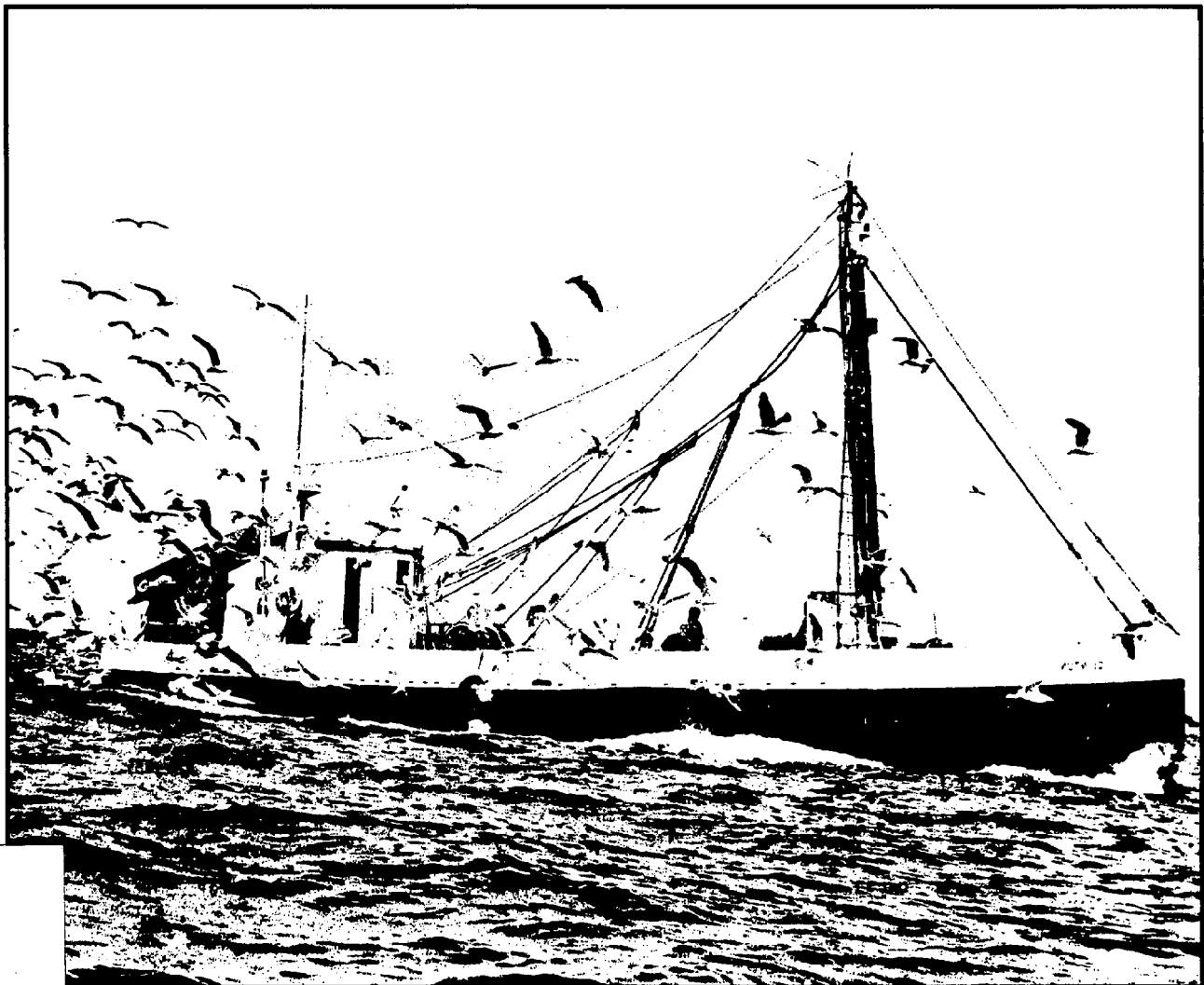


State of Massachusetts Coastal Management Draft Environmental Impact Statement



COASTAL ZONE
INFORMATION CENTER

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of Coastal Zone Management



U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
OFFICE OF COASTAL ZONE MANAGEMENT

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UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Science and Technology
Washington, D.C. 20230

OCT 20 1977

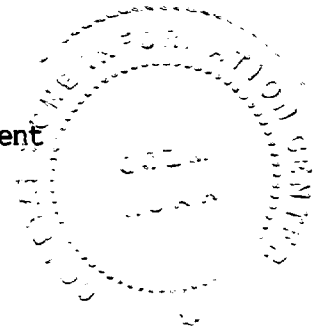
COASTAL ZONE
INFORMATION CENTER

In accordance with the provisions of Section 102(2)(C) of the National Environmental Policy Act of 1969, we are enclosing for your review and consideration the draft environmental impact statement prepared by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, Department of Commerce, on the proposed Massachusetts Coastal Zone Management Program.

Any written comments you may have should be submitted in duplicate to the parties listed below by

If you have any questions about the enclosed statement, please feel free to contact:

Kathryn Cousins or
Richard O'Connor
Office of Coastal Zone Management
3300 Whitehaven Street, N.W.
Washington, D. C. 20235
Telephone: 202/634-4235



Thank you for your cooperation in this matter.

Sincerely,

Sidney R. Galler
Sidney R. Galler
Deputy Assistant Secretary
for Environmental Affairs

U. S. DEPARTMENT OF COMMERCE NOAA
COASTAL SERVICES CENTER
2234 SOUTH HOESON AVENUE
CHARLESTON, SC 29405-2413

Enclosure

Public hearing notice is located on the back cover.

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NOTE TO READERS

COASTAL ZONE INFORMATION CENTER

The National Environmental Policy Act of 1969 mandates that an environmental impact statement be prepared as part of the review and approval process of major actions by Federal government agencies which significantly affect the quality of the human environment. The action contemplated is approval of the Massachusetts Coastal Management Program under Section 306 of the Federal Coastal Zone Management Act of 1972, as amended. An immediate effect of approval is the qualification of the State for Federal matching funds for use in administering the program. 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.

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

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

The 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.

To those people whose time is limited in reviewing the draft EIS, the following sections are recommended reading in order to understand the essential elements:

<u>Chapter</u>	<u>Page</u>
Overview of What Can Occur in the Coastal Zone	II-1
Coastal Policies	II-7
Local Government Role	II-50
Probable Impact of Proposed Action	III-1

This program is of major significance, not only to Massachusetts, but to the Nation. It is one of the first programs submitted from the eastern coastal States. Previously, only States along the Pacific

coast have submitted program for approval. It is expected that by April, 1978 six programs will be approved, and seven will be in the process of evaluation. Further, the Massachusetts coast represents a concentration of natural, historic, and economic attributes that are of national importance. The Office of Coastal Zone Management thanks those participating in the review of the Massachusetts program and this environmental impact statement.

It is the general policy of the Federal Office of Coastal Zone Management to issue a combined draft environmental impact statement and program document. An exception was made for Massachusetts because of the length of the program document. Thus, this draft environmental impact statement contains a summary of the program (see Part II). The entire Massachusetts Coastal Zone Management Program consists of Volumes I, II and addendum issued by the State as well as this DEIS.

The Massachusetts Executive Office of Environmental Affairs assures that this environmental impact statement satisfies the requirements of the Massachusetts Environmental Policy Act.

SUMMARY

(X) 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:

Ms. Kathryn Cousins
Regional Manager, North Atlantic Region or
Richard S. O'Connor
Assistant Manager, North Atlantic Region
Office of Coastal Zone Management
National Oceanic and Atmospheric Administration
3300 Whitehaven Street, NW,
Washington, DC 20235
Phone: 202/634-4235

Written comments should be addressed to:

Office of Coastal Zone Management
National Oceanic and Atmospheric Administration
Attention: Ms. Kathryn Cousins
Room 3280
3300 Whitehaven Street, NW,
Washington, DC 20235

1. Type of Action

Proposed Federal approval of the Massachusetts Coastal Management Program

(X) Administrative

() Legislative

2. Brief Description of Action

It is proposed that the Associate Administrator approve the Coastal Management Program of the State of Massachusetts pursuant to P.L. 92-583. Approval would permit implementation grants to be awarded to the State, and require that Federal actions be consistent with the program.

3. Summary of Environmental Impacts and Adverse Environmental Effects

Approval and implementation of the program will allow the State to better coordinate and more effectively implement existing State authorities for management of its coastal zone. The State will condition, restrict, or prohibit land and water uses in some parts of the Massachusetts 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 Massachusetts Coastal Zone Management Program will be generally beneficial, although there may be some adverse, short-term economic impacts on coastal users, and the program will entail irreversible commitment of some coastal resources. The Massachusetts Coastal Management Program will produce positive and negative impacts.

4. Alternatives Considered

A. Federal Alternatives

The Associate Administrator could delay or deny approval of the Massachusetts Coastal Management Program under the following conditions:

1. If the program is not adequately comprehensive to achieve the goals and objectives of the Coastal Zone Management Act.
2. If the program does not have the authorities necessary to implement the program.
3. If Federal agency views and the national interest in the siting of facilities in the coastal zone were not adequately considered.
4. If the program does not meet all of the specific requirements of the Coastal Zone Management Act.

B. State Alternatives

5. The State could revise the proposed program by expanding the scope and comprehensiveness of the policies.
6. The State could seek additional legislation establishing more comprehensive management authorities.
7. The State could restrict under existing authorities all of the State's unrestricted significant resource areas prior to program approval.
8. The State could withdraw the program until all proposed State agency regulations have been promulgated in final form.
9. The State could revise the program by defining a different landward coastal boundary.
10. The State could withdraw the approval application and continue program development, or attempt to use other sources of funding to meet the objectives of the proposed coastal management program.

5. List of all Federal, State and local agencies and other parties from which comments have been requested.

Federal Agencies

Advisory Council on Historic Preservation

Department of Agriculture

Forrest Service

Soil Conservation Service

Department of Commerce

Economic Development Administration

Maritime Administration

National Oceanic and Atmospheric Administration

Department of Defense

Department of the Air Force

Department of the Army

Army Corps of Engineers

Natural Resources Branch

Department of the Navy

Department of Health, Education and Welfare

Office of Assistant Secretary for Administration and Management

Office of Planning Systems

Department of Housing and Urban Development

Office of Community Planning and Programs

Office of Environmental Quality

Department of the Interior

Bureau of Land Management

Office of Policy Analysis

Department of Justice

Marine Resources Division

Pollution Control Section

Department of Labor

Department of Transportation

Coast Guard

Office of Environmental Affairs

Department of the Treasury

Energy Research and Development Administration

Environmental Protection Agency

Marine Protection Branch

Office of Federal Activities

Energy Research and Development Administration

Assistant Administrator for Environment and Safety

Division of Biomedical and Environmental Research

Federal Energy Administration

Federal Highway Administration

Federal Power Commission

General Services Administration

Nuclear Regulatory Commission

State and Local Government

Coastal Town Planning Boards

New England Fisheries Steering Committee

200 Mile Work Group Members

Regional Planning Councils

City Council Offices

State and Local Government (cont.d.)

Martha's Vineyard Commission
Local Conservation Commissions
New England River Basin Commission
Department of Public Works
Division of Marine Fisheries
Cape Cod Planning & Economic Development Commission
Old Colony Planning Council
Merrimack Valley Planning Commission
Department of Commerce and Development
Office of State Planning
Boston Redevelopment Authority
New Bedford Planning Department
Energy Policy Office
Department of Environmental Management
Boston Chamber of Commerce
Mayors and Selectment of Towns
Governor's Office
Department of Public Works
Office of Transportation and Construction
State Economic Opportunity Office
Historical Commission
Bureau of Transportation Planning and Development
Aeronautics Commission
Housing Finance Agency
Department of Community Affairs
EO Administration and Finance
Office of Federal/State Resources
Office of the Attorney General
Lt. Governor's Office
Department of Environmental Management
Department of Quality Engineering
Department of Wildlife and Recreational Vehicles
Water Quality Project
Department of Food and Agriculture
Local Libraries

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 Littorial 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

National Special Interest Groups (cont.d.)

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
Freinds of the Earth
Isaak Walton League
League of Women Voters of the U.S.
Marine Mammal Commission
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 Fisherman
National Fisheries Institute
National Forest Products
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 Rel Estate Appraisers
Soil Conservation Society of America
Sport Fishing Institute

National Special Interest Groups (cont.d.)

United Brotherhood of Carpenters and Joiners of America
U.S. Conference of Mayors
Western Oil and Gas Association
Wilderness Society
Wildlife Society
Wildlife Management Institute
World Dredging Association

6. This DEIS was submitted to CEQ on October 7, 1977, notice of availability in the Federal Register was October 14, 1977. Public comments should be submitted to OCZM by November 28, 1977.

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Part I

INTRODUCTION

Forty percent of the people in Massachusetts live in coastal communities, an area comprising less than a quarter of the Commonwealth's total land area. More than one-half of all current development is occurring in the State's coastal zone. At the same time, the coast already supports numerous business facilities important to the entire State, and includes a variety of valuable natural, recreational, cultural and historic resources.

A. WHAT THE PROGRAM IS GOING TO DO THAT IS NEW

The Massachusetts Coastal Zone Management Program will rely extensively on existing authorities to achieve its objective. However, a number of new management activities will occur which:

- 1) Coordinate the financing of public facilities (i.e., waste treatment, recreation and highway programs) consistent with the policies adopted by the program.
- 2) Require the consideration of at least one alternative inland site for each new energy facility which is not coastally dependent.
- 3) Ensure the consistency of all Federal actions in the coastal zone through Federal consistency (Section 307 of the Coastal Zone Management Act)
- 4) Give priority in port areas to maritime dependent development if a waterways permit is required.
- 5) Restrict State and Federal developments near designated public recreation areas and historic sites if they would have an adverse impact on the area or private projects if they require an Executive Office of Environmental Affairs permit.
- 6) Provide in a unified document data, research material and State policies regarding the coastal zone of Massachusetts thereby establishing a consistent framework for managing the coastal zone.
- 7) Specify more detailed criteria for dredging and dredge disposal.
- 8) Consider non-structural solutions to coastal erosion problems.
- 9) Identify areas of critical environmental concern for potential designation.
- 10) Expand implementation of the coastal wetlands restriction program to encompass all area types subject to the Act such as barrier beaches, sandy beaches and some contiguous uplands.

The Massachusetts Coastal Management Program has been developed in an effort to ensure that the environmental and economic value of the Massachusetts coastal zone will be sustained and enhanced. The program was prepared pursuant to the Federal Coastal Zone Management Act of 1972 (P. L. 92-583), as amended. The Office of Coastal Zone Management has determined that approval and implementation of the State's coastal program has the potential for causing a significant impact on the environment, and that, therefore, an Environmental Impact Statement (EIS) should be prepared pursuant to the National Environmental Policy Act (NEPA). It has been initially determined that the program generally will have beneficial impacts. In addition, the Associate Administrator is considering whether the program meets the requirements of the CZMA and is circulating this statement for public input to this decision. Final approval and the award of a grant to implement the program will occur only after citizens and Federal, State and local officials have had an opportunity to comment and any appropriate program changes are made based on the comments received.

B. THE FEDERAL COASTAL ZONE MANAGEMENT PROGRAM

The Coastal Zone Management Act of 1972 (P. L. 92-583) was passed in recognition of the importance of the coastal zone of the United States and the potentially adverse affects of intense pressures upon this national resource. The Act authorized a program of financial assistance to States to manage their coasts and is administered by the Secretary of Commerce, who in turn delegated this responsibility to the National Oceanic and Atmospheric Administration (NOAA), Office of Coastal Zone Management. The program was substantially modified by Coastal Zone Management Act Amendments of 1976 (P. L. 94-370).

The CZMA opens by stating "there is a national interest in the effective management, beneficial use, protection, and development of the coastal zone." (Section 302(a)). The statement of Congressional findings goes on to describe how competition for the utilization of coastal resources, brought on by the increased demands of population growth and economic expansion, has led to the degradation of the coastal environment, including the "loss of living marine resources, wildlife, nutrient-rich areas, permanent and adverse changes to ecological systems, decreasing open space for public use, and shoreline erosion." The CZMA then states, "the key to more effective protection and use of the land and water resources of the coastal zone is to encourage states to exercise their full authority over the land and waters in the coastal zone by assisting states...in developing land and water use programs...for dealing with coastal land and water use decisions of more than local significance." (Section 302(h))

The State level of government has prime responsibility for achieving "effective management, beneficial use, protection, and development of the coastal zone" (Section 302(a)). Under Section 305 of the Federal

Act, up to four years of grants are available to 34 coastal states and territories (the Great Lakes States are included) to finance up to 80 percent of program development costs. General guidelines for the preparation of management programs are provided in 15 CFR 920.50.

After developing a management program, the State may submit its program to the Associate Administrator for approval. If a program has deficiencies which can be remedied but prohibit full approval under Section 306, the State is eligible for additional funding under Section 305(d). Funds provided under this Section can be used for initial program implementation and continued program development efforts. (15CFR 920.61) If approved, the State is then eligible for annual grants under Section 306 to administer its management program.

OCZM has published criteria to be used for approving State coastal management programs and guidelines for program administrative grants (15 CFR Part 923, Federal Register 40 (6): 1683-1695). These criteria and guidelines set forth (a) the standards to be utilized by the Associate Administrator in reviewing and approving coastal management programs developed and submitted by coastal States for approval, (b) procedures by which coastal States may qualify to receive program administrative grants, and (c) policies for the administration by coastal States of approved coastal management program. The Associate Administrator will review the management program in accordance with the following general requirements:

(1) That the management program is comprehensive. It must address and provide for the management of those significant resources, uses and areas that the State has determined, through its development process and in consultation with all relevant interests as required by the Act and these regulations, make its coastal zone a unique, vulnerable and/or valuable area requiring various forms of management;

(2) That the policies, standards, objectives and criteria upon which decisions pursuant to the program will be based are articulated clearly and are sufficiently specific to provide (i) a clear understanding of the content of the program, especially in identifying who will be affected by the program and how, and (ii) a clear sense of direction and predictability for decision makers who must take actions pursuant to or consistent with the management program; and

(3) That there are sufficient policies of an enforceable nature to insure the implementation of and adherence to the management program.

As of August 1, 1977, 33 out of 34 eligible coastal states and territories had received program development grants and two States (Washington and Oregon) and two segments had received program approval under Section 306. This is one of several programs coming in for approval prior to June 1978.

The 1976 Amendments established a new assistance program consisting of grants, loans, and bond guarantees to States impacted by OCS oil and gas or other forms of energy development. In order to be eligible for assistance, a State must be receiving development (305) or administrative (306) grants, or, in the Associate Administrator's view, be developing a management program consistent with the policies and objectives contained in Section 303 of the Coastal Zone Management Act. Other sections of the Act provide grants to States to coordinate, study, plan, and implement interstate coastal management programs (Section 309); allow the Associate Administrator to conduct a program of research, study, and training to support State management programs (Section 310) and provide grants to States to acquire lands for access to beaches and other public coastal areas. (Section 315)

Besides the financial assistance incentive for State participation, the Coastal Zone Management Act stipulates that Federal activities affecting the coastal zone shall be, to the maximum extent practicable, consistent with approved State management programs the "Federal consistency" requirement, Section 307(c)(1) and (2)). The State must concur with any applicant's certification that a Federal license or permit affecting land and water uses within the coastal zone is consistent with the State's coastal management program. Section 307 of the Coastal Zone Management Act requires that any outer Continental Shelf oil and gas activity described in an exploration, development, or production plan be certified to the Secretary of the Interior that it is consistent with an approved State management program. The State must concur with such certification prior to any approval by the Department of the Interior. Section 307 further provides for mediation by the Secretary of Commerce when serious disagreement arises between a Federal agency and a State with respect to the administration of a State's program and shall require public hearings in the concerned locality.

The table below indicates which chapters of the Massachusetts Program Submission describe how the State's program meets the specific requirements of Section 306 of the CZMA.

<u>OCZM Requirements 15 CFR Part 923, Section:</u>	<u>Massachusetts Coastal Management Program</u>	<u>Draft Environmental Impact Statement</u>
.4(b) Problems, Issues and Objectives	7-8, 9-10, 20-25, 55-78, 111-114 134-144, 162-173, 193-203, 229-258, 276-292	II (2)
.5 Environmental Impact Assessment	This document meets the requirement	
.11 Boundaries	p. 26, p. a-3	11-1
.12 Land and Water Uses to be Managed	p. 55-78, 113-115, 139-140, 143-144, 162-170, 196-199, 229-258, 280-291	11-2-6
.13 Areas of Particular Concern	p. 27-31, p. 32-37 (summary and regional maps)	11-7
.14 Guidelines on Priority of Uses	p. 21-34	11-7-12
.15 National Interest in the Siting of Facilities	p. 345-349	11-53-66
.16 Area Designation for Preservation and Restoration	p. 32-34	11-08
.17 Local Regulations and Uses of Regional Benefit	p. 345-349	11-50-53
.18 Shorefront Access Planning	p. 193-199, p. 204-216	Appendix
.19 Energy Facility Planning	p. 227-269	Appendix
.20 Shoreline Erosion	p. 109-128	Appendix
.31 Means of Exerting State Control over Land and Water Uses	p. 317-343 1-5	11-35-41

<u>CZM Requirements 15 CFR Part 923, Section:</u>	<u>Massachusetts Coastal Management Program</u>	<u>Draft Environmental Impact Statement</u>
.32 Organizational Structure to Implement the Management	p. 317-343	11-42-49
.33 Designation of Single Agency	Forward - Letter from Governor (March 18, 1977) also p. 9-21	
.34 Authorities to Administer Land and Water Use, Control Development and Resolve Conflicts	p. 317-343	11-35-41
.35 Authorities for Property Acquisition	p. 208, 213-214	11-35-41
.36 Techniques for Control of Land and Water Uses	p. 317-343	11-7-34
.41 Full Participation by Relevant Bodies in Adoption of Management Program	p. 364-370; Appendix B	11-67-68
.42 Consultation and Coordination with other Planning	p. 11-12, p. 343-357; Appen- dix B, C, D	11-67-68
.51 Public Hearings	p. 6-19; Appendix B	
.52 Gubernatorial Review and Approval	Letter in Program Document	
.54 Applicability of Air and Water Pollution Control Requirements	Policy (3) p. 21, p. 334 Policy (34) p. 293-294	11-10

Part II

DESCRIPTION OF THE PROPOSED ACTION

The proposed Federal action is approval of the Massachusetts Coastal Program. The Office of Coastal Zone Management initially has determined that the program is consistent with the national policy to achieve wise use of the coastal zone and the achievement of the many national interests which Federal financial assistance was intended to promote. This action can only be understood in terms of the program itself, which is summarized in the following seven chapters.

Chapter 1

OVERVIEW

A. WHAT IS THE COASTAL ZONE?

The Massachusetts coastal zone includes the lands and waters within the area defined by:

The seaward limit of the State's territorial sea (i.e. 3 miles), extending from the Massachusetts-New Hampshire border south to the Massachusetts-Rhode Island border, and landward to 100 feet inland of specified major roads, rail, or other visible right-of-way. A map is contained at the back of this DEIS indicating boundary.

The Boundary also includes all islands in state jurisdiction.

B. OVERVIEW OF WHAT CAN OCCUR IN THE COASTAL ZONE

The Massachusetts Coastal Zone Management Program does not include new laws or increase the present number of State or local permits required for development activities. Essentially, development can occur where it occurs now, subject to the following:

- a) general development is encouraged to locate in already developed areas or areas contiguous to them;
- b) development will be permitted in the following areas but must meet certain conditions:
 - in all areas below mean high tide including ocean sanctuaries,
 - in all wetlands covered by the Wetlands Protection and Inland Wetlands Act,

- where soil can support limited sewage disposal systems and sewers are not available, and
- near recreation sites or designated historical sites if the development would have a negative impact on the sites
- c) maritime-dependent development is given priority over non-maritime dependent development in ports*, provided such activities entail dredging, filling, bulkheading or other State permitted or funded activities;
- d) development is essentially prohibited except for a defined set of uses such as catwalks, piers, boathouses, etc.
- in the 30,000+ acres now restricted under the Wetlands Restriction Act.

Development will be permitted in all other areas provided existing State and local requirements are met. Energy facilities, for example, will need to obtain approval from the Energy Facilities Sitting Council. Whether an area otherwise meeting the above conditions is used for single family homes, high rise apartments, commerce or industry will continue to be decided by local governments. Although the program points out other concerns associated with development pressures present in the coastal zone - competition among land and water uses, loss of community character and visual degradation - the State will use a range of incentive devices rather than regulatory powers to address them. General development is encouraged to locate in existing developed areas and adjacent lands by using Federal and State investment to provide sewage waste treatment and transportation services. State sewerage priorities already follow this policy, and proposed transportation projects will be reviewed for consistency with this policy.

1. Open Ocean Waters

Open ocean waters include ocean waters other than estuaries and coastal embayments. The open ocean provides opportunities for the harvest of living marine resources and mineral resources, recreation, and water transportation.

High priority uses of ocean are commercial fishing, shipping, and water sports. Uses which are conditioned are dredging, dredged spoil disposal, and mineral and energy resource extraction.

2. Significant Resource Areas

There are three types of Significant Resource Areas (SRAs) that will be discussed: 1) Ecological, which is divided into ones under the Wetlands Restriction Act and others not restricted, 2) Economic, and 3) Recreation. A full list of Significant Resource Areas in Massachusetts is provided on pages 35-37 of Volume I of the program document, and mapped in Volume II.

*Ports are defined under policy 17, page 11-14.

a. Significant Ecological Resource Areas: These are natural features whose roles in the environment are vital to the continued health, productivity and functioning of coastal ecosystems and whose values can be destroyed by physical alteration. They include barrier beaches, dunes, beaches, salt marshes, shellfish beds, and salt ponds. These Significant Resource Areas are divided into two types:

1. Areas Subject to the Wetlands Restriction Act: This refers to areas already restricted pursuant to the Wetlands Restriction Act, currently about 30,000 acres, mostly saltmarshes, which represents about 40% of the State's coastal wetlands. High priority uses of these areas are limited to conservation, shellfish harvesting, outdoor recreation and other non-intense uses. Permissible uses are underground energy transmission lines, and certain other utility lines; maintenance of existing roads and boat channels and the construction of wharves, piers, boat shelters, floats and catwalks. Maintenance dredging and the dredging of ship channels in designated port areas is also permitted. All other uses are prohibited.
2. Areas not Subject to the Wetlands Restriction Act. These are the remainder of the natural features described as Ecological SRA's which are not subject to the Wetlands Restriction Act. It is the policy of the State to place some of these areas under restrictions in the future. It is important to note that until such areas are restricted, no uses will be prohibited per se in these areas. Except for SRAs located beyond 100 feet inland of the 100 year flood plain, development in these SRAs is subject to conditions under the Wetlands Protection Act. This act permits any use provided that the following specified interests are protected:

- land containing shellfish,
- fisheries,
- prevention of pollution,
- storm damage prevention,
- flood control,
- ground water supply, and
- public or private water supply.

It should be noted that the Massachusetts program document mentions a few Ecological SRAs that will not be managed through either the Restriction or the Protection Program, such as some anadromous fish runs, erosion areas, embayments, flood

plains, and visual viewpoints and sites. The program does not address these areas beyond their current coverage under existing law.

In the remainder of the area between the significant natural features and 100' inland of the 100 year floodline, all uses are permitted provided they do not significantly impact a wetland area. Public works projects which encourage development in hazardous areas are considered low priority, as are structural protection measures, unless warranted by overriding public interests.

b. Significant Resource Areas (Economic): These are areas where development is important to the economy of the region or the Commonwealth and where capabilities exist to support coastally dependent development, such as ports, developed harbors, and urban waterfronts. In these areas development of maritime-dependent and waterfront related uses are given high priority. The Program advocates land and water development in order to increase the use and growth of port and harbor development in order to increase the use and growth of port and harbor facilities. These policies, (17-20 found on pages 11-14 apply only when State or Federal permitting or funding is required for dredging, bulkheading or pier construction.

High priority uses in designated ports are fishing operations, maritime shipping and marine industry. Other uses are permitted provided they do not conflict with these priority uses. Recreational boating, tourist facilities, and water-related activities are considered priority uses in developed harbors. New dredging and filling outside of these economic SRAs are low priorities.

c. Significant Resource Areas (Recreation): These are recreational areas unique to the coastal zone, such as beaches, boat facilities, related trails and campgrounds.

These significant resource areas are managed primarily through government funding for maintenance, improvements and acquisition. However, policies also focus on increasing non-auto coastal access. Additionally, the policies presume a public right to recreation; therefore, developments which jeopardize existing recreation shall be reviewed under the Massachusetts Environmental Policy Act and conditioned appropriately in order to minimize impacts.

3. Areas Subject to Development Constraints**

These are areas with impermeable soils, steep slopes or bedrock near the surface. Unless public sewers are provided to overcome these

** See Inland Development Constraints Areas on Summary Map

constraints, the State Environmental Code limits development requiring sub-surface waste disposal. Priority uses generally are open space, recreation, and low density residential. The map showing these areas at the end of this DEIS is generalized and when site specific tests are made, the soil may be found to support septic systems that will allow higher density. If areas subject to development constraints are sewerred, they can be developed consistent with the policies for the remainder of the coastal zone (see below).

4. Remainder of the Coastal Zone***

The remaining areas on the summary map have soils suitable for development or are currently developed and lie inland, 100 feet from the 100 year flood plain. The limited interests which apply throughout the coastal zone will affect development in this area. The five interests are:

- a. Accommodate Energy Facilities: Because certain types of energy production, storage and distribution facilities are dependent on waterfront siting and because these facilities usually have impacts affecting the coastal zone, the state program has insured that these uses can be accommodated by using the authority of the Energy Facilities Siting Council. The program specifies that alternative inland sites must be considered for non-coastal dependent uses.
- b. Protect Beach Recreation and Historic Sites: Because of specific policies in the program, beach recreation and historic sites or districts must be protected from conflicts caused by adjacent uses or activities which would degrade their quality. The Massachusetts Environmental Policy Act and the Federal procedures for protection of historic districts will be the principal management measures used to minimize such conflicts.
- c. Focus State and Federal Waste Treatment and Transportation Projects into Developed or Contiguous Areas: The State will encourage development in already developed areas and adjacent lands by giving priority to funding transportation and waste treatment facilities, development can occur at any density deemed appropriate by local governments providing existing State laws are met. For example, this coastal management program does not constrain local governments in determining if high rise apartments and hotels or single family homes would be most appropriate. Experience indicates that areas not receiving major infrastructure investments generally will be developed at low densities (typically for units per acre or less, light commercial or industrial uses, open space, recreation, etc.).

