council (N.J.A.C. 7:1C-1.9(b)), DOE shall be a party of interest at the appeal. If the final decision on appeal of either the Coastal Area Review Board, Commissioner, or Natural Resource Council differs with the DOE Energy Report submitted to DEP before the initial administrative decision, then DOE may convene the Energy Facility Review Board.
- (c) The Energy Facility Review Board may affirm, reverse, or modify the initial DEP administrative decision or the decision on appeal.
- (d) Appellant parties may seek judicial relief as appropriate.

4. Basis of Energy Report

- (a) DOE and DEP agree to accept the New Jersey Coastal Management Program - Bay and Ocean Shore Segment (and subsequent segment), as approved by the Governor, and particularly its coastal resource and development policies, and the Energy Master Plan, as the basis for the formulation of the DOE Energy Report with respect to the siting of energy facilities in the coastal zone.
- (b) DOE and DEP agree that the DOE Energy Report shall include an evaluation of the need for the proposed energy facility, to be used by both DOE and DEP as one of many factors to be considered in preparation of the Energy Report and decision, respectively.

5. Coastal Energy Impact Program

- (a) DOE and DEP agree to work cooperatively in DOE's administration of the federal Coastal Energy Impact Program in New Jersey.
- (b) DEP will participate fully in the New Jersey CEIP Intrastate Allocation Committee's deliberations.
- (c) One copy of all CEIP applications submitted to DOE shall be referred by DOE to DEP for an initial review of the application's compatibility or consistency, as appropriate, with the State's developing or approved coastal management program (15 CFR 931.26(a)(3), Federal Register, Vol. 43, No. 37 - February 23, 1978, p. 7554).
- (d) One copy of all final work products and reports prepared with financial assistance under the Coastal Energy Impact Program shall be transmitted to DEP, as a standard condition of CEIP grants passed through to state agencies and units of local governments by DOE.

6. National Interests in Energy Facility Siting

DEP and DOE agree to consider the national interests in siting energy facilities in New Jersey's coastal zone, as defined in the New Jersey Coastal Management Program - Bay and Ocean Shore Segment, as approved by the Governor, in the DEP coastal energy facility permit application process and the DOE Energy Report preparation process. DEP agrees to interpret the opportunity under CAFRA to consider the "public health, safety and welfare" (N.J.S.A. 13:19-4) as sufficient authority to consider the national interests in the siting of coastal energy facilities. DOE agrees to interpret its mandate to "... contribute to the proper siting of energy facilities necessary to serve the public interest ..." (N.J.S.A. 25:27F-2) as sufficient authority to consider the national interests in the siting of coastal energy facilities.

7. Federal Consistency

DEP and DOE agree that both agencies shall participate in the State's decision to issue a determination of consistency under Section 307 of the Federal Coastal Zone Management Act for coastal energy facilities. As required by federal regulations (15 CFR 930.18), DEP shall receive, and forward promptly to DOE, all materials necessary for consistency determinations on coastal energy facilities. In the event of a disagreement between DEP and DOE, the Energy Facility Review Board shall be convened and shall make a recommendation to the Governor, who shall make the final determination within the applicable time limit. As required by federal regulations (15 CFR 930.18), DEP will then transmit the final federal consistency determination to the appropriate federal agency.

8. Effective Date

This Memorandum of Understanding shall take effect immediately upon its execution by the Commissioners of DOE and DEP.

Joel R. Jacobsen
Commissioner
Department of Energy

Date

Rocco D. Ricci, P.E.
Commissioner
Department of Environmental
Protection

Date

This Memorandum has been reviewed as to form and content.

John Degnan
Attorney General of New Jersey

By _____
Deputy Attorney General

Date

Introduction

The New Jersey Coastal Management Program - Bay and Ocean Shore Segment relies upon certain New Jersey State laws and adopted rules for its legal authority and the enforceability of its coastal resource and development policies. This Appendix briefly describes these key legal authorities and gives the appropriate citation reference to either the New Jersey Statutes Annotated (N.J.S.A.) or the New Jersey Administrative Code (N.J.A.C.). In addition, this Appendix concludes by reprinting two laws in their entirety: the Coastal Area Facility Review Act and the Wetlands Act.

Coastal Area Facility Review Act

Law

N.J.S.A. 13:19-1 et seq. enacted June 20, 1973; effective September 19, 1973 (reprinted in this Appendix).

Rules

N.J.A.C. 7:7D-1.0 et seq. - Coastal Area Review Board; effective November 18, 1975. These rules establish the procedures of the Coastal Area Review Board, a body composed of three cabinet members and created by N.J.S.A. 13:19-13, and which may hear appeals from decisions on CAFRA permit applications by the Director of the Division of Marine Services.

N.J.A.C. 7:7D-2.0 et seq. - CAFRA Procedural Rules and Regulations; effective April 5, 1977. These rules establish the permit application and exemption request procedures of DEP under the Coastal Area Facility Review Act.

Administrative Order

No. 32, November 3, 1975, by DEP Commissioner David J. Bardin; effective November 10, 1975. This Administrative Order delegated decision-making authority on CAFRA permit applications from the Commissioner to the Director, Division of Marine Services.

No. 35, December 4, 1975, by DEP Commissioner David J. Bardin, effective December 8, 1975. This Administrative Order established the Office of Coastal Zone Management in DEP's Division of Marine Services. Under the Administrative Order, the Chief of the Office of Coastal Zone Management reports directly to the DEP Commissioner with respect to planning under N.J.S.A. 13:19-16 and under the federal Coastal Zone Management Act, but reports to the Director of the Division of Marine Services with respect to the CAFRA permit program.

Wetlands Act

Law

N.J.S.A. 13:9A-1 et seq.; effective November 5, 1970 (reprinted in this Appendix)

Rules

N.J.A.C. 7:7A-1.1 et seq.; effective April 13, 1972. The New Jersey Wetlands Order Basis and Background, adopted in 1972, defined the rationale for the regulation of coastal wetlands. Independent contractors for DEP prepared maps of wetlands at a scale of 1:2,400 (one inch = 200 feet). DEP then adopted the Wetlands Order, including the maps delineating wetlands areas, on a county-by-county rule-making process, with notice to affected property owners, from 1972-1977 (N.J.A.C. 7:7A-1.2). The order defines regulated activities, and prohibits certain activities on wetlands, while the Procedural Regulations (N.J.A.C. 7:7A-1.3 et seq.) establish permit application procedures and project review criteria, and list the wetlands maps.

Administrative Order

No. 12, December 8, 1977, by DEP Commissioner Rocco D. Ricci; effective December 8, 1977. This Administrative Order delegated decision-making authority on Wetlands permit applications from the Commissioner to the Director, Division of Marine Services and specified that appeals of the Director's decision shall be submitted to the Commissioner.

Riparian Statutes

Law

N.J.S.A. 12:3-1 through 12:3-71; enacted at various dates beginning 1869. These laws define the procedures and standards for leases, grants, and conveyances of riparian lands.

N.J.S.A. 12:5-1 through 12:5-11; enacted at various dates beginning 1914. These laws define the procedures and standards for the management of waterfront and harbor facilities, including waterfront development permits.

N.J.S.A. 13:1B-10, 11, 12; enacted at various dates beginning 1948. These laws define the powers, functions, and duties of the Natural Resource Council, which decides riparian lands management real estate matters and reviews some waterfront development permit applications.

N.J.S.A. 13:1B-13; enacted 1948. This law defines the procedure for approval of riparian leases and grants.

N.J.S.A. 13:1B-13.1 through 13:1B-13.51; enacted 1968. This law, part of the statute creating the Hackensack Meadowlands Development Commission, mandates tidelands delineation studies and the surveys in the Meadowlands and defines procedures for conveyances of State-owned riparian lands in the Meadowlands.

90 Day Construction Permits Law

Law

C.232, L. 1975 (supplements N.J.S.A. 13:1D-1 et seq., amends N.J.S.A. 12:5-2, 12:5-3, 58:1-26 and 58:1-27, and repeals N.J.S.A. 12:5-4); enacted October 23, 1975; effective December 22, 1975. The law provides for the

approval, conditional approval, or disapproval of applications under five DEP-administered construction permit programs within 90 days of completion of an application. Otherwise it is deemed approved.

Rules

N.J.A.C. 7:1C-1.0 et seq.; effective December 22, 1975; revised October 10, 1977. These rules implement the 90 Day Construction Permits Law.

Rules

N.J.A.C. 7:1C-1.0 et seq.; effective December 22, 1975; revised October 10, 1977. These rules implement the 90 Day Construction Permits Law.

Shore Protection

Law

N.J.S.A. 12:6A-1 et seq.; enacted at various dates beginning 1940. The law authorizes DEP to carry out structural and non-structural shore protection programs and undertake dredging of waterways and streams.

Department of Energy

Law

N.J.S.A. 52:27-1 et seq.; enacted and effective July 11, 1977. This law created a new cabinet-level executive department, with co-extensive jurisdiction with other State agencies, including DEP, on energy facility siting.

Reprinted Laws

The Coastal Area Facility Review Act and the Wetlands Act are reprinted in full on the following pages.

CHAPTER 185

AN ACT to provide for the review of certain facilities in the coastal area and making an appropriation therefor.

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

C. 13:19-1 Short title.

1. This act shall be known and may be cited as the "Coastal Area Facility Review Act."

C. 13:19-2 Declaration of policy.

2. The Legislature finds and declares that New Jersey's bays, harbors, sounds, wetlands, inlets, the tidal portions of fresh, saline or partially saline streams and tributaries and their adjoining upland fastland drainage area nets, channels, estuaries, barrier beaches, near shore waters and intertidal areas together constitute an exceptional, unique, irreplaceable and delicately balanced physical, chemical and biologically acting and interacting natural environmental resource called the coastal area, that certain portions of the coastal area are now suffering serious adverse environmental effects resulting from existing facility activity impacts that would preclude or tend to preclude those multiple uses which support diversity and are in the best long-term, social, economic, aesthetic and recreational interests of all people of the State; and that, therefore, it is in the interest of the people of the State that all of the coastal area should be dedicated to those kinds of land uses which promote the public health, safety and welfare, protect public and private property, and are reasonably consistent and compatible with the natural laws governing the physical, chemical and biological environment of the coastal area.

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It is further declared that the coastal area and the State will suffer continuing and ever-accelerating serious adverse economic, social and aesthetic effects unless the State assists, in accordance with the provisions of this act, in the assessment of impacts, stemming from the future location and kinds of facilities within the coastal area, on the delicately balanced environment of that area.

The Legislature further recognizes the legitimate economic aspirations of the inhabitants of the coastal area and wishes to encourage the development of compatible land uses in order to improve the overall economic position of the inhabitants of that area within the framework of a comprehensive environmental design strategy which preserves the most ecologically sensitive and fragile area from inappropriate development and provides adequate environmental safeguards for the construction of any facilities in the coastal area.

C. 13:19-3 Definitions.

3. For the purposes of this act, unless the context clearly requires a different meaning, the following words shall have the following meanings:

a. "Commissioner" means the State Commissioner of Environmental Protection.

b. "Department" means the State Department of Environmental Protection.

c. "Facility" includes any of the facilities designed or utilized for the following purposes:

(1) Electric power generation—

Oil, gas, or coal fired or any combination thereof.

Nuclear facilities.

(2) Food and food byproducts—

Beer, whiskey and wine production.

Fish processing, including the production of fish meal and fish oil.

Slaughtering, blanching, cooking, curing, and pickling of meats and poultry.

Trimming, culling, juicing, and blanching of fruits and vegetables.

Animal matter rendering plants.

Operations directly related to the production of leather or furs such as, but not limited to, unhairing, soaking, deliming, baiting, and tanning.

Curing and pickling of fruits and vegetables.

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Pasteurization, homogenization, condensation, and evaporation of milk and cream to produce cheeses, sour milk, and related products.

Coffee bean and cocoa bean roasting.

(3) Incineration wastes—

Municipal wastes (larger than or equal to 50 tons per day).

Automobile body (20 automobiles per hour or larger).

(4) Paper production—

Pulp mills.

Paper mills.

Paperboard mills.

Building paper mills.

Building board mills.

(5) Public facilities and housing—

Sanitary landfills,

Waste treatment plants (sanitary sewage).

Road, airport, or highway construction.

New housing developments of 25 or more dwelling units or equivalent.

Expansion of existing developments by the addition of 25 or more dwelling units or equivalent.

(6) Agri-chemical production—

Pesticides manufacture and formulation operations or either thereof.

Superphosphate animal feed supplement manufacture.

Production of normal superphosphate.

Production of triple superphosphate.

Production of diammonium phosphate.

(7) Inorganic acids and salts manufacture—

Hydrofluoric acid and common salts.

Hydrochloric acid and common salts.

Nitric acid and common salts.

Sulfuric acid and common salts.

Phosphoric acid and common salts.

Chromic acid, including chromate and dichromate salts.

(8) Mineral products—

Asphalt batching and roofing operations including the preparation of bituminous concrete and concrete.

Cement production, including Portland, natural, masonry, and pozzolan cements.

Coal cleaning.

Clay, clay mining, and fly-ash sintering.

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Calcium carbide production.

Stone, rock, gravel, and sand quarrying and processing.

Frit and glass production.

Fiberglass production.

Slag, rock and glass wool production (mineral wool).

Lime production, including quarrying.

Gypsum production, including quarrying.

Perlite manufacturing, including quarrying.

Asbestos fiber production.

(9) Chemical processes—

Ammonia manufacture.

Chlorine manufacture.

Caustic soda production.

Carbon black and charcoal production, including channel, furnace, and thermal processes.

Varnish, paint, lacquer, enamel, organic solvent, and inorganic or organic pigment manufacturing or formulating.

Synthetic resins or plastics manufacture including, but not limited to, alkyd resins, polyethylene, fluorocarbons, polypropylene, and polyvinylchloride.

Sodium carbonate manufacture.

Synthetic fibers production including, but not limited to, semi-synthetics such as viscose, rayon, and acetate, and true synthetics such as, but not limited to, nylon, orlon, and dacron, and the dyeing of these semi and true synthetics.

Synthetic rubber manufacture, including but not limited to, butadiene and styrene copolymers, and the reclamation of synthetic or natural rubbers.

The production of high and low explosives such as, but not limited to, TNT and nitrocellulose.

Soap and detergent manufacturing, including but not limited to, those synthetic detergents prepared from fatty alcohols or linear alkylate.

Elemental sulfur recovery plants not on the premises where petroleum refining occurs.

Used motor or other oil or related petroleum product reclamation operations.

Petroleum refining, including but not limited to, distillation, cracking, reforming, treating, blending, polymerization, isomerization, alkylation, and elemental sulfur recovery operations.

Organic dye and dye intermediate manufacturing.

Hydrogen cyanide or cyanide salts manufacture or use.

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Glue manufacturing operations.

Manufacturing, fabricating, or processing medicinal and pharmaceutical products including the grading, grinding, or milling of botanicals.

(10) Storage—

Bulk storage, handling, and transfer facilities for crude oil, gas and finished petroleum products not on the premises where petroleum refining occurs.

Bulk storage, handling, transfer and manufacturing facilities of gas manufactured from inorganic and organic materials including coal gas, coke oven gas, water gas, producer, and oil gases.

(11) Metallurgical processes—

Production of aluminum oxide and aluminum metal and all common alloys, such as those with copper, magnesium, and silicon.

Production of titanium metal, salts, and oxides.

Metallurgical coke, petroleum coke, and byproduct coke manufacturing.

Copper, lead, zinc, and magnesium smelting and processing.

Ferroalloys manufacture such as, but not limited to, those combined with silicon, calcium, manganese and chrome.

Integrated steel and iron mill operations including, but not limited to, open hearth, basic oxygen, electric furnace, sinter plant, and rolling, drawing, and extruding operations.

Melting, smelting, refining, and alloying of scrap or other substances to produce brass and bronze ingots.

Gray iron foundry operations.

Steel foundry operations.

Beryllium metal or alloy production, including rolling, drawing and extruding operations.

Operations involving silver, arsenic, cadmium, copper, mercury, lead, nickel, chromium, and zinc including, but not limited to, production, recovery from scrap or salvage, alloy production, salt formation, electroplating, anodizing, and metallo-organics compound products preparation.

Stripping of oxides from and the cleaning of metals prior to plating, anodizing, or painting.

(12) Miscellaneous—

Operations involving the scouring, desizing, cleaning, bleaching, and dyeing of wool.

Wood preserving processes which use coal or petroleum based products such as, but not limited to, coal tars and/or creosotes.

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Manufacture, use, or distillation of phenols, cresols, or coal tar materials.

Manufacture of lead acid storage batteries and/or storage batteries produced from other heavy metals, such as nickel or cadmium.

Installation of above or underground pipelines designed to transport petroleum, natural gas, and sanitary sewage.

Operations involving the dyeing, bleaching, coating, impregnating, or glazing of paper.

Dyeing, bleaching, and printing of textiles other than wool. Chemical finishing for water repelling, fire resistance, and mildew proofing, including preshrinking, coating and impregnating.

Sawmill and planing mill operations.

Marine terminal and cargo handling facilities.

d. "Person" means and shall include corporations, companies, associations, societies, firms, partnerships and joint stock companies as well as individuals and governmental agencies.

e. "Governmental agencies" means the Government of the United States, the State of New Jersey, or any other states, their political subdivisions, agencies, or instrumentalities thereof, and interstate agencies.