*** See Developed and Potentially Developable Areas on Summary Map

- d. Protect Air and Water Quality in All Parts of the Coastal Zone: Activities which emit pollutants that significantly affect ambient air and water quality can cause significant impacts on coastal waters regardless of their location and will be required to follow existing State and Federal laws.
- e. Provide Open Space and Recreation: The remaining enforceable State concern in this area is the provision of open space and recreation sites. The acquisition priorities are incorporated into the coastal management program and are enforceable through eminent domain powers of the State Public Access Board.

The above five interests are the enforceable State policies for the remaining part of the coastal zone. The resolution of issues involving protecting community character, incompatibility of land uses such as whether industrial zoning is preferable to residential zoning will remain the responsibility of local government.

Chapter 2

COASTAL POLICIES

The state has adopted 38 policies to guide activities on the coast. Fifteen of these are enforceable through existing state laws and regulations while the others are of an encouragement nature and cannot be enforced on Federal, State or private activities. An example of an enforceable policy is "conserve ecologically significant resource areas;" an encouragement policy is "encourage incorporation of visual concerns into...facilities." The policies that are enforceable are indicated by an asterisk in this chapter. This distinction is made so that all persons proposing actions in the coastal zone will know the minimal policies they must follow. The other policies are included in the program because they show concerns of the state that although not enforceable, will get special attention such as funds will go to preparing an advisory handbook for developers that will describe methods to incorporate visual concerns into their projects.

The enforceable policies (policies 1, 3, 4, 5, 6, 8 (a-c) 9, 12, 14, 17, 18, 25, 26, 27, 33, 34 and 35) were the only ones considered for determining that minimum requirements of the Federal Coastal Zone Management Act were met. They are also the only policies with which Federal government actions must be consistent. Policies 2 and 16 will become enforceable once Areas of Critical Environmental Concern are designated by the Secretary. Scenic Rivers and Sign Free Areas are designated by the Department of Environmental Management and Outdoor Advertising Board.

The following is a summary of the coastal policies as well as further clarifying information about criteria the State will use in applying the policies.

A. MARINE ENVIRONMENT POLICIES

- *Policy (1) Conserve ecologically significant resource areas (salt marshes, shellfish beds, dunes, beaches, barrier beaches, and salt ponds) for their contributions to marine productivity and value as natural habitats.

These ecologically significant resource areas comprise at the most 70,000 acres, or approximately 12 percent of the coastal zone, much of it consisting of submerged intertidal areas. Currently about 30,000 acres are under the Coastal Wetlands Restriction Act, which authorizes the placement of restrictive orders on property deeds prescribing permitted and prohibited uses in wetland areas. The other 40,000 of these acres are subject to the Wetlands Protection Act, which vests authority to condition construction in such areas to local conservation commissions, under state guidance.

- *Policy will be applied to Federal government activities and is otherwise enforceable under current Massachusetts Laws.

Permitted and Prohibited Uses

In the areas subject to the Wetlands Protection Act, no uses are prohibited a priori. Rather, any activities that would remove, fill, dredge, or alter these areas will continue to be conditioned or denied on a case by case basis to protect the seven specified interests in the Wetlands Protection Act - water supply, food control, storm damage prevention, water quality, shellfish and fisheries protection.

In areas restricted under the Wetlands Restriction Act, the high priority uses of these areas are limited to conservation, shellfish harvesting, outdoor recreation and other non-intense uses; permissible uses are underground energy transmission lines, and conduits or other facilities associated with certain other utility lines; maintenance of existing intake and outfall structures of electric generating facilities; roads and boat channels, and the construction of wharves, piers, boat shelters, floats and catwalks. Maintenance dredging and the dredging of ship channels in designated port areas is also permitted. All other uses are prohibited.

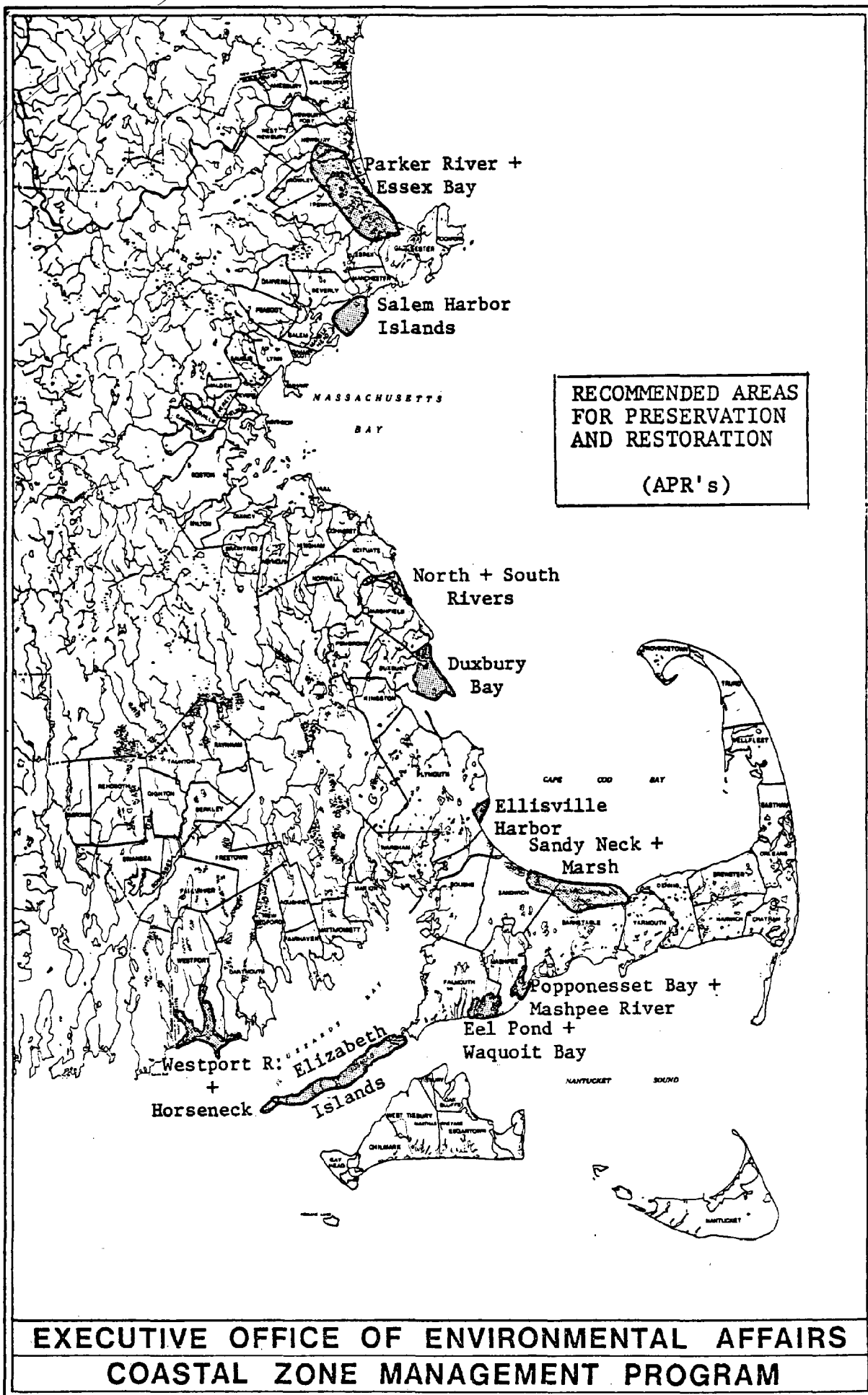
****Policy (2)** Protect complexes of marine resource areas of unique productivity (Areas for Preservation or Restoration (APR's)); ensure that activities in or impacting such complexes are designed and carried out to minimize adverse effects on marine productivity, habitat values, water quality, and storm buffering of the entire complex.

In the future, designation of an Area for Preservation or Restoration will trigger special protection measures for the area. This will include the salt marshes, sandy beaches, shellfish beds, and dunes within the complex, as well as the contiguous upland areas, where necessary to insure full protection of the area. In addition, the Inland Wetlands Restriction Program shall be applied to protect such anadromous fish runs as may exist in the complex. Designation of the areas will mean greater scrutiny to state funded and permitted projects proposed for the area since the categorical exemptions for smaller projects from the reporting and review requirements of the Massachusetts Environmental Policy Act will be removed.

The map on the following page shows the ten APR's the State plans to designate under this policy. The following activities will be categorically prohibited within designated Areas for Preservation or Restoration.

1. the siting of energy facilities,
2. new industrial discharges and the discharge of hazardous substances, including thermal effluent,
3. new dredging except for maintenance of existing channels or for enhancement of shellfish and other marine food productivity,

****Policy** applied to Federal government activities after Massachusetts Secretary of Environmental Affairs officially designates Areas of Critical Environmental Concern.



4. disposal of dredge spoil, except in instances when the spoil may be used for beach nourishment and/or dune stabilization, and
5. the siting of new sewage of treatment facilities.

In situations where compliance with this policy would conflict with the compelling public interest, the conflict resolution process will be used (see Chapter 3).

*Policy (3) Support attainment of the national water quality goals for all waters of the coastal zone through coordination with existing water quality planning and management agencies; ensure that water bodies within Areas for Preservation or Restoration are given priority for achievement and, where consistent with Federal and state law, maintenance of the highest level of water quality; and ensure that all activities endorsed by CZM in its policies are consistent with Federal and state effluent limitations and water quality standards.

This policy relies on the implementation of existing State and Federal air and water quality regulations.

*Policy (4) Condition construction in water bodies and contiguous land areas to minimize interference with water circulation and sediment transport and to preserve water quality and marine productivity.

Design and construction of solid fill piers, bulkheads, or other permanent marine structures shall be examined on a case by case basis and shall be permitted if:

- a. in estuaries and coastal embayments, flushing rates and capacity are not reduced,
- b. water quality, marine productivity, and anadromous fish run are not adversely affected,
- c. alteration of wave generated littoral currents will not exacerbate or induce shoreline erosion or adversely alter depositional patterns. (See also Coastal Hazards Policy (8)).

The design and construction of highways, roads, bridges, dams, and the diversion or impoundment of water will also be reviewed for conformance to the above provisions. Additionally, construction of these facilities in contiguous upland areas must not:

- a. increase upland erosion or induce or accelerate runoff of contaminants or otherwise adversely affect the quality of coastal receiving waters,

*Policy will be applied to Federal government activities and is otherwise enforceable under current Massachusetts Laws.

- b. affect the quantity of fresh water entering coastal receiving waters such that salinity levels would be adversely altered.

*Policy (5) Ensure that dredging and disposal of dredged material minimize adverse effects on marine productivity.

Extensive criteria and standards for dredging have been prepared and are listed on pages 96-98 of Vol. I of the Massachusetts program document.

*Policy (6) Accommodate off-shore and grave mining needs in areas and in ways that will not adversely affect marine resources and navigation.

Locational guidelines are outlined in the Massachusetts program document (page 99) which will be incorporated into regulations for off-shore sand and gravel mining to be adopted following program approval. Basically mining will be prohibited in marine areas that serve as sources of sediment supply for coastal beaches (landward of 80' contour), areas where contaminated or hazardous material has been deposited, in navigation channels, shellfish, finfish spawning and other productive sport or commercial fisheries.

Policy (7) Encourage and assist commercial fisheries research and development, restoration of fishery resources, the development of extensive and intensive aquaculture, and anadromous fish enhancement, initiated at local, State, and Federal levels.

B. COASTAL HAZARD POLICIES

Policy (8) Discourage further growth and development in hazardous areas and preserve natural buffers throughout the coastal zone.

- *a. Restrict new development in barrier beach, dune, and salt marsh significant resource areas to the permitted uses defined under Policy I, Marine Environment Section.
- *b. Condition new development in contiguous upland areas within a zone extending landward to 100 feet inland of the limit of the 100 year flood, especially within designated Areas for Preservation or Restoration, to ensure that existing hazards are not exacerbated and that the proposed uses or activities are appropriate in light of the risks of damage.

*Policy will be applied to Federal government activities and is otherwise enforceable under current Massachusetts Laws.

- *c. Ensure that development proposed to be located in inter-tidal areas or offshore in coastal water bodies will not exacerbate existing erosion or flooding hazards in adjacent or downcoast areas.
- d. Encourage and support local floodplain zoning and other management of hazardous areas in all coastal towns.

This policy addresses the need to concentrate on preventing new growth and development that would be prone to damage, would exacerbate existing hazards, or would impair the ability of natural buffers to protect both existing development in hazardous zones and development in adjacent inland areas.

*Policy (9) Ensure that state and federally funded public works projects proposed for location within the 100 year coastal floodplain will:

- a. not exacerbate existing hazards or damage natural buffers,
- b. be reasonably safe from flood and erosion related damage, and
- c. not promote growth and development in damage prone or buffer areas, especially in undeveloped areas of APR's.

Policy (10) Acquire undeveloped hazard prone areas for conservation or recreation use.

Policy (11) Provide funding and technical assistance for the restoration and stabilization of foreshore and shore areas in hazardous zones using non-structural measures.

Minimum criteria for implementing any of these types of measures through either Federal, State, or local action should include:

1. The existence of adequate land use regulation or access controls to prevent deterioration of restored or stabilized areas; and
2. the establishment of adequate design criteria to ensure proper height, slope, width, and sand grain size of restored dune and beaches; and
3. the assurance that future maintenance and replenishment requirements have been estimated and can be provided for.

In the extreme cases where there would be widespread public benefit, structural solutions will be permitted to protect existing development. (See Policy 12))

*Policy (12) a. Implement Federal or State structural solutions to protect property and lives only when there will be widespread public benefits and minimal adverse environmental effects.

*Policy will be applied to Federal government activities and is otherwise enforceable under Current Massachusetts Laws.

- b. Approve permits for private flood or erosion control projects only when it has been determined that there will be no adverse effects on adjacent properties or down coast areas.

Policy (12a) will be implemented only when the following criteria are met:

1. Non-structural measures, such as acquisition, relocation, land use regulation, flood proofing, and dune/beach restoration or stabilization have been evaluated and rejected as being cost prohibitive, ineffective, or legally infeasible.
2. The area to be protected is of greater than local significance and substantial public benefit in the form of protection of existing public facilities or development of improved public access and expanded public use opportunities can be achieved in conjunction with construction of the proposed project.
3. Implementation of structural measures will not seriously impair the functioning of natural process, nor adversely affect adjacent or down coast areas.
4. Maintenance costs have been estimated for the project and included in the cost/benefit evaluations. Agreements have been reached with recipient communities concerning maintenance responsibilities.

C. Visual Policies

Policy (13) Encourage incorporation of visual concerns into the early stages of the planning and design of all facilities proposed for siting in the coastal zone. Use existing review processes to ensure that publicly funded development minimizes adverse impacts on the visual environment.

*Policy (14) Review developments proposed near designated or registered historic districts or sites to ensure that Federal and State actions and private actions requiring a State permit respect their preservation intent and minimize potential adverse impacts. Encourage use of local zoning, land use controls, and tax incentives to improve visual access and the compatibility of proposed development with existing community character.

Historic districts or sites are designated through (1) placement on The National Register of Historic Places, or (2) districts created by local governments, or (3) by special acts of the Massachusetts legislature. The following is a list of designated historic districts:

*Policy will be applied to Federal government activities and is otherwise enforceable under current Massachusetts Laws.

<u>Historic Districts Established by Coastal Communities</u>	<u>Established</u>
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Beverly:	Fish Flake Hill Historic District	1971
Dennis:	South Dennis Historic District	1974
Harwich:	Harwich Historic District	1970
Manchester:	Manchester Historic District	1975
New Bedford:	Waterfront Historic District	1971
Plymouth:	Town Brooke, Town Square Historic District	1973
Salem:	Derby Street Historic District	1974
Sandwich:	Sandwich Historic District	1965
Tisbury:	William Street Historic District	1975
Wareham:	Parker Mills Historic District	1971
Westport:	Westport Point Historic District	1973

<u>Historic Districts Established by Special Acts of Massachusetts Legislature</u>	<u>Established</u>
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Falmouth:	Falmouth Historic Districts (7 areas)	1975
Hingham:	Lincoln Historic District	1966
Marblehead:	Old Town Historic District	1965
	Ginger Bread Hill Historic District	1965
Nantucket:	Nantucket Historic District (entire island)	1970
Yarmouth:	Yarmouthport Historic District	1965
Barnstable County:	Regional District Old Kings Highway	1973

Policy (15) Expand visual access in urban areas and provide views of coastally dependent activities with significant educational or interest value.

**Policy (16) Support designation of scenic rivers in the coastal zone. Support designation of Areas for Preservation and Restoration as "Sign Free Areas." Encourage scenic highway and scenic road designation.

The State currently has the authority to designate scenic rivers and sign free areas but has previously not made such designations in the coastal zone.

D. Ports and Harbors Policies

*Policy (17) Encourage maritime commerce and related development in port areas. Prohibit preemptions of present and proposed maritime-dependent industrial uses. Permit non-maritime dependent industrial uses which do not represent an irreversible commitment of sites and which do not preempt foreseeable maritime-dependent industrial uses.

**Policy will apply to Federal Government activities as well as other activities in the State after such designations occur.

The following are definitions the State has used for applying these policies:

- Ports: Water and land areas with
- 1) navigable channels of 20 foot depth or more
 - 2) available land abutting such channels which by its topography, size, separation from residential neighborhoods, and/or zoning is suited to accommodate maritime dependent activity,
 - 3) well-developed road and rail lines to port areas leading to major trunk and arterial routes, and
 - 4) water and sewer services capable of accommodating major industrial needs.

The following localities contain a port area under this definition: Gloucester, Salem, Beverly, Davenport, Boston, Chelsea, Revere, Quincy, Weymouth, Plymouth, New Bedford, Fall River, Somerset.

Developed Harbors: Areas meeting at least one of the following characteristics:

- 1) provides public mooring space, berths, slips, ramps, and docks which serve a region-wide boating public, as evidenced by either (a) public access to the harbor which is free or open for a nominal fee to non-residents and which has adequate parking facilities; or (b) a significant number of mooring spaces or slips which are available to the general public on a first come, first serve basis; or (c) very heavy boating traffic,
- 2) hosts harbor facilities used by commercial fishermen,
- 3) serves cruise boats, ferries and other marine industry, and/or
- 4) presents unique development opportunities for the fishing industry or for waterfront renewal and revitalization.

There are over 100 harbors under this definition.

All proposals for maritime-dependent industrial developments in port areas will be encouraged by CZM and will be facilitated as much as possible by EOE agencies, unless the proposed use will seriously conflict with or preempt, either economically or physically, other existing maritime-dependent industrial uses in that port or other ports. Should conflicts arise among maritime-dependent uses, State and Federal permit and funding actions shall be granted to the use which is more limited in its spatial, locational, or economic options and denied to the other use.

Proposals for development in port areas which are not maritime-dependent will be permitted so as not to deter viable economic uses of vacant port lands. However, should a conflict arise between a project which is not maritime-dependent and a foreseeable maritime-dependent use, State and Federal permit and funding actions shall be denied to the non-marine dependent use if:

1. public agencies and/or fishing, maritime shipping or marine industry spokesmen have expressed interest in the site for waterfront dependent uses of particular state or national economic importance; and
2. the proposed activity would irreversibly commit the site and the site is the best available for the foreseeable maritime dependent use.

In determining "irreversibility" and "best available", the following factors shall be considered:

irreversibility:

- can the proposed structure be converted to maritime dependent use?
- is the proposed use or structure of a duration or type that is permanent and not easily removed?
- is future maritime-dependent use of the area effectively defined because water or land access for vessels or truck and rail transportation is precluded?
- are lease stipulations such as to allow future conversion of the site to maritime-dependent use?

best available:

- for the foreseeable maritime-dependent use, are alternative sites in port areas available possessing similar characteristics (size, availability of road and rail access, proximity to major shipping channels and open water, suitable turn-around basins and channel depth)?
- will the use of alternative sites present graver environmental and safety problems (proximity to residential neighborhoods, overloading of road or rail capacities, harbor congestion, expose greater numbers to environmental harm or safety risks)?

*Policy (18) Promote the widest possible public benefit from port and harbor and channel dredging and ensure such proposals are consistent with marine environment policies.

Public funding for dredging will only be allocated to port areas and in developed harbors.

In port areas and developed harbors, maintenance dredging will have the highest priority for public assistance. Publicly funded maintenance dredging will be scheduled so that projects demonstrating the most pressing need, widest public benefit, and least environmental damage are carried out first.

*Policy will be applied to Federal government activities and is otherwise enforceable under current Massachusetts Laws.

Deepening or expansion of channels and mooring or turn-around basins beyond authorized or existing depths or size will be approved for State or Federal funding if the project meets two of the following criteria:

- 1) provides broad public benefits for recreational boating which are spread over a region and which rebound to the general public and is necessary to resolve harbor conflicts between fishermen and recreational boaters;
- 2) enhances benefits to the marine fishing industry;
- 3) produces economic returns to maritime shipping and other maritime industries by reducing turn-around times and in-harbor transit delays, and permits usage of more efficient sized vessels; and/or
- 4) reduces navigational safety risks.

Also, in order to encourage location of maritime shipping and marine industry in existing port areas, proposals for recreation of new channels or mooring and turn-around basins of 20-foot depth or more will only be permitted, publicly assisted or developed if the need to be met by the project is of national or Statewide importance and cannot be accomplished in designated port areas and the project demonstrates that damage to the environment would be less.

Policy (19) Encourage, through technical and financial assistance, the expansion of water-dependent uses in port areas and developed harbors where the risks of damage to the marine environment are minimal.

Policy (20) Encourage urban waterfront redevelopment and renewal in developed harbors in order to link residential neighborhoods and commercial downtown areas with physical and visual access to the waterfront.

E. Recreation

Policy (21) Improve public access to coastal recreation facilities, and alleviate auto traffic and parking problems through improvements in public transportation.

CZM will support access improvements, both demonstration and permanent solutions, to existing recreation areas where increased use can be sustained without degradation of significant resource areas cited in Marine Environment Policy (1) and when:

- (1) existing transportation is inadequate, especially where there are traffic problems or related environmental impacts; or
- (2) the area is State or Federally owned, since potential impacts from increased use can be more easily managed on public land; or

- (3) the area is underutilized based on a ratio of parking to amounts of sandy beach and adequate public facilities, rest rooms, etc., can be provided to support the increased use, or
- (4) benefits from public transportation to recreation might spill over into increased town commerce, tourism; or
- (5) public transportation investments can service many recreation areas near each other.

Policy (22) Link existing coastal recreation sites to each other or to nearby coastal inland facilities via trails for bicyclists, hikers, and equestrians, and via rivers boaters.

Policy (23) Increase capacity of existing recreation areas by facilitating the multiple use of the site and by improving management, maintenance and public support facilities. Resolve conflicting uses whenever possible through improved management rather than through exclusion of uses.

Policy (24) Provide technical assistance to developers of private recreational facilities and sites that increase public access to the shoreline.

Policy (25) Expand the physical size of existing State or local recreation facilities in regions with a high need.

With regard to the above four policies, first priority is to improve transportation to and maintenance of existing recreation facilities. The list of beaches under policy 27 identify those areas to which this policy applies. Where those policies are not sufficient to improve recreation for areas of high need, CZM will then support funds for site expansion of existing facilities at a higher priority than entire new acquisitions when:

1. Undeveloped areas abutting or near existing recreation sites are suitable for expansion or
2. Existing sites are over-utilized and there is no nearby substitute which might shift demand for the activity, or
3. Other public improvements have been made or are proposed on or near existing recreation sites; for example, where state or Federal funding has been used to slow or prevent erosion of beaches, and
4. Access, including transit, roads and parking, is sufficient or will be sufficient subsequent to implementation of transportation improvements under Policy (21).

*Policy (26) Acquire and develop new public areas and facilities for coastal recreational activities. Give highest priority to new acquisitions in regions of high need and where site availability is now limited. Assure that both transportation access and the recreational facility is compatible with social and environmental characteristics of the surrounding community(ies).

In order to minimize negative impacts of new recreation acquisition, a formal committee comprised of communities affected by the proposed purchase and relevant state agencies will be convened to discuss and resolve the following issues:

- the "need" for the acquisition as defined in the text and previous policy of this section.
- traffic and site environmental impacts.
- social and economic impacts on the surrounding community(ies).
- alternatives in terms of expanding other sites; acquiring more, smaller sites in conjunction with trails; different available locations.

The following lists are coastal recreation sites of high priority for acquisition funded partially with State or Federal funds, and are consistent with Policy 26. See Regional Chapters for level of government appropriate for acquisition. Any changes to this list would require a revision or amendment to the plan.

SITES CONSISTENT WITH POLICY 26

1. Local acquisition financially supported by State and/or State allocated federal funds (CZM Act Section 315 Amendments providing acquisition funds, BOR, Self Help):

- 1) Chariff Property, Rockport
- 2) Knowlton Wharf and Field, Rockport
- 3) Halibut Point, Rockport
- 4) Long Wharf Gloucester
- 5) Downtown Gloucester Visitor's Park, Gloucester
- 6) Kernwood Park, Salem
- 7) West Beach, Beverly
- 8) Lynn Harbor Waterfront, Lynn
- 9) Forest River, Salem
- 10) Chelsea Naval Hospital Site, Chelsea
- 11) Belle Isle Marsh, Winthrop
- 12) East Boston Waterfront, East Boston
- 13) Charlestown Naval Shipyard Park Expansion, Charlestown
- 14) Mann Hill Beach, Scituate
- 15) Cohasset Harbor Boat Ramp and Parking Expansion, Cohasset
- 16) Blackman's Point, Marshfield
- 17) Green Harbor, Marshfield

*Policy will be applied to Federal government activities and is otherwise enforceable under current Massachusetts Laws.

- 18) Saquish Beach, Plymouth
- 19) Ah-de-na, Kingston
- 20) Ellisville Harbor, Plymouth
- 21) Access Points on Runnins River, Seekonk
- 22) Bicentennial Waterfront Park, Fall River
- 23) Land Adjacent to Assonet Bay, Berkley-Freetown
- 24) Access facilities to Long Beach, Wareham
- 25) Washburn Island, Falmouth
- 26) Popponesset Bay Beaches, Mashpee
- 27) Barrier Beach, Brewster
- 28) Lamberts Cove, West Tisbury
- 29) Tiah's Cove, Tisbury Great Pond, West Tisbury
- 30) Nantucket Water Access Points, Nantucket

II. State Acquisition:

- 1) Lynn Harbor Waterfront, Lynn
- 2) Chelsea Naval Hospital, Chelsea
- 3) Revere Beach Expansion, Revere
- 4) Boston Harbor Islands
- 5) Access Points on Palmer River, Swansea-Rehoboth
- 6) Boat Ramp on Lee River, Swansea
- 7) Expanded State Owned Rest Area, Route 24, Freetown
- 8) Access to Stoney Point Dike, Wareham
- 9) South Cape Beach, Mashpee
- 10) Elizabeth Islands, Dukes County

III. Potential Federal Surplus Land:

- 1) Coast Guard Station, Plum Island
- 2) Air Force Land, Fourth Cliff, Scituate
- 3) Thacher Island, Rockport

I. All these sites are discussed in the Regions Chapter (Volume II) or have been proposed for purchase.

*Policy (27) Review developments proposed near existing public recreation sites in order to minimize their potential adverse impacts.

During project design and construction of new developments near existing public recreation sites, potential negative impacts should be evaluated, and litigation measures such as setbacks, buffers, pollution controls and site design should be employed. All Federal and State actions and private actions requiring a State permit that have an adverse impact on recreation facilities will be deemed inconsistent with the CZM program and conditioned or denied. The many public beaches to which this policy applies are listed on the next page.

*Policy will be applied to Federal government activities and is otherwise enforceable under current Massachusetts Laws.

F. Energy Policies

Policy (28) Maximize the use of existing oil terminals. For new oil terminals, ensure that environmental impacts and effects on port operations are appropriately considered.

An oil terminal is by its nature a coastally dependent facility, and, as such, must be accommodated within the coastal zone. In exercising its authority over the siting of oil terminals, the Energy Facility Siting Council (EFSC) has agreed to maximize the use of existing oil terminals by:

- assessing the need for a new oil terminal, including determining whether existing capacity is available and would fulfill the need and whether such capacity is available for use by the applicant.

Where the EFSC has approved the need for a new oil terminal, the EFSC has agreed to consider environmental impacts and effects on port operations by:

- assessing the air, water, and land use impacts associated with the use of the proposed site,
- weighing the impacts of any new dredging that may be required for the terminal against the use of alternative sites that may not require new dredging,
- assessing the impact of siting the oil terminal on existing or future port operations (will the use of the proposed site preempt or conflict with future needs of the fishing industry, maritime commerce, or other marine industry?), and considering whether the oil terminal can optimize use of existing infrastructure and is accessible to pipelines for distribution of oil.

Assessment of these factors will provide for adequate balancing of potential environmental impacts while providing necessary energy supplies at the lowest possible cost.

In addition, oil terminals will not be sited in areas designated by the Secretary of Environmental Affairs as Areas for Preservation or Restoration/Areas of Critical Environmental Concern.

Policy (29) Consider the siting of oil tank farms in areas outside the coastal zone.

The EFSC, in exercising its jurisdiction over oil storage facilities, has agreed to consider the environmental impacts and effects on port operations by making the same assessments called for under Policy (28) and not by approving the siting of oil storage facilities in areas designated as Areas for Preservation and Restoration.

BEACHES WITH PUBLIC ACCESS AND PARKING* (i.e., to which Policy 25 & 27 apply)

Plum Island Beach and State Park	
Salisbury Beach State Reservation	Salisbury
Salisbury Beach	Salisbury
Crane Beach	Ipswich
Hodgkin's Cove	Gloucester
Wingaersheek Beach	Gloucester
Half Moon Beach	Gloucester
Pavilion Beach	Gloucester
Good Harbor Beach	Gloucester
Cressy Beach	Gloucester
White Beach	Gloucester
Pebbly Beach	Rockport
Back Beach	Rockport
Front Beach	Rockport
Forest River Park	Salem
Collins Cove	Salem
Beverly Harbor	Beverly
Obear Park	Beverly
Dane Street Beach	Beverly
Independence Park	Beverly
Juniper Cove Beach	Salem
Juniper Beach	Salem
Salem Willows Beach	Salem
Horse Shoe Beach	Salem
Porter River Beach	Danvers
Devereaux Beach	Marblehead
Riverhead Beach	Marblehead
Castle Park	Marblehead
Kings Beach	Lynn
Lynn Beach	Lynn
Nahant Beach	Nahant
Revere Beach	Revere
Short Beach	Winthrop
Winthrop Beach	Winthrop
Constitution Beach	Boston
Castle Island	Boston
Pleasure Bay	Boston
City Point	Boston
L Street Beach	Boston
Carson Beach	Boston
Malibu Beach	Boston
Tenean Beach	Boston
Orchard Beach	Quincy
Wollaston Beach	Quincy
Heron Road Beach	Quincy
Willows Beach	Quincy
Perry Beach	Quincy
Rhoda Street Beach	Quincy
Lower Germantown Beach	Quincy
Baker Beach	Quincy
Mound Street Beach	Quincy

*Public parking defined as space for more than 25 cars.

BEACHES WITH PUBLIC ACCESS AND PARKING (cont. page 2)

Wessagusett Beach	Weymouth
Fort Point Beach	Weymouth
Hingham Bathing Beach	Hingham
Pemberton Beach	Hull
Bay Side Beach	Hull
Nantasket Beach	Hull
Gun Rock Beach	Hull
Brant Rock Beach	Marshfield
Green Harbor Beach	Marshfield
Duxbury Beach	Duxbury
Plum Hills Beach	Duxbury and Plymouth
Long Beach	Plymouth
Scusset Beach	Bourne
Bossetts Island	Bourne
Potuisset Beach	Bourne
Barlows Landing	Bourne
Monks Park	Bourne
Monument Beach	Bourne
Gray Gobles Beach	Bourne
Falmouth Beach	Falmouth
Old Silver Beach	Falmouth
Trunk River Beach	Falmouth
Menauhant Beach	Falmouth
Falmouth Heights Beach	Falmouth
Surf Drive Beach	Falmouth
Megonsett Beach	Falmouth and Bourne
Sandwich Beach	Sandwich
Sandy Neck Beach	Sandywich
South Cape Beach	Mashpee
Kalmus Park Beach	Barnstable
Keyes Memorial Beach	Barnstable
Coville Beach	Barnstable
Craigville Beach	Barnstable
Dowes Beach	Barnstable
Englewood Beach	Yarmouth
Bay View Beach	Yarmouth
Colonial Acres Beach	Yarmouth
Grays Beach	Yarmouth
Chapin Memorial Beach	Yarmouth
Bass River Beach	Yarmouth
Parker's River Beach	Yarmouth
Seagull Beach	Yarmouth
Taunton Avenue Landing	Dennis
Dunes Road Landing	Dennis
Horse Foot Path Beach	Dennis
Bayview Road Beach	Dennis
Corporation Beach	Dennis
Cold Storage Beach	Dennis
Town Beach	Dennis
Sea Street Beach	Dennis
Glendon Beach	Dennis
Haigis Beach	Dennis

BEACHES WITH PUBLIC ACCESS AND PARKING (cont. pg. 3)

South Villiage Road Beach	Dennis
West Dennis Beach	Dennis
Scargo Lake Beach	Dennis
Harbor Road Beach	Dennis
Inman Road Beach	Dennis
Roycraft Parkway Beach	Dennis
Town Beach	Brewster
Paines Creek Beach	Brewster
Saints Landing	Brewster
Breakwater Beach	Brewster
Crosby Landing	Brewster
Ellis Landing	Brewster
Robbins Hill Beach	Brewster
Handing Beach	Chatham
Ridgevale Beach	Chatham
Cockle Cove Beach	Chatham
Forest Beach	Chatham
Pleasant Street Beach	Chatham
Nauset Beach	Chatham
North Beach	Chatham
Holway Beach	Chatham
Harding Lane Beach	Chatham
Chatham Light Beach	Chatham
Oyster Pond Beach	Chatham
Harding Beach	Chatham
Red River Beach	Harwich
Banks Beach	Harwich
Earle Road Beach	Harwich
Skaket Beach	Orleans
Rock Harbor Beach	Orleans
Nauset Beach	Orleans
Rock Harbor Beach	Eastham
First Encounter Beach	Eastham
Short Life Beach	Eastham
Nauset Beach	Eastham
Nauset Lighthouse Beach	Eastham
Coast Guard Beach	Eastham
Boat Meadow	Eastham
Eastham Beach	Eastham
Indian Neck Beach	Eastham
Mayo's Beach	Eastham
Cahoon Hollow Beach	Eastham
White Crest Beach	Eastham
Lecount Hollow Beach	Eastham
Marconi Beach	Eastham
Corn Hill Beach	Truro
Ballston Beach	Truro
Great Hollow Beach	Truro
Head-of-the-Meadow Beach	Truro
Highland Beach	Truro
Longhook Beach	Truro
Herring Cove	Provincetown

BEACHES WITH PUBLIC ACCESS AND PARKING (cont. pg. 4)

Race Point Beach	Provincetown
South Beach	Edgartown
Oak Bluffs Town Beach	Oak Bluffs
Joseph Silva State Beach	Oak Bluffs and Edgartown
Cisco Beach	Nantucket
Jetties Beach	Nantucket
Madaket	Nantucket
South Beach	Nantucket
Surfside Beach	Nantucket
Sconset Beach	Nantucket
Swifts Beach	Wareham
Minot Forest Beach	Wareham
Little Harbor Beach	Wareham
Onset Beach	Wareham
West Island Beach	Fairhaven
Horseneck Beach	Westport
East Horseneck Beach	Westport
Apponagonsett Point Beach	Dartmouth
Jones Beach	Dartmouth
West Beach	New Bedford
East Beach	New Bedford
Lloyd Street Beach	New Bedford

Other oil storage facilities do not have to be located on the coast. Prior to approving these kinds of oil storage facilities in the coastal zone, the EFSC has agreed to examine the need for the facility, alternative sites outside the coastal zone, and the relative impacts of siting storage facilities at each alternative site.

In addition, oil storage facilities will not be sited in areas once they are designated by the Secretary of Environmental Affairs as Areas for Preservation or Restoration/Areas of Critical Environmental Concern.

Policy (30) Weigh the environmental and safety impacts of locating proposed coastal gas facilities at alternative sites.

In exercising its authority over the siting of coastally dependent gas facilities, the Energy Facility Siting Council has agreed to weigh alternative sites within the coastal zone and the relative impacts of locating facilities at these sites. For non-coastally dependent gas facilities, the Council has agreed to continue to consider alternative inland sites. In evaluating alternative sites, the EFSC will:

- assess the risks to public safety, including the potential magnitude of danger and size of populations effected,
- evaluate the size of buffer zones available,
- assess air and water quality and land use impacts associated with the use of each site; and
- assess, if applicable, the impacts of siting gas facilities on existing or future port operations..

In addition, gas facilities shall not be sited in areas designated by the Secretary of Environmental Affairs as Areas for Preservation or Restoration/Areas of Critical Environmental Concern.

Policy (31) Consider alternative sites, including inland locations, prior to siting electric generating facilities in the coastal zone.

The EFSC has agreed prior to approving the siting of an electric generating facility in the coastal zone, to consider both a site outside the coastal zone and least one other within the coastal zone. Specifically, the Council shall:

- weigh the air and water quality, noise, and visual impacts associated with siting the facility at the alternative and proposed sites,
- consider the impacts of transmission line corridors that may be required at each alternative site, and
- assess, if applicable, the effect of siting the facility on present and future port operations.

In addition, electric facilities will not be sited in areas designated by the Secretary of Environmental Affairs as Areas for Preservation or Restoration/Areas of Critical Environmental Concern.

Policy (32) Consider alternative sites, including inland locations, for refineries. For deepwater ports consider alternative coastal sites to ensure that harm to the marine environment is minimized.

In reviewing refinery proposals, the Energy Facility Siting Council has agreed to evaluate alternative sites both within and without the coastal zone. Specifically the Council shall:

1. assess whether sufficient acreage is allotted for a buffer zone,
2. assess air, water quality, noise, and land use impacts associated with siting the facility at the alternate and proposed sites.
3. evaluate alternative cooling systems other than "once-through cooling",
4. assess the impacts associated with the generation, if any, of hazardous wastes.

In exercising its authority over deepwater ports and associated facilities, the EFSC has agreed to:

- assess the need for a new deepwater port, including determining whether existing capacity is available and would fulfill the need, whether the deepwater port would replace or supplement existing marine terminals.

Where the ERSC has approved the need for a new deepwater port, the ERSC has agreed to consider social, economic and environmental impacts by:

- assessing whether any cost savings due to transport costs would accrue to the consumer,
- assessing whether harbor congestion and ship traffic would be reduced,
- assessing the impact on existing and future port operations (including marine terminals and other marine industries),
- assessing the change in environmental impacts if the deepwater port is to replace existing terminals or assessing the added environmental impacts if the deepwater port is to supplement existing terminals including but not limited to chronic oil discharge, major oil discharge due to tanker groundings, collisions, and pipeline rupture, oil spill trajectories from proposed sites, impact of pipeline construction, impact of tank farm construction and operation,

- risks of environmental damage to designated Areas for Preservation or Restoration,
- assessing air, water, and land use impacts associated with the proposed and alternative sites,
- assessing whether the deepwater port can optimize use of existing infrastructure and is accessible to pipelines for distribution of oil.

In addition, refineries and deepwater port facilities will not be sited in areas once they are designated by the Secretary of Environmental Affairs as Areas for Preservation or Restoration/Areas of Critical Environmental Concern.

- Policy (33)
- a. Accommodate exploration, development and production of off-shore oil and gas resources while minimizing impacts on the marine environment, especially with respect to fisheries, water quality and wildlife and on the recreational value of the coast, and minimizing conflicts with other maritime-dependent uses of coastal waters or lands. Encourage maritime-dependent facilities serving supply, support or transfer functions to locate in existing developed ports.
 - b. Encourage the acceleration of uses of solar and wind power and conservation measures to meet the energy needs of the Commonwealth.
 - c. Evaluate indigenous or alternative sources of energy (coal, wind, solar, and tidal power) and offshore mining to minimize adverse impacts on the marine environment, especially with respect to fisheries, water quality, and wildlife, and on the recreational values of the coast.

G. General Development and Public and Private Investment Policies

- *Policy (34) All development must conform to existing State and Federal requirements governing sub-surface waste discharges, point sources of air and water pollution, and protection of inland wetlands.

Regardless of location in the coastal zone, all development actions must conform to existing State and Federal permit requirements for the discharge of substances into the air or waters of the Commonwealth and for the protection of inland wetlands. Commercial, industrial and residential developments to which other CZM policies do not apply are considered to be of local concern, provided they are in conformance with the State Environmental Code, laws protecting inland wetlands, and applicable discharge permit requirements.

- *Policy will be applied to Federal government activities and is otherwise enforceable under current Massachusetts Laws.

*Policy (35) Upgrade public infrastructure in existing developed areas, assigning highest priority to infrastructure which meets the needs of urban and community development centers.

The policy will focus infrastructure investment and development in existing developed areas or adjacent areas suitable for development. The criteria used below and specific criteria cited in the following two sections will be used to assess the consistence of infrastructure prospects:

1. strong community support for concentrating growth is expressed and where there is evidence that local regulatory measures will be adopted to direct future development consistent with the proposed infrastructure investments,
2. surface and ground water supplies are adequate to support further growth, and,
3. concentrating development will be compatible with community and regional character.

Public infrastructure in this policy refers to State and Federally supported waste treatment facilities, sewer and water collection systems and transportation improvements. The program identifies those current projects which are consistent with this policy and CZM will deem inconsistent and prohibit the building of facilities not identified unless the coastal program is revised or amended.

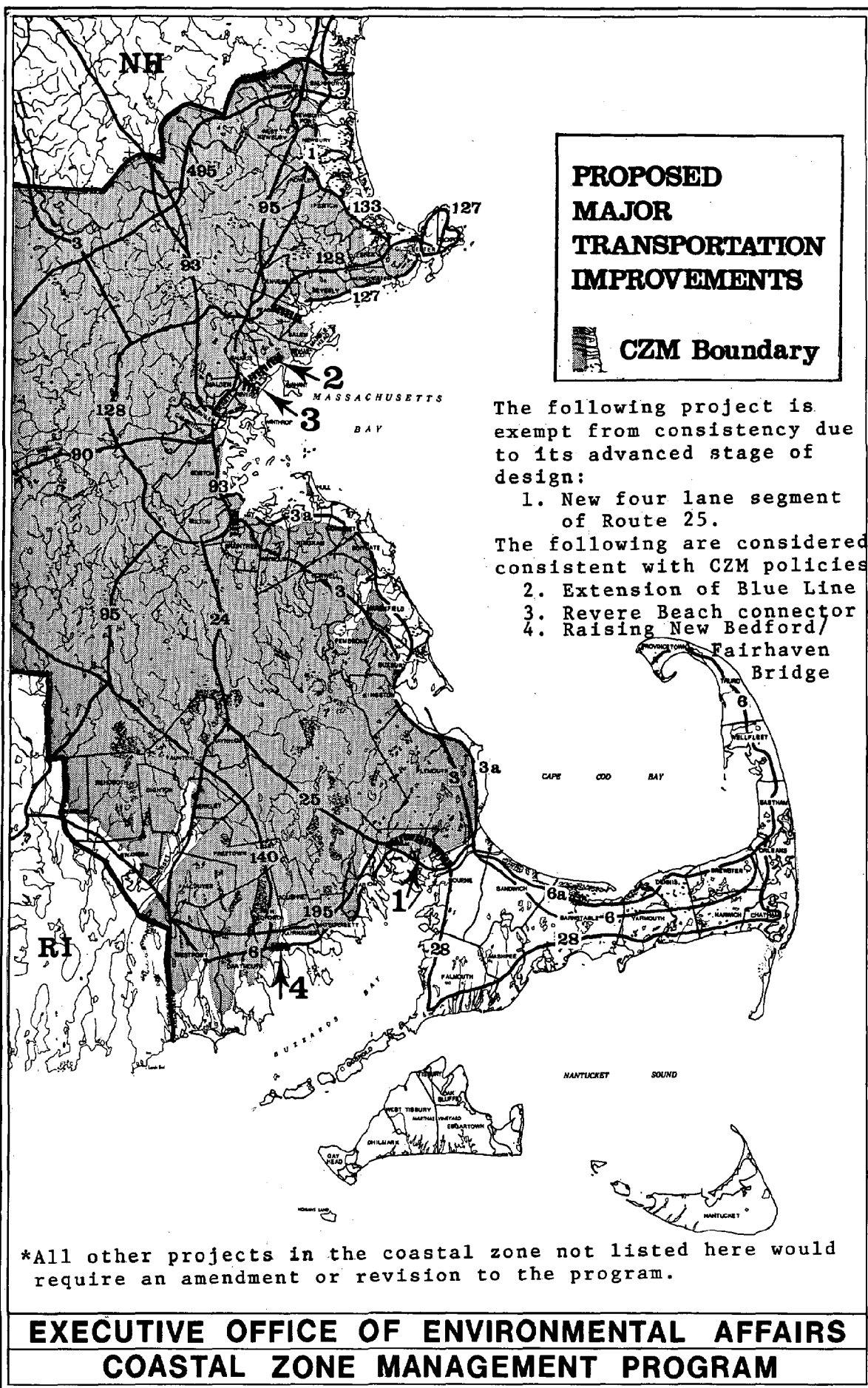
Transportation Projects

For the most part, the state's transportation network in the coastal zone is virtually complete. Therefore, CZM's involvement in transportation planning, except as enumerated in the Recreation section of this chapter is expected to be limited, relative to anticipated involvement in sewage treatment facility planning. However, CZM will coordinate with the federal, state, and regional agencies involved in transportation planning to ensure that investments in transportation improvements serve to guide growth in a manner consistent with CZM objectives.

Four major projects are proposed for construction within the boundary of the coastal zone and thus fall within the scope of the federal consistency requirements of the CZMA (See map). The Route 25 extension around Buttermilk Bay, however, has advanced beyond the environmental studies and design development phases and is scheduled for construction over this particular project.

The Blue Line extension to Lynn, the Revere Beach Connector, and the raising of the New Bedford/Fairhaven Bridge will all serve existing development and are thus consistent with Policy (35). The Blue Line extension and the Revere Beach Connector should facilitate public access

*Policy will be applied to Federal government activities and is otherwise enforceable under current Massachusetts Laws.



to the shore as well, and the New Bedford/Fairhaven Bridge project will enhance commercial shipping opportunities. All of these projects are in the pre-engineering/environmental studies phase of transportation planning. CZM will review design aspects of these projects for consistency to other policies of the CZM plan that may be applicable at such time that alternative design concepts have been sufficiently advanced. Such review will focus on the following:

- assessment of the routing and design of proposed facilities relative to marine resources and potential impacts (see policies 1, 2, and 4)
- assessment of the routing and design of proposed facilities relative to flood and erosion hazard concerns (see policy 9)
- assessment of impacts on scenic resources and historic districts or sites (see policies 13 and 14)
- assessment of impacts on public recreation access and beaches (see policies 21 and 27)

Should transportation projects other than the four noted above be proposed for the coastal zone in the future, they will also be reviewed for consistency with these policies through the review and coordination processes noted below. Major transportation projects (See below) will require amendment to, or revision, of the CZM plan to be considered consistent with the growth clustering intent of Policy 35: major transportation projects are defined as:

- projects involving the introduction of new transportation modes,
- projects involving development of new transportation corridors or alignments, or
- projects which involve increases in existing designed capacity of greater than 30%

Consistency will be judged on the basis of anticipated changes in land development patterns and rates that may result from changes in transportation access.

Wastewater Treatment Facilities and Collection Systems:

CZM will coordinate with federal, state, regional and local entities responsible for waste treatment facilities planning, construction and permitting to ensure that the location and design of treatment plants and sewage collection facilities encourage the consolidation of growth in existing developed areas. A Sewer Service Areas map will be used as a policy guide in determining future state and federal investments in waste treatment facilities in the coastal zone. CZM priorities are summarized on the following page.

- Accord highest priority to 201 projects in existing urban areas or community centers where water quality problems merit rehabilitation or new construction of treatment and collection facilities. These areas are included in the "Developed Land" category shown on the Summary Map and are generally developed at a density of 1 unit/acre or greater.
- Accord next highest priority to projects proposed for contiguous developed areas, which are as yet unsewered, but those water quality problems merit implementation of structural solutions. These areas may include lands in either the "Potentially Developable" or "Development Constraints" categories.
- Accords lowest priority to projects proposed for undeveloped areas. These areas include lands in all categories but the "Developed land" classification. Public investment in waste water facilities will be allowed only when there is a documented public health problem requiring resolution through structural measures. System design will be carefully evaluated as indicated below particularly in lands falling within the "Geographical Areas of Particular Concern" category which have least priority for 201 investment. Unsewered private development within any of these areas must meet all environmental regulations of the Commonwealth (Policy 34) and be consistent with other applicable CZM policies. It is anticipated that unsewered areas within the "Development Constraints" or "Potentially Developable" categories will not be developed at a density greater than four units/acre.

These priorities basically parallel the priorities currently used to formulate the state's section 106 Priority List. For purposes of consistency with the coastal zone program, the projects listed on the state's current 201 priority list (see page 305 of Vol I of the Massachusetts document) that have advanced beyond the Facility Planning Phase (step 1) are deemed to be consistent with the program. Projects for which Step I plans and Step II (Design) applications have not been completed will be reviewed for conformance to all applicable CZM policies when their Step I plans are submitted for approval. Such review will focus on the following:

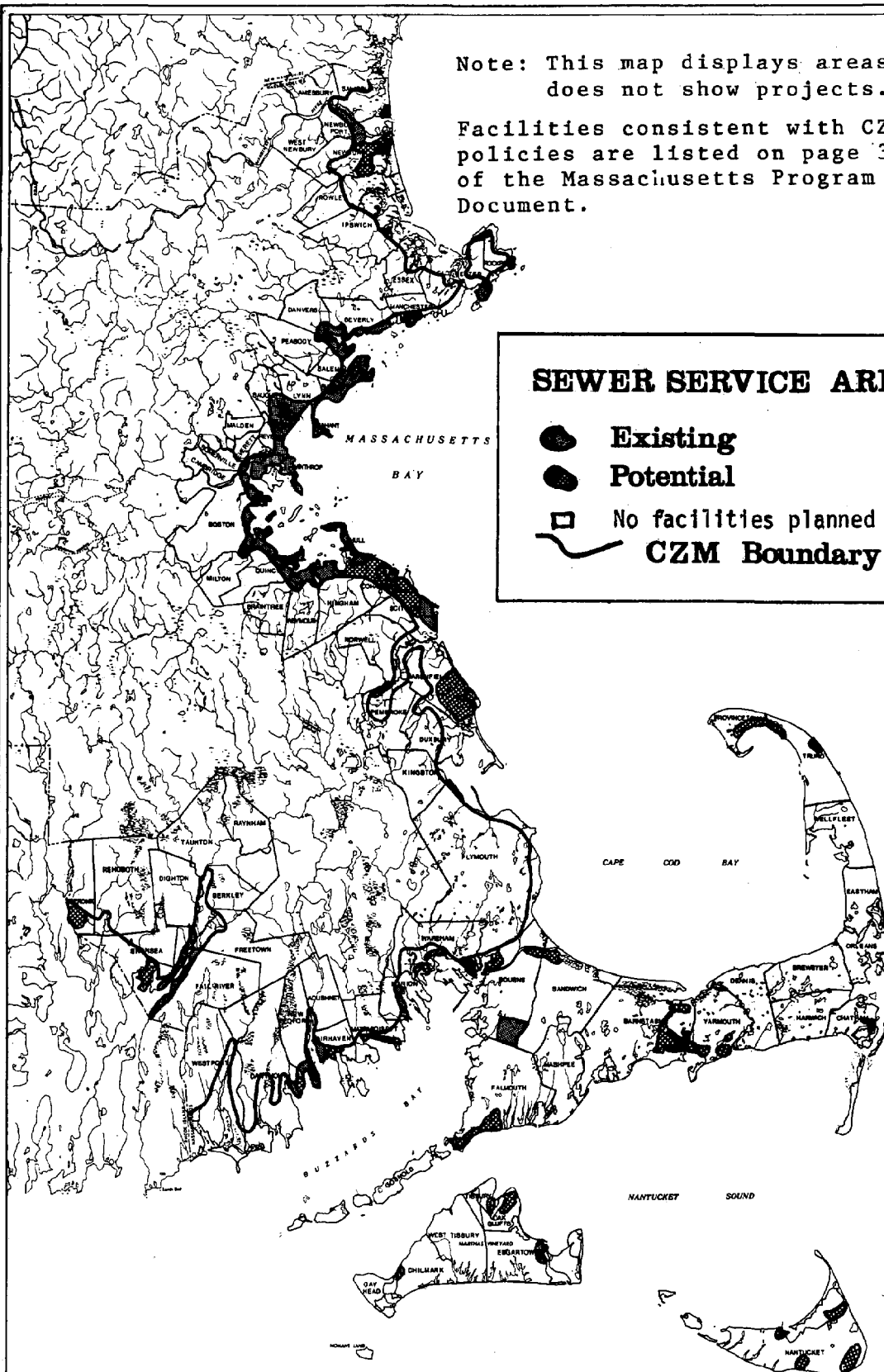
1. The location of the outfall and method of treatment relative to marine resources and recreation resources (see also Policies (1), (2), (3).)
2. The location and design of proposed facilities relative to flood and erosion hazards (see also Policy 9)).
3. The location, design, and capacity of proposed facilities relative to secondary impacts and growth inducement including assessment of:
 - market demand and number of lots opened up for development that were previously constrained by soil limitations;
 - compatibility with local zoning and density patterns;

Note: This map displays areas; it does not show projects.

Facilities consistent with CZM policies are listed on page 305 of the Massachusetts Program Document.

SEWER SERVICE AREAS

- Existing
- Potential
- No facilities planned
- CZM Boundary



* Federal consistenct will apply to all projects. Future projects will require an amendment or revision to the program

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impacts on scenic resources and historic districts or sites (see also Policies (13) and (14)).

impacts on public recreation beaches (see also Policy 27)

Policy (36) Encourage the revitalization of existing development centers in the coastal zone by providing Federal and State financial support for residential, commercial, and industrial redevelopment.

Redevelopment will be supported when it will:

1. enhance community and regional character by providing for the rehabilitation or adaptive reuse of older structures within existing urban and community development centers.
2. maximize use of existing or upgraded infrastructure investments consistent with the previous policy.
3. not pre-empt the use of waterfront land for marine dependent activities (see Policy (17), Ports and Harbors section).

Policy (37) Encourage the adoption of local zoning and regulatory controls which promote clustering of new development and encourage compatibility between future growth and public infrastructure investments.

Policy (38) Encourage major developments conforming to CZM policies and assist developers to reach such conformance.

Chapter 3

Managing the Coast: Key Authorities

The Massachusetts Coastal Zone Management Program will rely entirely on existing management authorities to achieve its objectives. These authorities entail different degrees of State and local involvement, and provide for various forms and intensities of land use regulation. This section consists of a table which describes the type of control and jurisdiction provided by each of the major authorities that will be used to carry out the program. The principal state agency responsible for administering the law, program or process is also identified. The Massachusetts program document describes all the applicable authorities; the reader interested in such detail should refer to pages 317-343.

AUTHORITY	CORRESPONDING POLICY	STATUS OF AUTHORITIES
1. Coastal Wetlands Restriction Program (MGLA Ch. 130, S. 105) authorizes the Commissioner of the Department of Environmental Management, after a public hearing, to restrict coastal wetland areas against most types of environmentally harmful development. All beaches, dunes, salt marshes, shellfish beds, and salt ponds in coastal Massachusetts will be restricted under this program, except those in designated port areas and those under MDC control. Approximately 40% of all eligible areas have been restricted to date. In general, filling, draining, or dredging of wetlands, the discharge of hazardous substances, or any act that would destroy natural vegetation, alter existing tidal flow, or otherwise result in the alteration of the natural and beneficial character of these areas, is prohibited. Permitted uses include piers, wharves, duck blinds and so on, essential energy transmission lines and upkeep of existing roads. Local conservation commissions issue an "Order of Conditions" for permitted uses. A full list of the permitted and prohibited uses in restricted areas is provided on pages 81-83 of Volume I of the Massachusetts document. A landowner can appeal to the Commissioner within 60 days after restriction orders are proposed. Restriction orders are made on town by town basis. A two-thirds vote of Massachusetts Legislature can repeal a restriction Order.	Policy (1): Conserve ecologically significant resource areas. Policy (2): Protect complexes of resource areas of unique productivity (APR's). Policy (8): Discourage further development in hazardous areas and preserve natural buffer areas.	Approximately 30,000 acres presently restricted. - No regulations, none planned. - Restriction Orders are issued for each community. - A model Restriction Order is contained on p. 81 of Volume I of the Massachusetts document and will be followed by DEM. - Almost all of Cape Cod will be restricted by end of March 1978. Within 3-5 years, Boston Harbor, north & south shores adjacent to Boston, Buzzards Bay and Mt. Hope Bay will be restricted.
2. Inland Wetlands Restrictions Program (MGLA, Ch. 131, S. 40A), also administered by the Commissioner of DEM, is similar to the Coastal Wetlands Restriction Program except that it applies to freshwater inland.	Policy (1): Conserve ecologically significant resource areas. Policy (2): Protect Areas for Preservation or Restoration.	-See above

AUTHORITY	CORRESPONDING POLICY	STATUS OF AUTHORITIES
3. Wetlands Protection Program (MGLA Ch. 131, S. 40) gives local Conservation Commissions authority to review proposals for projects in wetlands (including permitted use projects in restricted wetlands). The purview of the Act extends to 100 feet beyond either the 100 year floodplain on the landward edge of a wetland, whichever distance is the greatest. All dredging, filling or other alteration in these areas is unlawful without filing a Notice of Intent, both with the local Conservation Commission and the Commissioner of the Department of Environmental Quality Engineering. The Conservation Commission issues an Order of Conditions either conditioning or prohibiting the activity based on the probable impact on the seven interests of the Wetlands Protection Act--public and private water supply, flood control, storm damage prevention, prevention of pollution, protection of land containing shellfish, or the protection of fisheries. An Order of Conditions may be appealed by or to the Commissioner of DEQE.	Policy (1): Conserve ecologically significant resource areas. Policy (2): Protect complexes of resource areas of unique productivity (APR's). Policies (8, 5 and 12): Minimize adverse effects from dredging, dredge disposal, and erosion control structures; discourage development in hazardous areas.	- Current regulations in place. - New draft regulations to be submitted to OCZH before program approval. - Wetlands Protection Program Review Board is mandated by Secretary & Commissioner to complete recommendations on regulations in calendar year 1977. - Final regulations to be promulgated by 6/78.
4. Waterways Program (MGLA, Ch. 91, S. 1-59), administered by DEQE, has jurisdiction over filling, construction of any new structure, dredging, or removal of sand and vegetation in tideland harbors and certain rivers below high water bank. All land below mean low tide is managed as a public trust by DEQE, and permission to utilize these lands is given in the form of five year licenses. Although land between high and low water is privately held, no activity that interferes with the reserved public rights for fishing and fowling in this area is permitted. The Waterways Program also carries out projects with State funds such as dredging and shoreline protection works.	Policy (4): Condition construction in water and contiguous tidelands to minimize interference with circulation and sediment transport. Policy (5): Ensure that dredging and disposal of dredged material minimizes adverse affects on marine productivity. Policy (6): Accomodate offshore mining Policy (8): Minimize interference of construction with sediment transport. Policy (17): Encourage maritime dependent uses of port areas. Policies (14 & 27): Minimize adverse impacts on historic districts and sites and recreation sites. Policy (18): Promote wide public benefit from dredging. Policy (33): Minimize adverse effects of offshore energy exploration. Policy (12): Ensure erosion coastal projects minimize interference with sediment transport and effects on downcoast areas.	- No regulations now. - Interim guidelines for evaluating funding contained in the CZM program. - Draft regulations on Waterway filling will be submitted to OCZH prior to Federal program approval. - New regulations incorporating CZM policies to be promulgated 6/78.