C. 13:19-4 "Coastal area" defined.

4. The "coastal area" shall consist of all that certain area lying between the line as hereinafter described and the line formed by the State's seaward (Raritan Bay and Atlantic ocean) territorial jurisdiction on the east thereof, the State's bayward (Delaware Bay) territorial jurisdiction on the south and southwest thereof, and the State's riverward (Delaware River) territorial jurisdiction on the west thereto. Beginning at the confluence of Cheesequake Creek with the Raritan Bay; thence southwesterly along the center line of Cheesequake Creek to its intersection with the Garden State Parkway; thence southeasterly along the Garden State Parkway to Exit 117 at State Highway 36; thence northeasterly along State Highway 36 to the intersection of Middle Road (County 516); thence easterly along Middle Road to the intersection of Palmer Avenue (County 7); thence northeasterly on Main Street to the intersection of State Highway 36; thence easterly on State Highway 36 to the intersection of Navesink Avenue; thence southerly on Navesink Avenue to the intersection of Monmouth Avenue at Navesink; thence westerly on Monmouth Avenue to its intersection with Browns Dock Road; thence southerly on Browns Dock

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Road to its intersection with Cooper Road; thence southwesterly on Cooper Road to the intersection of State Highway 35; thence southerly on State Highway 35 to its intersection with State Highway 71; thence southeasterly on State Highway 71 to its crossing of the Central Railroad of New Jersey tracks; thence southerly along the Central Railroad of New Jersey tracks to its intersection of 6th Avenue (County 2); thence westerly on 6th Avenue (County 2) to the intersection of State Highway 33; thence westerly along State Highway 33 to the crossing of State Highway 18; thence southerly on State Highway 18 to its intersection of Marconi Road; thence southeasterly on Marconi Road to Adrienne Road, continuing south on Adrienne Road to Belmar Boulevard; thence easterly on Belmar Boulevard and 16th Avenue to the intersection of State Highway 71; thence southerly on State Highway 71 to the intersection of State Highway 35; thence northwesterly along State Highway 35 to State Highway 34 at the Brielle Circle; thence northwesterly along State Highway 34 to the Garden State Parkway at Exit 96; thence southwesterly along the Garden State Parkway to the intersection of the Monmouth, Ocean County boundary; thence westerly along said boundary to the intersection of the Central Railroad of New Jersey tracks; thence southwesterly along the tracks of the Central Railroad of New Jersey to its junction with the tracks of the Pennsylvania Railroad near Whiting; thence easterly along the tracks of the Pennsylvania Railroad to its intersection with the Garden State Parkway near South Toms River; thence southerly along the Garden State Parkway to its intersection with County Road 539 at Garden State Parkway exit 58; thence northerly along County Road 539 to its intersection with Martha-Stafford Forge Road; thence westerly along Martha-Stafford Forge Road to its intersection with Spur 563; thence northerly along Spur 563 to its intersection with County Road 563; thence southerly along County Road 563 to its intersection with County Road 542 at Green Bank; thence northwesterly along County Road 542 to its intersection with Weekstown-Pleasant Mills Road; thence southeasterly along Weekstown-Pleasant Mills Road to its intersection with County Road 563 at Weekstown; thence southeasterly along County Road 563 to its intersection with Clarks Landing Road leading to Port Republic; thence easterly along Clarks Landing Road to its intersection with the Garden State Parkway; thence southerly along the Garden State Parkway to its intersection with Alt. 559, and thence northwesterly along Alt. 559 to its intersection with County Road 559 at Gravelly Run; thence

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northwesterly along County Road 559 to its intersection with U. S. 40 and S. R. 50 at Mays Landing; thence westerly along combined U. S. 40 and S. R. 50 to its intersection with S. R. 50; thence southerly on S. R. 50 to its intersection with Buck Hill Road near Buck Hill; thence westerly along Buck Hill (River Road) Road to its intersection with S. R. 49; thence southeasterly along S. R. 49 to its intersection with S. R. 50; thence southeasterly along S. R. 50 to its intersection with County Road 585; thence southwestwardly along County Road 585 to its intersection with S. R. 47 at Dennisville; thence northwesterly along S. R. 47 to its intersection with State Road 49 at Millville; thence through Millville along State Road 49 to its intersection with County Road 555; thence southerly along County Road 555 to its intersection with County Road 27; thence southerly along County Road 27 to its intersection with County Road 70; thence southerly on County Road 70 to the Center of Mauricetown; thence through Mauricetown westerly on County Road 548 to its intersection with the tracks of the Central Railroad of New Jersey; thence northwesterly on the tracks of the Central Railroad of New Jersey to its intersection with County Road 98; thence easterly along County Road 98 to the intersection with County Road 38; thence northerly along County Road 38 to its intersection with S. R. 49 east of Bridgeton; thence westerly along S. R. 49 through Bridgeton to its intersection with County Road 5 (Roadstown Road); thence westerly along County Road 5 (Roadstown Road) to Roadstown; thence northwesterly along the Roadstown Road to County Road 47; thence southwestwardly along County Road 47 to its intersection with County Road 19; thence along County Road 19 northwesterly to Gum Tree Corner; thence northwesterly along County Road 19 from Gum Tree Corner across Stowe Creek to its intersection with Salem County Road 59 (Hancock's Bridge Road); thence northwesterly along County Road 59 to its intersection with County Road 51 at Coopers Branch; thence northeasterly along County Road 51 to its intersection with S. R. 49 at Quinton; thence northwesterly along S. R. 49 to its intersection with County Road 50; thence southwestwardly along County Road 50 to its intersection with County Road 58; thence southerly on County Road 58 to its intersection with County Road 24; thence westerly along County Road 24 to its intersection with County Road 65; thence northerly along County Road 65 (Walnut Street) to its intersection with County Road 4; thence westerly along County Road 4 and northerly along

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County Road 4 and thence easterly along County Road 4 to its intersection with State Road 49; thence northerly along State Road 49 (Front Street) to its intersection with County Road 57; thence easterly along County Road 57 to its intersection with State Road 45; thence northerly along State Road 45 to its intersection with County Road 540 at Pointers; thence northerly and northwesterly along County Road 540 (Deepwater-Slapes Corner Road) to its intersection with the New Jersey Turnpike; thence westerly along the New Jersey Turnpike to its intersection with County Road 33; thence southerly along County Road 33 to its intersection with State Road 49; thence southeasterly along S. R. 49 to its intersection with County Road 26; thence northwesterly along County Road 26 to the Killcohook National Wildlife Refuge; thence northwesterly along this northeasterly boundary to the limits of the State's territorial jurisdiction on the Delaware River; provided, however, that the coastal area shall not include all that certain area in Cape May County lying within a line beginning at the intersection of S. R. 47 and County Road 54; thence westerly on County Road 54; to the intersection of County Road 3; thence southeasterly on County Road 3 through the intersection of County Road 3 with County Road 13 to the intersection with County Road 47; thence easterly and northerly along County Road 47 to its intersection with State Road 9; thence northerly along State Road 9 to its intersection with State Road 47; thence westerly along State Road 47 to its intersection with County Road 54.

C. 13:19-5 Permit to construct facility.

5. No person shall construct or cause to be constructed a facility in the coastal area until he has applied for and received a permit issued by the commissioner; however, the provisions of this act shall not apply to facilities for which on-site construction, including site preparation, was in process on or prior to the effective date of this act.

C. 13:19-6 Application for permit.

6. Any person proposing to construct or cause to be constructed a facility in the coastal area shall file an application for a permit with the commissioner, in such form and with such information as the commissioner may prescribe. The application shall include an environmental impact statement as described in this act.

C. 13:19-7 Contents of environmental impact statement.

7. The environmental impact statement shall provide the information needed to evaluate the effects of a proposed project upon the environment of the coastal area.

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The statement shall include:

- a. An inventory of existing environmental conditions at the project site and in the surrounding region which shall describe air quality, water quality, water supply, hydrology, geology, soils, topography, vegetation, wildlife, aquatic organisms, ecology, demography, land use, aesthetics, history, and archeology; for housing, the inventory shall describe water quality, water supply, hydrology, geology, soils and topography;
- b. A project description which shall specify what is to be done and how it is to be done, during construction and operation;
- c. A listing of all licenses, permits or other approvals as required by law and the status of each;
- d. An assessment of the probable impact of the project upon all topics described in a.;
- e. A listing of adverse environmental impacts which cannot be avoided;
- f. Steps to be taken to minimize adverse environmental impacts during construction and operation, both at the project site and in the surrounding region;
- g. Alternatives to all or any part of the project with reasons for their acceptability or nonacceptability;
- h. A reference list of pertinent published information relating to the project, the project site, and the surrounding region.

C. 13:19-8 Declaration of completeness of application.

8. a. Within 30 days following receipt of an application, the commissioner shall notify the applicant in writing regarding its completeness. The commissioner may declare the application to be complete for filing or may notify the applicant of specific deficiencies. The commissioner, within 15 days following the receipt of additional information to correct deficiencies, shall notify the applicant of the completeness of the amended application. The application shall not be considered to be filed until it has been declared complete by the commissioner.

b. The commissioner, within 15 days of declaring the application complete for filing, shall set a date for the hearing. The date for the hearing shall be set not later than 60 days after the application is declared complete for filing.

C. 13:19-9 Hearing.

9. a. The commissioner, or a member of the department designated by him, shall hold a hearing to afford interested parties standing and the opportunity to present, orally or in writing, both their

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position concerning the application and any data they may have developed in reference to the environmental effects of the proposed facility.

b. The commissioner, within 15 days after the hearing, may require an applicant to submit any additional information necessary for the complete review of the application.

C. 13:19-10 Review of applications; required findings.

10. The commissioner shall review filed applications, including the environmental impact statement and all information presented at public hearings. He shall issue a permit only if he finds that the proposed facility:

a. Conforms with all applicable air, water and radiation emission and effluent standards and all applicable water quality criteria and air quality standards.

b. Prevents air emissions and water effluents in excess of the existing dilution, assimilative, and recovery capacities of the air and water environments at the site and within the surrounding region.

c. Provides for the handling and disposal of litter, trash, and refuse in such a manner as to minimize adverse environmental effects and the threat to the public health, safety, and welfare.

d. Would result in minimal feasible impairment of the regenerative capacity of water aquifers or other ground or surface water supplies.

e. Would cause minimal feasible interference with the natural functioning of plant, animal, fish, and human life processes at the site and within the surrounding region.

f. Is located or constructed so as to neither endanger human life or property nor otherwise impair the public health, safety, and welfare.

g. Would result in minimal practicable degradation of unique or irreplaceable land types, historical or archeological areas, and existing scenic and aesthetic attributes at the site and within the surrounding region.

C. 13:19-11 Grounds for denial of permit application; conditional permit; approval of nuclear electricity generating facility.

11. Notwithstanding the applicant's compliance with the criteria listed in section 10 of this act, if the commissioner finds that the proposed facility would violate or tend to violate the purpose and intent of this act as specified in section 2, or if the commissioner finds that the proposed facility would materially contribute

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to an already serious and unacceptable level of environmental degradation or resource exhaustion, he may deny the permit application, or he may issue a permit subject to such conditions as he finds reasonably necessary to promote the public health, safety and welfare, to protect public and private property, wildlife and marine fisheries, and to preserve, protect and enhance the natural environment. In addition, the construction and operation of a nuclear electricity generating facility shall not be approved by the commissioner unless he shall find that the proposed method for disposal of radioactive waste material to be produced or generated by such facility will be safe, conforms to standards established by the Atomic Energy Commission and will effectively remove danger to life and the environment from such waste material.

C. 13:19-12 Notification to applicant.

12. The commissioner shall notify the applicant within 60 days after the hearing as to the granting or denial of a permit. The reasons for granting or denying the permit shall be stated. In the event the commissioner requires additional information as provided for in section 9, he shall notify the applicant of his decision within 90 days following the receipt of the information.

C. 13:19-13 Coastal Area Review Board; creation, membership, voting, powers.

13. There is hereby created the Coastal Area Review Board, in but not of the Department of Environmental Protection, which shall consist of three voting members who shall be the Commissioner of Environmental Protection or his designated representative, the Commissioner of Labor and Industry or his designated representative and the Commissioner of Community Affairs or his designated representative. No vote on a permit request shall be taken unless all voting members are present.

The Coastal Area Review Board shall have the power to hear appeals from decisions of the commissioner pursuant to section 12. The board may affirm or reverse the decision of the commissioner with respect to applicability of any provision of this act to a proposed use; it may modify any permit granted by the commissioner, grant a permit denied by him, deny a permit granted by him, or confirm his grant of a permit. The board shall review filed applications, including the environmental impact statement and all information presented at public hearings and any other information the commissioner makes available to the board prior to the affirmation or reversal of a decision of the commissioner.

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C. 13:19-14 Continuance in force of issued permit.

14. In the event of rental, lease, sale or other conveyances by an applicant to whom a permit is issued, such permit, with any conditions, shall be continued in force and shall apply to the new tenant, lessee, owner, or assignee so long as there is no change in the nature of the facility set forth in the original application.

C. 13:19-15 Effect of denial of application.

15. The denial of an application shall in no way adversely affect the future submittal of a new application.

C. 13:19-16 Environmental inventory; alternate environmental management strategies; environmental design for coastal area.

16. The commissioner shall, within 2 years of the taking effect of this act, prepare an environmental inventory of the environmental resources of the coastal area and of the existing facilities and land use developments within the coastal area and an estimate of the capability of the various area within the coastal area to absorb and react to man-made stresses. The commissioner shall, within 3 years of the taking effect of this act, develop from this environmental inventory alternate long-term environmental management strategies which take into account the paramount need for preserving environmental values and the legitimate need for economic and residential growth within the coastal area. The commissioner shall, within 4 years of the taking effect of this act, select from the alternate environmental management strategies an environmental design for the coastal area. The environmental design shall be the approved environmental management strategy for the coastal area and shall include a delineation of various areas appropriate for the development of residential and industrial facilities of various types, depending on the sensitivity and fragility of the adjacent environment to the existence of such facilities. The environmental inventory, the alternate long-term environmental management strategies and the environmental design for the coastal area shall be presented to the Governor and the Legislature within the time frame indicated herein.

C. 13:19-17 Rules and regulations.

17. The department is hereby authorized to adopt, amend and repeal rules and regulations to effectuate the purposes of this act.

C. 13:19-18 Injunctive relief; penalties.

18. If any person violates any of the provisions of this act, rule, regulation or order promulgated or issued pursuant to the provisions of this act, the department may institute a civil action in

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the Superior Court for injunctive relief to prohibit and prevent such violation or violations and said court may proceed in a summary manner. Any person who violates any of the provisions of this act, rule, regulation or order promulgated or issued pursuant to this act shall be liable to a penalty of not more than \$3,000.00 to be collected in a summary proceeding or in any case before a court of competent jurisdiction wherein injunctive relief has been requested. If the violation is of a continuing nature, each day during which it continues shall constitute an additional, separate and distinct offense. The department is hereby authorized and empowered to compromise and settle any claim for a penalty under this section in such amount in the discretion of the department as may appear appropriate and equitable under the circumstances.

C. 13:19-19 Applicability of act.

19. The provisions of this act shall not be regarded as to be in derogation of any powers now existing and shall be regarded as supplemental and in addition to powers conferred by other laws, including municipal zoning authority. The provisions of this act shall not apply to those portions of the coastal areas regulated pursuant to enforceable orders under the Wetlands Act, C. 13:9A-1 et seq., section 16 however shall apply to the entire area within the boundaries described herein.

C. 13:19-20 Construction of act.

20. This act shall be liberally construed to effectuate the purpose and intent thereof.

C. 13:19-21 Partial invalidity.

21. If any provision of this act or the application thereof to any person or circumstances is held invalid, the remainder of the act and the application of such provision to persons or circumstances other than those to which it is held invalid, shall not be affected thereby.

22. There is hereby appropriated to the Department of Environmental Protection for the purposes of this act the sum of \$100,000.00.

23. This act shall take effect 90 days from the date of enactment, except that section 22 shall take effect immediately.

Approved June 20, 1973.

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CHAPTER 272

AN ACT concerning the protection of natural resources in coastal wetlands, providing for the designation by the Commissioner of Environmental Protection of certain coastal wetlands after public hearing, and requiring permits from the commissioner prior to the dredging, removing, filling or otherwise altering or polluting coastal wetlands.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

C. 13:9A-1 Legislature's findings and declaration of policy; inventory and mapping of tidal wetlands; filing of maps.

1. a. The Legislature hereby finds and declares that one of the most vital and productive areas of our natural world is the so-called "estuarine zone," that area between the sea and the land; that this area protects the land from the force of the sea, moderates our weather, provides a home for water fowl and for 75% of all our fish and shellfish, and assists in absorbing sewage discharge by the rivers of the land; and that in order to promote the public safety, health and welfare, and to protect public and private property, wildlife, marine fisheries and the natural environment, it is necessary to preserve the ecological balance of this area and prevent its further deterioration and destruction by regulating the dredging, filling, removing or otherwise altering or polluting thereof, all to the extent and in the manner provided herein.

b. The Commissioner of Environmental Protection shall, within 2 years of the effective date of this act, make an inventory and maps of all tidal wetlands within the State. The boundaries of such wetlands shall generally define the areas that are at or below high water and shall be shown on suitable maps, which may be reproductions or aerial photographs. Each such map shall be filed in the office of the county recording officer of the county or counties in which the wetlands indicated thereon are located. Each wetland map shall bear a certificate of the commissioner to the effect that it is made and filed pursuant to this act. To be entitled to filing no wetlands map need meet the requirements of R. S. 47:1-6.

C. 13:9A-2 Authority to regulate alteration of coastal wetlands; definition.

2. The Commissioner may from time to time, for the purpose of promoting the public safety, health and welfare, and protecting pub-

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Public and private property, wildlife and marine fisheries, adopt, amend, modify or repeal orders regulating, restricting or prohibiting dredging, filling, removing or otherwise altering, or polluting, coastal wetlands. For the purposes of this act the term "coastal wetlands" shall mean any bank, marsh, swamp, meadow, flat or other low land subject to tidal action in the State of New Jersey along the Delaware bay and Delaware river, Raritan bay, Barnegat bay, Sandy Hook bay, Shewsbury river including Navesink river, Shark river, and the coastal inland waterways extending southerly from Manasquan Inlet to Cape May Harbor, or at any inlet, estuary or tributary waterway or any thereof, including those areas now or formerly connected to tidal waters whose surface is at or below an elevation of 1 foot above local extreme high water, and upon which may grow or is capable of growing some, but not necessarily all, of the following: Salt meadow grass (*Spartina patens*), spike grass (*Distichlis spicata*), black grass (*Juncus gerardi*), saltmarsh grass (*Spartina alterniflora*), saltworts (*Salicornia Europaea*, and *Salicornia bigelovii*), Sea Lavendar (*Limonium carolinianum*), saltmarsh bulrushes (*Scirpus robustus* and *Scirpus paludosus* var. *atlanticus*), sand spurrey (*Spergularia marina*), switch grass (*Panicum virgatum*), tall cordgrass (*Spartina pectinata*), hightide bush (*Iva frutescens* var. *oraria*), cattails (*Typha angustifolia*, and *Typha latifolia*), spike rush (*Eleocharis rostellata*), chairmaker's rush (*Scirpus americana*), bent grass (*Agrostis palustris*), and sweet grass (*Hierochloa odorata*). The term "coastal wetlands" shall not include any land or real property subject to the jurisdiction of the Hackensack Meadowlands Development Commission pursuant to the provisions of P. L. 1968, chapter 404, sections 1 through 84 (C. 13:17-1 through C. 13:17-86).

C. 13:17-3 Adoption, change or repeal of order; hearing, notice; recording, indexing and filing of order; mailing.

3. The commissioner shall, before adopting, amending, modifying or repealing any such order, hold a public hearing thereon in the county in which the coastal wetlands to be affected are located, giving notice thereof to each owner having a recorded interest in such wetlands by mail at least 21 days prior thereto addressed to his address as shown in the municipal tax office records, and by publication thereof at least twice in each of the 3 weeks next preceding the date of such hearing in a newspaper of general circulation in the municipality or municipalities in which such coastal wetlands are located.

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Upon the adoption of any such order or any order amending, modifying or repealing the same, the commissioner shall cause a copy thereof, together with a plan of the lands affected, including reference to the filed wetlands map or maps on which the same are shown and a list of the owners of record of such lands, to be recorded in the office of the county clerk or register of deeds, where it shall be indexed and filed as a judgment, and shall mail a copy of such order and plan to each owner of record of such lands affected thereby.

C. 13:9A-4 "Regulated activity" defined; permit; application; contents; inspection; effect of work to be considered.

4. a. For purposes of this section "regulated activity" includes but is not limited to draining, dredging, excavation or removal of soil, mud, sand, gravel, aggregate of any kind or depositing or dumping therein any rubbish or similar material or discharging therein liquid wastes, either directly or otherwise, and the erection of structures, drivings of pilings, or placing of obstructions, whether or not changing the tidal ebb and flow. "Regulated activity" shall not include continuance of commercial production of salt hay or other agricultural crops or activities conducted under section 7 of this act.

b. No regulated activity shall be conducted upon any wetland without a permit.

c. Any person proposing to conduct or cause to be conducted a regulated activity upon any wetland shall file an application for a permit with the commissioner, in such form and with such information as the commissioner may prescribe. Such application shall include a detailed description of the proposed work and a map showing the area of wetland directly affected, with the location of the proposed work thereon, together with the names of the owners of record of adjacent land and known claimants of rights in or adjacent to the wetland of whom the applicant has notice. All applications, with any maps and documents relating thereto, shall be open for inspection at the office of the Department of Environmental Protection.

d. In granting, denying or limiting any permit the commissioner shall consider the effect of the proposed work with reference to the public health and welfare, marine fisheries, shell fisheries, wildlife, the protection of life and property from flood, hurricane and other natural disasters, and the public policy set forth in section 1. a. of this act.

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C. 13:9A-5 Restraint of violations.

5. The Superior Court shall have jurisdiction to restrain violations of orders issued pursuant to this act.

C. 13:9A-6 Filing of complaint; determination of issue exclusive.

6. Any person having a recorded interest in land affected by any such order or permit, may, within 90 days after receiving notice thereof, file a complaint in the Superior Court to determine whether such order or permit so restricts or otherwise affects the use of his property as to deprive him of the practical use thereof and is therefore an unreasonable exercise of the police power because the order or permit constitutes the equivalent of a taking without compensation. If the court finds the order or permit to be an unreasonable exercise of the police power, the court shall enter a finding that such order or permit shall not apply to the land of the plaintiff; provided, however, that such finding shall not affect any other land than that of the plaintiff. Any party to the suit may cause a copy of such finding to be recorded forthwith in the office of the county clerk or register of deeds, where it shall be indexed and filed as a judgment.

The method provided in this section for the determination of the issue shall be exclusive, and such issue shall not be determined in any other proceeding.

C. 13:9A-7 Certain powers and duties not to be restricted.

7. No action by the commissioner under this act shall prohibit, restrict or impair the exercise or performance of the powers and duties conferred or imposed by law on the State Department of Environmental Protection, the Natural Resource Council and the State Mosquito Control Commission in said Department, the State Department of Health, or any mosquito control or other project or activity operating under or authorized by the provisions of chapter 9 of Title 26 of the Revised Statutes.

C. 13:9A-8 Riparian rights or obligations not affected.

8. Nothing in this act or any permit issued hereunder shall affect the rights of the State in, or the obligations of a riparian owner with respect to, riparian lands.

C. 13:9A-9 Liability in event of violations; penalty.

9. Any person who violates any order by the commissioner, or violates any of the provisions of this act, shall be liable to the State for the cost of restoration of the affected wetland to its condition prior to such violation insofar as that is possible, and shall be punished by a fine of not more than \$1,000.00, to be collected in accordance with the provisions of the Penalty Enforcement Law (N. J. S. 2A:58-1 et seq.).

C. 13:9A-10 Short title.

10. This act may be cited as "The Wetlands Act of 1970."

11. This act shall take effect immediately.

Approved November 5, 1970.

Introduction

Judicial decisions in New Jersey courts have upheld the constitutionality of the State's key coastal laws, the Coastal Area Facility Review Act (N.J.S.A. 13:19-1 et seq.) and the Wetlands Act (N.J.S.A. 13:9A-1 et seq.). New Jersey courts have also expanded the Public Trust Doctrine to protect beach access and recreational uses of the waterfront, as well as the traditional navigation, commerce and fishing rights of the public at the water's edge. Also, the State of New Jersey is actively establishing its claim of ownership of the riparian lands now or formerly flowed by the mean high tide. This Appendix provides a legal commentary to the principal recent judicial decisions involving the laws concerning coastal management in New Jersey.

Coastal Area Facility Review Act

In the case of Toms River Affiliates and Lehigh Construction Company v. Department of Environmental Protection and Coastal Area Review Board 140 N.J. Super 135 (App. Div.), certif den. 71 N.J. 345 (1976), the Appellate Division of Superior Court upheld the constitutionality of CAFRA. The case arose after DEP denied a CAFRA permit application for a ten story, high-rise luxury apartment complex on a 9.5 acre tract of land in Toms River, Ocean County. The developer then administratively appealed to the Coastal Area Review Board. The Coastal Area Review Board unanimously upheld the Department's decision. The applicant then filed an appeal for relief to the Appellate Division, challenging the constitutionality of the CAFRA statute on five points. The applicant contended that: (1) CAFRA did not provide adequate standards for the administration of the Act prior to the preparation of the studies mandated in Section 16 of the Act; it therefore was in violation of Article III, Paragraph I of the New Jersey Constitution; (2) The Act granted zoning powers to the DEP in contravention of the constitutional delegation of such powers to a municipality in violation of Article IV, Paragraph II of the New Jersey Constitution; (3) the Act created an invalid classification by designating a delineated coastal area and omitted other coastal areas in violation of Article I, Paragraph I of the New Jersey Constitution; (4) The Act denied equal protection of the laws in contravention of the Fourteenth Amendment to the Constitution of the United States; and (5) The Act constituted the taking of property in violation of Article I, Paragraph 20 of the Constitution of New Jersey.

On the issue that the CAFRA statute lacked reasonably adequate standards to guide the administrative agency in processing permit applications, the Court stated that Sections 10 and 11 of the Act set forth specific criteria by which the Environmental Impact Statement required for a CAFRA permit could be evaluated.

The Court rejected the applicant's contentions that the statutory delegation of power to the DEP to grant or deny permits for construction of housing was in violation of the constitutional provision authorizing the Legislature to enact general laws under which municipalities may adopt zoning ordinances and that CAFRA did not provide guidelines parallel to those incorporated in the Municipal Zoning Enabling Act (N.J.S.A. 40:55-30 et seq.).

The Court stated unequivocally that the police power of the State was not exhausted by the delegation of zoning power to the municipality. The State retained a quantum of reserved police power to delegate such authority to one or more agencies of the State government as the Legislature may deem appropriate. The State's delegation of such authority to the Hackensack Meadowlands Development Commission provided a precedent on this issue. On the issue of conflict between a local zoning regulation and CAFRA, the Court noted that the exercise of such power by the State was a valid exercise of police power and that the conflict represents no constitutional infirmity.

The assertion by appellants that CAFRA violated Article IV, Section 7, Paragraph 9 of the New Jersey Constitution and the Fourteenth Amendment to the United States Constitution because it classified one section of the coastal area and excluded others was struck down as without substance. The Court noted that the CAFRA Statute should be read in light of the intention of the Legislature which recognized that the coastal area was a unique and irreplaceable portion of the state. Its importance to the public health and welfare supports the reasonableness of the special legislative treatment regulating that area. In view of the presumption of the constitutional validity, the court noted, the limitation of the Act to the portion delineated by the statutory boundaries constituted a valid exercise of discretionary power vested in the Legislature. Boundaries of areas demanding regulations cannot be formulated with mathematical perfection. The mere fact that the property of the appellants is subject to the Act's provision, while property in other parts of the state is not so regulated does not establish a Fourteenth Amendment deprivation of equal protection. In addition, the Court stated that the appellants presented no evidence for the claim of arbitrariness in the classification adopted by the Legislature. If the classification is not arbitrary and all persons within a controlled area are treated alike, the legislation is not a special law nor violative of the Fourteenth Amendment.

The Court labeled the taking issue in this case as specious. A particular use of property may be frustrated, but so long as alternative uses for development exist, no taking of private property can be claimed by the appellants.

In the case of Public Interest Research Group of New Jersey, et. al. v. Department of Environmental Protection and Public Service Electric and Gas Co., 153 N.J. Super 191 (App. Div.), certif. den. ___ N.J. ___ (1977), the Court upheld the decision of DEP, as upheld unanimously on appeal by the Coastal Area Review Board, to approve a CAFRA permit for the Hope Creek Nuclear Generating Station (Units 1 and 2) at Artificial Island in Lower Alloways Creek Township, Salem County. The Court rejected the appellants' procedural contention that DEP should have conducted an adversarial hearing with cross-examination of witnesses and findings of fact and conclusions of law, instead of the two quasi-legislative, fact-finding hearings held before the DEP decision. The Court also ruled that the DEP decision to grant a conditional permit was reasonable. The Court concurred with DEP that Public Service Electric and Gas Co. complied with the findings of Section 10 and 11 of the Act.

The Court also rejected the contention of appellants and the Public Advocate, who submitted an amicus brief, that the environmental impact statement submitted by Public Service Electric and Gas Company was legally deficient.

Wetlands Act

In the case of Sands Point Harbor, Inc. v. Richard J. Sullivan, 140 N.J. Super 436 (App. Div. 1975), the Appellate Division found that the Wetlands Act of 1970, N.J.S.A. 13:9A-1 et seq. and the regulations N.J.A.C. 7:7A-1 et seq. adopted pursuant to the Wetlands Act did not violate the Constitutions of the State of New Jersey and of the United States.

The applicant, a private developer, alleged that the statute and regulations both deprived him of equal protection under law as guaranteed by the Fourteenth Amendment of the Constitution of the United States and by Article I, Paragraph I of the New Jersey Constitution, and further that the statutes and regulations constituted a taking of property without just compensation in violation of Article I, Paragraph 20 of the New Jersey Constitution.

The applicant's "equal protection" argument was predicated upon the fact that only coastal wetlands were regulated by the Wetlands Act and that wetlands subject to the Hackensack Meadowlands Development Commission (N.J.S.A. 13:17-1 et seq.) were specifically excluded from the Wetlands Act. The Court tersely noted that classification in legislation is not constitutionally prohibited, and that the Legislature is granted a wide range of discretion to treat subject matter of legislation differently, so long as the classification is reasonable and related to the basic object of the legislation. The Appellate Division stated that classifying coastal wetlands as a separate object of protection was reasonable, considering that wetlands north of Raritan Bay are characterized by heavy industrial, commercial, or residential development. The only other broad contiguous area of wetlands in the state was within the special legislatively defined Hackensack Meadowlands Development District, and a classification by statute of this area afforded reasonable grounds for the disparate treatment of land in these different areas of the State.

On the so-called "taking issue", the applicant relied upon a New Jersey Supreme Court case which struck down a municipal zoning ordinance severely restricting the use of swamp land. The restrictions in this case, however, were of such a nature that the only practical use which could be made of the property was as a hunting or fishing preserve. The taking test, as defined by the New Jersey Supreme Court, was whether no practical use could be made of the land so as to constitute a taking without just compensation.

The Appellate Division found in the Sands Point case that the only activities absolutely prohibited under the Wetlands Act were the dumping of solid waste, discharging of sewage, and storage and application of pesticides. Since the Commissioner of Environmental Protection must consider the effect of a proposed activity upon the public health and welfare, marine and shellfisheries, wildlife, and the protection of property from flood, hurricane or other disasters, such criteria were reasonable and did not so restrain virtually all activities so as to be in violation of the New Jersey Constitution.

In Carton et al vs. State of New Jersey, Commissioner of Environmental Protection (A-638-73 (1978)), argued before the Appellate Division of the Superior Court in December 1977, the plaintiffs argued that the Wetlands Act constituted a taking of private property without just compensation. The plaintiffs contended that

the Act was vague, unreasonable and unconstitutional, but the Court, citing Sands Point Harbor held that the Act was a valid exercise of governmental power and did not constitute a taking. The Carton case is currently under appeal to the New Jersey Supreme Court.

Tidelands and Riparian Cases

Numerous issues concerning riparian or tidelands management in the coastal zone of New Jersey are not expressly addressed or resolved in Titles 12 and 13 of the Revised New Jersey Statutes, which contain the bulk of riparian statutory authority. The case law decisions described in this section have established key principles in riparian law.

The case of O'Neill v. State Highway Department 50 N.J. 307 (1967) involved an ownership dispute of lands along the Hackensack River. The State asserted title to these lands. In its opinion, the Court laid down several principles. First, the State owns in fee simple all lands that are flowed by the tide up to the high water line or mark. The high water line or mark is the line formed by the intersection of the tidal plain of mean high tide with the shore. In establishing this line, the average to be used should be, if possible, the average of all the high tides over a period of 18.6 years. Second, the State cannot acquire interior land by its construction of artificial works such as ditching which enables the tide to ebb and flow on lands otherwise beyond it. The riparian owner cannot, however, enlarge his holdings by excluding the tide. Third, the party who challenges the existing scene must satisfy the court that the tidelands status of the property was changed by artificial measures.

Rules concerning erosion and its effect on riparian ownership were discussed in the case of Leonard v. State Highway Department of New Jersey 29 N.J. Super 188 (App. Div. 1954). Where erosion is by natural means, the riparian owner loses title to the State. The owner suffers no such loss, however, in the event of a sudden and perceptible loss of land. The high water mark may shift from time to time through erosion, and persons who own or purchase tide-flowed land are well aware of this natural process. Where there is erosion, they lose title to the State. Where there is accretion, they gain title at the expense of the State.

The State's procedure for tidelands delineation was challenged in the case of the City of Newark v. Natural Resources Council 133 N.J. Super 245 (Law Div. 1974). Two riparian statutes relevant to the State's tideland delineation procedure provided that "the (Natural Resource) Council is hereby directed to undertake title studies and surveys of meadowlands throughout the State and to determine and certify those lands which it finds are State owned lands." (N.J.S.A. 13:1B-13.2.) "Upon completion of each separate study and survey the Council shall publish a map portraying the results of its study and clearly indicating those lands designated by the Council as state owned lands". (N.J.S.A. 13:1B-13.4) The Natural Resource Council is a twelve member citizen body appointed by the Governor, with the advice and consent of the State Senate.

In 1970 the State issued a grey and white map of New Jersey which designated grey portions of the State as representing lands claimed by the State. However, in 1971 the Court held that these maps did not comply with the intent of the legislation.

The State then began a new delineation of tidelands based on aerial photography. This mapping procedure resulted in thirty-seven panels of land, each of approximately 964 acres, mapped at a scale of 1:2,400. In 30 of the 37 panels the maps produced resulted in substantial claims to the land by the State. However in seven of the panels it was very difficult for the State to determine ownership, and so these areas were characterized as "hatched" (areas of filled meadowlands adjacent to virgin meadowlands). The "hatched" areas indicated a claim by the State that the filled areas were once tide flowed, and so the State was likely to own them. The court held that the "hatching" procedure did not conform with the statutory requirement that the State define its interests in unequivocal terms. (N.J.S.A. 13:1B-1 et seq.). The State was ordered to prepare new maps clearly indicating the riparian lands. The Office of Environmental Analysis in DEP began the mapping based on new overlay techniques. The State filed these maps with the Court in January 1978. A decision by the Court on whether to accept their validity is now pending. If the validity of the maps is accepted, the Court will then have to determine the claims to the land.

An appeal by an owner of a riparian grant whose application for a waterfront development permit was denied by the Natural Resource Council was reviewed in Kupper v. Bureau of Navigation, Council of Resources, etc., Docket No. A-737-71 (unpublished opinion of Appellate Division, decided April 9, 1976). The application involved a request to construct a bulkhead in a substantially developed residential area. The Court observed that although they were sympathetic to DEP's efforts to preserve the ecological balance in any area of the State, they were equally sympathetic to the rights of individual property owners who would be deprived of the economic use of their land. The Court felt that the granting of a riparian permit in this case would lead to a minimal effect on the immediate environment.

Public Access to Shorefront Areas

Increasing and maintaining public access to the shorefront in the coastal zone of New Jersey is public policy evolved from the Public Trust Doctrine as defined by New Jersey case law. (See Martin v. Waddel's Lessee 81 U.S. (PET) 367 (1842), Arnold v. Mundy 6 NJL 1 (Sup. Ct. 1821), and Avon v. Neptune 61 N.J. 296 (1976).)

The cases concerning shorefront access have dealt with public access to publicly owned land rather than public access to privately owned land. This latter issue which concerns public access across privately owned land in order to reach publicly owned land, has not been decided by the courts although the issue was raised in Le Compte v. State of New Jersey, (65 N.J. 447, 450, N.1) 1975. The court indicated that it would like to consider the problem at a suitable time. However, the court is expected to discuss this issue in Mathews v. Bay Head Improvement Association, (Docket No. L-23410-73).

The Avon case expanded the Public Trust Doctrine to cover recreational uses of the shoreline beyond the traditional public rights of navigation, commerce, and fishing. The New Jersey Supreme Court held that tidal lands between the mean high and mean low water marks, as well as the oceanland seaward, are owned by the public. In this case the beach front had been dedicated to the public. The court held that this dedication was irrevocable, and for the municipality to charge a discriminatory fee to users of the beach was analogous to erecting a physical barrier.

The Avon Court and the trial court in the case of New Jersey v. Borough of Deal 139 N.J. Super 83 (Ch. Div., 1976) rev'd 145 N.J. Super. 368 (App. Div. 1976), cert. granted 74 N.J. 262 (1976), held that the upland or dry sand areas may be subject to the Public Trust Doctrine and, in the Deal case, that a municipality cannot exclude a non resident from using the upland and beach area upon payment of a reasonable non-discriminatory fee. In the Deal case there was not a clear public dedication of land and the trial court decided the case on statutory construction. The court held that a municipality does not have the right to exclude people from beach front properties. However, in 1976 the Appellate Division of the Superior Court overturned a portion of the Deal trial court opinion which stated that a municipality's "residents-only policy", with respect to the upland beach areas was not beyond the scope of authority delegated to the municipality by State statutory enactment. The Appellate Division did not address the applicability of the Public Trust Doctrine to the dry sand area, but decided the case on whether a municipality had statutory authority to make a reasonable differentiation between residents and non-residents using a municipal beach, in a town which provides for equal access at an adjoining non-restricted beach. The Deal case is now awaiting action in the New Jersey Supreme Court.

The case of Allenhurst v. New Jersey A-1429-75 (1976), decided in the Appellate Division of Superior Court, partially modifies the Public Trust Doctrine with respect to artificial improvements placed in the dry sand area. The Appellate Division narrowly distinguished the Avon and Deal cases and noted that the Public Trust Doctrine applies only to access to natural resources and not to man-made improvements which may be placed upon the dry sand area. In the Avon case, there were no man-made improvements on the dry sand area. However, the Appellate Division left intact a section of the Allenhurst trial court opinion which required equal fees for both residents and non-residents. Thus, the central holding of the Avon case remains unchanged.

APPENDIX M: GLOSSARY

Introduction

This glossary is intended to provide the reader with understandable definitions of technical terms used and undefined in the text. Terms which have been previously defined include a reference to the appropriate section of Part II.

- accretion - the process of gradual and imperceptible addition of solid material, thus extending the shoreline.
- adverse impact - a net negative effect.
- algae - non-vascular simple aquatic plants, without true roots, stems, or leaves, that vary from single celled to large multicellular forms; most noted groups are: green, brown, red, blue-green and diatoms.
- alluvial - deposits of flowing water; clay, silt, sand, gravel, and/or organic detritus.
- aquifer - a water-bearing underground layer of sand, gravel, or rock; a porous sub-terranean water-bearing stratum of unconsolidated sediments.
- anadromous - marine or estuarine species of finfish that spawns in freshwater.
- assimilative capacity - the amount of adverse impacts (pollutants) that a water body or land area can absorb and neutralize before it begins to display a significant reduction in biological diversity, chemical, and/or physical quality.
- bathymetry - the measurement of depths of water areas; underwater topography.
- benthic - occurring or living on or in the bottom of a water body.
- biota - the plant and animal assemblage of a biological community.
- brackish - partially saline water.
- built-up urban areas - land areas already intensely developed for housing, commerce, industry, etc.
- carcinogen - capable of causing cancer in humans.
- clay lense - a lense-shaped deposit of clay.
- coastal waters - include the Atlantic Ocean to the limit of New Jersey's seaward jurisdiction; Raritan Bay to the New York State boundary; Delaware River and Bay to the State of Delaware boundary and tidal portions of their tributaries; and other tidal streams, rivers, and bays of the coastal plain.

- critical - a condition, measurement, or point at which some quality, property, or phenomenon suffers a definite change. An essential component.
- datum - a reference point, line or plane used as a basis of measurements.
- detritus - Particulate matter, especially of organic vegetative origin in varying stages of decomposition.
- development - a facility, use, or alteration as defined in enabling legislation. See - potential.
- direct impact- is a change in the built or natural environment that is either the immediate result of an impacting activity or is linked to the impacting activity through an identified chain of cause and effect without further human intervention.
- disturbance - a disruption or perturbation; significant changes in the equilibrium of natural or social processes and resources from artificial or natural causes.
- diversity - the variety of species present in a habitat or ecosystem. High diversity indicates environmental health.
- ecotone - an edge or border zone between different habitats usually with high species diversity.
- effluent - a discharge of pollutants into the environment; untreated or partially or completely treated.
- ephemeral - lasting only a short time; temporary; transient.
- erosion - the wearing away of the land surface by running water, wind, or other geological agents. (See Chapter Three, Section 7.0).
- escarped foredune - wave eroded sand dune, with steep slope in ocean front adjacent to beach.
- estuarine - of, relating to, formed, or living within an estuary.
- estuary - any confined coastal water body with a connection to the sea and measurable quantity of marine salt in the waters; greater than 0.5 parts per thousand (ppt).
- euthrophication - nutrient enrichment, leading to excessive growth of aquatic plants, usually resulting in anoxic (lack of dissolved oxygen) water conditions.
- fauna - a collective term for the animal species present in an ecosystem.
- flora - a collective term for the plant species present in an ecosystem.
- flushing rate - the rate at which the water in a water body is replaced, usually expressed as the time needed for one complete replacement.