AUTHORITY

CORRESPONDING POLICY

STATUS OF AUTHORITIES

5. Ocean Sanctuaries (MGLA, Ch. 132A, S. 13-17) have been created to protect all State waters except those from Lynn to Marshfield and those in Mt. Hope Bay (See map Part II). In general, such activities as the removal of sand, gravel, or minerals, dumping on any new waste discharge are prohibited. However, a broad class of activities are exempt from these prohibitions. While the terms of the five sanctuaries differ, laying of cables approved by the Department of Public Utilities, projects authorized under the Waterways Program or other improvements authorized by other State or Federal agencies are permitted. No permit is required to conduct an activity in an Ocean Sanctuary besides a permit that would be issued under the Waterways Programs. The DEM is responsible to insure compliance.	Policy (3): Ensure compliance with all Federal and State water quality standards. Policies (4 & 5): Condition construction and dredge spoil disposal in marine sanctuaries. Policy (6): Accommodate sand and gravel operations. Policy (33): See above.	- No existing regs. - In August 1977, proposed legislation recodifying the 5 existing laws - If laws are recodified, regulations will be ready 60 days after legislative action.
6. The Energy Facility Siting Council (MGLA, Ch. 164, SS. 69 F-R) has jurisdiction over determining the need for the siting of electric generating, gas, and oil facilities in the Commonwealth. The Council's jurisdiction includes controls over electric, gas and oil facilities. Any energy or energy-related facility not subject to EFSC jurisdiction is managed in the same fashion as other coastal activities.	Policies (28 thru 32): Consider at least one alternative inland site for refineries, electric generating facilities, oil tank farms. Policy (33): Minimize impacts on the environment for all off-shore energy exploration.	- Regulations in place. - Memorandum of Understanding between EFSC and EOE that EFSC will consider CZM policies and act consistently with the management program.
7. The Massachusetts Environmental Policy Act (MGLA, Ch. 30, S. 61 and 62). Establishes an environmental review process for State actions, projects with State funding, or projects requiring permits or licenses from State agencies. Essentially an environmental full disclosure law, the intent of MEPA is to improve environmental planning and design "so as to minimize and prevent damage to the environment."	Policies (14 & 27): Review and condition major projects adjacent to public recreation sites and historic areas to ensure against significant adverse impacts. In addition, MEPA may supplement other laws in implementing program policies.	Regulations in place.
8. Community Sanitation Program (MGLA, Ch. 111, State Environmental Code, Title 5, Regulation 2), administered by Local Boards of Health, requires permits for all subsurface discharges based on DEQE standards for percolation rates, distance from a water body, capacity of system, etc. Systems larger than 15,000 gallons per day are reviewed by DEQE before permits are issued.	Policy (3): Ensure compliance with Federal and State water quality standards Policy (34): All development must conform to State and Federal requirements governing subsurface waste discharge, air and water pollution and inland wetlands.	Title 5 regulations in place (adopted 1977)

AUTHORITY (cont.)

CORRESPONDING POLICY

STATUS OF AUTHORITY

9. Self-Help Program, administered by the Division of Conservation Services, provides reimbursement for up to 50 percent of the cost of acquiring public recreation and open space. Cities and towns must have established conservation commissions to be eligible.	Policy (10): Acquire undeveloped hazard prone areas for conservation or recreation. Policy (15): Expand visual access of coast. Policies (20-27): Expand and acquire recreation sites.	- Evaluate guidelines in place (point system). - No regulations now
10. Outdoor Advertising Board (MGL Ch. 93, d) is authorized to prohibit the use of off-premise billboards and other forms of advertising along primary roads in areas that are not zoned for commercial or industrial use or are not of a predominant business character. The Board also has the power to designate areas of historical, scenic, or environmental significance as Sign Free Areas or Sign Free Corridors.	Policy (16): Support designation of APR's as sign free areas.	- Regulations now - No sign free areas or corridors in coast now.
11. Scenic Roads Act, (MGLA, Ch. 40, Sec. 15c) empowers local planning boards to restrict the removal of vegetation or stone walls on designated local roads, exclusive of numbered routes or State highways.	Policy (16): Encourage scenic road designation.	No State regulations as Act enables local action.
12. Historic District Act (MGLA, Ch. 40c) enables cities and towns to establish historic districts for the preservation and protection of historic sites and districts. Within such districts, demolition, new construction and alteration to exterior architectural features cannot be carried out without a certificate of appropriateness or certificate of non-applicability.	Policy (14) Minimize adverse impacts on historic districts and sites, and on public recreation facilities.	- Legislature has created districts. - Act enables local government action.
13. Mineral Resources, (MGLA, Ch. 21, Sec. 54). The Division of Mineral Resources in DEQE is empowered to license, following a public hearing, the exploration for sand, gravel and other minerals in Massachusetts coastal waters and the seabed and leasing rights for extraction of such mineral resources as have been discovered.	Policy (6): Accommodate offshore sand and gravel mining in areas and ways not to adversely affect marine resources and navigation. Policy (33): To the extent practicable, minimize adverse impacts on marine environment in exploitation of offshore energy resources.	- No regulations now - Moratorium now in place for any new permits by sand gravel extraction.
14. Marine Fisheries, (MGLA, Ch. 130, Sec. 19 et al). The Division of Marine Fisheries in the Department of Fisheries, Wildlife and Recreation Vehicles regulates the harvest of fish in coastal waters and is charged with aiding the promotion and development of the commercial fishing industry. The Division also operates a program to assist coastal commissions to increase the supply of shellfish and to ensure that construction on coastal streams does not impact the passage of anadromous fish to spawning areas.	Policies (3&5): Review imports of dredged material disposal and ocean outfalls. Policy (7): Encourage and assist commercial fisheries research, development and restoration. Policy (4): Condition construction to minimize interference with water circulation or quality, marine productivity, or sediment transport.	Regulations in place on anadromous fish runs. No changes anticipated

AUTHORITY (cont.)

CORRESPONDING POLICY

STATUS OF AUTHORITY

16. <u>Public Access Board</u> (MGLA, Ch. 21, S. 17, 17a) is empowered to acquire access to great ponds and other waters within the Commonwealth and develop trails and related facilities for hiking, skiing, boating and other uses.	Policies (21-26). Acquire and expand recreational opportunities.	• No regulations
17. <u>Scenic Rivers Program</u> (MGLA, Ch. 21, S. 17b) provides for the designation and restriction of rivers for scenic and recreational purposes. The Scenic Rivers Act authorizes DEM to regulate the alteration or pollution of designated rivers and contiguous land within 100 yards of their bank.	Policy (16): Encourage scenic river, designation in the coastal zone assigning priority to river segments in APR's.	• No Scenic Rivers designated now. • No regulations now
18. <u>Areas of Environmental Concern</u> (MGLA, Ch. 21a, S. 2(7)): Proposed EDEA Regulations) The Secretary of Environmental Affairs developed a process for designating Areas for Preservation or Restoration (APRs), or in the nomenclature of Massachusetts, Critical Areas of Environmental Concern. As a result of this designation, EDEA agencies will attach a high degree of scrutiny to their activities in these areas, will not proceed with activities that could impair characteristics cited in their designation, and will administer programs consistently with CZM policies regarding the acquisition, protection, and use of such areas. State agencies outside of EDEA will be unaffected by the designation except pursuant to a Memorandum of Understanding with the agency or to MEPA, where no project conducted or permitted by an State agency shall qualify for a categorical exemption if located in an APR.	Policy (2): Protect complexes of marine resource areas of unique productivity (APR's); ensure design and implemented activities in these areas (or impacting them) have minimum adverse impact. Policy (9): Ensure public works projects will not damage APRs Policy (16): Support sign free designations in APRs. Policies (28-33): The following energy facilities will not be located in APRs. • oil terminals oil storage facilities • gas facilities • electric generating facilities • refineries • deepwater ports	• None yet designated. Ten nominated by CZM Program. • By end of first year of 306 funding. Secretary will have approved or denied designation of nominated areas. • Memorandum of Understanding signed with EFSC to protect APRs.
19. <u>The Martha's Vineyard Commission</u> is a regional planning and management agency, granted special regulatory powers by State enabling legislation (Chapter 637, Acts of 1974, as amended). The special legislation gives the Commission power to designate Districts of Critical Planning Concern and to review Developments of Regional Impact, provide planning assistance to the six towns on the island of Martha's Vineyard as well as assume some regulatory control held by the six communities.		• Commission operates under State approved guidelines. • Specific guidelines prepared for Districts.

20. Water Quality Permits, (MGLA Ch. 21, s43) administered by the Division of Water Pollution Control, permits required for point source discharges, discharges must conform to effluent limitations, receiving water standards, or other applicable regulations or adopted water quality plans. Permitting coordinated with EPA NPDES process.	Policies (3 & 34): Provide for adequate assessment of ocean outfall effects, abate pollution of shellfish beds and recreation waters, require conformance to existing permit requirements. Policy (5): Minimize adverse effects of dredging and dredged spoil disposal.	State water quality certification procedures coordinated with NPDES permitting by EPA, State receiving water standards established by regulation effluent limitations set by EPA, new DMPC guidelines on ocean outfalls to be drafted pending issuance of revised ocean discharge criteria by EPA. Framework to be established for coordinating DMPC, DAHM, DMF, CZM review of water quality and biological impacts, procedural reg to be drafted prior to program approval.
21. Water Quality Standards, Segment Classification, MGLA Ch. 21, s27) Standards of minimum water quality are established by regulation for all waters of the Commonwealth by Division of Water Pollution Control, segments also classified with respect to treatment required or discharges prohibited.	Policy (2): Prohibit discharge of hazardous substances, sewage treatment facility effluent and thermal effluent in APR's. Policy (3): Classify all segments of APR water bodies SA waters.	Anti-degradation regulations exist. Amendments to regs to be drafted prior to program approval. Regulations exist, policy to be incorporated during triennial review and revision of segment standards.

Chapter 4

MANAGING THE COAST: KEY STATE AGENCIES

The vast majority of decisions about what can and cannot occur in the coastal zone will still be made by local governments. Decisions of State-wide significance will be made in the Executive Office of Environmental Affairs with the exception of decisions about the location of energy facilities which will be made by the Energy Facility Siting Council (EFSC) using the Coastal Zone Program for guidance. The State recognizes that while many of these agencies have been operating within the coastal zone, this program is the first that coordinates activities between agencies.

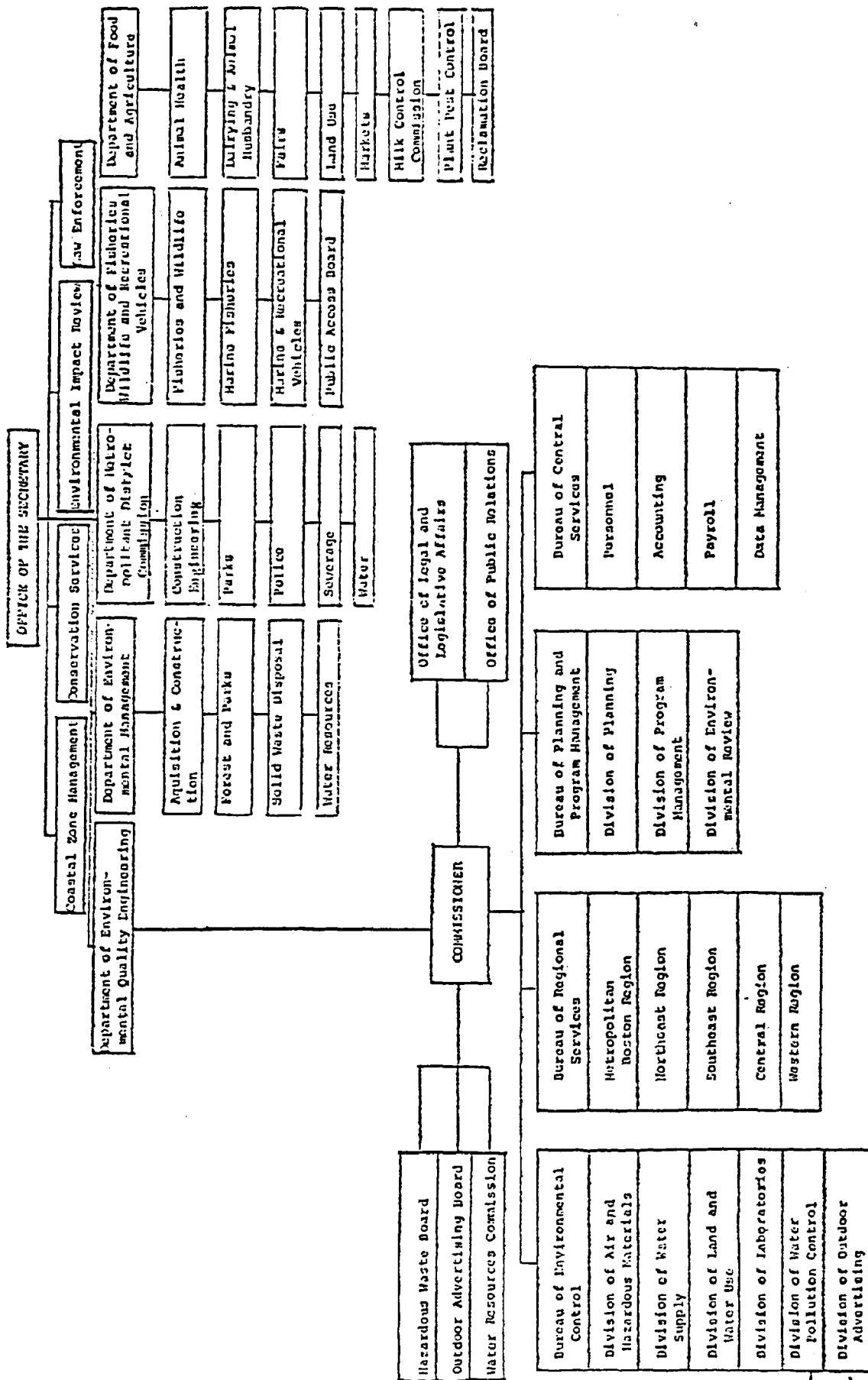
This Chapter describes only the key agencies responsible for implementation. For a description of all agencies the reader is referred to pages 321-342 of the Massachusetts Program Document.

A. THE OFFICE OF THE SECRETARY WITHIN THE EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS.

The Executive Office of Environmental Affairs (EOEA) is the designated lead agency for Section 306 implementation of the Massachusetts Coastal Zone Management Program. Created out of forty-three existing State agencies, EOEA together with its various departments and divisions is charged to carry out the State environmental policy. The Coastal Zone Management Program represents the first major attempt by the EOEA and its line agencies to conduct a comprehensive resource management program using the administrative structure and authorities provided by the 1969 reorganization of Massachusetts state government. Through regulations to be promulgated by the Secretary of Environmental Affairs and memoranda of understanding between the Secretary and the various State agencies involved, the Program will be implemented as State environmental policy. Designation of critical areas of environmental concern, resolutions of conflicts among EOEA agencies, periodic performance evaluations and fiscal controls are the primary measures that will be specifically utilized by the Secretary to implement the program. Within the Executive Office of the Secretary the two major offices involved in the program are:

The Office of Coastal Zone Management, which will continue to advise the Secretary on planning and policy formulation for the coastal zone as well as aid in performance evaluation. In addition, the Office will undertake in-depth technical studies of key coastal issues, promote development consistent with coastal policies, provide technical assistance to local communities, and provide in-service training, technical assistance, clarification of policies, coordination and financial assistance to EOEA agencies in order to enable them to effectively implement the Program. The Office will become involved in the routine activities of agencies in only four ways:

EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS



- (1) continuing its present role in reviewing actions through MEPA, NEPA, AND A-95 reviews;
- (2) reviewing all Federal agency determinations of consistency with the State program;
- (3) serving as an expert witness to formal hearings conducted by any EOEa agency on coastal actions, or bringing cases to a hearing; and
- (4) ensuring that EOEa agencies relay notices of pending management decisions in the coastal zone to allow adequate time for local governments to comment.

The Division of Environmental Impact Reviews evaluates and monitors State environmental impact statements required by the Massachusetts Environmental Policy Act (MEPA). MEPA established an environmental review process for State actions, projects with State funding contributions, or projects requiring permits or licenses from State agencies. As for information device, MEPA attempts to provide full disclosure of the environmental consequences of State related activities. The MEPA staff also reviews and comments on appropriate Federal projects filed under the National Environmental Policy Act (NEPA). The division is specifically responsible for publishing The Monitor, which is a key mechanism for informing citizens and other government agencies of projects in the coastal zone, of Federal consistency decisions, MEPA actions, hearings, etc. The MEPA statutes also direct all agencies of the Commonwealth to "review, evaluate, and determine the impact on the natural environment of all works, projects, or activities conducted by them" and to "use all practicable means and measures to minimize damage to the environment." The MEPA statute further provides, "unless a clear contrary interest is manifested, all statutes shall be interpreted and administered so as to minimize and prevent damage to the environment." This legislative charge makes possible the closer scrutiny and regulation of projects or activities under such EOEa programs as the Wetlands and Waterways Programs, thereby ensuring that the environmental concerns in CZM policies can be addressed.

B. DEPARTMENTS WITHIN THE EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS

The Coastal Zone Management structure is essentially one where the line EOEa agencies will be primarily responsible for the implementation of the CZM policies. This will be accomplished via a Memorandum of Understanding with the Secretary and appropriate agencies agreeing to jointly implement the CZM program with the Executive Office and other EOEa agencies, via the regulations promulgated by the Executive Office adopting the plan as a statement of the State environmental policy, and via changes, if necessary, in the regulations of affected agencies. Memoranda of Understanding have already been signed between the Secretary and five commissioners setting forth the fundamentals of the interagency agreement. A draft of the

Secretary's regulation is now undergoing informal public review (see Appendix A, Vol. 1). A formal public hearing will be held following the procedures established by the State Administrative Procedures Act prior to Federal approval. Some agencies are already at work on revising their regulations to implement the CZM plan. While none of these regulations can be formally promulgated until the final program has been approved, it is anticipated that some programs will have their revised regulations in place soon after program adoption while others will be promulgated in the early stages of implementation.

Department of Environmental Quality Engineering (DEQE), Division of Land and Water Use is particularly important in implementing the CZM program in that it administers the Wetlands Protection Act, the Waterways Program and the Community Sanitation Program. In the case of the Wetlands Protection Act, the Division is involved in setting the regulations and reviewing the local conservation commission's order of conditions, either on appeal or if invoked by the Commissioner. Within the same division, the Waterways Program issues licenses for filling, wharf construction, bridges and pieplines over tidelands, harbors and certain rivers below the high water mark. The Waterways Program also funds such activities as wharf improvement, public piers, jetties, bulkheads, shore protection works, channel dredging and maintenance, dams and wreck removals as well as development of harbor plans and funding of their implementation. The Community Sanitation Program, also within this Division, regulates the siting, placement and design of sub-surface sewage disposal with a capacity of 15,000 gallons per day or more (i.e. septic tanks, leaching fields, cesspools, etc.), the location of sewage disposal sites, sewage treatment plant sites, mobile home parks (siting and lot size and adequacy of waste disposal facilities), and the siting and design of solid waste disposal facilities (including sanitary landfills). Sub-surface disposal systems with a capacity of less than 15,000 gallons per day are regulated by local boards of health to ensure compliance with the State Environmental Code.

The Division of Air and Hazardous Materials in DEQE is responsible for ensuring that sources of air pollution do not contravene State and Federal emission limitations, and for assuring conformance with established State and Federal ambient air quality standards.

The Division of Water Pollution Control in DEQE has permitting authority (jointly with EPA) over point source pollution, including municipal sewage treatment works. The Division also awards grants for the construction of sewage treatment and collection systems.

The Division of Mineral Resources in DEQE licenses exploration for and extraction of mineral resources in coastal waters.

The Public Access Board is charged with acquiring and developing public access points to great ponds or other waters and trails for paths for hiking and other recreational activities. The Board's acquisition, construction and maintenance program is funded by the gasoline fee on watercraft and registration fees from recreational and snow travelling vehicles.

The Department of Environmental Management (DEM) administers several key coastal authorities, including the Wetlands Restriction Programs and the Scenic Rivers Programs. DEM also has responsibility to enforce ocean sanctuaries laws and acquire recreational land outside of the metropolitan park district.

C. AGENCIES OUTSIDE EOE

The Energy Facility Siting Council (EFSC) has jurisdiction over determining the need for and the siting of electric generating, gas, and oil facilities. The council is composed of the heads of four State cabinet level departments (Consumer Affairs, Environmental Affairs, Administration and Finance, and Manpower Affairs), and five other individuals appointed by the Governor. The energy facility siting decision process of the Council is described in Part II, Chapter 3 of this DEIS.

The Martha's Vineyard Commission will implement portions of the program on Martha's Vineyard. The Massachusetts CZM Program supports the regulation of coastal activities on Martha's Vineyard by the Commission, since the regulating guidelines have been approved by the State and when an action needs both State and Commission approval, both agencies must concur before action can proceed.

D. ASSURING COORDINATION BETWEEN AGENCIES

The CZM Program represents the first major efforts by the EOE and its line agencies to conduct a comprehensive resource management program using the administrative structure and authorities provided by the 1969 reorganization of Massachusetts State Government. Since the program relies exclusively on existing management authorities, the significance of the program essentially lies in the more effective implementation of their authorities that should result, in part, from more effective coordination among State agencies.

The Office of Coastal Zone Management within the EOE will coordinate with the various departments and divisions within EOE, the Energy Facility Siting Council, the Martha's Vineyard Commission, and local governments to implement the program.

1. The Secretary's Regulations: Prior to program approval, the Secretary will promulgate regulations adopting the program as a statement of State environmental policy. Draft regulations are contained in Appendix A of Volume I of the Massachusetts document. The effect of the Secretary's Regulations is that all EOE agencies (not all State agencies) are required to carry out the CZM plan in full in granting permits, in

disbursing funds, or in conducting any other kind of activity in the coastal zone. Two exceptions apply to this rule. First, neither the program nor the regulations require EOEa agencies to take actions not authorized by law. Second, where the Secretary has utilized the conflict resolution mechanism (see below), she/he may determine that CZM policies should not be followed, either because of conflicts within the program itself or because there are more substantial compelling public interests.

2. Conflict Resolution: The Secretary of EOEa has the authority to resolve administrative or jurisdictional conflicts between EOEa agencies (not all State agencies). Any time a conflict arises, including a permit decision by personnel of EOEa, a statement of issues may be prepared, a public notice issued and formal proceedings held. The conflict resolution mechanism will be employed, for example, where two laws or programs have inconsistent criteria or require potential for undercutting or duplicating or interfering with another program; or where there are issues concerning how to fund or enforce certain programs.
3. Performance Evaluation: To insure that the program functions efficiently, the Secretary, through the Office of Coastal Zone Management, will periodically conduct performance evaluations. Subject areas requiring the evaluations are outlined in Section 8 of the Secretary's Regulations, page A-66 of Volume I of the Massachusetts program document.
4. Memoranda of Understanding within EOEa: Each Commissioner of the five departments within EOEa has requested to jointly implement the program and has accepted the program as a statement of State environmental policy for the coastal zone. The memoranda of understanding further provide that each department will adopt and incorporate the rules and regulations promulgated by the Secretary.
5. Coordinative Functions of Office of Coastal Zone Management:
 - a. CZM will be notified of all hearings conducted by EOEa agencies regarding any within or affecting the coastal zone. CZM may appear as an expert witness, may intervene as an interested party, or otherwise submit its comments.
 - b. CZM shall have the right where a right of appeal or hearings exists for other interested parties or permit applicants, to request an appeal or hearing of any action taken by an EOEa agency regarding the coastal zone unless otherwise specifically forbidden.
 - c. A CZM coordinator shall be located in key implementing agencies to assist in applying the policies to their day to day responsibilities.
6. Memorandum of Understanding with Energy Facility Siting Council: Through a Memorandum of Understanding between the Council and the Secretary of Environmental Affairs (see Appendix A of the State Document), the EFSC has agreed to recognize the final CZM plan, as approved by the Governor, as a statement of health, environmental, and resources use and development policies of the Commonwealth. Further, the Council has agreed to act consistently with the policies of the plan. To this end, the Council shall adopt necessary regulations and procedures. These shall provide for:

- (1) review and comment by EOEa for any forecast or application for a Certificate of Environmental Impact or public review prior to any hearing by the Council;
- (2) cooperation in developing guidelines for data required of applicants prior to initial review of proposed facilities;
- (3) for any proposed coastal facility, the submission by the applicant, of information on at least two alternative sites, including one inland site, if the facility is coastally dependent and;
- (4) standing of the CZM program in EFSC proceedings on energy facilities proposed to be sited in the coastal zone.

7. Martha's Vineyard Commission: Although no formal Memorandum of Understanding has been signed by the Commission and the Secretary of Environmental Affairs, several types of assurances exist that the Commission will act consistent with the Program:

Local governments can only perform activities in coastal areas if such activities conform to regulations developed under guidelines established by the Commission. The guidelines have been approved by the State and conform to CZM policies.

The Commonwealth will continue to administer State authorities on Martha's Vineyard.

The Secretary of Environmental Affairs is the voting Cabinet official appointed by the Governor to sit on the Commission.

The State will grant the Commission funds to apply the coastal policies to the Island and will review coordination in this procedure.

8. Public Involvement Citizens Advisory Councils: Based on the existing CZM Advisory Committees, will be established in each coastal region to perform the following functions:

update the regional program chapters;

insure quality in the implementation of the CZM program;

alert the Office of Coastal Zone Management to regional problems and issues;

advise in the setting of priorities in the allocation of technical assistance funding;

participate in inter-municipal conflict resolution and;

monitor the coordination of coastal activities by local, State and Federal government.

9. A Statewide Advisory Group, representing diverse coastal user groups, will also be established to perform the following:

advise the Secretary on program implementation;

work with CZM on a periodic review of environmental regulatory and management functions to insure adequacy and consistency in the application of CZM policies;

advise the Secretary and CZM on funding priorities, and overall program objectives and goals;

insure the development of education program to foster a State coastal ethic;

review the CZM program and recommend amendments or refinements to the Secretary; and

perform an annual review of the CZM program for the Secretary.

10. Citizen Action to Assure Coordination. Notice of any major State action under the Massachusetts Coastal Zone Management Program will be published in The Monitor. It will be sent to all planning boards, boards of selectmen, conservation commissions, as well as interested citizens. Citizens can comment in writing or at hearings on such actions as environmental impact statement reports, Federal consistency certifications, major amendments to the program. In addition, if any ten citizens believe the State is not properly exercising its responsibilities according to the approved coastal management program and thereby damaging the environment, they can intervene in any State adjudicatory proceeding under Chapter 30 A, Section 10 A of the general laws or can sue in the Superior Courts concerning any damage to the environment, pursuant to Chapter 214, Section 7 A of the general laws.
11. Federal Government Annual Review for Continued Funding. The Federal Office of Coastal Zone Management within the Department of Commerce will evaluate continued funding of the Massachusetts program partly on the basis of whether coordination has been achieved.

CHAPTER 5

WHAT THIS PROGRAM MEANS TO LOCAL COMMUNITIES

The Massachusetts Coastal Zone Management Program does not include new laws or increase the present number of State or local permits required for private development activities. On the local level, there will not be an increased State presence over coastal activities. As long as the Statewide interests are managed development decisions and community character will be determined by local governments.

The State CZM Program will provide technical assistance to local communities to aid them in investigating site specific problems. Scientific, environmental, planning, and legal expertise will be available to assist in short-term studies within coastal communities. Eligible categories for technical assistance include:

- a. erosion
- b. fish and shellfish management (coordinated with Division of Marine Fisheries)
- c. recreational facility siting (coordinated with DEM and Metropolitan District Commission)
- d. public access (coordinated with Conservation Services, Fisheries and Wildlife, and DEM)
- e. coastal wetland management coordinated with (DEM, DEQE)
- f. coastal land use planning problems (Department of Community Affairs, Regional Planning Agencies Mass Historical Commission)
- g. scenic river designation (coordinated with DEM, etc.)
- h. water quality (coordinated with DEQE)

In the first year, at least three full-time professionals will be available to local communities on a rotating basis. Local communities also will be able to receive financial assistance from the CZM Program to undertake studies and preparatory work necessary before major project development proposals can be initiated, provided the projects are consistent with the State coastal zone program. Projects eligible for funding include:

waterfront renewal and development studies: preparing harborfront plans aimed at improving visual and physical access to waterfronts; identifying opportunities for waterfront parks; waterfront pedestrian ways, ramps, and other public access improvement; conducting feasibility, cost and preliminary engineering studies for such waterfront improvement projects.

port and harbor development projects: preparing overall port and harbor development plans; assessing future facility needs and the economic return from such facilities; conducting feasibility and preliminary engineering studies for public marinas, town wharfs, and docks, access ramps, and navigational improvements.

dredge spoil disposal investigations: identifying feasible land alternatives and sites for dredge spoil disposal; investigating costs; and preliminary engineering for innovating dredge spoil disposal practices including creating artificial salt marshes, using spoil as fill, and building containerized sites.