- food chain - the step-by-step transfer of food energy and materials, by consumption, from the primary source in plants through increasingly higher forms of animals.
- food web - the network of feeding (trophic) relationships in and between (a) biological community(ies).
- forage - food source.
- gabion - loose rock held together with wire mesh used to promote groundwater recharge.
- habitat - place of residence of plants and animals; community of species.
- impact - ecological or sociological effect; impinge; an impelling or compelling effect.
- indigenous - having originated in and being produced, growing, or living naturally in a particular region or environment; native species.
- infill - development of vacant land within generally built-up area; development of land parcel with at least 50% of boundary of site presently developed in the same way as that type proposed. [see Chapter Three, Section 5.7.1(iv)]
- inorganic - non-living or of non-organic origin; mineral.
- intertidal - the area between high and low tide levels, twice daily exposed and flooded.
- littoral - shoreline; related to edge of the sea or ocean.
- littoral drift - the movement of sedimentary material, e.g.: sand, silt, gravel, parallel to shoreline under the influence of wind, waves, and currents; commonly used as synonymous with longshore transport.
- maximum practicality - best available technology; all alternative mitigation measures have been considered resulting in selection of measure, technique, or level which produces most environmentally desirable effect.
- mean high water (MHW) - a tidal datum; the arithmetic average of the high water heights observed over a specific 18.6 year Metonic cycle (the National Tidal Datum Epoch).
- mean high water line - the line formed by the intersection of the tidal plane of mean high water with the shore.
- mean low water (MLW) - a tidal datum; the arithmetic average of the low water heights observed over a specific 18.6 water Metonic Cycle (the National Tidal Datum Epoch).
- multi-purpose marina - a small harbor facility that maximizes diversity of user groups and activities.

- organic - living, related to living substance or living organisms. Chemical compounds formed of carbon united with hydrogen (hydrocarbons).
- pathogenic - capable of causing disease.
- perennial - present at all seasons; persisting for several years; continuing without interruption.
- permeability - See Chapter Three, Section 5.4.
- permit - a writing, issued by a person in authority, empowering the grantee to do some act not forbidden by law, but not allowed without such authorization.
- photo-synthesis - the vegetative manufacture of organic carbohydrates from carbon dioxide and water in the presence of chlorophyll by utilizing light energy and releasing oxygen.
- phyto-plankton - the single-cell plant component of plankton.
- plankton - small suspended aquatic plants and animals which passively drift or swim weakly.
- potential - existing in possibility; capable of development into actuality. (See Chapter Three, Section 5.7 for discussion of Development Potential).
- Pre-appli- cation Conference - informal meeting with Division of Marine Services staff member, prospective permit applicant and consultant to discuss development proposal prior to formal application, to determine consistency with coastal policies and define specific application requirements.
- preservation - to maintain in existing condition; protection from permanent alteration by human activity.
- productivity - (primary or biological) - The amount of organic matter produced by photosynthesis usually expressed as weight per area over a given period of time.
- riparian lands - land now or formerly flowed by the mean high tide.
- riprap - a foundation of stones or rocks loosely placed together without order in deeper waters to prevent scour and erosion.
- rookery - a communal breeding site for certain species of aquatic birds.
- runoff - the portion of precipitation on land that flows over the land surface; overland flow (see Chapter Three, Section 6.0).
- salinity - a measure of the quantity of dissolved salts in water expressed in parts per thousand of water (ppt).

- salt water intrusion - the movement of salt water inland into subterranean aquifers.
- salt wedge - estuarine water mass of higher salinity found along the bottom over which lighter fresher waters move.
- sediment - material deposited by water, wind, or glaciers.
- sedimentation - the process of gravitational deposition of organic and/or inorganic suspended particles by water (See Chapter Three, Section 7.0).
- sensitivity - the capacity of an organism, community, or area to respond to stimulation; susceptibility to disturbance and change.
- significant - a measurable change in the built or natural environment that is cause for concern.
- silt - fine particulate matter suspended in water and later deposited on water body bottom.
- storm surge - the piling up of water against (or withdrawal from) a coast by strong winds and reduced atmospheric pressure such as that accompanying a hurricane or other intense storms.
- shellfish - a misnomer of common use for a group of organisms none of which are true vertebrate finfish; includes mollusks and crustaceans such as clams, oysters, scallops, conchs, squid, crabs, lobsters, and shrimp. (See Chapter Three, Sections 8.1 and 8.3).
- successional - plant species or vegetative community which will be successively replaced by more stable communities. A sub-climax vegetation type.
- surface water-runoff - See runoff (See Chapter Three, Section 6.0).
- swale - a low-lying or depressed land area commonly wet or moist; an intermittent drainageway.
- tertiary water treatment - a process following secondary treatment involving filtration, activated carbon, and chlorination. In the process, the effluent is subjected to denitrification and phosphorus precipitation.
- tidal flooding - inundation of land caused by an abnormally high tidal water having an average frequency of once in 100 years, although the event may occur in any year.
- tidal influence - waters which measurably rise and fall with twice-daily tides.
- tide - the periodic rise and fall of the water resulting from gravitational interaction between the sun, moon, and earth. The vertical component of the particulate motion of a tidal wave. In each lunar day of 24 hours and 49 minutes there are two high tides and two low tides.

- tidelands - those lands now or formerly flowed by the mean high tide, held in trust by the State unless alienated.
- toxic substance - a poison.
- turbidity - reduced water clarity resulting from presence of suspended matter.
- water disturbance - measurable change in biological, chemical, or physical water quality.
- waterfowl - a group of aquatic birds within the family Anatidae which includes ducks, geese, swans, and mangansers.
- wetlands - inundated areas supporting emergent hydrophytes (See Chapter Three, Section 2.4).
- wildlife - a collective term used for living organisms neither human or domesticated (See Chapter Three, Section 9.0).
- zooplankton - the animal component of the plankton.

APPENDIX N: CASE STUDIES - USING THE LOCATION POLICIES

This appendix presents four cases that illustrate the use of the Location Policies of Chapter Three - Coastal Resource and Development Policies to determine the acceptability for development of actual sites in the Bay and Ocean Shore Segment. The case studies examine only the first stage, or Location Policies, of the three-stage screening process that constitutes the coastal management decision-making process.

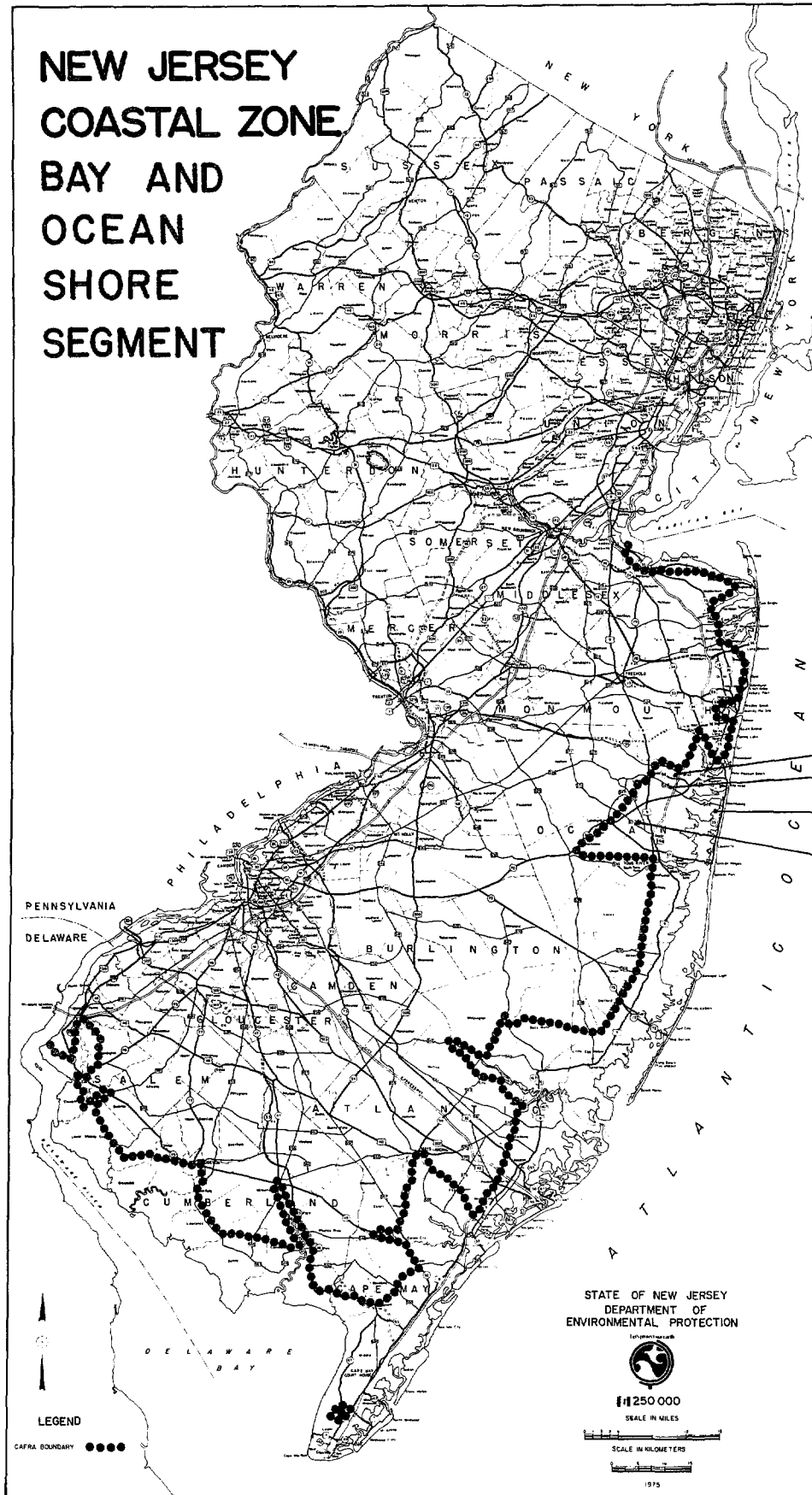
The four case studies take sites and proposed developments that DEP has reviewed through the CAFRA permit application process, and, where DEP has decided already on the application, compares the resulting DEP decision under CAFRA with the results using the eight step location acceptability determination process defined in the Location Policies. This process is sometimes referred to as the Coastal Location Acceptability Method, or CLAM. The four case studies are:

- (1) Glen Pines
- (2) Oak Knoll Estates
- (3) Lakewood Industrial Campus
- (4) Barnegat Village

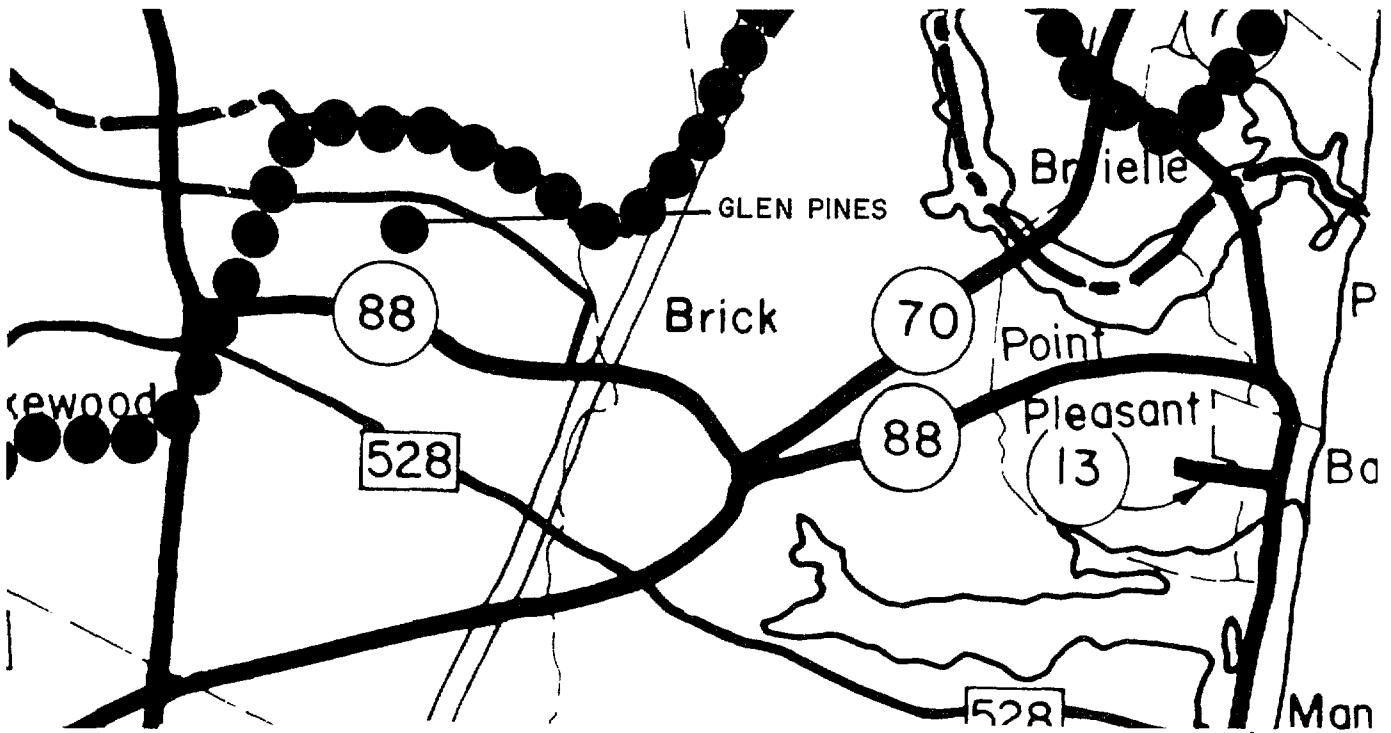
The Oak Knoll Estates and the Lakewood Industrial Campus case studies examine applications still pending under CAFRA. None of these case studies contain water areas. The steps that analyse water areas are therefore omitted.

CASE STUDY LOCATIONS

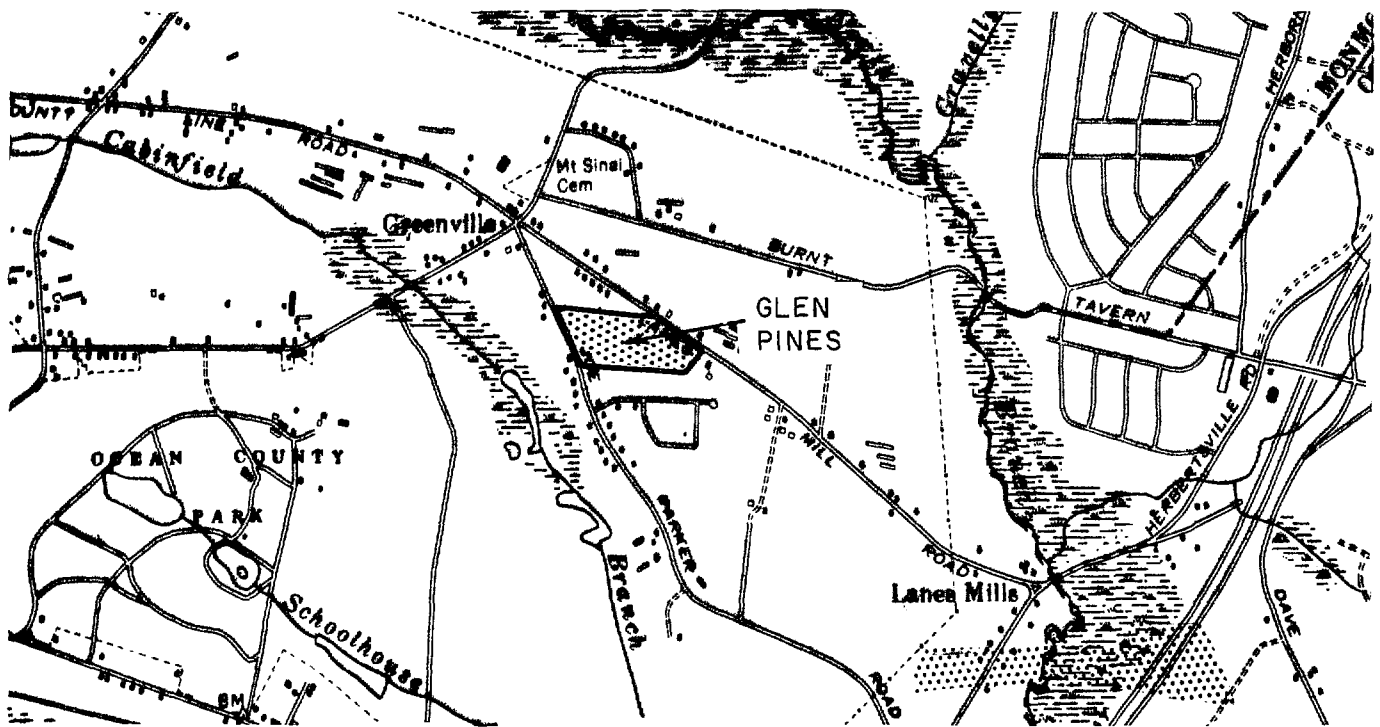
NEW JERSEY COASTAL ZONE BAY AND OCEAN SHORE SEGMENT



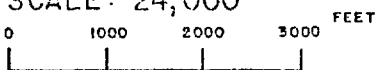
CLAM CASE STUDY GLEN PINES



REGIONAL LOCATION MAP
SCALE: 1: 100,000



LOCATION MAP
SCALE: 24,000



SOURCE: U. S. G. S. TOPOGRAPHIC QUADRANGLE: LAKEWOOD

GLEN PINES CASE STUDY - (CAFRA Application No. 74-10-067)

Introduction

The Keryn Corporation applied for a CAFRA permit in October, 1974, to build 31 individual single family residential lots with roadways, curbing, sidewalks, potable water, and sanitary sewerage facilities on 17.33 acres of land in Lakewood Township, Ocean County, New Jersey. The project is known as "Glen Pines."

The location of the site is indicated on the state-wide location map, the regional location map and the location map on the preceding pages.

CLAM ANALYSIS

In the Glen Pines case study, the findings and maps of the steps in the CLAM analysis are :

A. Special Areas

This site does not contain any Special Areas.

B. Water's Edge Area

The site contains neither lower nor upper water's edge areas.

C. Depth to Seasonal High Water Table

The map shows the distribution of uplands on the site at a scale of 1:24,000.

The data source is the SCS Ocean County Soil Survey.

D. Permeability

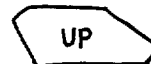
This map shows the distribution of permeability on the site at a scale of 1:24,000.

The data source is the SCS Ocean County Soil Survey.

E. Soil Fertility

This map shows the distribution of soil fertility in the uplands (the entire site) at a scale of 1:24,000.

The data source is the SCS Ocean County Soil Survey.



Depth to Seasonal High Water Table

Legend:

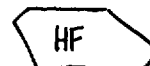
UP = Upland



Permeability

Legend:

MP = Med. Perm.



Soil Fertility

Legend:

HF = High Fertility

F. Vegetation

This map shows the distribution of vegetation at a scale of 1:24,000.

The data sources are the Mark Hurd Aerial Photograph, and the aerial photograph and vegetation description supplied by the applicant.



Vegetation

Legend:

MV = Med. Veg.
HV = High Veg.

G. Development Potential

The site has direct access to paved public roads which can absorb the traffic that will be generated by the development. It has access to public water and sewage systems, and is an infill. It is also close to school and shopping facilities.

The development potential of the site is therefore high.

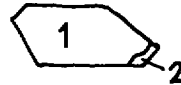
H. Regional Growth Area Type

The site is located in a municipality designed as a growth area.

I. Composite of Acceptability Variables

This map shows the site divided into two acceptability sub-areas at a scale of 1:24,000.

The data sources are the individual maps shown above.



Land Composite

Legend:

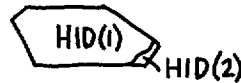
1 = Upland, Med. Perm.,
High Fert., Med. Veg.
2 = Upland, Med. Perm.,
High Fert., High Veg.

J. Location Acceptability Map

This map shows the distribution of acceptable development intensities given by the acceptability criteria.

Area 1 is acceptable for high intensity development, up to 80% of the site area in structures or impervious paving with an additional 10% of permeable paving with a minimum of 5% herbs and shrubs and 5% forests.

This is found on Line 67 of the Land Acceptability Tables.



Location Acceptability

Legend:

HID = High Intensity Development
(1 = Line 67)
(2 = Line 73)

Area 2 is also acceptable for high intensity development, up to 80% of the site area in structures or impervious paving with an additional 10% of permeable with a minimum of 5% herbs and shrubs and 5% forests.

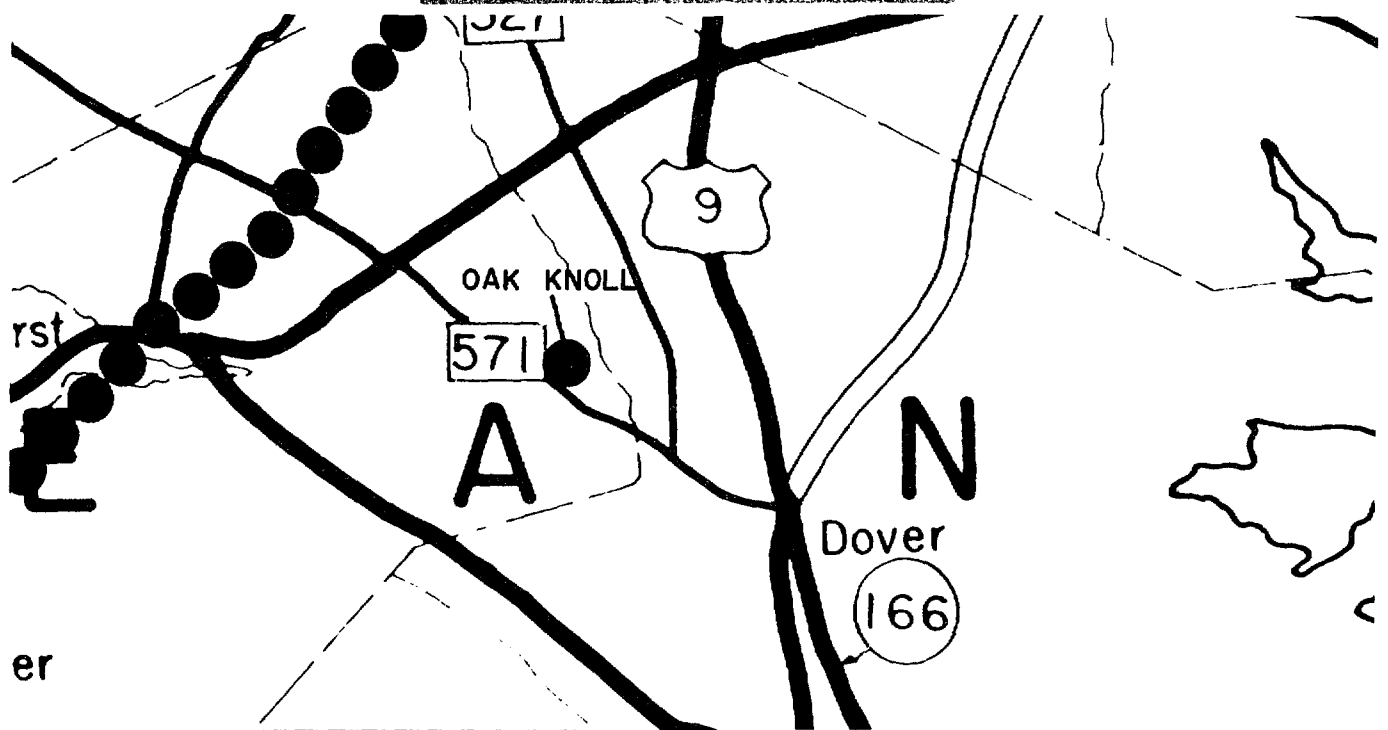
This is found on Line 73 of the Land Acceptability Tables.

The CLAM analysis indicates that from the point of view of concentrating development, this site would be more acceptable with a higher intensity of development than that shown, however no minimum densities are required.

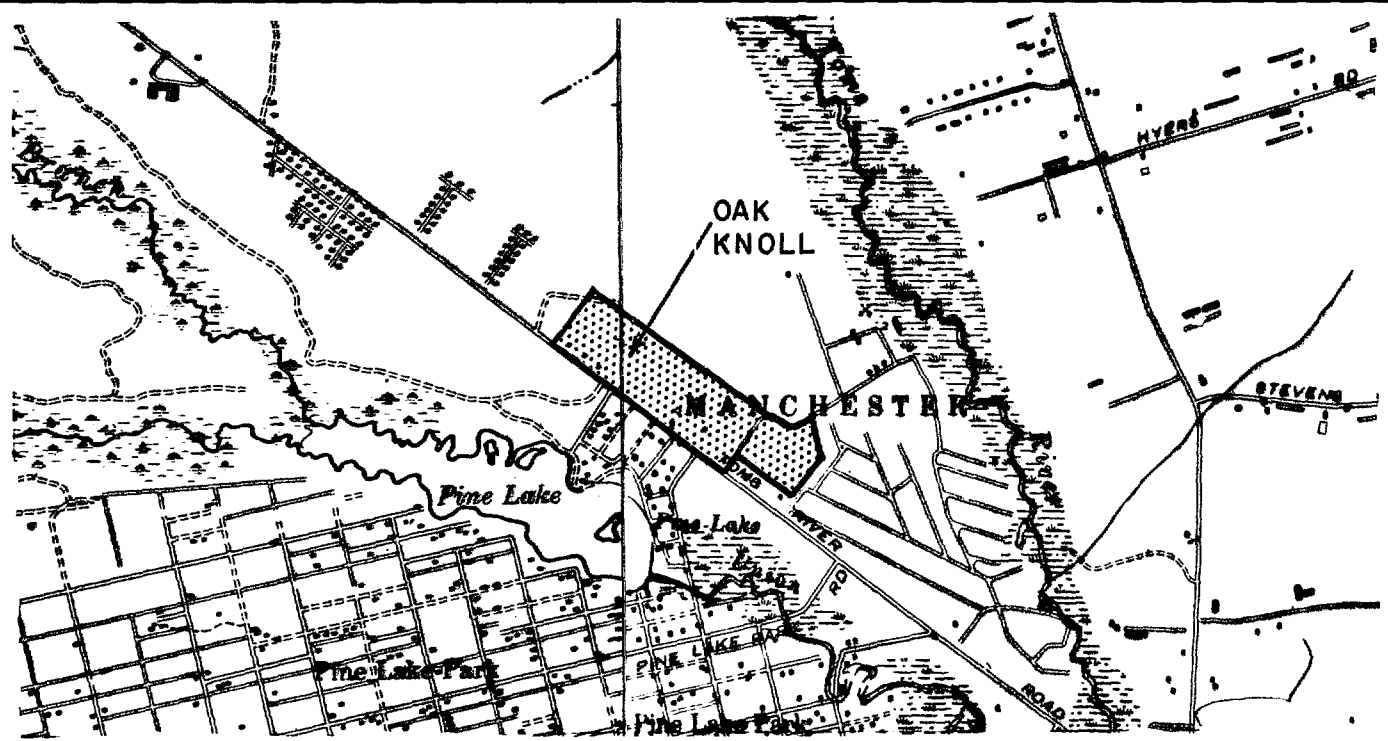
K. Comparison of CLAM and CAFRA findings.

The proposed development is acceptable under the CLAM analysis. Also, DEP approved the project under CAFRA on February 26, 1975.

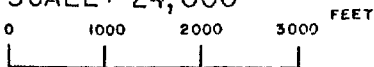
CLAM CASE STUDY OAK KNOLL



REGIONAL LOCATION MAP
SCALE: 1:100,000



LOCATION MAP
SCALE: 24,000



SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLE: LAKEWOOD & LAKEHURST

OAK KNOLL ESTATES CASE STUDY - (CAFRA Application No. 0228).

Introduction

Bella and David Suchman applied for a CAFRA permit on January 24, 1978 for the construction of 85 detached single family dwellings with all "ancillary facilities" on 41 acres of land in Manchester Township, Ocean County, New Jersey.

The location of the site is indicated on the state-wide location map, the regional location map and the location map on the preceding pages.

CLAM ANALYSIS

In the Oak Knoll Estates case study, the findings and maps of the steps in the CLAM analysis are:

A. Special Areas

This site does not classify as a special area.

B. Water's Edge Areas

This site does not contain water's edge areas.

C. Depth to Seasonal High Water Table

This map shows the distribution of Wet Terraces (SHWT < 3') and Uplands (SHWT > 3'). The mined area is assumed to be a Wet Terrace.

The data source is the SCS Soil Survey of Ocean County.

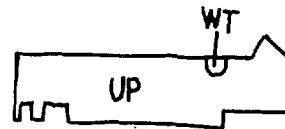
D. Permeability

This map shows the distribution of Medium (0.2 - 2 inches/hour) and High (> 2 inches/hour) permeability on the site.

The data source is the SCS Soil Survey of Ocean County.

E. Soil Fertility

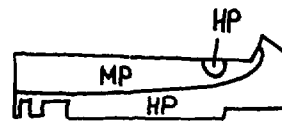
This map shows the distribution of High (Ag I & II or Wood 1) fertility soils on the site.



Depth to Seasonal High Water Table

Legend:

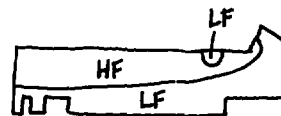
UP = Upland
WT = Wet Terrace



Permeability

Legend:

HP = High Perm.
MP = Med. Perm.



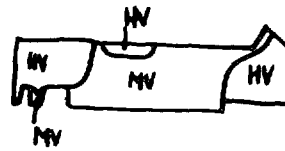
Soil Fertility

Legend:

LF = Low Fert.
HF = High Fert.

F. Vegetation Index

This map shows the distribution of (forest height > 15') and medium (meadow and shrub veg. < 15') vegetation.



Vegetation Index

Legend:

- HV = High Veg.
- MV = Med. Veg.

G. Development Potential

The site has direct access to paved roadways with sufficient capacity to absorb traffic from the development.

The site has access to on-site, high-quality groundwater. The soils on the site may pose slight problems for septic tanks and wells but it is assumed that those problems can be resolved by the applicant.

The site is an infill site and has access to shopping and school facilities.

The development potential, therefore is high.

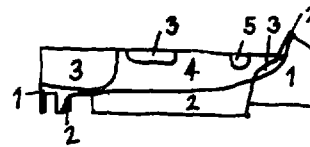
H. Growth Potential

The site is in a municipality designated as a Limited Growth Area.

I. Composite of Acceptability Factors

This map shows the site divided into 5 types of acceptability sub-areas.

The data source is the composite of the maps shown above.



Land Composite

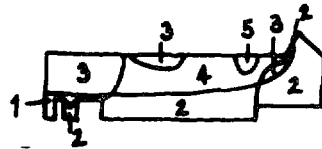
Legend:

- 1 = Upland, High Perm., Low Fert., High Veg.
 - 2 = Upland, High Perm., Low Fert., Med. Veg.,
 - 3 = Upland, Med. Perm., High Fert., High Veg.
 - 4 = Upland, Med. Perm., High Fert., Med. Veg.,
 - 5 = Wet Terrace, High Perm., Low Fert., Med. Veg.,
- Development Potential: High
Growth Potential : Limited Growth

J. Location Acceptability

This map shows the five acceptable development intensities for each sub-area.

The development intensities are determined by the acceptability criteria as listed in the Land Acceptability Tables.



Location Acceptability

Legend:

1. Mod. Int. Dev. (Line 86)
2. Mod. Int. Dev. (Line 80)
3. Mod. Int. Dev. (Line 74)
4. Mod. Int. Dev. (Line 68)
5. Mod. Int. Dev. (Line 182)

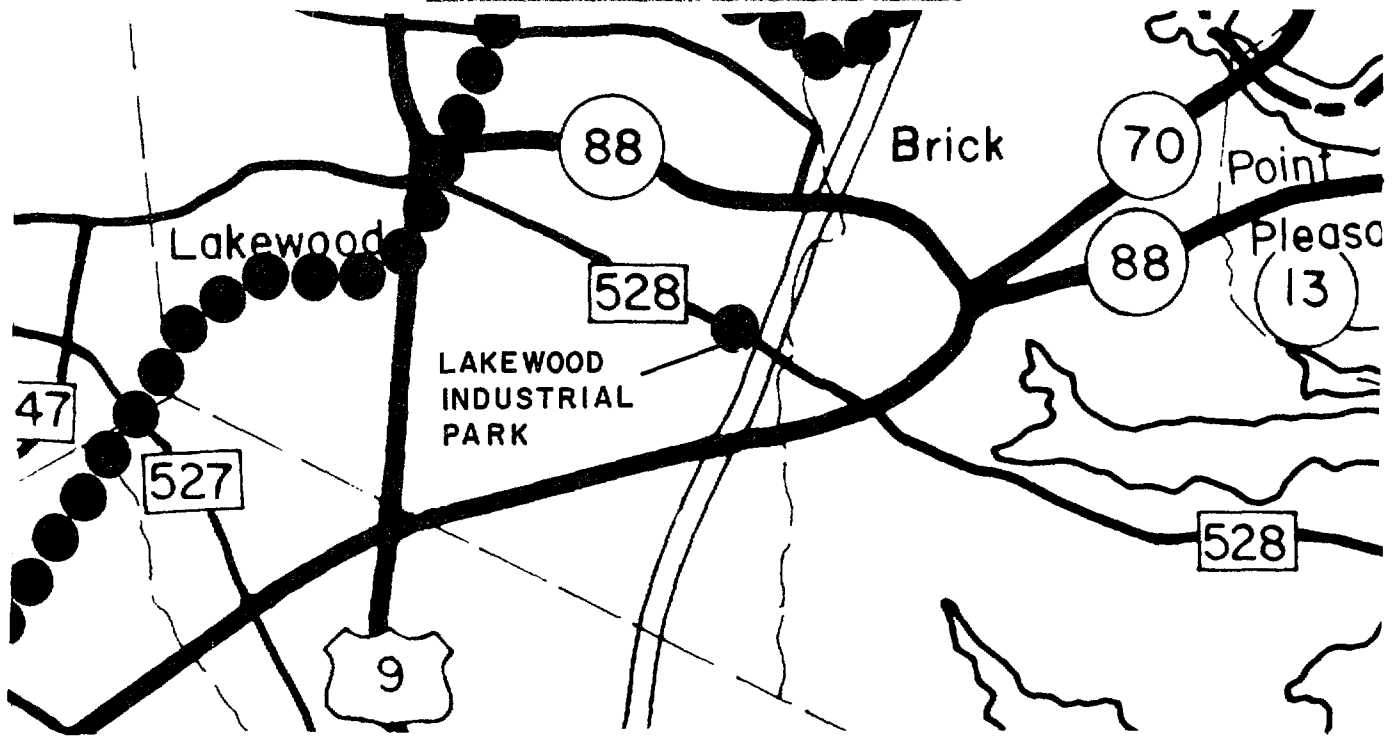
K. COMPARISON OF PROPOSED DEVELOPMENT WITH CLAM FINDINGS

The proposed development is acceptable for moderate intensity development under the CLAM analysis, assuming that the location of the wells and septic tanks on the site will be arranged so as not to pollute the site's water supply.

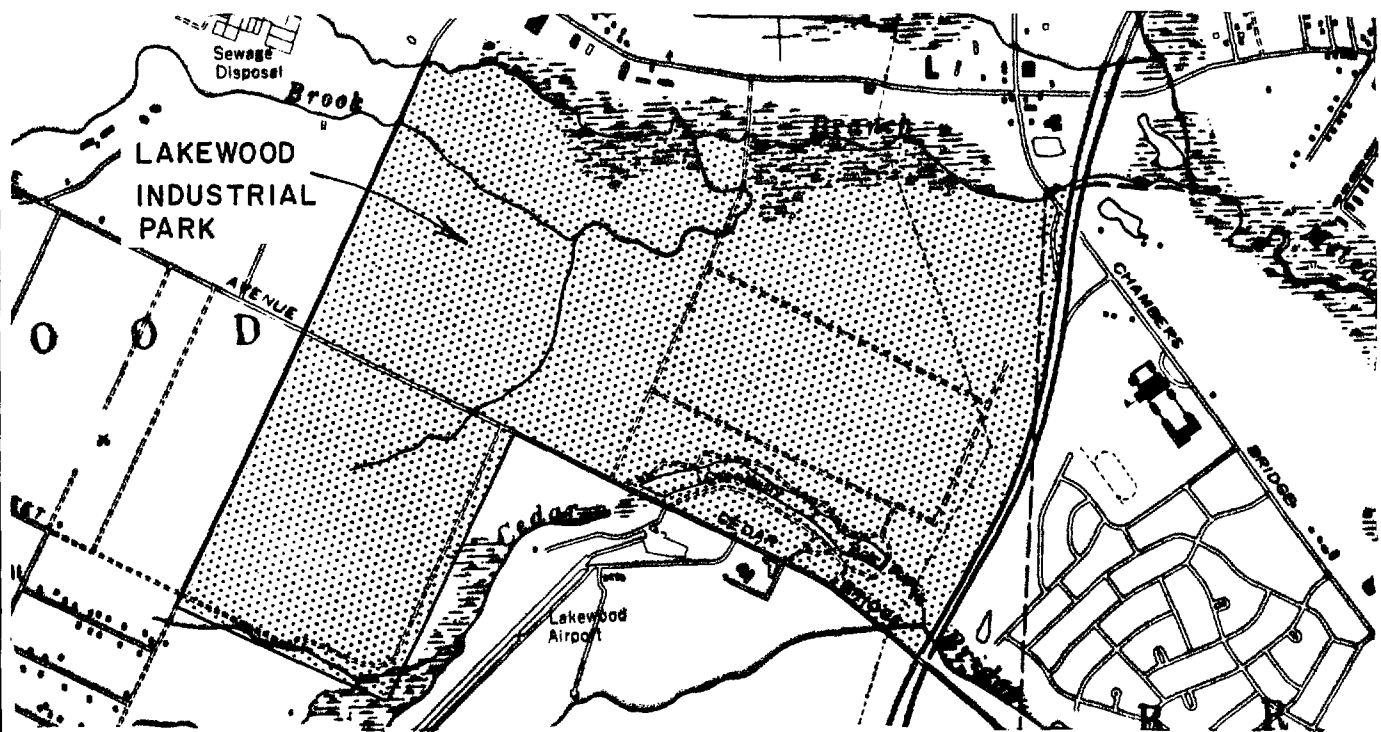
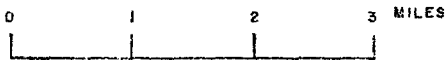
The percentage of impervious paving has not been calculated by the applicant, but moderate intensity development allows a maximum of 30% impervious paving with an additional 10% pervious paving. This would allow approximately eight dwelling units per acre, which would not be exceeded by the submitted site plan.

The DEP decision under CAFRA on the project has not yet been made.

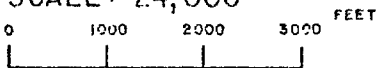
CLAM CASE STUDY LAKEWOOD INDUSTRIAL PARK



REGIONAL LOCATION MAP
SCALE: 1:100,000



LOCATION MAP
SCALE: 24,000



SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLE, LAKEWOOD

Introduction

Lakewood Industrial Commission applied for a CAFRA permit on July 25, 1977, for light manufacturing and assembly plants on a site of 745 acres in Lakewood Township, Ocean County, New Jersey.

The location of the site is indicated on the state-wide location map, the regional location map and the location map on the preceding pages.

CLAM ANALYSIS

In the Lakewood Industrial Campus case study, the findings and maps of the steps in the CLAM analysis are:

A. Special Areas

This map shows at a scale of 1:24,000 three types of special land areas present on the site.