The maximum sum to be awarded for any one proposal cannot exceed \$20,000. The minimum sum is \$1,000. The maximum time period for any funded project will be one year. One third of the first year Federal money available to the State under Section 306 of the CZMA will be targeted to local community projects.

Coastal communities hosting new coastal energy facilities will be eligible to participate in a new Federal loan, loan guarantee, and grant program to cover the costs of public facilities and services necessitated by accommodating coastal energy facilities and the costs of environmental losses and damages sustained by the siting of a coastal energy facility. These programs are:

1. loans and loan guarantees to help cover the costs of both providing additional public services and constructing new public facilities (roads, water supply, sewage treatment works) made necessary by new coastal energy facilities;
2. refinancing and other financial assistance, including grants in extreme cases of hardship, to repay the above loans if the financial burden imposed on a community accommodating new coastal energy facilities is so severe as to cause substantial hardship; and
3. grants covering the full costs of environmental losses and damages sustained by the siting of a coastal energy facility.

The CZM Program also becomes the central focus for consistent State and Federal actions in the coastal zone. Through the Regional Chapters (Volume II of the Massachusetts coastal zone program), local communities know the extent of future State activities and can plan comprehensively for these State actions. The CZM Program staff also will act as a mediator between Federal agencies and will be notified through The Monitor early in the process of new or expanded State or Federal actions in the coastal zone. Through the proposed permitting procedures outlined in the CZM Program, local involvement in dredge and fill permits should be streamlined and simplified.

Finally, through the continuation of the ten citizen advisory councils, local communities will have a direct input into the formation of the ongoing CZM Program. The citizen advisory councils will set the priorities where CZM funding should be directed on the local level, establish coordinating links between local communities and State agencies, establish ongoing communications and update regularly the regional CZM and programs.

Regulatory programs on the local level will not change, however, the added assistance on specific projects from the State could have a positive impact on how local communities manage their respective coastal zone.

CHAPTER 6

NATIONAL INTEREST

The Massachusetts coast is of national, historic, scenic, economic, and recreation importance. The seaport of Boston serves as the major terminus for maritime trade and delivery of energy supplies in New England; the fishing grounds off the Massachusetts coast are among the most productive in the world, and the estuaries, salt marshes, and ocean bottom spawning grounds of Massachusetts serve to maintain this productivity; the many historic sites along the Massachusetts coast give tangible evidence of the nation's beginnings; Cape Cod, Nantucket, and Martha's Vineyard are a national tourist destination; and oil and gas reserves off the Massachusetts coast may serve to relieve national energy shortages and reduce dependence on foreign oil.

Recognizing the distinct and irreplaceable value of this country's coastline, the Congress, in enacting the Coastal Zone Management Act, found that "there is a national interest in the effective management, beneficial use, protection, and development of the coastal zone" (Coastal Zone Management Act, Section 302 (a)).

Once approved by the Secretary of Commerce, the Massachusetts coastal program provides the basic policies for managing the Massachusetts coastal zone in accord with both State and national interests. To ensure that the national interest is adequately addressed by the Massachusetts program, the CZMA requires that the state coastal management program provides for adequate consideration of the national interest involved in planning for, and in siting of facilities (including energy facilities in, or which significantly affect, such state's coastal zone), which is necessary to meet the requirements which are other than local in nature", (Section 306 (e) (2)).

The Massachusetts program provided opportunities to federal agencies to participate in program development and solicited federal agency views on their missions relating to national interests. Meetings with individual agencies were also held. These interactions, which assisted the program in developing its posture and procedures for addressing national interests, and a summary of the issues raised and their resolution are described in Appendix C of the Massachusetts program.

In addition to the comments received in consulting with federal agencies, the Massachusetts program looks to the following sources for policies and information that must be taken into account to adequately consider national interest in exercising both its planning and management responsibilities:

- a. Federal laws and regulations,
- b. Policy statements for the President of the United States (e.g., National Energy Plan),
- c. Special reports, studies, and comments from federal and state agencies,
- d. Testimony received at public hearings and meetings on the Massachusetts program,
- e. Certificates, policy statement, and solicited opinions issued on specific projects by federal regulatory agencies such as FPC, FRDA, FEA, etc.
- f. statements of the national interest issued by federal agencies.

For three of the national interests of salient to Massachusetts - energy production and transmission, recreation, and fisheries - NOAA has issued specific statements of national interest.

These in addition to the sources above, are used for defining national interest in energy, recreation, and fisheries.

The discussion below capsulizes how the Massachusetts program, both during program development and as a continuing process during implementation, considers facilities and resources which may be in the national interest or uses of regional benefit:

1. National Defense and Aerospace. The Massachusetts program recognizes the paramount importance of national defense, and while the Massachusetts coast no longer hosts as many national defense facilities as it once had, national security contingencies may, in the future, require the Massachusetts coast to be the location of new defense facilities. Recognizing these national defense interests, the Massachusetts program excludes from its program existing federally owned or leased lands and facilities.

With respect to proposals for new or expanded defense facilities, the Massachusetts program will not seek to question their national security justification but rather will strive to ensure that all feasible alternative sites and mitigation measures are explored so that conformance, to the maximum extent practicable, is reached with the enforceable policies of the Massachusetts program. When necessary, federal consistency mediation procedures will be invoked.

2. National Interest in Energy

With respect to the national interest in energy facilities and other energy production and transmission, the Massachusetts program has made the following determinations:

- energy facilities are uses of regional benefit and the state mechanism granting overall approval for energy facilities provides for an override of State and local regulations when such regulations preclude the siting of a energy facility approved by the State Energy Facility Siting Council (EFSC).
- certain energy facilities must be accommodated in the coastal zone. These include marine terminals for ship to shore transfer of oil (see Policy 28); certain oil storage tank farms, including surge storage, storage for oil fired power plants in the coastal zone (see Policy 29); LNG and gas facilities that rely on cryogenic pipelines to transfer gas or feedstocks for ship to shoreside storage (see Policy 30); deepwater ports (see Policy 32); and offshore OCS and certain facilities for alternative energy sources (see Policy 33).
- all other energy (including nuclear power plant) facilities are not coastally dependent.
- site suitability for energy facilities is best determined by broad scale evaluation of alternative sites. Thus under the Massachusetts program the EFSC is to evaluate at least one additional coastal site for coastally dependent facilities, and at least one alternative inland sites for non-coastally dependent energy facilities. In evaluating site suitability the EFSC will look to the full Massachusetts program as an expression of the State environmental and resource use policy in relation to historic districts or sites, public recreation beaches, ecologically significant resource areas, port operations, dredging requirements, oil spills, risks, etc.
- OCS exploration and development is in the national interest, provided environmental safeguards are adhered to and national fisheries interests are safeguarded.

Balancing National Interests - In siting energy facilities care must be exercised that other national interests or uses of regional benefit are not compromised. Specifically, given the national interest in wetlands and barrier beaches, as outlined below, only certain energy facility components are permitted in restricted coastal wetlands: transmission lines, pipelines, and cooling water intake and out flow structures. Given both the national interest in fisheries and recreation outlined below, and in OCS exploration and development, the Massachusetts program will evaluate OCS plans to determine if all possible measures-locational, structural, or operational-have been taken to reduce the potential interference with traditional fishing operations, the risks of oil and gas spills on marine resources, and the possibilities of spills reaching shore. Siting of land based support facilities will be encouraged where consistent with the ports and harbors policies. Through the review of OCS plans, special concern will be addressed to designated areas of preservation or restoration and ocean sanctuaries.

For example, recognizing that energy production on the OCS is in the national interest but may conflict with other national interests such as the harvesting of our marine resources and the protection of prime recreational areas, the Massachusetts program seeks to balance competing interests on the OCS.

The CZM program has, throughout its involvement in the leasing process, made recommendations to the Department of Interior which will insure the compatibility of the fishing and oil interests. Specifically, Massachusetts requested that 26 out of a total of 206 tracts be withdrawn from Lease Sale 42 because of a confluence of three factors: a high risk of spills coming onshore on prime recreation areas of the Cape and Islands, a high risk of impacting especially productive fishing and spawning grounds, and the added risk of vessel collisions from being in our near heavily trafficked commercial shipping lanes. Withdrawal of these few tracts will insure that leasing will take place in those areas which have the least impact on other national interests.

The CZM program has also more numerous recommendations to minimize operational conflicts with the commercial fishing industry such as: prohibition on dumping of debris, burial of all pipelines, and minimizing the numbers of structures required to develop the OCS. The program will continue to review all future leasing actions and development plans to insure that all reasonable mitigating measures are taken to protect shorelines from oil spills and to preserve valuable marine resources.

Considering National Interest in Implementation - The national interest on specific energy facility siting questions as evidenced in the sources enumerated above will be brought to the attention of the EFSC and considered in the Council's decision-making through:

- (a) the Secretary of Environmental Affairs, as a member of the Council, ensuring that the national interest considerations incorporated in the Massachusetts CZM program, including the national policies on energy enumerated above, are brought to bear in the decision-making process;
- (b) federal agencies presenting their views at public hearings conducted by the Council on electric and gas forecasts and notices of intent to construct oil facilities; and
- (c) consideration by the Council of interstate aspects of energy demand and supply in meeting the Commonwealth's energy needs. For example, the Council requests of energy facility applicants information on and considers interstate bulk purchase agreements, Federal Power Commission reports on inter-state gas and applicable inter-state energy plans, such as NEPOOL's NEPLAN.

The Massachusetts Coastal Zone Management Program has incorporated the following NOAA statement concerning the national interest in energy:

In general the following guidance is provided by the National Energy Plan. The U.S. has three overriding energy 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, p. 1X)

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 PP 1X-X)

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

(a) Conservation - "The cornerstone of the National Energy Plan is conservation" (p. 55 of the Plan).

Comment - Energy conservation efforts in Massachusetts are discussed on pp. and of the Program. In addition, Policies 35, 36, 37, and 38 encourage energy conservation by encouraging more compact development and in-fill of existing urbanized areas.

(b) Outer Continental Shelf - "Oil and gas under Federal ownership on the Outer Continental Shelf (OCS) are important national assets. It is essential that they be developed in an orderly manner, consistent with national energy and environmental policies. The Congress is now considering amendments to the OCS Lands Act, which would provide additional authorities to ensure that OCS development proceeds with full consideration of environmental effects and in consultation with states and communities. These amendments would require a flexible leasing program using bidding systems that will enhance competition, ensure a fair return to the public, and promote full resource recovery." (p.56, Plan)

Comment: OCS related development activities in the Massachusetts coastal zone are treated extensively in the Chapter on Energy, pp. 225 - 272 of the Program. Particular attention is given to OCS on pp. 247- 254 , and in Policy 33, pp. 266 - 268. In addition, the location of pipelines and other facilities in ocean sanctuaries is dealt with in the Chapter on Marine Environment (see Vol. I., p. 41) and on p.254 on the Energy Chapter. Location of onshore facilities is also discussed in the Chapter on ports and harbors (pp.161 - 187).

(c) Liquified Natural Gas - "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-1980's and beyond, until additional gas supplies may become available." (p.57 of the Plan)

"The previous Energy Resources Council guidelines are being replaced with more flexible policy that set 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. The 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 of the Plan)

Comment: Massachusetts currently has a number of natural gas facilities in the coastal zone, including the only existing major LNG terminal in the U.S. LNG facilities are discussed on pp. 236 - 239 of the Energy Chapter, and in Policy 30.

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

Comment: Massachusetts currently has a nuclear power plant in Plymouth, with a potential for expansion at that site. Electric generating facilities are discussed on pp. 225 of the Energy Chapter, and in Policy 31.

In addition to this statement of national energy interests, consideration must be given as part of program approval under 306 (c)(8) to other recent Presidential statements of the national interest in particular the 1977 Environmental Program, including the emphasis on protection of wetlands, floodplains and other land and water considered. Finally, attention is drawn to Section 307 (f) of the CZMA, which establishes a strong national interest in air and water quality and prohibits approval of any coastal zone management program which fails to incorporate all water pollution and air pollution requirements established pursuant to the Federal Water Pollution Control Act and the Clean Air Act.

3. Recreation

The Massachusetts program has balanced the national interest in recreation against other national interests. For example, in considering alternative sites for energy facilities and in OCS development special consideration is to be given to impacts on recreational beaches and to the possibility that oil spills from the OCS may reach recreational shorelines. Additionally, the siting of sewage treatment plants and other outfalls must minimize adverse effects on recreational beaches.

As the national interest in recreation is incorporated in the Massachusetts program's policies, the implementation of the program will ensure that these interests are accommodated.

The Massachusetts Program has incorporated the following statement by NOAA on the national interest in recreation:

The Massachusetts coastline is of more than local and state interest; it is a resource of unique and natural beauty. The Massachusetts Coastal Zone Management Program declares that the "recreation dilemma is critical. Solutions must be provided within the next decade or most remaining opportunities will be lost", and that the primary concern "is to increase and enhance public use of the Massachusetts shoreline while improving existing facilities and minimizing future conflicts of recreation areas." Visitors yearly come from across the country to Massachusetts to utilize the state's recreational facilities, most of which are concentrated in the state's coastal zone. Tourism is a leading contributor to the State Gross Product and the coast accounts for most of the jobs and State tourist income.

Recognizing its responsibilities to the rest of the nation, Massachusetts in its coastal planning has incorporated local, State and Federal recreation interests in issues affecting the coastal zone. The Massachusetts coastal recreation policies have been developed after consideration of the following sources:

- a) Federal laws and regulations
- b) The Nation-wide Outdoor Recreation Plan
- c) State and local recreation programs (e.g., Massachusetts State-wide Comprehensive Outdoor Recreation Plan)
- d) Special reports, studies and comments from Federal, State and local agencies.

The Massachusetts Coastal Zone Management Program has incorporated the State Comprehensive Outdoor Recreation Plan (SCORP), which is consistent with the National Outdoor Recreation Plan adopted in 1973. The National Plan calls for:

- 1) Increase the availability and access to recreation resources, especially in central, city, suburban and urban fringe areas
- 2) Improve the management and administration of recreations resources and programs by local and State governments.

Salient points of the National Plan include:

- 1) Interest public recreation in high density areas
- 2) Improve coordination and management of recreation areas
- 3) Protect existing recreation areas from adverse contiguous uses
- 4) Accelerate the identification and no-cost transfer of surplus and under-utilized federal property.

Key elements of the National Outdoor Recreation Plan with particular emphasis in Massachusetts are as follows:

Expansion of recreation areas in urban and high need areas:

Policy 26 (pages 17-18) addresses this concern and a list of future recreation sites for acquisition that are consistent with the MCZMP policies is listed on page

Improve public transportation facilities to coastal recreation facilities:

Policy 21 outlines the state's concern to increase public access by public transportation.

Protect existing recreation areas of State and national significance from adverse impacts:

Outdoor recreational activities are permitted use in restricted coastal wetlands; intensive development is not, thereby ensuring that uses of wetlands contiguous to recreation sites will be compatible.

In addition, Policy 27 outlines how the State will utilize the Massachusetts Environmental Policy Act to protect existing recreation areas and on pages 220-223 is a list of those areas that apply to this policy. Also, existing State or locally owned parks or recreation areas cannot, under the Massachusetts Constitution, pass from public to private ownership or be converted for another use without a two-thirds vote of the Massachusetts Legislature, giving these areas a special measure of protection.

More effective management:

The State has consolidated all recreation activities into the Executive Office of Environmental Affairs. Management responsibilities are outlined on pages 335-338.

Use of surplus federal lands:

The program has identified surplus federal lands which it wishes to convert to coastal recreation facilities on page .

4. Transportation. Port development and maritime shipping and industry are accorded high priority and given preference in existing port areas. New port development outside of existing port areas is restricted, unless the need to be met is of national or statewide importance as described on pages 172- 173 and cannot be met in existing port areas. Existing major road and transit plans have been examined, and the status of their consistency is discussed on page . Logan Airport in Boston is the New England region's airport of major national significance; no plans for expansion are under consideration (see Appendix D). The Massachusetts program policies on wetlands and ports and general public investment are the chief considerations that would be brought to bear on airport siting and expansion. Other future transportation needs will be determined by relevant federal agencies working with counterpart State and local agencies, with the Massachusetts program giving highest priority to transportation infrastructure which meets the needs of urban and community development centers. As plans for new or expanded transportation facilities are developed, the national interest in these facilities will be addressed through coordination among the Massachusetts CZM program and Federal, State, and regional transportation agencies and the program revised or amended to include as consistent projects those transportation facilities in which there is a national interest. National interests in transportation must be balanced against the national interest in wetlands and living resources. For instance, the program requires bridges to be constructed so as not to impede anadromous fish passage and so that the basic seven interests of the Commonwealth's Wetlands Protection Act are met.

5. Regional Waste Treatment Plants. Concomitant with the program's support to attainment of national water quality goals (see below under water), the program recognizes that public sewage treatment plants are uses of regional benefit. The Division of Water Pollution Control is empowered to order a municipality or a water pollution abatement district to construct treatment facilities and to prepare necessary engineering plans. Highest priority for waste treatment facilities is given to projects serving existing urban areas and community centers where water quality problems currently exist. Next priority is awarded to facilities proposed for contiguous developed areas. In all cases, facilities proposals must demonstrate a documented public health problem requiring resolution through a structural measure (see Policy 35 on pages 294-296). During implementation, national interest will be considered in developing the annual priority list for Federal and State funding of waste treatment facilities. This list is approved by both EPA and the Secretary of Environmental Affairs, thereby allowing for input of national interest concerns.

The national interest on waste treatment plants is balanced against national interests in wetlands, barrier islands, recreation, floodplains, and living marine resources in that treatment plants and outfalls are to be sited so as to minimize potential adverse effects to recreation beaches and shellfish beds and so as to minimize the growth-inducing effects caused by providing sewer services in floodplains, barrier beaches, and wetlands.

6. Water and Air. The program fully incorporates the national interests in air and water quality, and the requirements of the Federal Water Pollution Control Act and Clean Air are made part of the Massachusetts coastal program. Thus, those water and air national interests will be met during program implementation through the process of issuing State and Federal air emission and waste water discharge permits.

7. Wetlands. The national interest in wetlands, as expressed in the President's Executive Order on Wetlands (Executive Order 11990, May 24, 1977) is:

"to avoid to the extent possible the long and short term adverse impacts associated with the distribution or modification of wetlands and to avoid direct or indirect support of new construction in wetlands whenever there is a practicable alternative."

The Massachusetts program meets this national interest in Policy 1 found in 11(7) by permitting in restricted wetlands those activities which have no practicable alternative (e.g., wharves, piers, intake and out-take conduits for electric power plant cooling water, which all require a waterfront location) and by prohibiting or conditioning all other activities which would modify or destroy wetland values. The national interest in wetlands is balanced against national interest in energy facilities siting in that certain necessary components of energy facilities (transmission lines, pipelines, and intakes and out-take conduits for cooling water) are permitted uses for wetlands. For other types of energy facilities, such as tank farms, the national interest in wetlands is represented by either the prohibited use in restricted wetlands or the conditioning protecting the interests of the Wetlands Protection Act on unrestricted wetlands.

8. Endangered Flora and Fauna. Habitats are protected through the restriction of wetlands as well as through its designation as Areas for Preservation or Restoration. The special scrutiny reserved for activities taking place in Massachusetts ocean sanctuaries also provides assurance that during the implementation the national interest in marine mammal protection is addressed in licensing off-shore activities. Also see living marine resources below.

9. Floodplains and Erosion Hazard Areas. The national interests in these areas as expressed through the President's Executive Order on floodplains and the National Flood Insurance Program are incorporated into the Massachusetts program. Development is conditioned or restricted

in wetlands and floodplains; the program supports non-structural measures for erosion and flood control. Structural measures are only selectively permitted and then only if downcoast effects are minimized. As the national interest in floodplains is incorporated in the Massachusetts program's policies, those national interests will be accommodated through coastal wetlands restrictions, Wetlands Protection Act permitting and Tidelands licensing.

10. Barrier Islands. See wetlands and floodplains above.

11. Historic Sites and Districts. The program affords protection to designated historic districts or sites from adverse impacts stemming from Federal or State actions, and accordingly all national interest facilities must minimize adverse impacts to designated historic districts or sites. During program implementation, the national interest in historic sites and districts will continue to be considered with the program encompassing new districts or sites as they are established or registered.

12. Wildlife Refuge or Reserves. Federally owned refuges are excluded as Federal lands from the provisions of the Massachusetts program. State or other publicly owned refuges or reserves may not, under the Massachusetts Constitution, be converted to other use or be sold without two-thirds approval of the Massachusetts Legislature. The presence of feeding and breeding areas for waterfowl or birds dependent on coastal resources is one of the criteria used in designating Areas for Preservation or Restoration. The establishment of wildlife refuges or reserves is of high priority in designated Areas of Preservation or Restoration. Energy facilities are restricted from locating in such areas. During program implementation, the Federal consistence mediation procedures may be invoked to resolve conflicts arising from balancing national interests in wildlife refuges or reserves with other national interests, such as energy facility siting.

13. Areas of Unique Cultural Significance. See historic sites and districts above.

14. Minerals. Mineral development is a recognized permitted use under the Massachusetts program. However such development is balanced against other national interests in that dredge or filling will be conditioned in wetlands or barrier islands; and, offshore, is conditioned upon a showing that there will be no adverse effects to natural sand replenishment processes for recreational beaches or to living marine resources. During program implementation, federal agencies will be offered opportunities at public hearings on off-shore leases in Massachusetts waters to voice national interest concerns, and the leasing process will take account of these interests.

15. Prime Agricultural Lands and Forests. No agricultural lands or forests of national significance exist in the Massachusetts coastal zone.

The Massachusetts Coastal Zone Program has incorporated the following statement by NOAA on the national interest in living marine resources:

16. Living Marine Resources. In determining the national interest in living marine resources the following documents and specific legislation were used as indicators:

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.

A Marine Fisheries Program for the Nation. U.S. Department of Commerce. July, 1976.

Fishery Conservation and Management Act of 1976. (P.L. 94-265)

The major objectives of the national interest in living marine resources as expressed are 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, resources thereof and their habitat, and to control losses by damage to habitat areas through coordination with other features of water resource development programs.

The salient features of the national interest in living marine resources are, therefore:

- emphasize commercial fisheries
- relationship of marine resources to recreation
- develop and protect wildlife and their resources
- protection of wildlife habitat.

Elements of the national interest in living marine resources with particular application to the Massachusetts Coastal Zone Management Program are as follows:

1) Emphasize Commercial Fisheries

Policy 7 outlined the State's emphasis in encouraging and assisting commercial fisheries research and development.

Policy 17 accords the fishing industry priority in allocating port space and Policy 18 gives fishing harbors priority for State and Federal dredging funds. These priorities assure that the commercial fishing industry's on-shore space and harbor needs are met.

2) Relationship of Marine Resources to Recreation

Policy 21 outlines the State's concern to increase public access by public transportation. Policy 22 establishes the State's interest in linking existing coastal recreation sites to each other or to nearby coastal inland facilities via trails for bicyclists, hikers and equestrians, and via rivers for boaters, thereby expanding recreational fishing opportunity. Lastly, Policy 26 addresses the expansion of recreational facilities, including those for recreational fisherman.

3) Develop and Protect Wildlife and their Resources

The Massachusetts program addresses the adverse effects to wildlife that may stem from construction or development in open ocean waters, estuaries, and coastal rivers. Specifically, Policy 3 speaks to minimizing damage to shellfish beds from out-fall placement; Policy 4 addresses impediments to anadromous fish passage; Policy 5 specifies the measure to be taken to avoid adverse impacts to fisheries from dredging or dredge spoil disposal; and Policy 33 outlines the State's concern for fisheries and wildlife in OCS exploration and development and other off-shore mining.

4) Protection of Wildlife Habitats.

Consistent with the national interest in wetlands protection, the Massachusetts program conserves salt marshes, shellfish beds, dunes, beaches, barrier beaches, and salt ponds -- all resources that provide food and habitat upon which marine life depends (Policy 1). In addition, through designating Areas for Preservation or Restoration which encompasses particularly important areas of marine productivity, wildlife habitats are afforded additional protection (see Policy 2).

Other national interests in energy facilities siting, mineral extraction and transportation are matched against national interests in fisheries with the result that the planning for and siting of such national interest facilities must avoid adverse impacts to marine productivity and fisheries. Specifically, off-shore mining is prohibited in ocean sanctuaries which constitute the major traditional fishing waters of Massachusetts and encompass the major off-shore shellfish beds and fin-fish spawning grounds. Moreover, OCS development and exploration is, under the Massachusetts program, conditioned to minimize impacts on fishing operations and on spawning grounds.

During program implementation, the national interest in fisheries will be considered in Wetlands Protection Act permitting, Tidelands licensing, off-shore mineral leasing, water quality discharge permitting, and energy facility siting. These permits, licenses, and approval procedures either expressly include protection of fisheries as a criteria for approval or provide a public process for introduction of evidence that must be considered prior to approval.

CHAPTER 7

HOW THE MASSACHUSETTS COASTAL ZONE MANAGEMENT PROGRAM WAS PREPARED

A. Full Citizen Participation

The preparation of coastal management program in Massachusetts began in 1974 upon the receipt of Federal CZM funds. In its earliest days, Massachusetts CZM made a commitment to involve as many citizens as possible in the development of the coastal zone management program. An open participatory process was the one way of assuring the development of a management program that would meet immediate and long term needs, grow from the demands of citizens and communities, and would have support from all levels of government. Some examples of this open participatory process are:

- The Governor established a Task Force on Coastal Resources composed of 42 volunteers representing the legislative, all levels of government, and major user groups of the coastal zone.
- The Coastal Zone staff met with over 2,000 citizens and officials in open public meetings to discuss policies and better management of the coast.
- Regional Citizen Advisory Committees were established in seven of the ten regions of the coast. CAC members, representing coastal communities and interests, worked month-by-month over the past year to ensure that CZM policies meet the needs of sub-areas of the coast. CAC membership included an appointee of the mayor or board of selectman and representatives of the major user-interest groups of the area.
- A public opinion survey of 1000 randomly selected coastal residents was conducted to further ascertain the needs and desires of coastal citizens.
- Questionnaires were prepared to help local officials and CAC members set priorities on subjects such as erosion problems, recreation needs, and alternative management systems.
- The staff conducted an active public information program to inform many thousands of citizens on CZM issues and progress. Newsletters, publications, slide programs, films and newspaper stories were among the materials prepared for public dissemination.
- In addition to citizen involvement, the CZM staff received excellent technical assistance from the NERBC study of South Eastern New England.
- After 3 years of this active interaction between citizens and the CZM staff, a program Preview was distributed in December, 1976. Over 2,000 copies were printed and sent to citizens as well as Federal agencies.

- In the Winter and Spring of 1977, changes and additions were made in the document to reflect comments received from Federal Agencies and citizens.
- A public hearing was held on the entire revised program in August prior to the Governors formal submittal.

B. Federal Government Participation

The Massachusetts Program Appendix C documents the opportunity of full participation by relevant Federal agencies in the development of the management program. It describes the contact that was made with Federal agencies early in the program preparation, how Federal input was obtained on a timely basis, summarizes the nature and frequency of contacts, evaluates the Federal comments received and how they were accommodated or where conflicts were not resolved.

C. Participation of Other State Agencies, Local Governments, Regional Organizations, Port Authorities and other interested public or private parties.

Appendix D of the Massachusetts Program documents the full participation provided these groups.

PART III

PROBABLE IMPACTS OF THE PROPOSED ACTION ON THE ENVIRONMENT

Significant environmental, social and economic impacts will result from Federal approval of the Massachusetts Coastal Zone Management Program. Impacts directly resulting from Federal approval fall into four categories. First, an increase in funds and funding options will permit State agencies to implement the Program through more effective administration of existing management authorities. Second, Federal approval will require that Federal government actions be consistent with the management program to the maximum extent practicable. Third, approval will signify that the State has an acceptable procedure to insure adequate consideration of the national interest involved in siting of facilities necessary to meet requirements which are other than local in nature. While the State is not compelled to propose a program which accommodates certain types of facilities, the impact of this procedure shall assure such national interests are not arbitrarily excluded or unreasonably restricted from the coastal zone.

Finally, Federal approval will insure continued State eligibility to receive assistance under Coastal Energy Impact Section 308 of the Coastal Zone Management Act. This would provide financial aid in ameliorating the impacts associated with offshore oil and gas production off the Massachusetts coast. Additional funding for other coastal zone assistance programs such as interstate coordination, beach access, island preservation, research, and training will also be assured.

In order to fully understand the impacts associated with Federal approval, however, it is necessary to evaluate the probable impact of program implementation by the Commonwealth. The following description of program impacts is divided into two chapters. The first chapter summarized the probable environmental, social and economic impacts of the program. The second chapter describes how each of the State's management authorities will be administered differently under an approved program and evaluates the specific impacts of these changes.

Chapter I

SUMMARY OF PROBABLE ENVIRONMENTAL SOCIAL AND ECONOMIC IMPACTS

A. SUMMARY OF ENVIRONMENTAL IMPACTS

The Massachusetts coastal zone constitutes a large, delicately balanced ecosystem in which changes in any one part, however small or remote, cause alterations in all other parts. These causes and effects are linked through geophysical processes (e.g. wave action, movement of currents and tides, flow of surface water, and other hydrologic cycles) and biological processes (e.g., food chain links, reproductive cycles, migration patterns, and habitat adaptation). The Massachusetts Coastal Zone Management Program seeks to preserve key natural processes and conserve biologically productive resources. Thus, implementation of the Program should have a generally beneficial impact on the natural environment.

The key natural processes and resources that the Program policies are designed to preserve and respect are:

- littoral sand transport along the shore;
- flushing and circulation patterns in estuaries, coastal embayments, and salt ponds;
- storm buffering functions of beaches, dunes, barrier beaches, and salt marshes;
- soil capabilities to filter and absorb wastes;
- salt marshes which promote habitat for wildlife and which, through the production of detritus, are a primary source of food for marine life;
- beaches, dunes, and barrier beaches which provide habitat for wildlife;
- shellfish beds;
- anadromous fish runs; and
- fishery resources.

These natural processes and resources are mapped in detail in the regional chapters found in Volume II of the Program document, and their significance is described in Chapter 3 of Volume I.

By protecting certain key natural resource areas of the coast - salt marshes, beaches, barrier beaches, dunes and shellfish beds, in particular - the Program will also help to preserve the coast's esthetic qualities and the various types of recreational opportunities available along the shore. By preserving these key natural resource areas the Program will also discourage further inappropriate development in hazardous areas and preserve natural buffers against hazards.

While the Program seeks to preserve natural processes and resources, the Program also recognizes that the coast will continue to experience significant new growth. Marine dependent energy development, offshore mineral mining, and port and harbor development, and their attendant dredging, spoil disposal, and bulkheading activities, will be permitted in certain locations in the coastal zone, so long as potential adverse impacts are addressed and minimized to the extent practicable. Such activities will have a variety of adverse impacts, including reduced marine productivity as a result of habitat destruction and increased turbidity, deterioration of coastal visual resources, and interference with recreational uses of the coast.

Most types of major development located in or immediately adjacent to tidal areas will be regulated by the state directly, or by local conservation commissions subject to state review. The regulation of most other types of development in the coastal zone, with the exception of energy facilities, will remain the responsibility of local governments. Thus a variety of development that may not individually, but in the aggregate may have adverse impact on the coastal zone will not be addressed by the management program.

The Coastal Wetlands Restriction Program will be employed to protect ecologically significant resource areas and natural hazard buffer areas. The Inland Wetlands Restriction Program will be used to protect anadromous fish runs located in Areas of Critical Environmental Concern/Areas for Preservation or Restoration, once these are formally designated by the Secretary. This should serve to protect coastal and marine fisheries resources.

The Wetlands Protection Act and state Tidelands licensing will be relied upon to protect ecologically significant resource areas and natural hazard buffer areas against inappropriate development. After tidelands regulations are adopted, construction of solid fill structures in estuaries and embayments shall be required to minimize interference with water circulation and sediment transport, and preserve coastal water quality and marine productivity. This should have beneficial impacts on marine productivity as well as the visual quality of water bodies.

In addition, conservation commissions shall approve permits for private flood or erosion control only where there will be no adverse effects on adjacent properties or down coast areas. Uniform criteria for evaluation of proposed projects will be contained in the revised regulations. These should eliminate some of the adverse ecological consequences of inappropriate flood or erosion control projects and protect down coast landowners from economic losses.

The other types of activities regulated under the Waterways Program may have substantial adverse environmental affects. Dredging may generate sufficient amounts of suspended material to harm organisms by blocking light necessary for photosynthesis and by clogging the gills and siphons of fish, molluscs, and other marine fauna. Disposal of dredge spoil also increases turbidity and may destroy benthic organisms. Marine construction frequently results in the loss of coastal habitat areas. Thus, the policies on dredging and spoil disposal will serve to protect the marine environment.

In summarizing the environmental implications of the Program, a significant point is that several of the major elements of the Program will not be in effect, or not completely in effect, at the time of Program approval. Thus the positive environmental impacts of these elements will begin to be felt only sometime following Program approval. For example, the Program proposes to restrict the rest of the State's wetland areas over the course of the next three to five years; thus, the positive implications of prohibiting most intensive types of development in these types of areas will expand as the restriction program proceeds. During the interim, the less stringent but still quite protective provisions of the Wetlands Protection Act will apply. Also, the various use prohibitions and other regulations in Areas of Critical Environmental Concern/ Areas for Preservation or Restoration (See Policy 2) will only take effect once these areas are designated by the Secretary of Environmental Affairs. A decision on all ten nominated areas will be made in the first year after Federal approval of the Coastal Zone Program.

B. SUMMARY OF SOCIAL AND ECONOMIC IMPACTS

The Massachusetts Coastal Zone Management Program seeks to conserve and protect key ecological coastal resources, while it advocates increased development of already developed areas. Although the Massachusetts Program does not anticipate a decline in the present rate of development in the coastal zone, the Program may shift some development activity inland. This may affect property values, property tax revenues and resource extraction or exploration. The program will provide an improved decision-making process for determining coastal land and water uses, siting of facilities in the national interest and generally provide increased publicity about what can and cannot occur along the coast.

Maritime dependent activities that bring sustained economic growth will be given highest priority for coastal locations that have the resources and facilities needed to support them. General development also benefits from a coastal location, but could locate in other areas. General development that involves dredging or filling will be managed in an effort to protect resources valuable to maritime dependent growth.

New Development Impacts

New development is expected to continue at its present rate, but will be encouraged to occur in existing developed areas or adjacent areas. Development is restricted in areas under the Wetlands Restriction Program and permitted subject to certain conditions in areas below mean high tide, areas covered by the Wetlands Protection Acts, where soil cannot support sewage disposal systems, and near designated recreation or historical sites.

This leaves approximately 120,000 undeveloped acres or 21 percent of the coastal zone immediately suitable for development, without constraints beyond local zoning, the State Environmental Code, and Federal emission standards. Thus, many decisions concerning economic growth and development will be made at the local level, and future impact will vary.

Over the long run, as land suitable for development without sewers and State roads is exhausted, the need for public investment will become more critical to future development. Thus, a key impact of the plan will be that the public sector will have increasing involvement in determining optimum growth in the coastal zone. Since the plan seeks to concentrate development in/and adjacent to developed areas through public investment policies, development may occur at higher densities and in fewer places.

The conservation of sensitive coastal resources advocated may make existing and future development more desirable and may raise property values. Present property owners would benefit economically while potential future residents might suffer as a result of increased housing costs.

Fisheries Impacts

The commercial fishing industry currently provides employment for 15,000 persons and sport fishing is an equally important activity. In 1974 approximately two million sportsmen fished in Massachusetts coastal waters. Massachusetts coastal zone management policies are designed to conserve habitats and biological processes upon which the fisheries depend. Furthermore, the program promotes the funding of harbor dredging, pier construction, and other harbor works needed to benefit and expand the fishing industry.

These policies will have a positive impact on the fisheries related economy. Without such improvements, the benefits made available by an extended US fishing zone would not be as fully realized in Massachusetts.

Ports and Harbors Impacts

Other waterfront dependent industries in Massachusetts directly employ some 35,000 persons. These industries include ship and boat yards, water transportation services, tugboat operations, marine construction, marine terminals, trucking firms, and waterfront industries relying on maritime shipping of raw materials or finished products. Offshore oil and gas development may bring additional marine trade to Massachusetts.

The Program will direct redevelopment funds into existing ports and harbors and approve funds and permits for dredging projects according to policies 17 and 18. Through the waterways licensing authority the coastal program will attempt to prevent the preemption of present and proposed maritime-dependent uses in port areas, while permitting other uses which do not represent an irretrievable commitment of sites and which do not preempt foreseeable maritime-dependent industrial uses. This policy should have beneficial impacts on maritime sectors of the economy such as fisheries and shipping. Its affects may be somewhat limited, however, since certain projects can be permitted in port areas without any opportunity for State review for maritime dependency.

Impacts on Individual Coastal Land Owners and Uses

CZM policies advocating the conservation of certain coastal resources (e.g., marshes, beaches) are consistent with existing State laws in that they do not alter the development rights of individual property owners.

Furthermore, no owner's rights are redistributed to other people; i.e., no access rights are conveyed through the plan without just compensation. However, some individual owners will bear negative impacts, though there are judicial processes to allow compensation.

On the other hand, the CZM program advocated the protection of complete natural systems by conditioning or restricting dredging, pollution, filling, bulk-heading etc. Individual land owners may be burdened in the short run through such conditions, but over the long run, the CZM plan will provide net positive benefits to most coastal land owners by promoting a high quality environment.

Local Government Budgets

Many policies of the CZM program advocate efficient use of public funds, better utilization of sunk investments, and increased public benefits for public investments. For example, public investment policies encourage the concentration of new development infrastructure such as sewers and the high priority revitalization of existing infrastructure. Recreation policies advocate improved transportation to and maintenance of existing facilities.

The immediate impact of these policies will be an insurgence of Federal/State money into local communities for projects and for new planning. In the short run, this may cause an increase in town expenditures where "matching" funds are required. If the Program is successful in improving the overall efficiency of public investments, local expenditures should be reduced in the long-term.

Property tax revenue may be reduced because of conservation restrictions or constraints on industrial development. This may be partially compensated by increases in maritime dependent industry, payment in lieu of taxes for recreation areas, increases in the value of developable land, or land made developable through public investments.

State Institutions

Several EOEa agencies (e.g. the Wetlands the Waterways Programs in the Department of Environmental Quality) will have expanded responsibilities under the Coastal Program. Adjusting to the added review steps that will be required to determine the permissibility of certain projects may cause some temporary delays in permit review and program development. In the longrun, however, coastal regulatory and management decisions should be made more efficiently and with better coordination among State agencies involved. Improvements in the decision-making process and increased staff capabilities will reduce the amount of time taken up by permitting and licensing procedures.

Under Federal consistency, proposed projects involving Federal funds or requiring a Federal permit or license, will have to be considered in light of Massachusetts' Coastal policies. Because assistance will be available from the Massachusetts Office of Coastal Zone Management in interpreting the Program, it is expected that few projects will be delayed due to inconsistency.

The consistency determination should require no major delays since it can be satisfied by the granting of a State permit or through the established A-95 review process. Added steps will be required only in the infrequent instances where applications for a Federal license or permit do not also require a State permit; in these instances, the applicant will be required to prepare a certificate of consistency.

The Coastal Program should also improve communication between the public and EOE agencies. For example, the list of projects in the Environmental Monitor and its distribution list will be expanded. Regional and State level citizens advisory groups will participate in the evaluation on the program and in developing the future course of the program

Chapter II

THE PROBABLE IMPACTS OF APPROVAL ON EXISTING MANAGEMENT AUTHORITIES

The second chapter of this discussion of the probable impacts of Federal approval of the Massachusetts Coastal Program is organized in terms of the various management authorities that will be relied on to implement the program. The description of impacts is based primarily on the probable affects of the enforceable policies on key management authorities. For reference, all of the thirty-eight program policies are cross-referenced with the appropriate management authorities in Part II, Chapter 3.

Since the Massachusetts Coastal Program will be based on existing laws and procedures, the Program will basically continue and intensify the present impacts of existing state programs. In order to distinguish present impacts from future impacts under an approved Program, the discussion is divided into two sections. "Present Operation" describes how each authority is presently administered and its impacts. "Coastal Program Impacts" describes how the authorities will be implemented differently under the Program and the environmental or socio-economic impacts that will result from this differential.

A. WETLANDS RESTRICTION PROGRAM

The Commonwealth through the Coastal and Inlands Wetlands Restriction Acts is authorized to place restrictive orders on property owners' deeds prescribing certain prohibited and permitted uses. All beaches, dunes, salt marshes, shellfish beds, and salt ponds in coastal Massachusetts will be restricted under the Coastal Wetland Restriction Program, except for those in designated port areas (See Summary Map), those under Metropolitan District Commission control, and portions of barrier beaches which no longer exhibit characteristics of naturally functioning barrier beaches. The Inland Restriction Program will also be used to protect anadromous fish runs in certain locations.

Present Operation: Salt marshes, shellfish beds, beaches, dunes, and salt marshes comprise at the most 70,000 acres, or 12% of the coastal zone. Since the Coastal Restriction Act was passed in 1965, 30,000 acres (45%) have been placed under restrictions. These restricted areas are located in 25 coastal communities (30% of all coastal communities) particularly on the lower Cape, Martha's Vineyard, the north shore of Buzzards Bay, from Cohasset to Duxbury, and from Salisbury to Essex. As a result of different policies prior to preparation of the Massachusetts Program, beaches and dunes generally were not restricted in these first communities that participated in the restriction process.

Although administered pursuant to a separate Act, the Inland Restriction Act is applied jointly with the Coastal Restriction Program by the Department of Environmental Management. As a result, all wetlands in a town are generally restricted at the same time.

Based on past experience, the average cost of applying restrictions is approximately \$7,200 per community, plus the salary of a technical staff person. It is estimated that about 3 communities can be restricted per year by one staff person.

Coastal Program Impact: Federal funding will allow the Commonwealth to hire additional staff which should increase the rate at which wetlands are restricted. Restrictions will be applied on a priority basis to protect Areas of Critical Environmental Concern/Areas for Preservation or restoration, once these are designated by the Secretary of Environmental Affairs, and to protect wetlands threatened by development in urban areas. It is anticipated that the rest of the State's coastal wetlands will be restricted in three to five years.

The primary new impacts of the Restriction Programs under an approved Coastal Program will be those resulting from an increase in the pace of the restriction process. All of the areas that will ultimately be restricted already are protected in terms of the seven interests of the Wetlands Protection Act. Environmental benefits will result from placing these areas under the more stringent protection of the restriction program earlier than would occur in the absence of Federal funding. Also, certain landowners may be preempted from receiving profits they might have gained as a result of not having had their land restricted. Finally, greater equity will be achieved among landowners if the restriction program is accelerated since all owners of salt marshes, beaches and so on will be treated on a more equal basis.

Another important change is that in the future all of the beaches, dunes, salt marshes, shellfish beds, and salt ponds in coastal towns will be restricted whereas in the past beaches and dunes were generally not included. Thus, under the coastal program, the Coastal Wetlands Restriction Program will provide more extensive protection of coastal resources.

B. WETLANDS PROTECTION PROGRAM

The Wetlands Protection Act gives local conservation commissions authority to review all proposed projects within 100 feet of the 100 year flood plain or, if further landward, within 100 feet of the bank of any beach, dune, flat, marsh, meadow or swamp. If the conservation commission, or the Commissioner of DEQE, (on appeal) finds that the proposed action presents a significant impact to the interests of the Act (public and private water supply, ground water supply, flood control, storm damage prevention, prevention of pollution, protection of land containing shellfish), an order of conditions is imposed to regulate the project and protect the interests of the Act. A conservation commission's Order of Conditions may be appealed to the Commissioner of DEQE, or the Commissioner himself may invoke the appeal process.

Present Operation: In 1974, final regulations were promulgated by the Commonwealth to assist local conservation commissions in implementing the Act. These regulations provide guidance on the type of information to be submitted with an application, how the application is to be processed, and whether a proposed action will affect the seven interests of the Act. These regulations do not indicate how different types of use should be managed in different locations to achieve the objectives of the Act.

Since original jurisdiction was delegated to local conversation commissions in 1972, approximately 3,900 Orders of Conditions had been issued through March 1976, and 322 Superceeding Orders have been issued by the State. Thus, only about 10% of conservation commissions' Orders of Conditions were formally overruled by the State. The majority of these cases were appealed by the applicant, while hardly any appeals were initiated by the Commissioner.

It is difficult to evaluate the impacts of the Wetlands Protection Act without comprehensive information on the Orders of Conditions issued throughout the Commonwealth. Clearly, however, in areas that are restricted under the Restriction Program, the Wetlands Act represents a largely redundant regulatory control. But the Wetlands Act does serve to protect ecologically significant resource areas that have not yet been restricted, as well as other coastal areas not eligible for the restriction process.

The Wetlands Project at the Massachusetts Audubon Society reviewed the 125 Wetland Orders that were appealed to the Department of Environmental Quality Engineering during 1975. Since this study represents the only attempt to date to evaluate the effectiveness of the Wetlands Protection Program, it is appropriate to describe some of the major conclusions of the study:

- DEQE has sought strict adherence to appeal procedures, often denying an appeal or declaring it null and void because of failure to conform adequately with the rules. Eleven of the 125 appeal cases were denied because the request came beyond the time period for appeal.
- DEQE has been inconsistent in dealing with violations of the Wetlands Protection Act. For example, an applicant illegally placed fill, changed the grade, destroyed vegetation, and built a canoe pier, DEQE did not bring legal action. In another case, pipes were placed illegally in a pond, yet DEQE allowed the project and did not order them removed. Yet in certain instances DEQE ordered natural conditions to be restored.
- Most of the appeal cases dealt with inland, freshwater wetlands. Only 9 percent of the appeals evaluated involved coastal wetlands.
- Most of the appeal cases involve streams and ponds. (This suggests that implementation of the Protection Act has aroused greater controversy in inland areas than along the coast.)
- DEQE has supported the control of activities occurring in an upland area which would pollute a wetland. For example, a residential septic system was not allowed because it would have polluted freshwater recharge areas and contaminated ground water. These recharge areas were crucial for the operation of a trout hatchery.
- The major grounds for appeal, although not clearly specified, seem to vary. Flooding and pollution problems were most often mentioned. Yet, other issues were also raised: water supply loss, erosion, and sedimentation/siltation, surface run-off, storm water damage, wetland integrity, aesthetics, recreation, dune destruction.

In summary, the Wetlands Protection Program appears to have suffered from uneven administration. One cause of this is the absence of explicit State standards or guidelines for local Coastal Commission decisions. A second cause is that the Department presently lacks adequate staff to review local Conservation Commission Orders in order to achieve Statewide consistency in administering the Program.

Coastal Program Impact: Federal approval of the Massachusetts Coastal Program should help to correct some of the deficiencies of the present program with beneficial environmental consequences as well as increased predictability for landowners.

A program review board has been established to review the Act's present regulations. Revised regulations are expected to be prepared in the fall and promulgated in final form in June 1978, following program approval. These regulations should assist local commissions in determining the permissibility of particular uses, and help to ensure the implementation of various Coastal Program policies.

Federal funds will permit the hiring of additional staff in DEQE regional offices to provide technical assistance to local commissions and to review Orders of Conditions. This should help to insure greater Statewide uniformity in the implementation of the Protection Act, and in turn, help to establish greater equity in the administration of the Act.

C. THE WATERWAYS PROGRAM

The Waterways Program has authority over filling, wharf construction, bridges and pipelines in tidewaters. The Commonwealth, as trustee over public lands below low waters, issues revocable licenses granting permission for construction that may interfere with public rights in these lands. While land between low and high water marks is in private ownership, these lands are subject to reserved public rights for fowling, fishing and navigation. The Waterways Program also funds such public works as wharf improvement, public piers, jetties, bulkheads, shore protection works, channel dredging and maintenance, dams and wreck removals.

Present Operation: The Waterways Program has been administered to date without formally adopted rules and regulations.

In 1976, the Waterways Program issued approximately 150 licenses, over one-half involving coastal related projects. In one part, the Program generally has approved projects so long as they do not impede navigation, are structurally sound, and are not disapproved by any State reviewing agencies. In practice, the Waterways Program does not issue licenses until projects are approved by the local Conservation Commissioner, if appealed by the Commissioner of Environmental Quality Engineering. Conditions are sometimes imposed upon licenses, and payment is required if the project displaces tidal water or is located on Commonwealth lands (below low tide).

Coastal Program Impact: Under an approved 306 Program, Federal funding will be used to support additional DEQE staff to review Waterways license applications. In addition, regulations will be promulgated for the evaluation of proposed dredging, filling and marine construction.

In reviews of license applications, marine construction will be approved if, in estuaries and coastal embayments, flushing rates and capacity are not reduced; water quality, marine productivity, and anadromous fish runs are not adversely affected; and alteration of wave generated littoral currents will not exacerbate or induce shoreline erosion or adversely alter depositional patterns.

The Waterways Program and the CZM staff have been working to develop a ranking system for the allocation of State funds for dredging and shoreline protection projects. It is proposed that funding be provided for dredging only in developed port or harbor areas, and that maintenance dredging be given priority over any new dredging. This should minimize the serious adverse environmental consequences of dredging in undisturbed coastal areas, while permitting dredging necessary to support maritime-dependent industry.

Non-structural measures will receive higher priority for public funds than structural solutions to shoreline erosion, except where structural solutions would produce widespread public benefits and minimize adverse environmental affects. Thus many of the adverse economic and environmental consequences of structural shoreline erosion control measures will be avoided.

D. OCEAN SANCTUARIES

The Commonwealth of Massachusetts has established five Ocean Sanctuaries to protect the ecology and the appearance of the ocean. All State waters below mean low water are included except for Mt. Hope Bay and that part of Massachusetts Bay for Lynn through Marshfield. (See Figure 1).

Present Operation: In general, such activities as the removal of sand, gravel, or minerals, dumping or any new waste discharge are prohibited. However, a broad class of activities are exempt from these prohibitions. While the terms of the five sanctuaries differ, laying of cables approved by the Department of Public Utilities, projects authorized under the Waterways program on other improvements authorized by other State or Federal agencies are not prohibited. Essentially, the Ocean Sanctuaries Statutes provides no additional management authority in addition to the Waterways Program.

No permit is required from the Department of Environmental Management in order to proceed with an activity in an Ocean Sanctuary. It is expected, however, that individuals and other agencies will confer with the Department to ensure compliance with the terms of the statutes.

Coastal Program Impact:

Regulations are expected to be promulgated in final form for the Ocean Sanctuaries Program by March 30, 1978.

The Massachusetts legislature is now considering legislation to re-modify the present statutes, make the terms of each sanctuary consistent, and clarify the permitted uses in each sanctuary.

In terms of impacts, the Ocean Sanctuaries can be assumed to have impacts comparable to those described under the Waterways Programs.

E. ENERGY FACILITY SITING COUNCIL

The Energy Facility Siting Council has jurisdiction over determining the need and approving locations for electric generating, gas and oil facilities. While energy facilities generally require various State agency permits prior to construction, the Council has the authority to override State or local denials of necessary permits.

Present Operations: Energy-related development has significant environmental impacts in the Massachusetts coastal zone for two reasons. First, energy facilities frequently require a coastal location because of their cooling requirements or because they are designed to handle energy resources imported into the State. Second, energy facility construction and operation have a variety of significant deleterious environmental affects.

For example, electric generating plans cause thermal water pollution and may adversely impair the scenic values of the coast; fossil fuel plants produce increased air pollution while nuclear plants pose various health and safety risks. Oil and gas transmission, storage and processing facilities create various land use conflicts, pose safety hazards, and can cause increased air pollution.

The Energy Facility Siting Council was established in 1972. The State's energy policy, established by the law creating the Council, calls for the provision of a necessary energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost. Regulations for the review of energy facility applications have been adopted by the Commonwealth.

As an example of the types of facilities reviewed by the Council, in fiscal 1976, the Council considered approximately thirty proposed facilities including 3 electric generating stations (2 nuclear), 2 liquid natural gas facilities, 1 oil storage tank farm, and numerous high voltage electric transmission lines. The authority of the Council to supercede State or local permitting authorities has not yet been tested, although one case is currently pending.

Coastal Program Impacts: Basically, the Energy Facility Siting Council will operate under an approved coastal program as it has operated in the past. However, there will be several changes.

First, the Council has agreed to recognize the final program as a statement of health, environmental, and resource use and development policies of the Commonwealth, and to evaluate proposed facilities for consistency with these policies.

More specifically, the Council has agreed not to site energy facilities in Areas of Critical Environmental Concern/Areas for Preservation or Restoration, once they are designated by the Secretary of Environmental Affairs. The impacts of this policy are somewhat uncertain since no area has yet been designated in the coastal zone. Moreover, areas nominated to be Areas of Critical Environmental Concern/Areas for Preservation or Restoration comprise only a small area of the coastal zone. Nevertheless, if these areas are designated, beneficial environmental consequences will occur to the extent that greater assurance will be provided that these areas will be protected against potentially damaging energy development.

In addition, the Council has agreed to require that for any proposed coastal facility the applicant provide information on at least two alternative sites, including one inland site. Although this policy does not insure that future energy development will have less serious adverse affects, it does require applicants to consider the environmental implications of locating energy facilities at various alternative sites.

Any permits or licenses issued by the Council will be considered consistent with the Program for purposes of Federal consistency. In the case of the Pilgrim II nuclear power plant, State approval was granted prior to formation of the Council. Federal permits for the plant are pending and the coastal program will need to determine whether this project is consistent with the program shortly after Federal Program approval.

F. MASSACHUSETTS ENVIRONMENTAL POLICY ACT (MEPA)

The Massachusetts Environmental Policy Act established an environmental review process for State actions, projects with State funding contributions, or projects requiring permits or licenses from State agencies. The intent of MEPA is to improve environmental planning and the design of activities through full disclosure of the environmental consequences of State actions.

Present Operation: MEPA has been an important instrument of environmental protection in Massachusetts. The environmental assessment requirement has discouraged the planning of activities that would degrade the environment. It is also possible to cite various instances in which the MEPA process was either the chief or a contributing factor in a decision by an applicant to modify a proposed action to minimize environmental damage, or in an agency's decision to deny a permit application.

Certain types of activities are categorically exempt from MEPA, with the result that these activities may not receive adequate environmental review. Exempt activities include:

- maintenance or replacement of existing facilities, or structures,
- construction and location of single, small, new facilities or structures;
- minor alterations to the condition of land, water and/or regulation and including areas less than two acres in extent (one acre in wetlands);
- activities not exceeding thresholds of adverse environmental impact, established by State agencies with the approval of the Secretary of EQEA;
- permit determinations or wastewater treatment construction grants by the Division of Water Pollution Control;
- the Wetlands Protection Orders, issued by local Conservation Commissions and not appealed to the Commissioner of DEQE and major private actions exempt from State regulation and not requiring State funds.

From the inception of the MEPA process on July 1, 1973, through June 30, 1977, 2715 Environmental Assessment Forms were filed with EQEA. The following list shows the number of assessment forms received annually:

1973 (last 6 months)	494
1974	888
1975	795
1976	330
1977 (first 6 months)	208

The reduction in the number of forms each year is the result of successful efforts by the MEPA staff to eliminate minor projects not requiring environmental review from the process, as well as combining related activities for comprehensive environmental review. A detailed assessment of the MEPA process through October, 1975 was prepared by several graduate students at Harvard University, Department of City and Regional Planning.* This report contains much valuable information relating to the affects of the MEPA process. Based on the 1942 assessment forms evaluated by them, these students made the following findings:

- The State agency with the largest number of submissions was the Executive Office of Environmental Affairs.
- The division with the largest number of submissions was the Highway Division within the Department of Public Works.
- One-third of the submissions under MEPA involve State permitting decisions, while two-thirds represent direct State actions.
- EOEA has concurred with approximately 90 percent of the negative assessment submissions, and with 92 percent of the positive submissions. (This suggests that the MEPA staff conducts careful review of each environmental assessment form submitted.)
- The types of activities submitted for MEPA review varied widely. The four most common activities were: Housing Development (13 percent); Highways and Bridges (10 percent); Schools (9 percent); and Roads, Trails, and Walkways (6 percent).

Coastal Program Impacts: The Massachusetts Environmental Policy Act will be relied on generally to insure that State and State-permitted actions are consistent with Program policies. However, MEPA will also be utilized in several specific ways to achieve the objectives of the Program.

First, categorical exemptions for smaller projects under MEPA will be removed in Areas of Critical Environmental Concerns/Areas for Preservation or Restoration, thereby providing fuller disclosure of the consequences of State and State-permitted activities in these areas. This should help to provide for more comprehensive and more focused environmental management as intended by the designation process. (See #6 below)

Second, MEPA will be employed to review State and Federally funded public works projects within the 100 year coastal floodplain so as to not exacerbate existing hazards or damage natural buffers, to provide safety from flood and erosion related damage, and so as not to promote growth and development in such areas. Although MEPA does not provide authority to halt inappropriate projects, full disclosure of environmental consequences will help to discourage such projects. This policy should protect public and private investments, as well as preserve coastal geophysical processes.

*Batchelor, Clara; Thomas Pelham; and Dorrit Sertios, An Analysis of the Environmental Review Process within the Executive Office of Environmental Affairs, Commonwealth of Massachusetts, February, 1976.

Finally, projects with State funding contributions or projects requiring licenses or permits, will be reviewed under MEPA to determine whether State agencies have acted to minimize potential adverse impacts of development near designated historic sites or districts, or near existing public recreation areas. This policy should have beneficial affects on the recreational, esthetic and economic values of these areas or sites. It should be noted, however, that the Program will be unable to control development adjacent to historic or recreation areas that is not subject to State permitting review or involve State funds.

G. DESIGNATION OF AREAS FOR PRESERVATION OR RESTORATION/AREAS OF CRITICAL ENVIRONMENTAL CONCERN.

The Massachusetts Secretary of Environmental Affairs is authorized to designate Areas of Critical Environmental Concern by Chapter 21A, Section 2(7), and the Federal Coastal Zone Management Act requires States to develop a process for designating Areas for Preservation or Restoration. For the purpose of reviewing the Massachusetts Coastal Program these two types of areas are identical. The purpose of designation in the Massachusetts Program is to utilize Statewide coastal authorities in order to provide focused management attention in selected coastal resource areas which are unique for their contribution to marine productivity.

Present Operation: Designation of Areas of Coastal Environmental Concern will be used for the first time as a resource management authority in the Coastal Zone under the Massachusetts Program.

Coastal Program Impact:

CZM has recommended that the Secretary designate 10 areas (See Policy (2) Part II). Detailed descriptions of these areas may be found in Volume II of the Massachusetts Coastal Program.

Since no APRs have been designated, this discussion describes impacts that will occur once these areas are designated and not as of the time of program approval. The State will designate or deny all 10 within the first year of the program.

As indicated, under MEPA, categorical exemptions for smaller projects will be removed in these areas once they are designated. Although MEPA is not a regulatory authority, this should provide an additional degree of protection for these areas by requiring disclosure of the environmental consequences of all proposed activities.

The following activities will be prohibited within designated Areas for Preservation or Restoration/Areas of Critical Environmental Concern:

1. The siting of energy facilities;
2. New industrial discharges and the discharge of hazardous substances, including thermal effluent;
3. New dredging except for maintenance of existing channels or for enhancement of shellfish and other marine food productivity;
4. Disposal of dredge spoil, except in instances when the spoil may be used for beach nourishment and/or dune stabilization; and
5. The siting of new sewage treatment facilities.