Stream Head Areas

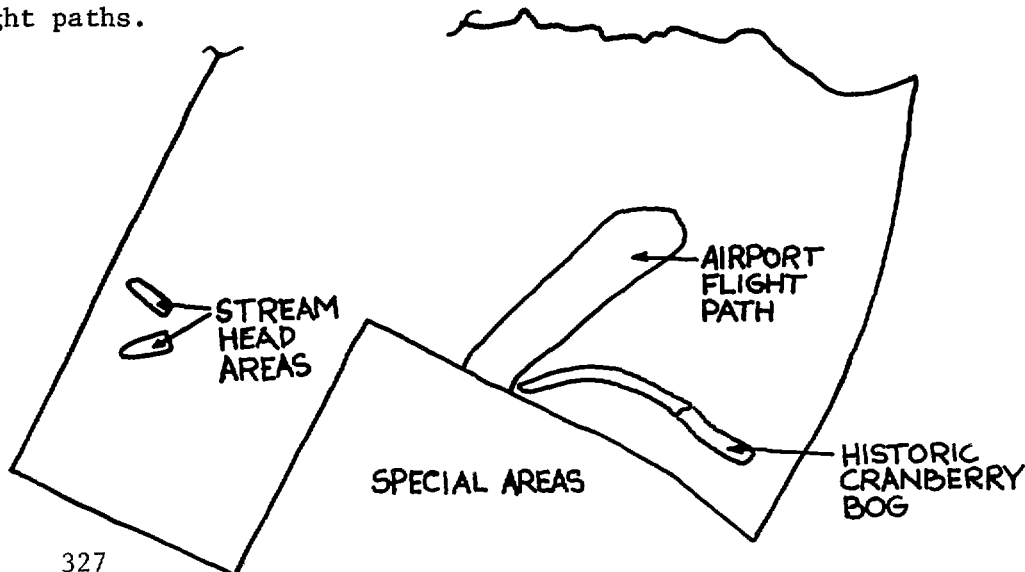
Corridors 100 feet wide centered on the ephemeral streams above the inland limit of the upper water's edge areas. Development in these areas is prohibited.

Historical Area

An old cranberry bog is present on the site. It is not on either the State or Natural Registers of Historic Places and so not properly an historic special land area. It is, however, of historic interest and could be worth considering for the Registers and so is shown here. No policy is attached to this area, however, since the criteria for historic places is not fully met.

There is an airport flight path across part of the site; therefore, development must be restricted here for safety reasons.

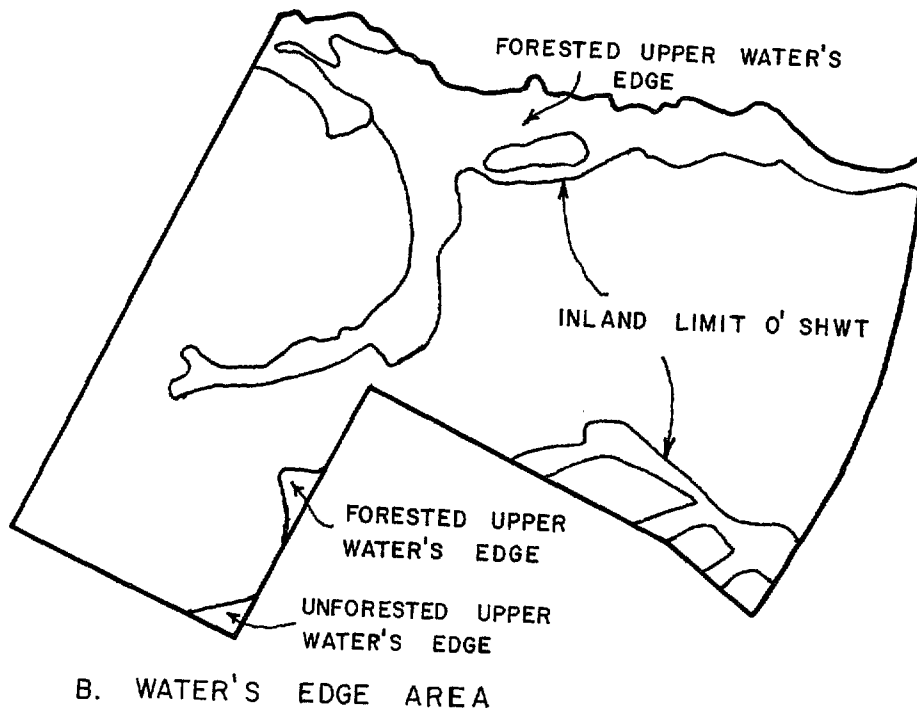
The sources of these data are the USGS Lakewood Quadrangle for the stream position and the cranberry bog and the SCS Ocean County Soil Survey for the inland limit zero water table soils, and the applicant's data for the airport flight paths.



B. Water's Edge Areas

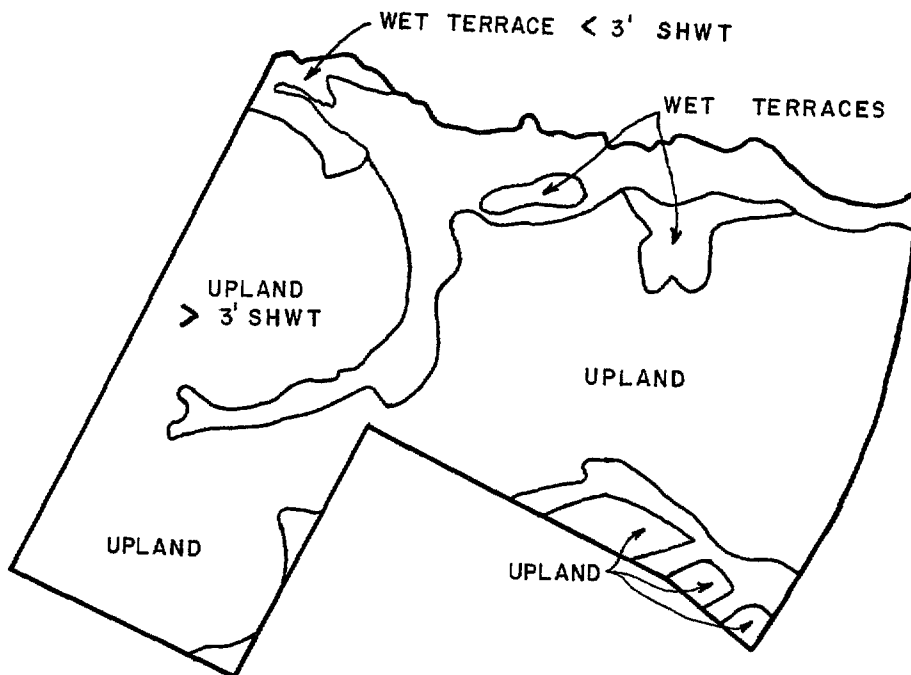
This map shows the distribution of upper water's edge areas.

The source of the data is the SCS Ocean County Soil Survey.



C. Wet Terraces and Uplands

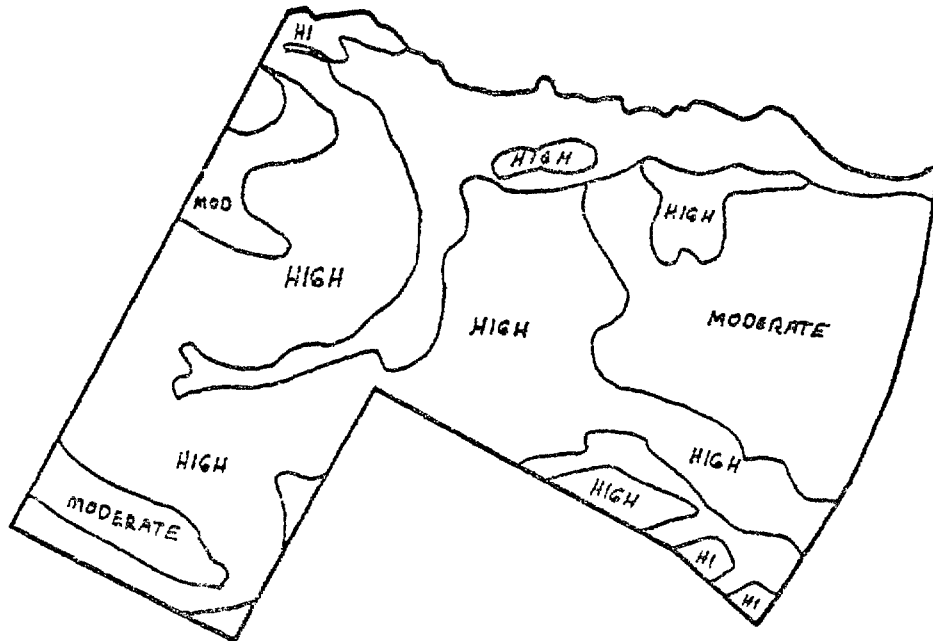
This map shows the distribution of Wet Terraces (< 3' SHWT) and Uplands (> 3' SHWT). The source of data is the SCS Ocean County Soil Survey.



D. Permeability

This map shows the distribution of High ($> 2''/\text{hr}$) and Moderate ($0.2'' - 2''/\text{hr}$) permeability in wet terraces and uplands.

The source of the data is the SCS Ocean County Soil Survey.

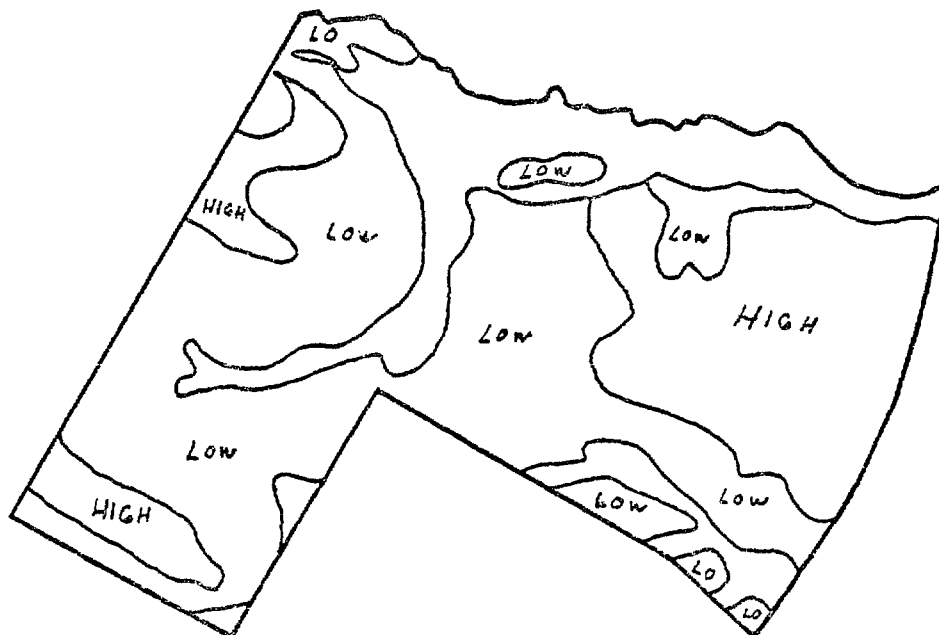


D. PERMEABILITY

E. Soil Fertility

This map shows the distribution of high (Ag I & II or Wood 1) and low (Ag IV or wood 3) fertility soils in wet terraces and uplands.

The source of data is the SCS Ocean County Soil Survey.

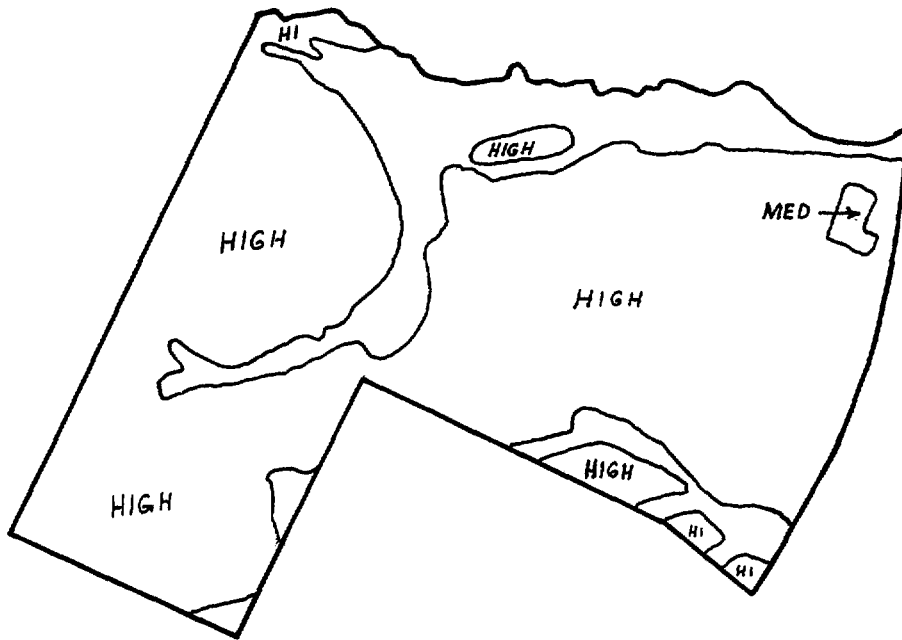


E. SOIL FERTILITY

F. Vegetation

This map shows the distribution of high (forest 15' high) and medium (meadow and shrub 15' high) vegetation.

The source data is the Mark Hurd Aerial Photograph of the Lakewood Quad 1972.



F. VEGETATION

G. Development Potential

The site is adjacent to an existing road of a capacity insufficient to accommodate the proposed development; however, the application includes proposals to improve the capacity to the required amount. In Growth Areas, these proposals help the development qualify for an adequate road capacity assessment. Secondary impact analysis for further development improvements is not available. For the purpose of this illustration, it is assumed that this is acceptable. There is an intersection with a high speed road within a mile.

Sewer and water supplies of adequate capacity are available adjacent to the site and there is existing industry.

The development potential is, therefore, high.

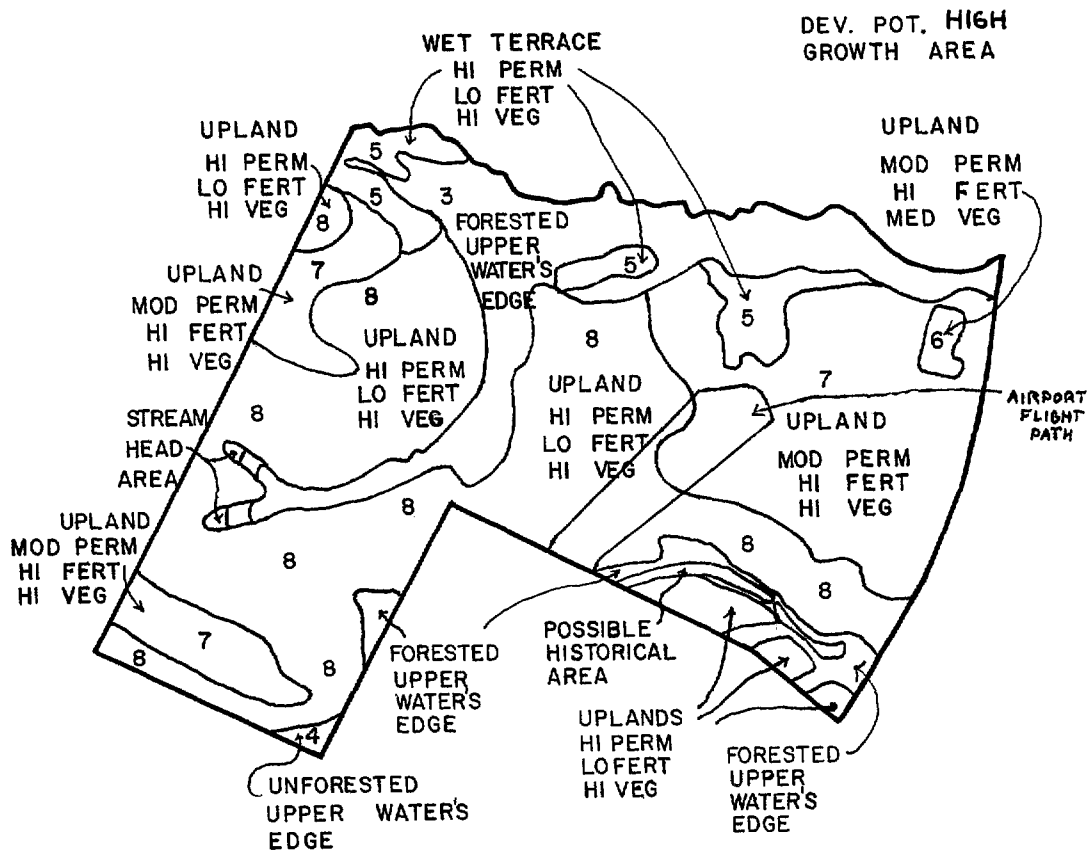
H. Regional Growth Area Type

The site is in a municipality designated as a Growth Area.

I. Composite of Acceptability Factors

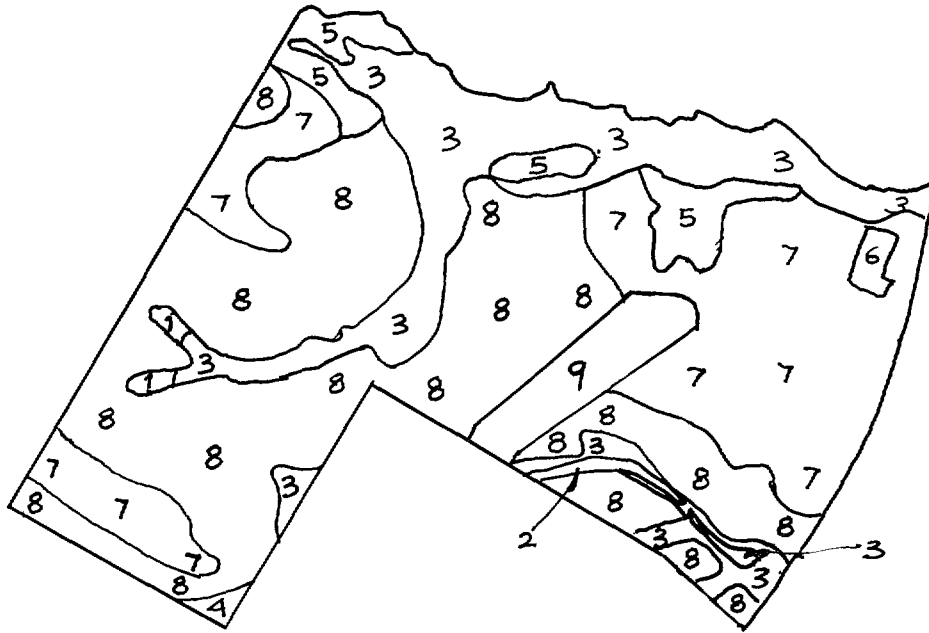
This map shows the site divided into eight types of acceptability sub-areas.

The data sources are the maps of individual variables shown below.



J. Location Acceptability

This map shows the acceptability criteria and tables of CLAM.



Location Acceptability

Legend:

1. Stream Head, Vegetation Conservation
2. Possible Historical Conservation
3. Vegetation Conservation,
Water's Edge Criteria
4. Vegetation Conservation,
Water's Edge Criteria
5. Moderate Intensity Development, Line 187
6. High Intensity Development, Line 67
7. High Intensity Development, Line 73
8. High Intensity Development, Line 85
9. No Structures, Airport Flight Path

Area Type 1

These are stream head areas, special land areas that require vegetation conservation, development is prohibited.

Area Type 2

This is possibly a historic area, a special land area where special conservation measures may be taken to preserve the historic value.

Area Type 3 and 4

These are water's edge buffer areas, where vegetation conservation is required unless the use is water dependent. The use is not water dependent, so development is prohibited.

Area Type 5

These are wet terrace areas. Moderate intensity development is acceptable, providing wet soil construction standards are satisfied. The maximum acceptable area of impervious paving and structures is 30%, an additional 10% of porous paving is acceptable, and 20% minimum of the area must be preserved in woodland.

Area Type 6, 7, and 8

These are upland areas. High intensity development is acceptable. Structures and impermeable paving may occupy 80%. Permeable paving may occupy a further 10%. A minimum of 5% of these areas shall be preserved in forest vegetation and a further 5% shall be either preserved as forest or planted with adapted herbs or shrubs.

Area Type 9

This is the airport flight-path. Structures shall be excluded.

K. Comparison of Applicant's Proposal With Location Acceptability

The applicant's proposal shows most of the site subdivided into lots for industrial development.

Subdivision is set back from the stream on the upper site boundary and around the cranberry bog. A narrow drainage channel is shown along the small stream channel running across the site.

Subdivision is also excluded from the airport flight path and from a power line right-of-way.

The conflicts are minor. Most of the site is acceptable for intensive development, up to 80% impervious surfaces. The runoff calculations submitted by the applicant assumed 60-70% paving, which would be acceptable.

Conflict occurs mainly on the extent of the water's edge buffer. The setback along the upper boundary does not include all areas with seasonal high water table at the surface. This would involve either eliminating a number of lots, or reducing lot size in the center of the site and moving the road away from the stream channel to allow sufficient depth between the road and the water's edge for development.