Further, these activities will be prohibited in areas adjacent to APRs if they would have an adverse impact on the APR. The Secretary can decide not to follow these prohibitions, however, if she determines that there are more substantial and compelling public interests that would be jeopardized by this policy. Nevertheless, these prohibitions should protect these significant ecological complexes against the most likely types of intensive development that might be proposed.

In addition, once APRs are designated, they will receive priority application of the coastal wetlands restriction program. The importance of this policy may be limited by the fact that no areas have been formally designated to date. Moreover, this priority system will need to be coordinated with the current practice of restricting wetlands on a town-by-town basis.

Finally, some contiguous upland, as well as anadromous fish runs, will be restricted in APRs. This should provide greater protection for APRs by permitting control of activities in upland areas that might adversely affect the areas. Landowners in APRs may feel that a disproportionate amount of their land will be restricted by this policy.

H. PUBLIC INFRASTRUCTURE INVESTMENTS

The Massachusetts Coastal Program will use public investments in sewage and transportation facilities to provide incentives for new development to locate in existing development centers or nearby. This policy represents the State's primary growth management authority within the coastal zone landward of the jurisdiction of the Wetlands Protection Act.

Present Operation:

The State's "106" Priority List for sewage treatment facilities is currently limited to facilities serving already developed areas, consistent with EPA policy. Thus, the coastal program will be generally consistent with present State and Federal practices. Transportation planning in Massachusetts, however, is not currently bound by an analogous policy, although the possible growth-inducing effects of transportation improvements are addressed in the Corridor Planning process conducted by BTP and D and APRs. The States transportation network is virtually complete.

Coastal Program Impact:

The Massachusetts Coastal Program has developed a set of priorities for State and Federal investment in waste treatment facilities in the coastal zone which:

1. Accord highest priority to projects in existing urban areas or community centers where water quality problems merit rehabilitation or new construction of treatment and collection facilities;
2. Accord next highest priority to projects proposed for contiguous developed areas, which are as yet unsewered, but whose water quality problems merit implementation of structural solutions; and
3. Accord lowest priority to projects proposed for undeveloped areas.

Approximately 25 facility projects that are already in the advanced stages of planning are deemed to be consistent with the program.

By indicating that only the three transportation projects listed in Policy 35 will be deemed consistent with the coastal zone management program (providing specific design aspects of the project conform to other relevant CFM policies), all other major Federally supported transportation will not occur unless the Program is amended. Because the projects listed are the only major ones currently planned by the State, the coastal zone program will have little impact. The primary impact would be if the State plans to change its transportation priorities and then would need to alter the coastal program if the change was deemed inconsistent with policies. By including these projects as consistent with the Program, it provides a greater predictability to the coastal landowner and user of where major transportation facilities will be built.

In assessing the impacts of the Program's public investment policies, it is important to recognize that infrastructure investments represent an indirect tool to manage the location of development. By providing necessary services at a relatively low cost, infrastructure investments may encourage development to locate in certain locations. On the other hand, the absence of infrastructure will tend to discourage development, except at relatively low densities (less than 4 units/acre).

Within these limitations, these priorities for major infrastructure investments in the Commonwealth should have numerous beneficial impacts as well as certain adverse impacts. The benefits include reduced pressure for development of outlying critical environmental resources, such as wetlands and floodplains; possible preservation of open space and agricultural land; revitalization of urban or community centers; improved efficiency of prior public investments; and improved energy efficiency. On the other hand, concentrating growth can have certain adverse impacts. For example, air water quality may be degraded if too many industrial sources of pollution are concentrated in one area or if clustering does not reduce vehicular use.

The Program's policies, including those relating to public investments, are not expected to reduce the rate of development in the coastal zone. However, it is expected that new development will be concentrated to at least some degree in already developed areas. As a result, while some landowners may receive unexpected profits, others might receive smaller profits from commercial or residential development than they might otherwise have received.

I. OPEN SPACE ACQUISITIONS AND PROTECTION

The Massachusetts Program intends to rely on a variety of mechanisms to acquire permanent open space in the coastal zone. These include the voluntary Land Conservation Restriction Program, the Land and Water Conservation Fund of the Department of the Interior, funding under Section 315 of the Coastal Zone Management Act, and the State Self-Help Program. The "Present Operation" and "Coastal Program Impact" on each of these programs is described in turn.

A. SELF-HELP PROGRAM

Present Operation:

The Massachusetts "Self-Help" Program, established in 1960, assists cities and towns with established conservation commissions in acquiring land for public recreation and open space. The Program supplements local contributions on a fifty-fifty matching basis.

Approximately 25,000 acres (39 square miles) have been acquired under the Program since 1960 at a total cost of \$11,250,000. 155 (44 percent) of the communities in the State have participated, while 30 (39 percent) of the Commonwealth's coastal communities have not participated. Approximately 20 percent of the land acquired under the Program is located in coastal communities. Coastal communities with significant open space lands purchased with the aid of "Self-Help" funds include Duxbury, Dennis, Barnstable, and Marshfield.

The Program has been largely supported by bond issues totalling \$12,000,000 since 1974. \$1,500,000 of "Self-Help" funds have not yet been expended, while applications pending total \$4,000,000.

Coastal Program Impact:

The staff of the Division of Conservation Services is currently preparing criteria for funding of proposed acquisitions that will reflect Program policies. In particular, the Program recommends these funds be provided to communities to acquire undeveloped hazard prone areas if they serve as natural protective buffers or if their buffering capabilities could be restored by non-structural improvements. In this fashion, both the prevention of inappropriate development and the preservation of scenic natural areas will be accomplished. In addition, it is proposed that "Self-Help" funds be used to acquire waterfront land in urban areas in order to expand visual access to the coast, and to acquire trails linking existing coastal recreation sites to nearby inland facilities. These acquisitions would have beneficial social impacts by improving public access to the coast.

The impact of the "Self-Help" Program will depend, in part, on the availability of funds. As indicated, the cost of already proposed acquisitions exceed the amount of funds presently available; the Division of Conservation Services is seeking an additional \$5,000,000 in fiscal 1978, for the "Self-Help" Program.

B. LAND CONSERVATION RESTRICTION PROGRAM

Present Operation:

The Land Conservation Restrictions Program allows property owners to retain title to their land while remaining legally bound not to develop it. In exchange, the landowner receives a property tax advantage based on the open space value of his land. Since it was enacted in 1969, 352 conservation restrictions covering approximately 12,500 acres were accepted by the Secretary of EOE. During Fiscal Year 1976, 111 conservation restrictions were accepted in 25 Massachusetts coastal communities, and include several large parcels of significant open space and aesthetic value in the coastal zone. Approximately 56 percent of the land subject to conservation restrictions in Massachusetts is located in coastal communities.

Coastal Program Impact:

The Land Conservation Restriction Program will continue to be administered as at present under an approved coastal program. As a tool to implement the Massachusetts Program, this Program is limited since it is impossible to insure that adequate natural areas will be protected, or that the most significant natural areas will be placed under restrictions.

C. SECTION 315 BEACH ACCESS

Present Operation:

Section 315 of the Federal Coastal Zone Management Act authorizes the Secretary, in part, to make grants to States for acquiring lands to provide

for access to public beaches and other public areas of environmental, recreational, historical, aesthetic, ecological, or cultural value, and for the preservation of islands. No money has yet been appropriated by Congress for these purposes.

Coastal Program Impact:

The impact of Section 315 is entirely conditional on the availability of funds. The Massachusetts Program proposes to use these funds for acquisitions similar to those described under the "Self-Help" Program. In addition, Section 315 funds are proposed to be used to purchase easements where necessary to protect existing public recreation sites.

D. LAND AND WATER CONSERVATION FUND

Present Operation:

The Land and Water Conservation Fund provides funds for the acquisition of active outdoor recreation lands for Federally administered recreation areas; and matching grants for State recreation planning, and State and local land acquisition and development. "Self-Help" Funds and the Land and Water Conservation Fund can be used jointly to pay up to 75 percent of the cost of local acquisition projects.

Coastal Program Impact:

Funding available from the Land and Water Conservation Fund will be used to expand public access to the coast. In particular, these fundings will be used to link existing coastal recreation sites via trails, and for recreation projects in connection with urban waterfront redevelopment and hazard area management. This should help to achieve the objective of the Program to expand recreational opportunities along the coasts, especially for urban dwellers.

PART IV

ALTERNATIVES TO THE PROPOSED ACTION

This part describes the four most likely reasons the Associate Administrator might deny or delay program approval, as well as the six 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 as well as those under each State alternative.

The proposed action is Federal approval of the Massachusetts Coastal Program. The essential alternative to be considered by the Associate Administrator is not to approve the Program as submitted. In deciding whether to approve the program, 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 Associate 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 Program that might be adopted. Clearly, however, the alternatives that will be considered by the State will depend on what action is taken by the Associate Administrator. In particular, if the Associate Administrator delays or denies approval, the State will be required to consider a wide range of options.

If the program is approved, the State is unlikely to consider alternatives to program implementation. The description of State alternatives satisfies in part the requirements of the Massachusetts Environmental Protection Act.

These Federal and State alternatives could be carried out in several different ways. Federal approval would lead to Program implementation under Section 306. On the other hand, a decision by the Associate Administrator not to approve the Program as submitted could lead Massachusetts to withdraw from the Federal Program. Alternately the State could seek an additional year of funds under Section 305(d) to implement certain Program elements and revise other elements deemed to be inadequate for Federal approval, also leading to final Program submission sometime next year.

A. FEDERAL ALTERNATIVE

1) The Associate Administrator could delay or deny approval if the Program is not adequately comprehensive to achieve the goals and objectives of the Coastal Zone Management Act as expressed by Congress in Section 302 and 303 of the Act.

The Office of Coastal Zone Management has made an initial determination that the Massachusetts Program is adequately comprehensive in scope. In 1972 in creating the Coastal Zone Management Act, Congress found "in light of competing demands...present State and local institutional arrangements for planning and regulating land and water uses in such areas are inadequate." (CZMA Section 302(g)). Thus, while the Massachusetts Program makes changes to its present State and local institutional arrangements, the reader could question whether or not the State had gone far enough in addressing the competing demands on the coastal area. For example, while maritime dependent recreation and energy facilities are given priority for various coastal locations, the State program does not address whether shopping centers, high rise apartments, warehouses, chemical plants, new towns or amusement parks should or should not be located in the coastal zone. These uses will continue to compete with single family homes, agricultural land and with each other. Local zoning and State infrastructure investment will be the only determining factor in where they are located in the coastal zone.

The initial determination of approvability was reached partly on the basis of the strong laws already in place in Massachusetts that met many of the concerns Congress expressed in 1972 about institutional arrangements in all States. For example, Massachusetts laws protecting wetlands and siting energy facilities are more advanced than most other States.

In addition to the "competing demands" finding, one could question if Massachusetts has adequately addressed the Congressional finding that scenic characteristics, cultural and aesthetic values were being destroyed by ill-planned development. The initial determination of approval was based on the existing State Scenic Rivers Act, Outdoor Advertising Board, the Scenic Roads Program and the Areas of Critical Environmental Concern Program, even though they do not blanket the coastal zone. Furthermore, the visual quality policies will assist localities to voluntarily consider aesthetic issues. Federal approval funds will assist the localities as well as the State in implementing the existing scenic acts.

The implications of this alternative include a delay in Program implementation, no increase in Federal funds for Massachusetts under Section 306, the possibility that Federal actions affecting the Massachusetts coast might be inconsistent with the policies of the Program and that issues of national interest may not be protected. Improved environmental protection anticipated under a Federally approved coastal program would not be achieved as rapidly, nor would the staff increase be available to work on designating scenic rivers. Momentum for effective protection of the Commonwealth's coastal resources, gained through preparation of this Program might be lost.

2) The Associate Administrator could delay or deny approval if the State does not have the authorities necessary to implement the Program at the time of 306 approval.

The Office of Coastal Zone Management has made an initial determination that the authorities that will be in place at the time of Program approval will be adequate to carry out the management Program and meet the objectives of the Coastal Zone Management Act. However, concern has been expressed whether these authorities are adequate, and whether additional legislation or regulations ought to be promulgated prior to program approval.

The alternative of getting coastal zone legislation in the State was considered and rejected by Massachusetts as unnecessary given the strong legislation already in place in the State. Furthermore, the National Coastal Zone Management Act specifically allows a State to coordinate existing laws providing their total coverage is broad enough to meet the requirements of the Act.

Although process regulations and 21A regulations will be in place prior to Federal approval, some hold that all key substantive regulations resulting from the program should be adopted. The Waterways Program and Ocean Sanctuary Program are currently without regulations. Their adoption would give added assurance the new State policies effecting these programs will be incorporated into day to day operations. Regulations implementing the Wetlands Protection Act are currently under study by a program review board for possible comprehensive revision. Such a revision would provide more effective and consistent administration than the current regulations which add less than optimum refinement to the broad standards of the Act. Withholding approval until agreement on the revisions is reached might provide the incentive needed to complete the revision process. However, the State will have drafts of all the above regulations prior to Federal approval of the Massachusetts Program.

While these proposed regulations may not be adopted at the time of Program approval, NOAA/OCZM has initially determined that the Program policies will nevertheless be implemented consistently with the Program. This decision results from a determination that the authority to implement the Program rests not with the regulations but with the authorities given the Secretary under Chapter 21A of the Massachusetts General Laws. Each State agency involved in the Program has agreed through a memorandum of understanding with the Secretary of Environmental Affairs to accept the coastal program as a statement of the State environmental policy (Draft regulations Sections 5.2, 5.4) and program policies are incorporated by reference within the regulation. EOEA agencies are directed to carry out Chapter 21A MGL Section 2; (Draft Regs. Section 5.5). In addition the individual commissioners have agreed that the Program represents State environmental policy and have requested the Secretary to jointly implement the Program, hereby triggering the Secretary's authority under Chapter 21A MGL Section 4 to implement programs upon request. Consequently, OCZM has initially determined that the Programs are enforceable as written.

Although the Energy Facilities Siting Council operates under current regulations, a claim can be made that the incorporation of coastal zone energy policies into these regulations will assure better assurance that they will be followed than simply by the memoranda of understanding. OCZM has preliminarily determined that these policies are also enforceable as written, given the EFSC's statutory duty to ensure consistency with current State environmental policies. This obligation is further defined by the MOU between the EFSC and EOEa.

Finally, the Program proposes to place certain types of restrictions or designations in order to protect natural areas against inappropriate development. For example, the State plans to restrict most of the unrestricted beaches, barrier beaches, dunes, salt marshes, and shellfish beds in the coastal zone. Also, the Program proposes that some coastal rivers be protected under the Scenic Rivers Program, and that Areas of Critical Environmental Concern/Areas for Preservation or Restoration be designated by the Secretary of Environmental Affairs. If the Associate Administrator determined that all or some of these designations or restrictions needed to be in place at the time of Program approval to insure Program implementation, he could delay or deny approval until the necessary steps were taken. The Commonwealth has agreed to designate or deny the 10 APRs within the first year after approval.

One clear disadvantage of these various alternatives is that Program implementation would be delayed. The length of the delay would depend on the type of action taken by the State in response to the Federal determination that particular restrictions or designations needed to be in place for Program approval. For example, all of the Critical Areas of Environmental Concern nominated in the Program document could probably be designated within one year; by contrast, restricting all of the rest of the State's coastal wetland areas would take from three to five years. The environmental implications of a delay would be similar to those described under Federal Alternative 1; the scale of the impacts would depend on the length of the delay. Other disadvantages are that the Commonwealth would lose additional funds that would be available under Section 306, Federal actions would not need to be consistent with the management program, and facilities and resources of national interest may not be adequately protected.

The major environmental advantage of these alternatives is that the State might be encouraged to have better coastal management authorities in place at the time of Program approval. On the other hand, the State might choose to withdraw from the Federal Coastal Zone Management Program rather than make the changes required for Section 306 approval.

3) The Associate Administrator could delay or deny approval if the national interest in the siting of facilities in the coastal zone was not adequately considered.

The CZM Act states that prior to granting approval of a management program the Secretary shall find "the 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."

(Section 306(c)(8)). NOAA/OCZM has made an initial determination that the Program adequately address the national interest in facility siting in the coastal zone. However, concern has been expressed that the Massachusetts Coastal Program, has not given adequate consideration to these facilities, especially energy facilities.

There are four separate concerns that have been expressed:

a) The Program will prohibit all energy facilities in areas for preservation and restoration

While this is true, the APR's are extremely valuable resource areas, their protection is also in the national interest. Existing transmission lines and certain underground utilities to serve existing structures will be allowed. OCZM has found that since only ten APR's have been nominated for the Massachusetts coast (see Map, Part II), and since adequate public hearing will be given prior to their designation, that precluding energy facilities from these 10 areas will not violate the intent of Congress to adequately consider energy facilities, but, in fact, exhibits the balance between various national interests inherent in coastal zone management.

b) The Program will prohibit some energy facilities in areas subject to the Restriction Act.

While this is true, the Program has made adequate adjustments to allow necessary transmission lines, certain underground utilities, and water cooling intake and outtake pipes to cross restricted barrier beaches and sandy beaches, so long as the pipes are covered, and the land returned to its natural setting. This last exception to the restrictions generally placed in these important resource areas allows energy facilities to develop immediately upland from the restricted area, and does not prohibit the siting of necessary facilities in the coast, while at the same time adequately protects the national interest in wetlands and providing beach recreation.

c) The Memorandum of Understanding between EFSC and EOEa has no standing.

The memorandum established the necessary procedure in this Program to assure that facilities are adequately considered and not arbitrarily excluded by local governments. It is the State's opinion that the EFSC has a right to enter into such agreements and that it does not effect their responsibilities assigned by law. It appears to the Associate Administrator that it is merely an administrative clarification recognizing the Coastal Zone Management Program as State environmental policy. Regulation 62.9(3) of the EFSC requires the Council to act consistently with State environmental policy.

d) The Program does not spell out specific enough criteria for the EFSC to consider.

Many of the policies in the energy portion of the Massachusetts plan are process oriented--i.e., "weigh," "consider" instead of substantive--i.e., "prohibit" or "encourage." The Associate Administrator could deny or delay approval until more substantive energy criteria were developed.

However, the EFSC has agreed to act consistently with all the policies in the plan not just those identified under the energy section. For this reason the OCZM has preliminarily determined the Program is adequate. The policies which are applicable include those pertaining to alteration of salt marshes, dune areas, salt ponds, barrier beaches, shellfish flats, and sandy beaches (Policy 1), development activity in Areas for Preservation or Restoration (Policy 2), conformance to water quality standards (Policy 3), construction in water bodies and in ports (Policies 4 and 17), dredging (Policy 5), impacts on fisheries resources (Policy 7), development in hazardous areas or which might degrade natural buffers (Policy 8) publicly funded development within the 100 year floodplain (Policy 9), construction of private flood or erosion control projects (Policy 12), incorporation of visual concerns especially for publicly funded development (Policy 13), preservation of lawfully designated historic sites or districts (Policy 14), provisions for views of coastally dependent facilities with significant educational or interest value (Policy 15), scenic areas (Policy 16), restrict development of new 20 foot channels outside of existing port areas (Policy 18), evaluation of impacts on public recreational facilities (Policy 27), evaluating the exploitation of indigenous and alternative sources of energy for impacts on the marine environment, fisheries, water quality, wildlife and recreation (Policy 33), and conformance to waste discharge pollution and wetland protection requirements (Policy 34).

The selection of this Federal alternative could considerably delay Program approval or make approval unlikely. For the State to change its policy to protect APRs and restricted areas in order to provide for greater accommodation of energy facilities would be a substantial change in the Program which it may not wish to make. Such a change would also raise the question of whether the national interest in wetlands and resource protection were adequately considered. To obtain a stronger legal relationship between EFSC and EOEa would probably require legislative action. To develop more specific criteria would take time. The results of this delay would be similar to those described under Alternative #1. The advantage of strengthening the relationship between EFSC and EOEa would be a clarification of the role CZM policies play in EFSC decisions. The advantage of more specific criteria would be more predictability.

4. The Associate Administrator could deny or delay approval if the Program does not meet all of the specific requirements of the Coastal Zone Management Act.

Section 306(c) of the Coastal Zone Management Act requires the Associate Administrator to find that a State coastal management program meets all of the requirements of the Coastal Zone Management Act prior to approving the Program. The specific findings that the Associate Administrator must make prior to Program approval are listed in Part 1, Chapter 3. This alternative encompasses all of the possible reasons for not approving the Program as submitted in addition to those already discussed in Federal Alternatives 1-3. For example, someone might feel that the boundary does not extend far enough inland to protect the interests of the Act.

The Office of Coastal Zone Management has made an initial determination that the Program does meet the minimum requirements or will by the time of 306 approval of the Act. However, the Office will review specific comments on the consistency of the Massachusetts 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 Massachusetts 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. (See impacts of Alternative One for more details).

STATE ALTERNATIVES

1. The State could revise the proposed Program by expanding the scope and comprehensiveness of the policies as described under Federal Alternative #1. As stated, the proposed Massachusetts Program has initially been determined to meet the minimal requirements of the Act necessary for Federal approval. However, the State might seek, by revising the Program's policies, to manage a greater number of coastal activities at the State level rather than leaving so much decision making with local governments. For example, the State might develop explicit guidelines for the location of major commercial or residential developments in the coastal zone. Also, more resolution of potential conflicts among competing coastal uses might be resolved prior to Program approval and thus increase predictability. On the other hand, the risk of adverse social and economic affects of the Program on housing costs and availability would probably increase. Opposition to a more comprehensive management program for the Commonwealth might threaten the success of any type of coastal program for Massachusetts.

2. The State could seek additional legislation establishing more comprehensive management authorities and submit a revised Program based on this legislation.

Instead of relying on existing regulatory programs and procedures, the Commonwealth could adopt new or revised coastal management legislation and submit a revised program based on this legislation. This new coastal zone management authority could be added to the existing State and local authorities, or it could be integrated with or replace existing laws or procedures.

The Governor's Task Force on Coastal Resources identified three alternative types of management based on new legislation that could be enacted by the State as a basis for a coastal management program. After evaluating all of these alternatives, the Task Force determined that new legislation was not required. However, these legislative alternatives are still available to the State and are potentially acceptable under the requirements of the Coastal Zone Management Act. These alternative proposals as well as their advantages and disadvantages are discussed below.

a. Expanded Direct State Control

The State could manage directly a significant number of coastal activities, including some now subject solely to municipal jurisdictions. A variety of institutional arrangements are possible. A new State body with broad powers could regulate directly a broad spectrum of projects; a State agency could review local decisions for conformance with State promulgated guidelines, and override local decisions

inconsistent with the State plan; or an agency could be empowered to regulate only activities of greater than local concern, which would have the authority to exercise comprehensive and consistent coastal management. Assuming, existing permitting authorities were combined or eliminated, the coastal regulatory process would be greatly simplified under this alternative. The disadvantages are that this alternative runs counter to the tradition of local land use control in Massachusetts, and potentially could add an additional bureaucratic hurdle for developers without the incentive under the proposed Program to make the present system work better.

b. State Review of Local Plans

The State could review local ordinances and regulations, prepared in line with State criteria, to ensure their consistency with an adopted State coastal plan. Individual communities would be permitted to enact more restrictive ordinances than provided for in State criteria. A number of mechanisms could be instituted to ensure that local governments comply with their own ordinances and regulation, including direct State review of local decisions, or judicial review of individual cases.

The major advantage of this alternative would be that the Commonwealth could enforce comprehensive, Statewide coastal policies while providing for a large degree of local authority and public participation. Nevertheless, the shift in the allocation of authority to the State and away from municipalities would create strong opposition. As under alternative (a) if State and local permit authorities were left unaffected, the system might be unduly complex and burdensome.

c. Regional Implementation

A third level of decision-making represented by regional bodies could be delegated some, or all, of the existing State permitting authorities, or they could promulgate criteria and regulations to be implemented by the local governments in their region as under alternative (b). Some form of regional review of local decisions could be provided. Or, enabling legislation might allow local governments to join together over an issue of mutual concern, receive some financial and technical support from the State, reach a decision on the problem, and dissolve.

The advantages of this approach are that a larger degree of public input for decisions of regional concern would be permitted than in the direct State control system and greater consistency in decision-making would be possible than under the State/local option. The major disadvantages of this alternative are the creation of another administrative layer resulting in higher costs and additional procedural steps for approval of development activities. Both State agencies and local government might oppose relinquishing any of their present powers.

3. The State could restrict under existing authorities all or some of the State's unrestricted significant resource areas, or designate Critical Areas of Environmental Concern, Sign Free Areas, or Scenic Rivers prior to Program approval.

Rather than deferring restriction of additional significant resource areas and designation of various environmental protection areas until after program approval, Massachusetts could take these key steps prior to Program approval. This alternative would require a substantial delay in Program implementation. Hearings would be required which would add a delay of at least several months for each designation process.

First, the Secretary of Environmental Affairs could designate certain Critical Areas of Environmental Concern (APRs) prior to Program approval. The proposed Program provides no assurance that critical areas will be designated, although ten areas have been nominated. Thus, this alternative means that certain policies and restrictions that may not be enforced, or that may not be enforced until some indeterminate time in the future, would be applied to these critical areas from the time of Program approval.

Second, an estimated 43 percent of the Commonwealth's barrier beaches, beaches, dunes, salt marshes and tidal flats are covered by the Coastal Wetlands Restriction Program. The remaining areas, excluding designated port areas, are proposed to be restricted following Program approval. Alternatively, the State could withdraw the Program until all or most of these areas actually have been restricted. However, as noted before this process would take between three to five years.

Finally, under the proposed Program, the Commissioner of DEM will designate certain Scenic Rivers, and the Office of Coastal Zone Management will petition the Outdoor Advertising Board to designate Sign-Free Areas in the coastal zone in the future. Alternatively, these steps could be taken prior to Program approval.

Alternative three would result in delay in the implementation of the Coastal Program due to administrative and public hearing requirements. The advantages of this alternative are that a greater degree of environmental protection would be afforded certain natural areas than might otherwise occur; for example, additional wetland areas would be restricted against inappropriate development, or Critical Areas of Environmental Concern would receive more focused management attention. Also, the practicability of certain coastal policies might become better understood, for example, if the Outdoor Advertising Board declined to designate Sign-Free Areas, the State might wish to amend the visual policies to amend this.

4. The State could promulgate final regulations prior to formal approval following DEIS/MEPA hearings.

The Coastal Program indicates that new and amended rules and regulations will be adopted by various State agencies following Program approval. Alternatively, the State could delay the final Program submittal until these regulations are in place.

The Secretary of Environmental Affairs will adopt regulations to establish the Coastal Zone Management Program as a statement of State environmental policy. In addition, rules and regulations, and review procedures, incorporating CZM concerns will be adopted by various State agencies involved in the program. For example, either new or revised regulations will be adopted for the Oceans Sanctuaries Program, the Waterways Program, the Wetlands Protection Program, and for the Division of Water Pollution Control and the Energy Facility Siting Council. Waterways and CZM have also been preparing a rating system to rank the relative benefits of proposed navigation improvements. Finally, the Division of Conservation Services is developing new criteria reflecting the CZM Program for the allocation of Self Help Program funds in the coastal zone. All of these rules, regulations, and procedures could be adopted prior to formal approval under this alternative.

The adoption of new regulations and procedures in Massachusetts is particularly significant since the authorities that will be relied upon are based on statutes that were adopted at widely different dates and have been administered according to various standards of environmental protection. Thus, new regulations might be considered central to the purpose of the Massachusetts Program to make the implementation of present management authorities more consistent and effective.

The most significant disadvantage of this alternative is that a delay in Program implementation would occur. The advantages are that the implications of the Coastal Program for diverse coastal users would become clearer if the regulations were adopted prior to Program approval. Also, it might be easier to insure the consistency of these regulations with the overall Program if they were adopted prior to actual Program implementation.

5. The State could revise the Program by defining a different landward coastal boundary than the one proposed.

The Massachusetts Coastal Zone includes the lands and waters within the area defined by:

The seaward limit of the State's territorial sea (i.e., 3 miles), extending from the Massachusetts-New Hampshire border south to the Massachusetts-Rhode Island border, and landward to 100 feet inland of specified major road, rail, or other visible right-of-ways.

In isolated instances, where the road boundary might exclude significant resources areas, the boundary line departs from the road to encompass them. Tidal rivers and adjacent uplands are included inland, at a minimum, to the extent of vegetation affected by saline water. Anadromous fish runs are included to the fresh water breeding area, if such area is within a coastal town.

Prior to selecting this boundary, the Massachusetts Office of Coastal Zone Management evaluated ten alternative boundaries:

Natural Features Boundaries

- 1) Coastal watersheds
- 2) Coastal storm floodplain
- 3) 50-foot topographic elevation
- 4) Coastal ecological systems
- 5) Visual features

Cultural or Distance Boundaries

- 6) Town jurisdictions
- 7) $\frac{1}{2}$ mile from mean high tide
- 8) Major coastal road
- 9) Coastal census tracts
- 10) Immediate water or beach frontage

These boundaries were then evaluated on the terms of how well they satisfied the following criteria:

- (a) "A State's coastal zone must include transitional and inter-tidal areas, salt marshes, wetlands and beaches ... In no case, however, will a State's landward coastal zone boundary include only such areas..." (CZM Program Approval Regulations: 15 CFR 923.11)
- (b) "The area must not be so extensive that a fair application of the management program becomes difficult or capricious, nor so

limit that lands strongly influenced by coastal waters and over which the management program should reasonably apply, are excluded." (CZM Program Approval Regulations: 15 CFR 923.11).

- (c) "The coastal zone must include within it those lands which have any existing, projected or potential uses which have a direct and significant impact upon the coastal waters and over which the terms of the management program will be exercised." (CZM Program Approval Regulations: 15 CFR 923.11)
- (d) The boundary must be adequately delineated on maps or in words so that there are no questions as to whether someone's property is within or without. (CZM Institute, 1974)
- (e) The cost of necessary surveying and administration should not be excessive because of a too large or too complex boundary.
- (f) The boundary should coincide with existing special districts, jurisdictions, or other existing institutional frameworks if and where possible.