The water's edge area around the small stream running across the site towards the upper boundary is too small and does not include the stream head areas. To include the stream head would require some adjustment of lot sizes. The detention basins shown in this stream corridor would be unacceptable.

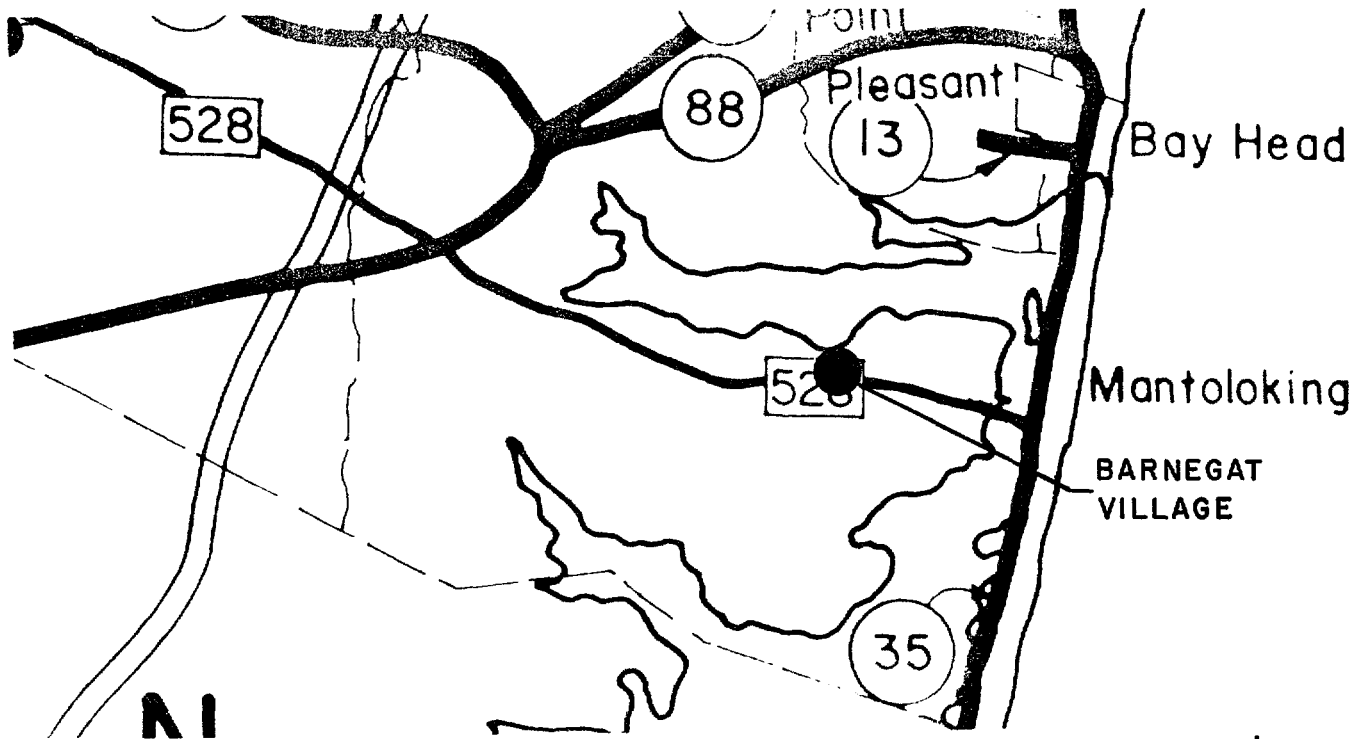
The water's edge around the stream that contains the cranberry bog is too small and omits two tributaries flowing across the lower site boundary. Resolving this conflict would involve the loss of two lots.

These adjustments could be made without significant reduction in the number of lots, if slight reductions of lot size were made in some upland lots.

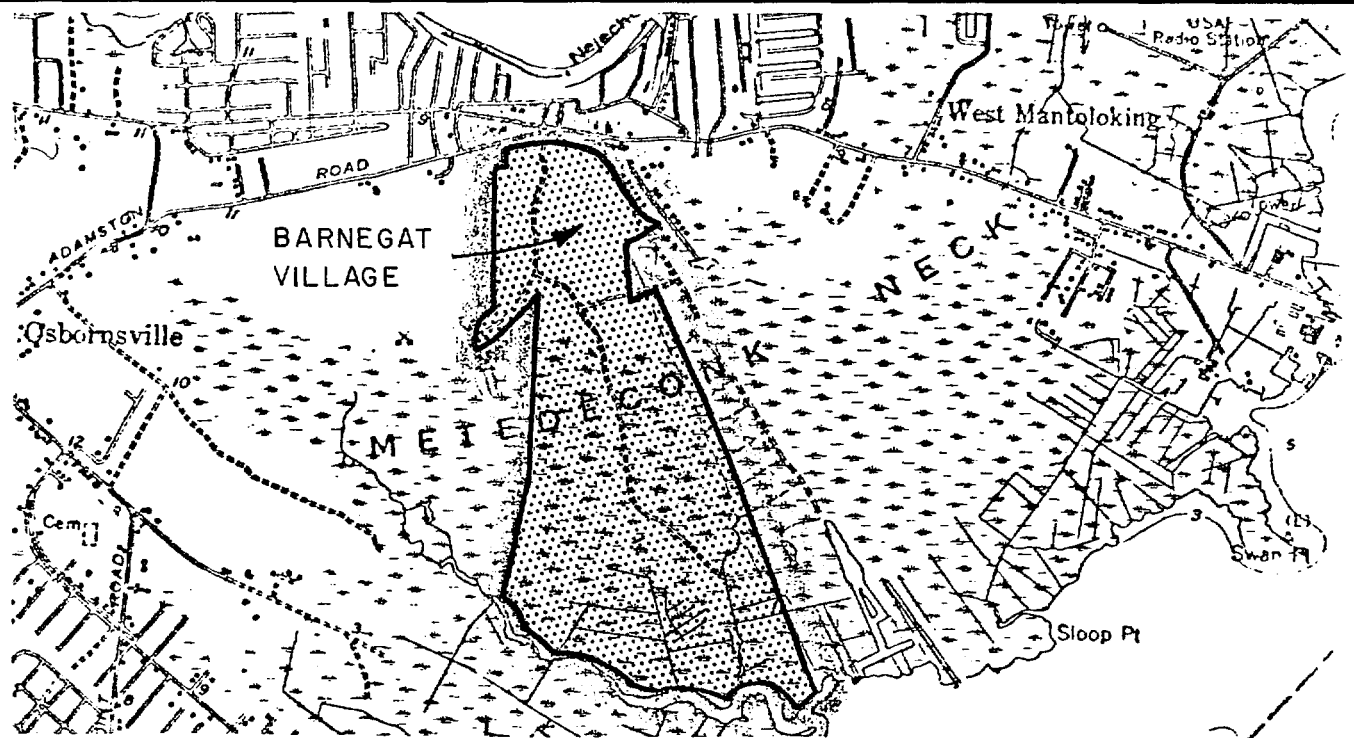
If these adjustments were made, the proposal would satisfy the location policies.

The Use Resource Policies of stages two and three would require further analysis. In particular, the use policies for minimum buffer areas for industrial uses, which may slightly decrease the maximum amount of paving acceptable, and the runoff policies which would require some revisions to the proposed drainage layout.

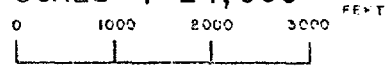
CLAM CASE STUDY BARNEGAT VILLAGE



REGIONAL LOCATION MAP
SCALE: 1:100,000



LOCATION MAP
SCALE: 1:24,000



SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLE: LAKEHURST

BARNEGAT VILLAGE CASE STUDY - (CAFRA Application No. 123)

Introduction

Barnegat Bay Inc. applied for a CAFRA permit on July 28, 1975, for an 840 unit planned residential condominium retirement community on 210 acres in Brick Township, Ocean County, New Jersey.

The location of the site is indicated on the state-wide location map, the regional location map and the location map on the preceding pages.

CLAM ANALYSIS

In the Barnegat Village case study, the findings and maps of the steps in the CLAM analysis are:

A. Special Areas

The site is not a special land area.

B. Water's Edge Areas

This map shows the distribution of upper and lower water's edge areas to a scale of 1:24,000.

Data Sources are as follows:

- Mean high water line
- USGS 7½' Point Pleasant Quad.
- Inland limit wetland vegetation
- NJDEP Wetlands Map
- No. 434-2160
- Inland Limit 0'SHWT
- SCS Ocean County Soil Survey
- Forest Vegetation 1:24,000
- Mark Hurd Air Photo
- Point Pleasant Quad.
- March-April 1972

C. Wet Terraces and Uplands

This maps shows the distribution of uplands (SHWT > 3') on the site to a scale of 1:24,000.

There are no wet terraces present. The data source is the SCS Ocean County Soil Survey.



D. Permeability

This map shows the distribution of permeability in the upland area to a scale of 1:24,000.

The source is the SCS Ocean County Soil Survey.



D. PERMEABILITY

E. Soil Fertility

This map shows the distribution of soil fertility in the uplands to a scale of 1:24,000.

The data source is the SCS Ocean County Soil Survey.

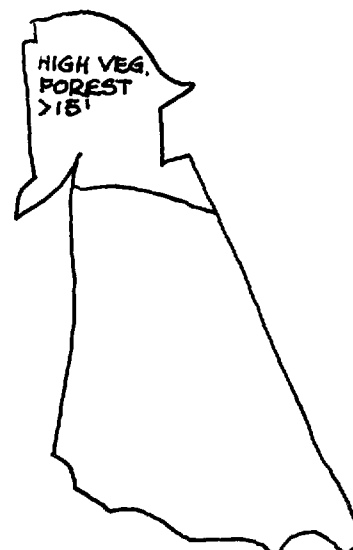


E. SOIL FERTILITY

F. Vegetation

This map shows the distribution of vegetation in the uplands to a scale of 1:24,000.

The data source is the Mark Hurd Aerial photo of the Point Pleasant quadrangle at a scale of 1:24,000



F. VEGETATION

G. Development Potential

The site is adjacent to road, sewer and water services of sufficient capacity and has similar development both adjacent to part of the site boundary and immediately across an adjacent road for less than 50% of the length of the site boundary. There are schools and shops within five miles.

The development potential of the site is therefore medium.

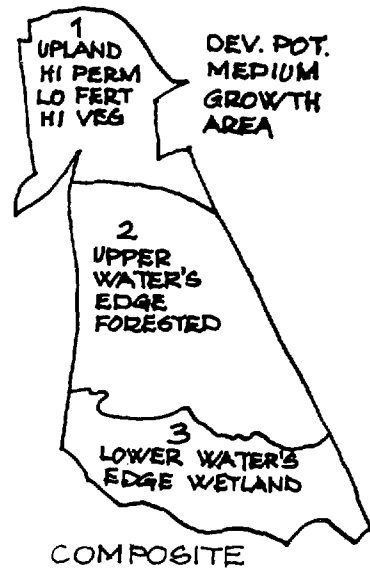
H. Regional Growth Area Type

The site is in a municipality that is designated a growth area.

I. Composite of Acceptability Factors

This map shows the site divided into three acceptability sub-areas at a scale of 1:24,000.

The data sources are the maps of individual variables shown above.

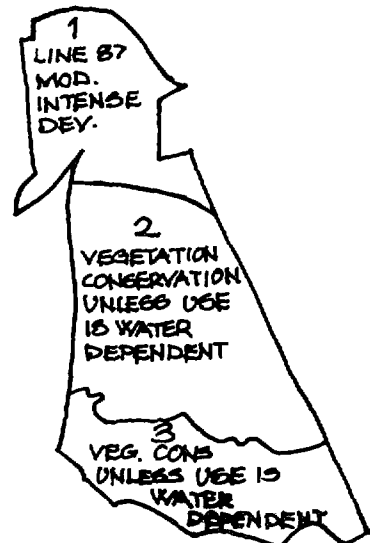


J. Location Acceptability

This map shows the distribution of acceptable development intensities given by the acceptability criteria and tables of CLAM.

Area 1 is acceptable for moderate intensity development, up to 30% of the site area in structures or impermeable paving, an additional 10% of porous paving and a minimum 20% of undisturbed forest.

This is found on Line 87 of the Land Acceptability Tables.



J. LOCATION
ACCEPTABILITY
MAP

Areas 2 and 3 are not acceptable for development that includes structures, paving, grading or vegetation disturbance unless the use is water dependent (which this proposal is not), according to the location policies for upper and lower water's edge areas.

K. Comparison of Proposed Development With Distribution of Acceptable Development Intensities

The proposed site layout shows moderate intensity clustered dwellings extended through the upland area and the upper water's edge almost to the wetland boundary.

This proposal is unacceptable because the development in the upper water's edge area exceeds the acceptable intensity.

Comparison of CLAM and CAFRA Findings

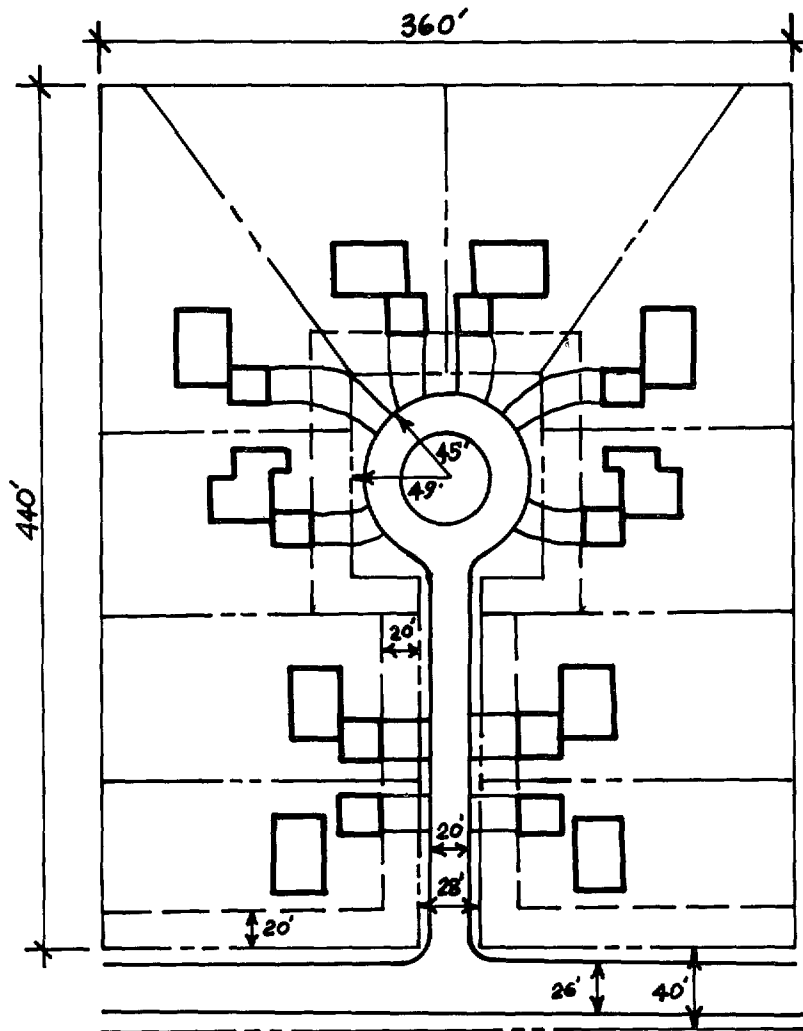
This proposed development was denied a CAFRA permit by DEP in Opinion No. 40 in August 1977, due to soil limitations, among other reasons.

Included in the soil limitations is the presence of seasonal high water table at surface, which is the main reason for excluding development from the upper water's edge areas under CLAM .

APPENDIX O: RESIDENTIAL DEVELOPMENT DENSITY TYPES

Introduction

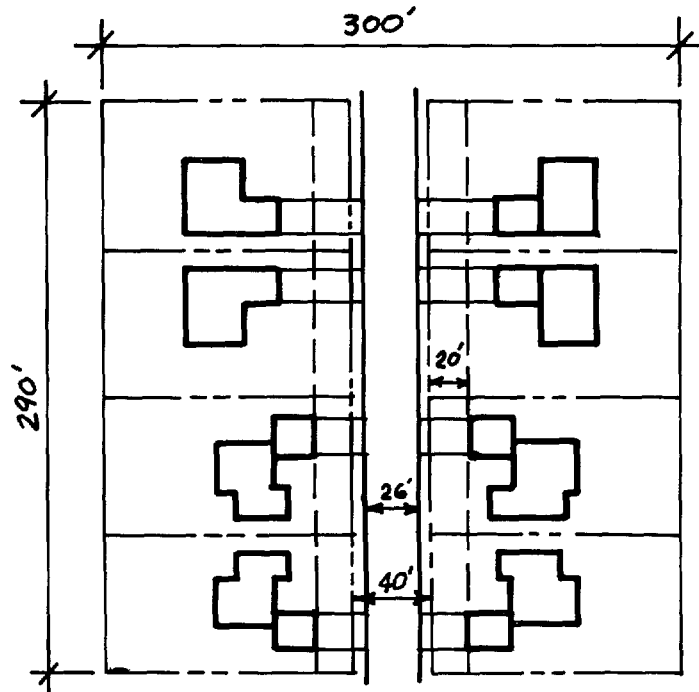
This appendix presents a series of typical residential site plans with densities ranging from 2.6 - 18 dwelling units per gross acre, analyzes the percentage of paving, and indicates the acceptable category of development intensity for each site plan under the CLAM Location Policies. The site plans in this appendix are taken from Land Design/Research, Inc., Cost Effective Site Planning: Single Family Development (Washington, D.C.: National Association of Home Builders, 1976).



Case No. 1

Total Site Area:	3.81 Acres
Dwelling Units:	10
Average Lot Size:	0.33 Acre or 14,363 Sq. Ft.
Gross Density:	2.62 DU/Acre
Total Area Structures and Paving (assuming all impervious):	0.85 Acres = 22.3% of Site

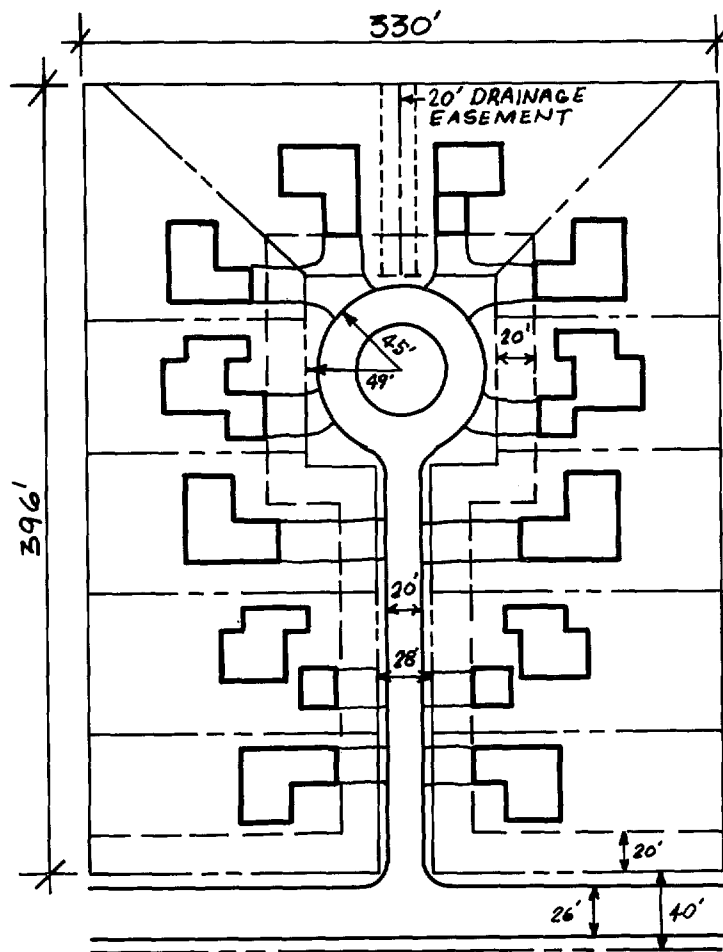
If a minimum of 20% or 0.76 Acres of the site is preserved or planted as native forest vegetation, this plan would be acceptable under CLAM in any area for moderate intensity or intensive development.



Case No. 2

Total Site Area:	2 Acres
Dwelling Units:	8
Average Lot Size:	0.22 Acres or 9,425 Sq. Ft.
Gross Density:	4 DU/Acre
Total Area Structures and Paving (assuming all impervious):	= 0.56 Acres = 28% of site

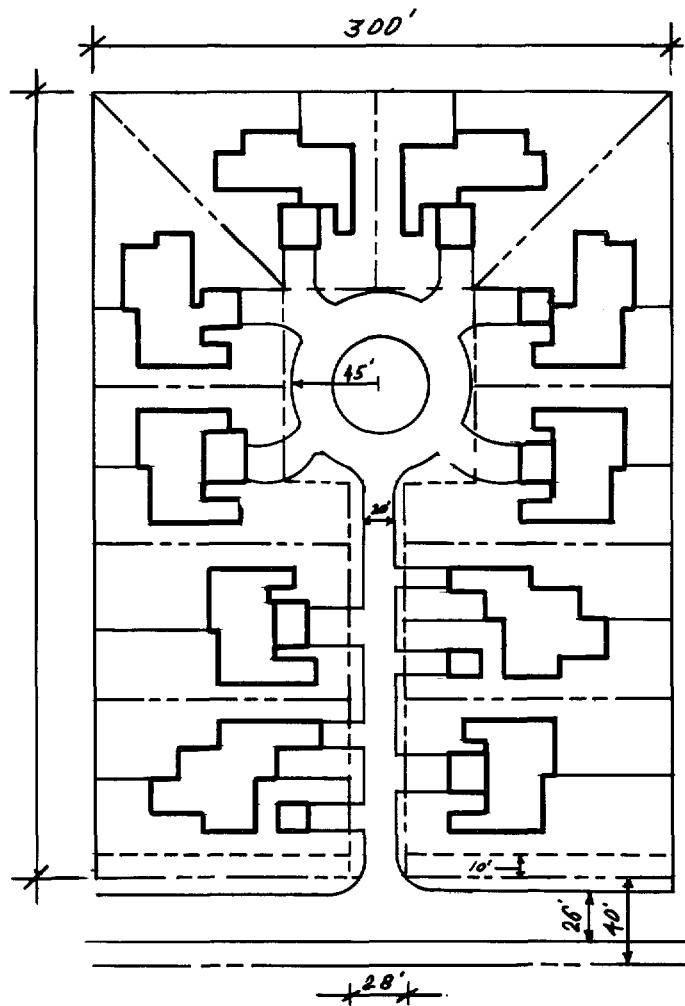
If a minimum of 20% or 0.4 Acres of the site is preserved or planted as native forest vegetation, this plan would be acceptable under CLAM in any area designated for moderate intensity or intensive development.



Case No. 3

Total Site Area:	3.1 Acres
Dwelling Units:	12
Average Lot Size:	0.22 Acre or 9,611 Sq. Ft.
Gross Density	3.87 DU/Acre
Total Area Structures and Paving (assuming all impervious):	= 0.88 Acres = 28.3% of site

If a minimum of 20% or 0.62 of the site is preserved or planted as native forest vegetation, this plan would be acceptable under CLAM in an area designated for moderate intensity or intensive development.

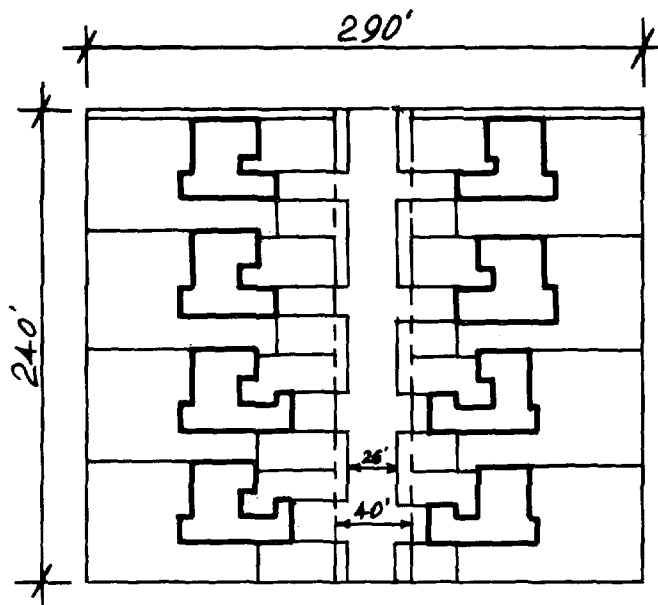


Case No. 4

Total Site Area:	2.99 Acres
No. of Units:	20
Average Lot Size:	0.11 Acres or 4,888 Sq. Ft.
Gross Density:	6.69 DU/Acre
Total Area Structures and Paving (assuming all impervious):	1.04 Acres or 34.8 % of site

If 5% of the site or 0.15 acres were preserved or planted as forest and 5% or 0.15 acres in shrubs or herbs, this development would be acceptable under CLAM in any area designated for Intensive Development.

If the total of impervious paving were reduced to 30% by making 4.8% of the site area or 0.14 acres in porous paving, and if 20% of the site or 0.60 acres were preserved or planted as forest, this plan would also be acceptable in any area designated for Moderately Intensive Development.

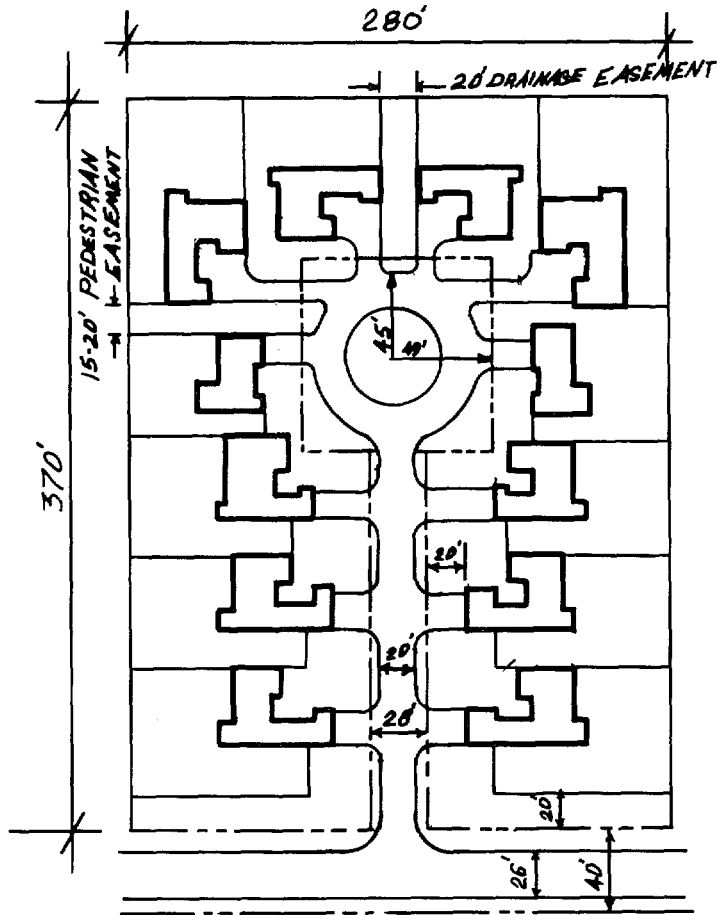


Case No. 5

Total Site Area:	1.60 Acres
Dwelling Units:	8
Average Lot Size:	0.17 Acres or 7,500 Sq. Ft.
Gross Density	5 DU/Acre
Total Area Structures and Paving (assuming all impervious):	0.56 Acres of 3.5% of site

If a minimum of 5% or 0.008 acres were preserved or planted as forest and a minimum of 5% or 0.008 acres were planted with shrubs and herbs, this plan would be acceptable under CLAM in any area designated for Intensive Development.

If the total of impervious paving were reduced to 30% of the site by making 5% of the site or 0.008 acres in porous paving, and if a minimum of 20% of the site or 0.32 acres were preserved or planted as forest, then this plan would also be acceptable under CLAM in any area designated for Moderate Intensity Development.

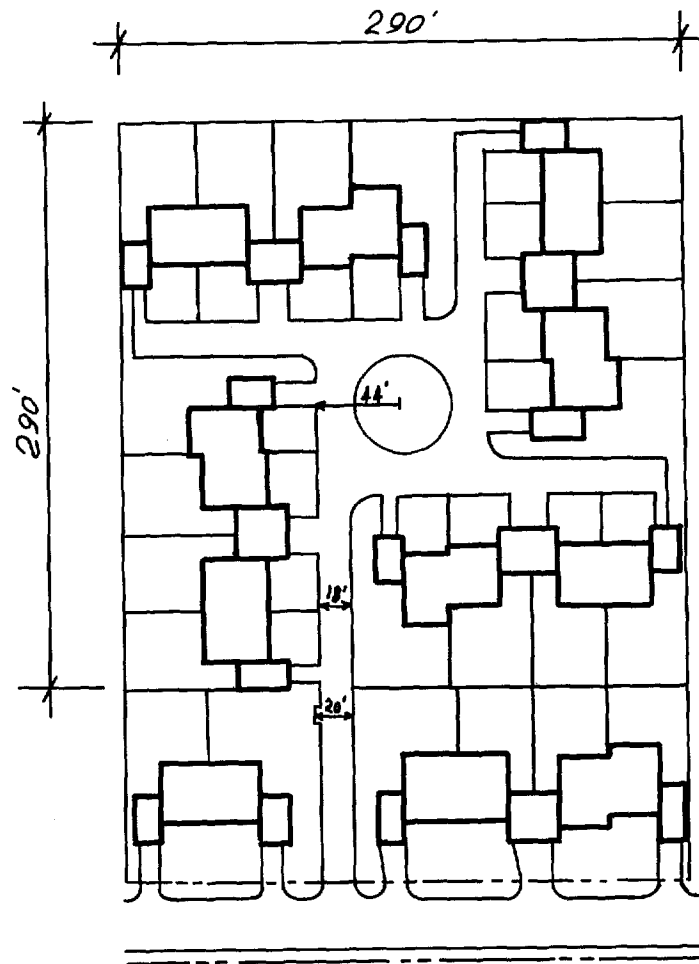


Case No. 6

Total Site Area:	2.51 Acres
Dwelling Units:	12
Average Lot Size:	0.1 Acres or 7,390 Sq. Ft.
Gross Density:	4.78 DU/Acre
Total Area Structures and Paving (assuming all impervious):	+ 0.90 Acres = 35.9% of site

If a minimum of 5% of the site or 0.12 acres were preserved or planted as forest and a minimum of 5% of the site or 0.12 acres were planted with herbs and shrubs, this plan would be acceptable under CLAM in any area designated for Intensive Development.

If the total of impervious surfaces were reduced to 30% of the site by making 5.9% of the site or 0.15 acres in porous paving, and if a minimum of 20% of the site or 0.5 acres were preserved or planted as forest, this plan would also be acceptable in any area designated for Moderate Intensity Development.

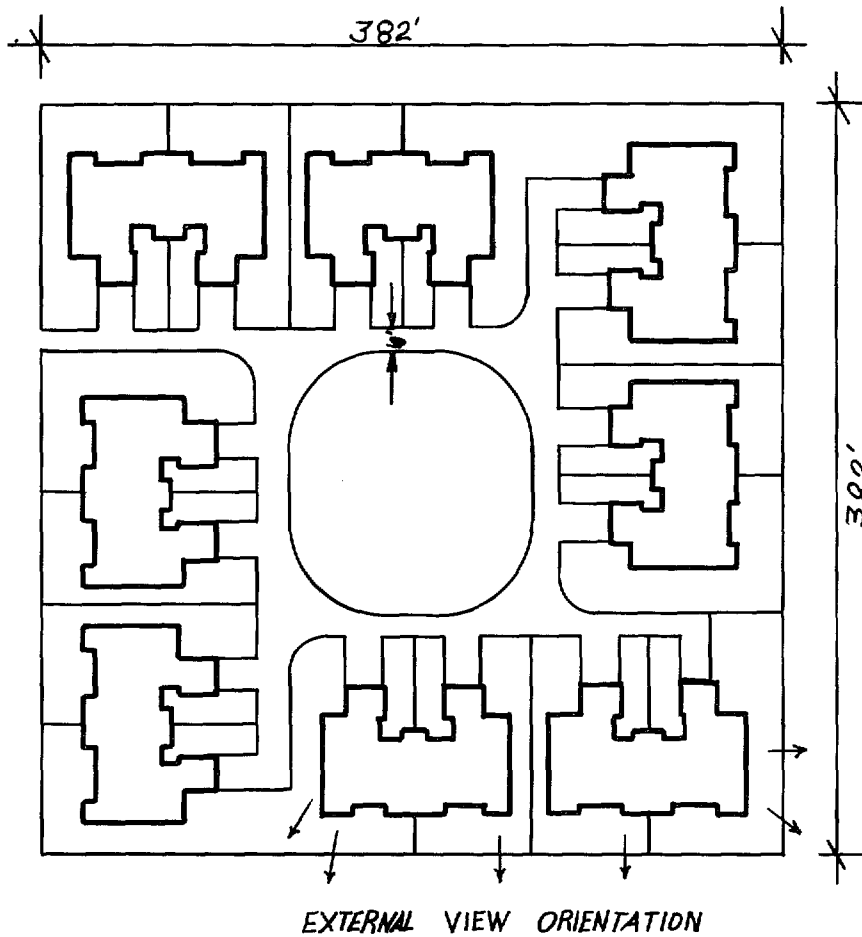


Case No. 7

Total Site Area:	2.73 Acres
Dwelling Units:	22
Average Lot Size:	0.098 Acres or 4,250 Sq. Ft.
Gross Density:	8.06 DU/Acre
Total Area Structures and Paving (assuming all impervious):	1.04 Acres or 38.1%

If a minimum of 5% of the site or 0.14 acres were preserved or planted as forest and a minimum of 5% of the site or 0.14 acres planted with herbs or shrubs, this plan would be acceptable in any area designated for Intensive Development.

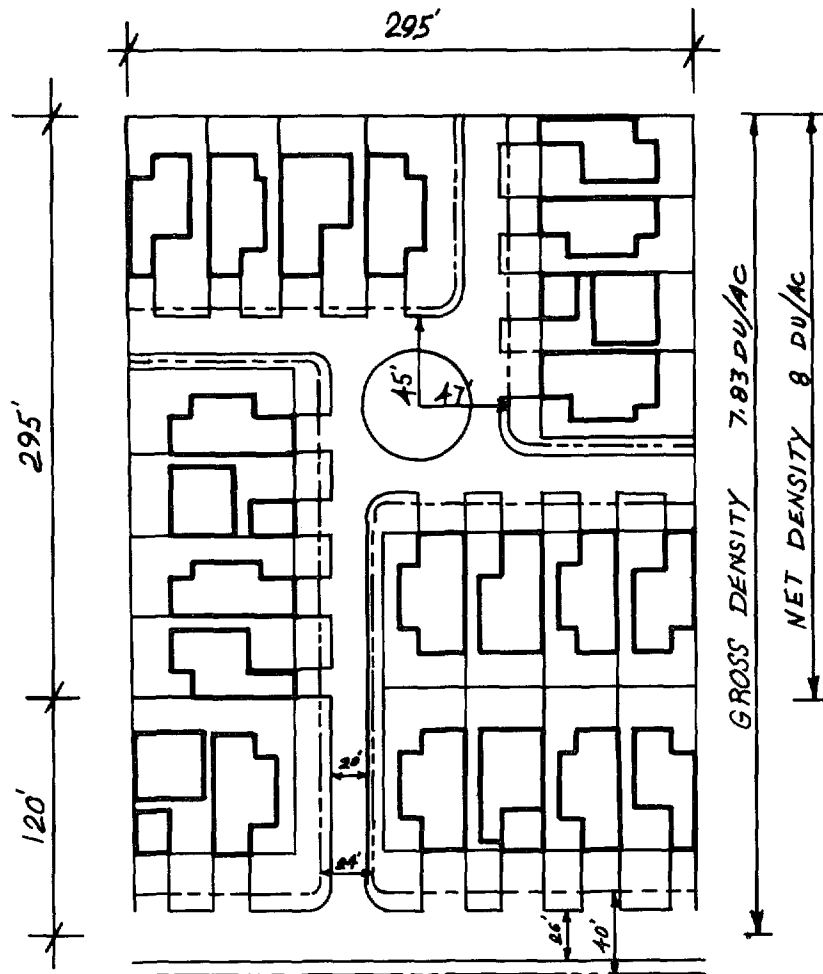
If the total of impervious surfaces were reduced to 30% by making 8.1% of the site or 0.22 acres as porous paving, and if 20% of the site or 0.55 acres were preserved or planted as forest, this plan would also be acceptable under CLAM in any area designated for Moderate Intensity Development.



Case No. 8

Total Site Area:	4.66 Acres
Dwelling Units:	44
Average Lot Size:	0.079 Acres or 3,465 Sq. Ft.
Gross Density:	9.44 DU/Acre
Total Area Structures and Paving (assuming all impervious):	= 1.94 Acres or 41.6% of site

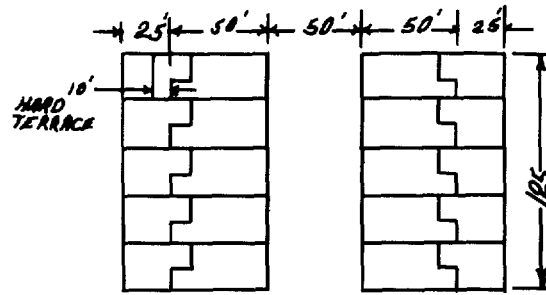
If a minimum of 5% or 0.23 Acres of the site is preserved or planted as native forest and 5% or 0.23 acres planted with herbs or shrubs, this plan would be acceptable under CLAM in any area designated for Intensive Development.



Case No. 9

Total Site Area:	2.81 Acres
Dwelling Units:	22
Average Lot Size:	0.099 Acres or 4,299 Sq. Ft.
Gross Density:	7.83 DU/Acre
Total Area Structures and Paving (assuming all impervious);	= 1.43 Acres or 50.9%

If a minimum of 5% or 0.14 Acres is preserved or planted in native forest vegetation and a minimum of 5% or 0.14 acres planted with herbs or shrubs, this plan would be acceptable under CLAM in any area designated for Intensive Development.



Case No. 10

Total Site Area:	0.57 Acres
Dwelling Units:	10
Average Lot Size:	0.043 Acres of 1,875 Sq. Ft.
Gross Density:	17.5 DU/Acre
Total Area Structures and Paving (assuming all impervious):	= 0.49 Acres or 85.6% of site.

If 5% or 0.028 acres is preserved or planted as native forest vegetation and a minimum 5% or 0.028 acres is planted with herbs or shrubs, and if the impervious paving is reduced to 80% by making a minimum 5.6% or 0.032 acres permeable, this plan would be acceptable under CLAM in any area designated for Intensive Development.

ACKNOWLEDGEMENTS

The Office of Coastal Zone Management in the Division of Marine Services, Department of Environmental Protection, prepared the New Jersey Coastal Management Program-Bay and Ocean Shore Segment, with the assistance of staff of the entire Department, other state, federal, and local agencies, interest groups, and citizens.

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Special thanks to Commissioner Rocco D. Ricci, First Deputy Commissioner Betty Wilson & Director Donald T. Graham of the Division of Marine Services.

NEW JERSEY COASTAL MANAGEMENT PROGRAM BAY AND OCEAN SHORE SEGMENT Public Hearings

Tuesday, June 13, 1978
7:30 p.m.

Cumberland County Court House
Freeholders' Meeting Room
Second Floor, Rear
Broad Street, (Route 49)
Bridgeton, New Jersey

Wednesday, June 14, 1978
7:30 p.m.

Ocean County Administration Bldg.
Freeholders' Meeting Room
Hooper Avenue & Washington Street
Toms River, New Jersey

Thursday, June 15, 1978
10:00 a.m.

State Museum Auditorium
205 West State Street
Trenton, New Jersey

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