6. The State could withdraw the approval application from OCZM and continue Program development and or attempt to use other sources of funding to meet the objectives of the proposed coastal management program.

Since coastal zone management is a voluntary program of State-Federal cooperation, a State can withdraw its application without any penalty, except that no additional OCZM funding will be provided and Federal agencies actions will not need to be consistent with the management program. Since Massachusetts includes some of the nations most valuable shoreline, withdrawal of the Program could mean that the overall objectives of the CZMA would not be met.

The legislative history of the CZMA shows Congress did not intend the requirements of the CZMA to be so stringent or difficult to achieve that a State would be precluded from achieving Program approval after reasonable time and effort. Nevertheless, experience has shown that it is not easy to develop an adequate Program. The reasons for Program withdrawal can be diverse. Important weaknesses in the Program may have gone unnoticed until the State has submitted its Program for approval. Or, number of unresolvable issues can surface during the review process.

In the case of Massachusetts, withdrawal would not result in a different type of management system than is proposed under CZM. The Program relies extensively on existing authorities and these presumably will continue to be implemented whether or not the Program is adopted. However, funding to hire additional staff to make the present management system more effective would not be available. Also, the restriction of additional ecologically significant resource areas and the designation of certain scenic areas for protection might not occur or would occur at a slower rate in the absence of a formal coastal program. Federal actions would not need to be consistent with the management program.

PART V:

IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS OF
THAT WOULD BE INVOLVED IN THE PROPOSED
ACTION SHOULD IT BE IMPLEMENTED

The approval of the Massachusetts Coastal Zone Management Program will not in itself lead to the loss of resources that a site specific project would. Tradeoffs will have to be made based on the policies of the Massachusetts 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 sewers and transportation 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. However, the program establishes criteria and standards for siting and requires that alternatives be considered and mitigation measures be taken. Development will occur in the absence of program approval, but the Massachusetts Coastal Zone Management Program will channel such activity toward environmentally suited land areas.

The Program supports the acquisition of areas to meet the demand for recreation. The acquisition of recreation sites would preclude further development and reduce the tax base of local government, although if the site were State owned, payment in lieu of property taxes would be made. The commitment of those purchased areas to recreation would be irreversible, unless the State legislature, as required by State law, were to approve by two-thirds vote a change in use.

PART VI

PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

The probable effects of Massachusetts CZM Program 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 CZM Program and related Federal acts (e.g., NEPA), each such project will be evaluated as to the impacts on the natural coastal environment. That is, investigations will be made, alternatives considered, etc.

Outside of Significant Resource Areas, state interests are confined to the meeting of air and water quality standards, ensuring that the capability of soils to accommodate sub-surface discharges are not overtaxed, energy facility siting, the avoidance of adverse impacts to the qualities of designated historic districts or sites and public recreational beaches, and the channeling of new sewer and transportation services to already developed areas or areas contiguous to them. Thus, under the Massachusetts CZM Program, local governments will continue to have sole responsibility for a very wide range of land use decisions and broad areas of the coastal zone. Apart from the State's interest enumerated above, whatever adverse environmental impacts stem from such local decision-making will not be avoided by implementation of the Program.

PART VII

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

While approval of the Massachusetts Coastal Zone Management Program 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 Massachusetts coast will be available for future use and enjoyment, by more effectively administering existing resource protection laws.

The Massachusetts Coastal Zone Management Program 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 in so much as growth is constrained by State sewer and State highway programs.
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 at present rates, 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.

Without the implementation of rationally based land and water use 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 program 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

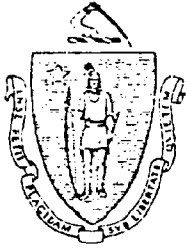
Extensive consultation, coordination, and input has been received in developing the Massachusetts Coastal Zone Management Program. Because the program was developed with the natural and human environment in mind, many alternatives have been considered.

The Office of Coastal Zone Management requires that a State conduct an environmental impact assessment on their coastal management program prior to any approval of the program. This assessment was used in developing the draft EIS. Additional input has been received from various Federal agencies throughout the duration of a 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, Federal, public, and private interests remains a key component of the Massachusetts Program. The Program will provide for the public notice of major State actions, establish regional and Statewide advisory groups to monitor and review implementation, provide technical assistance to coastal communities as to how local plans may be made consistent with the CZM Program, assist the private sector through the publication of handbooks and other means of communication on meeting CZM policy requirements, and continue coordination with Federal agencies to resolve potential conflicts during implementation.

APPENDIX

The Office of Coastal Zone Management has determined that Massachusetts has met the requirements of Section 305(b)(7)(8)(9) shore-front access, energy facility planning and shoreline erosion. These new sections were added to the Coastal Zone Management Act in the amendments passed by Congress in 1976. The State's justification for meeting these requirements is presented here to receive public comment on this part of the Massachusetts Coastal Zone Management Program.



MICHAEL S. DUKAKIS
GOVERNOR

The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02202

MEMORANDUM

EVELYN F. MURPHY
SECRETARY

Date: August 23, 1977

Subj: Fulfillment of 305(b)(8) Regulations:
Energy Facility Planning

Energy facilities are but one type of large-scale construction activity that may occur in the coastal zone. But there are certain key differences with an energy facility from a manufacturing plant, an office building, or a sports area. The CZM program will evaluate energy facilities as it would any facility -- for impacts on the marine environment, location in hazardous areas, opportunities for visual enhancement, water-dependency, impacts on recreation opportunities, conformity with existing environmental standards, and, if partially publicly funded, consistency with public investment criteria. But energy facility planning is not equivalent to the private construction of a factory; there are many public needs and factors and legal constraints which must be integrated into the process. There are four major reasons why this chapter appears in this Plan.

As explained more fully in the National Interest section of Chapter Four, energy facilities are clearly in the national interest. Massachusetts cannot act in a vacuum, an adequate supply of energy for its citizens and those of other states depends upon decisions made here, in other states, and at the national level. However, the national interest in energy must also be balanced against other national interests to ensure the wisest commitment of national resources. Secondly, certain energy facilities, due to the magnitude of the impacts they entail on air and water quality, consumption of land and other public resources for sites, buffer zones, raw materials and public support facilities and their need for coastal locations will require focused attention by public agencies in their

siting. The government and the utility companies will need to insure that good sites for necessary facilities are not pre-empted by other uses and that poor sites are identified early so that planning and design monies are not mis-spent. Thirdly, due to the heightened concern with energy policy at the national level, the CZMA was amended in 1976 to require a "planning process for energy facilities likely to be located in, or which may significantly affect, the coastal zone, including, but not limited to, a process for anticipating and managing the impacts from such facilities" (Section 305(b)(8)). The policies articulated below fulfill the newly felt Congressional need to have consistent energy planning in the coastal zone. Fourthly, Massachusetts, acting in the forefront in the energy field, has created a unique state agency empowered to give advance approval to sites; to over-ride permit denials by local or state agencies; to review utility capacities, agreements and plans including out-of-state energy sources; to authorize the exercise of eminent domain when companies cannot purchase land or rights privately, except for public parks or reservations; to evaluate alternatives; to act consistently with current environmental protection and resource use and development policies adopted by the Commonwealth; and to conduct a tripartite balancing of adequate supply, lowest cost and least environmental impact. The existence of the Energy Facility Siting Council (EFSC) means that the CZM Plan must specifically address this non-EOEA agency and the unique energy planning process which has been created by the Legislature.

In order to integrate CZM policies and EOEa review procedures with the policies and procedures of the EFSC, the following principles will be utilized:

a. The EFSC shall evaluate energy facilities for their consistency with all relevant non-energy-specific policies of the CZM Plan. In particular, the Council shall ensure that energy facilities are not sited in areas designated by the Secretary of Environmental Affairs as Areas for Preservation or Restoration/Areas of Critical Environmental Concern.

b. The EFSC shall, in its approval of Long-Range Forecasts and Notices of Intention to Construct an Oil Facility, assess the general environmental impacts from locating a particular type of facility on a certain site and be consistent with current health, environmental protection, and resource use and development policies of the Commonwealth by conducting a general evaluation of the CZM policies relating to the specific site and the general type of facility.

c. The EFSC shall allow for an adequate supply of energy by ensuring that coastally dependent energy facilities can be sited in the coastal zone. Careful public-decision making shall be promoted through evaluation of at least one alternative coastal site for coastally dependent energy facilities and one inland site for non-coastally dependent energy facilities.

d. The review of detailed engineering plans for energy facilities by EOEAs shall be coordinated by the Office of the Secretary to ensure full consistency with CZM policies, swift decision-making, joint hearings or processing, and consistent outcomes.

e. The Secretary of EOEAs will promote the consideration of environmental concerns where a Certificate of Environmental Impact and Public Need is sought to override the denial of an EOEAs permit or license while recognizing that it is the responsibility of the EFSC to provide for a necessary energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.

- (1) An identification of energy facilities which are likely to locate in, or which may significantly affect the coastal zone.

Energy facilities, their likelihood of locating in the coastal zone, and their impacts are discussed in the Energy Section of the Massachusetts CZM Program (see pages 225-259). Facilities covered include oil terminals, oil tank farms, gas facilities, electric generating facilities, refineries, deepwater ports, OCS exploration and development facilities, coal facilities, and alternative forms of energy production.

- (2) A procedure for assessing the suitability of sites for such facilities.
- (3) Articulation of state policies and other techniques for the management of energy facilities and their impacts.

A meshing of the CZM/EOEA policies and procedures with the EFSC policies and procedures produces the following four-step procedure for assessing the suitability of plans and sites for energy facilities:

1. The exclusion of certain types of energy facilities or components thereof from certain areas of the coastal zone because of their environmental sensitivity to the impacts typically caused by energy facilities.
2. Review and approval of oil, electric, and gas company plans, including broad assessment of energy needs, ways of meeting that need, and a broad and comparative evaluation of alternative sites and environmental impacts of facilities proposed to fulfill recognized energy needs.

3. The mitigation of specific impacts resulting from use of an approved site by an energy facility through state review of engineering plans and review by local government for conformance to local zoning.
4. An appeal or conflict resolution process allowing for an override of mitigation measures and other state or local regulations should these cause undue delay, impose burdensome conditions or otherwise unreasonably restrict the construction of an approved energy facility at an approved site.

The first step, which is consistent with one approach suggested in CFR 920.18(h)(1), derives from Massachusetts CZM's findings on the sensitivity of certain coastal ecosystems to withstand the impacts typically associated with energy facilities. Specifically, the Massachusetts CZM Program examined prototypical impacts of energy facilities. A discussion of these impacts is found on pages 225-259 of the Energy Section. In the course of program development, Massachusetts CZM contracted the Institute of Man and Environment to analyze the tolerance, sensitivity, and rejuvenating capacity of coastal ecosystems and fishery resources with respect to a range of impacts. A matching of the prototypical impacts of energy facilities with the Institute's findings led to the conclusion that salt marshes, dunes, beaches, barrier beaches, shellfish beds, salt ponds, and known fish spawning areas should be avoided as sites for energy facilities. Specifically, construction associated with terminals, tank farms, power plants, gas facilities, refineries and coal extraction could lead to severe physical alterations of ecologically significant resource areas, and thus, when these areas are restricted under the Coastal Wetlands Restriction Program, these facilities are not permitted uses. Transmission lines and certain underground utility lines could, however, traverse these areas with minimum damage provided natural topographic features were restored, and thus these are permitted uses.

In addition, of particular concern was the damage that could be wrought by the siting of energy facilities on complexes of coastal ecosystems presenting unique qualities, with high biological productivity, and remaining in a relatively pristine state. These included areas nominated for designation as Areas for Preservation or Restoration and those areas of Massachusetts coastal waters with high water quality, a preponderance of off-shore shellfish areas and known, valued fishing grounds. The latter coincides with the state's Ocean Sanctuaries. For the former all energy facilities are prohibited; for the latter the placement of permanent structures on the seabed and mining activities are restricted.

The second step involves the Energy Facilities Siting Council (EFSC). The Council examines ten-year forecasts of demand required of gas and electric companies and notices of intent to construct oil facilities required of oil companies. In that examination and approval of forecast

projections, the Council reviews analysis of alternatives provided by applicants, including other methods of generating, manufacturing, or storing gas or electricity, strategies for promoting energy conservation or consumption or for modifying load curves, other sources of providing energy, the alternative of not providing additional oil or gas, and applicant provided descriptions of how energy policies of the Commonwealth or the federal government were taken into account. The consideration of these alternatives meets the requirements of CFR 920(b)(1) relating to evaluating energy source mixes and energy conservation. Through this comprehensive examination and review power, the Council determines whether to approve an applicant's forecast of energy demand needs. Once the need for additional energy is established, and approval given to the way (i.e., what kind of facility) in which the need should be met, the Council examines alternative sites for the approved facility. This review is broad-based, examining and comparing, from the overall perspective of protecting the environment and minimizing energy costs, alternative sites.

In deciding whether or not to approve a long-range forecast, the Council is bound by statute (Chapter 164, Section 69J) to meet five requirements and for a notice of intent, three additional requirements. The first five require findings that all information submitted, including environmental impact and demand projections, is accurate and consistent with other companies and that the plans are consistent with current health, environmental protection, and resource use policies of the Commonwealth and consistent with the policy of providing necessary supply, at low cost and with minimum environmental impact. For notices of intention, the Council must further find that sources of supply listed are accurate, that the project is financially sound, and that the plans, including buffer zones or alternatives thereto, are consistent with current health, environmental protection and resource use and development policies as adopted by the Commonwealth.

The Council's regulations also call for it frequently to act consistently with current health, environmental protection and resource use and development policies of the Commonwealth. These are not defined but by Regulation 62.9(3) include policies "set forth in the constitution, general laws, and duly promulgated rules and regulations of responsible state... agencies having the force of law. Thus, once the Secretary promulgates the Chapter 21A regulations, the CZM Plan is such an environmental policy. 62.9(3) and 67.1 and 72.9 state that the Long Range Forecast or Notice of Intent shall not be approved unless consistent with such policies. Section 64.8 and 67.7 and 73.2 sets forth the information currently required for such forecast or notice application (see excerpts). 71.5(4) states that unless there are objectives raised by a government body, no Notice of Intent may be denied because of competitive effects or surplus supply. Rule 73.5 provides other decisional criteria including alternatives and conservation measures and 73.6 elaborates on the environmental information required.

CZM's concerns at the Forecast/Notice of Intention stage are that coastal sites are assured for coastally-dependent facilities, that the national interest in energy be weighed with other national interests, that the Council have adequate information to make informed decisions within the limited scope of the Forecast/Notice review and that such decisions not be given more weight than the scope of inquiry constituting them, and that the Council be consistent with all CZM policies where relevant.

Fundamental to the Ports and Harbors policies and to later policies is the concept that some energy facilities are coastally-dependent and, if demand warrants, must be sited in the coastal zone. Here, the EFSC review of alternatives shall evaluate another coastal site but need not address inland sites. Non-coastally dependent facilities must include an evaluation of at least one inland site in order to be consistent with the Plan.

Coastally dependent facilities are defined as: certain oil storage farms including surge storage and storage for oil-fired power plants in the coastal zone; LNG and gas facilities that rely on cryogenic pipelines for transfer gas or feedstocks from ship to shoreside storage; deepwater ports and marine terminals for transfer from ship to shore of oil products; and off-shore OCS facilities and certain facilities for alternative energy sources (harnessing tidal power for example).

Consideration of energy needs at the state, regional and national levels is an inherent part of the EFSC review. Concerning its decision regarding the need for the facility (the demand forecast) the Council consistently evaluates demands and supply arrangements out of state. Regulations 61.5, 63.2, 66.1 and 71.5 reveal that such data is informational only unless it is to be used to justify construction of facilities in the Commonwealth; that the Council is entitled to copies of all agreements regarding the purchase of power; that the applicant must reveal the location and capacity of all facilities, including those out of state; and that for oil facilities, two market forecasts must be prepared, one for in-state and the other for the total marketing region. The pervasive evaluations by the Council of out of state energy needs and supplies coupled with the balancing of energy v. other national interests in the coastal zone which are contained in the CZM Plan and promoted by the Secretary of EOEA provide for a thorough process for considering national energy interests in the Massachusetts coastal zone.

Fundamental to the EFSC scheme is that the Long Range Forecast and Notice of Intention stage include only a minimum of information but that it be sufficient to assess the environmental impacts expected at the proposed site. Thus, rigorous environmental review takes place upon submittal to the EOE agencies.

Therefore, the minimum of information which will be needed to assess the consistency of a specific site and a general type and size of facility with the policies of the CZM Plan is:

- identification of the location in or proximity to various types of special areas as identified in the CZM Plan (SRA's, SADA's, APR's)
- identification of relevant CZM policies concerning the impacts from the types of activities which are to be reasonably expected knowing the type of facility to be constructed and the area whereit will be located. The extension of a power line along an upland may be completely consistent with all of the policies of the Plan; a complex refinery which includes an oil terminal and is located on marshland may require evaluation against all of the marine environment policies, except possibly #6. Likewise, depending upon the type, scale, location, and funding (whether public or private). Several other CZM policies could potentially be relevant to promote, regulate, or coordinate with energy facility siting. The policies which possibly might be applicable include those pertaining to alteration of salt marshes, dune areas, salt ponds, barrier beaches, shellfish falts, and sandy beaches (Policy 1), development activity in Areas for Preservation or Restoration (Policy 2), conformance to water quality standards (Policy 3), construction in water bodies and in ports (Policies 4 and 17), dredging (Policy 5), impacts on fisheries resources (Policy 7), development in hazardous areas or which might degrade natural buffers (Policy 8), publicly funded development within the 100 year floodplain (Policy 9), construction of private flood or erosion control projects (Policy 12), incorporation of visual concerns especially for publicly funded development (Policy 13), preservation of lawfully designated historic sites or districts (Policy 14), provisions for views of coastally dependent facilities with significant educational or interest value (Policy 15), scenic areas (Policy 16), restrict development of new 20 foot channels outside of existing port areas (Policy 18), evaluation of impacts on public recreational facilities (Policy 27), evaluating the exploitation of indigenous and alternative sources of energy for impacts on the marine environment, fisheries, water quality, wildlife and recreation (Policy 33), and conformance to waste discharge, pollution and wetland protection requirements (Policy 34).

- Submission of information on typical or similar existing facilities in order to evaluate general impacts that may be expected from this type of facility. Information may be given in ranges or subject to contingencies. Where estimates are based upon comparisons with other facilities or are provided from secondary sources, such other facilities or sources must be identified.
- submission of copies or summaries of all preliminary engineering and site testing which has already been performed such as soil samples, air quality readings, water supply surveys, etc.

Once the Council approves a facility and site, the third step of the siting procedure begins. Under this step the objectives are to:

- (a) mitigate adverse impacts that stem from facility design, construction and maintenance. This is accomplished by exercising Environmental Affairs regulatory responsibilities over resources (air, water, ocean sanctuaries, wetlands, etc.); and
- (b) provide local regulatory agencies the opportunity to review the site and facility for conformance to local zoning. This is accomplished through application by the local government of its regulatory procedures to the facility applicant.

Since providing energy is a vital public need and energy facilities are a use of more than local benefit, and often in the national interest, the Massachusetts energy siting procedures provide for an appeal or "conflict resolution process" to ensure that the results of the third step of the procedure do not unreasonably prevent the construction of an approved energy facility at an approved site. This fourth step is triggered by petition from an electric, gas or oil company to the EFSC for issuance of a Certificate of Environmental Impact and Public Need on the grounds that state or local agency regulations have imposed burdensome conditions, caused undue delays, or otherwise unreasonably conditioned the construction of an EFSC approved facility at an approved site. If after reviewing the petition, the Council makes an affirmative finding, the Certificate, with whatever conditions it may include, serves in lieu of the state or local permit or license in question.

- (4) A mechanism for coordination and/or cooperative working arrangements, as appropriate, between the state coastal planning or management agency and other relevant state, federal, and local agencies involved in energy facility planning and/or siting, including conformity of siting programs, where they exist, with the Coastal Zone Management Program.

The framework for coordination and implementation is provided by a variety of instruments.

First, the adoption of the CZM Program through rules and regulations promulgated by the Secretary of Environmental Affairs compels the EFSC to give cognizance to CZM policies because by law and its own regulations, the Council is bound to make its forecast and site approval decisions in conformance with current health, environmental protection, and current use and development policies of the Commonwealth as set forth in the Constitution, general laws and duly promulgated rules and regulations of responsible state, region, or local agencies having the force of law. The Secretary's regulations also binds agencies in the Executive Office of Environmental Affairs to abide by CZM policies, to the extent permissible by law, thereby ensuring the implementation of the second step of the site suitability assessment procedure.

Second, the Memorandum of Agreement between the Secretary of Environmental Affairs and the Council (see Appendix A, Massachusetts CZM Program, Volume I, p. 2-19) sets forth the working and institutional arrangement to be followed in incorporating CZM policies into the Council's forecast and siting approval procedures.

Third, with respect to federal agencies, the Council examines the relationship of forecasts and proposed facilities to Massachusetts and federal energy policies and provides a forum through public hearings on forecasts and petition for Certificate of Environmental Impact and Public Need for federal agencies to make their views known. In addition, the Council will be delegated responsibility for reviewing federal consistency determinations for federal energy facility permits and licenses (i.e., FPC and NRC permits) and will rely on federal consistency consultation and mediation procedures to resolve federal and state disagreements.

Fourth, the EFSC in assessing forecasts and site needs takes into account arrangements made by Massachusetts energy suppliers to provide out of state requirements, bulk purchase agreements, and other interstate aspects of energy demand and supply. This facet of the EFSC's review operations meets the requirements of CFR 920.18(b)(7).

Fifth, prior to forecast and site approval, or issuance of a Certificate of Environmental Impact and Public Need, the Council, by law, must hold a public hearing, thereby allowing concerned citizens, organizations, and local, state, regional and federal officials to make their views known.

- (5) An identification of legal and other techniques that can be used to meet management needs.

Such techniques are identified both under those policies of the program's siting procedure listed above and in the Management Chapter of the Massachusetts CZM Program, Volume I. They include both the EFSC, pertinent Executive Office of Environmental Affairs authorities (air and water quality permits, tideland licenses, wetlands' orders of conditions), and related federal permits and licenses.

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COASTAL ZONE
MANAGEMENT

*Executive Office of Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02202*

MEMORANDUM

DATE: July 29, 1977

SUBJECT: Fulfillment of 305 (b) (9) requirements - Shoreline erosion/
mitigation planning

The Coastal Hazards program (Chapter 3, Volume I) outlines a planning and management process that includes the following elements: an inventory of areas along the coast where erosion is occurring and an assessment of the criticality and effects of such erosion; an articulation of state policies relating to erosion management; a coordinated permit and review program to ensure that private and public development in hazardous areas is appropriately managed; a coordinated funding program to provide for the acquisition, restoration, stabilization, or structural protection of eroding areas as necessary; a technical assistance program to aid local governments in managing erosion prone areas through non-structural measures; and a process for continuing policy refinement through monitoring and performance evaluation of implementing agency operations and erosion-related research in the Massachusetts coastal zone. As such, the management program encompassing these elements meets the requirements of Section 305 (b) (9). The specific means by which the requirements are met are outlined below, consistent with 920.19 (a)..

(1) A method for assessing the effects of shoreline erosion;

Eroding areas along the coast of Massachusetts were identified and mapped on the basis of data supplied by a Division of Mineral Resources study: Massachusetts Shoreline Condition. This study incorporated data generated by the Corps of Engineers National Shoreline Study. CZM staff transferred data from these studies to inventory base maps, which were subsequently reviewed and verified by the regional Citizen Advisory Committees and in some cases field checked by CZM staff. The original data included an assessment of erosion rates and defined "critical" erosion in relation to land uses affected (see page III of Volume I):

- loss in significant recreational beach benefits
- significant loss in other public lands or facilities
- significant damage or destruction of private property
- significant change in acreage or configuration of conservation lands.

Based on this data and the local verification process, shoreline erosion effects were grouped into two categories: critical and moderate. Critically eroding areas are depicted on the summary map on page 112 of Volume I. Specific critical and moderate erosion sites are delineated on the detailed regional maps in Volume II.

(2) Procedures for handling erosion effects, including non-structural procedures;

In order to develop a procedure for handling erosion effects, relevant data and literature were reviewed to determine the adequacy of procedures used in the past and to establish future management priorities. The resultant procedure is articulated in the Coastal Hazards program policies (see (3) below). The emphasis of the program's policies is on the use of non-structural measures. This emphasis is based on the following findings which are summarized in the text of the Coastal Hazards section pages 111-118:

- the dynamic stability of coastal landforms is dependent on the ability of natural processes (e.g., littoral drift, overwash) to continue uninterrupted. For example, barrier islands can best be maintained if they are allowed to migrate slowly landward in order to maintain their elevation relative to rising sea level; sloping beach faces naturally dissipate wave energy. Preserving natural buffering capabilities reduces the need for costly structural solutions and protects downcoast areas from adverse effects.
- the need to control land use in natural buffer areas because of the adverse effects caused by development (e.g., dune destruction, obstruction of overwash, acceleration of beach face erosion, etc.)
- recent studies by the Corps of Engineers point to the inadequacies of structural solutions and in many cases the exacerbation of erosion problems through the implementation of groins, sea walls, revetments, etc.
- analysis of previous state funded structural works indicates ineffectiveness in many areas, high initial costs, high frequency of needed maintenance, and other problems.

- site visits to areas where structural solutions have been implemented and analysis of aerial photos indicate high frequency of downcoast effects associated with structural solutions.
- federal programs are emphasizing non-structural solutions (e.g., National Flood Insurance Program and congressional and executive interest in shifting the burden of risk to property owners in hazardous areas, rather than using public tax revenues for disaster relief, etc.)

These findings form the basis of the CZM procedure which is articulated in the objectives and policies discussed in detail on pages 119 through 128 of Volume I. Basically, priority is given to non-structural protection of natural buffers through the restriction of conditioning of development in the following significant resource area types: barrier beaches, primary dunes, salt marshes, and sandy beaches. Similar restrictions are advocated for E zones outside of these areas identified on FIA Flood Insurance rate maps as they become available. In defining permissible uses for these areas, the protection of natural buffering capabilities was considered a major determinant (Policies 1,2,8). Structural solutions to control or lessen the effects of erosion are deemed more appropriate for urban areas where natural buffering capabilities have been irrevocably lost, but in all cases are to be reviewed on a case by case basis to ensure that adverse effects on downcoast areas are minimized (Policy 12). Public investment in hazardous areas is to be planned and designed so as to prevent encouragement of incompatible development (Policy 9) and funding sources are identified for acquisition and restoration of natural buffers (Policies 10 and 11).

- (3) Articulation of state policies pertaining to erosion, including policies regarding preferences for non-structural or structural controls and/or no controls;

The Coastal Hazards program consists of Policies (8) through (12), which are outlined on pages 119-128 of Volume I.

- (4) A method of designation of areas for erosion control, mitigation and/or restoration as areas of particular concern or areas for preservation/restoration, if appropriate;

"Critical erosion" and "moderate erosion" shoreline reaches are designated as GAPC's and delineated on the regional maps contained in Volume II. In most cases these segments will coincide with barrier beach, sandy beach, salt marsh, and sand dune significant resources areas and thus will be managed consistently with Policy (1) of the Marine Environment section and with Policy (2) if located in APR's. Shoreline protection works in all erosion related GAPC's are to be managed in accordance with Policy (12). Uses of these areas will be managed through the Wetlands Restriction, Wetlands Protection and Waterways Programs as will uses in "E zone" identified on future flood insurance rate maps. "Critical erosion" and "erosion" segments not coincident with

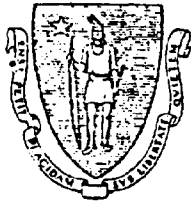
the areas to which Policies (1) and (2) apply will be managed by means of the latter two programs. GAPC designation will also signify that CZM recognizes the existence of a shoreline erosion problem in the area and will offer technical assistance to localities if requested in order to develop appropriate local controls.

- (5) A mechanism for continuing refinement and implementation of necessary management policies and techniques, if appropriate; and
- (6) An identification of funding programs and other techniques that can be used to meet management needs.

As summarized on pps. 119-128 of Volume I of the program submission, the policies are to be implemented through existing state permitting, funding and review programs and through coordination with local and federal entities involved in erosion management. Policies 8 and 12 are to be implemented through the Wetlands Restriction Program, Wetlands Protection Program, and the Waterways Program. All development in restricted erosion prone areas will be restricted on an a priori basis through the Wetlands Restriction Program, while development (including erosion control structures) in unrestricted erosion prone areas will be approved, conditioned, or denied on a case by case basis through the latter two programs. The operations of the agencies conducting these three programs will be monitored and evaluated on a quarterly basis to ensure the policies are being carried out efficiently and effectively and to accommodate refinements in policy or implementation procedures as necessary. Similarly, ongoing coordination with the Federal Insurance Administration will be maintained as Coastal towns advance to the regular phase of the Flood Insurance Program. The FIA and CZM have agreed to work together in providing technical assistance to towns in developing hazardous area zoning that would be consistent with both the NFIP requirements and the CZM program. Consistency of permits issued by the Corps of Engineers (Section 19, Section 404) with Policies (8) and (12) will also be ensured through coordination with that agency. Public investment in erosion prone areas will be reviewed through existing A-95, MEPA, and NEPA processes to ensure consistency with Policy (9).

Funding programs for implementation of Policies (10), (11), and (12) have been identified and criteria and conditions established for CZM advocacy and support. Acquisition funds will be solicited from the Land and Water Conservation Fund of the BOR where recreation benefits as well as restoration of erosion prone areas can be achieved. The Massachusetts Self-Help program can be used to help fund local acquisition of natural buffer/erosion prone areas, and funding from Section 1362 of the National Flood Insurance Act will be solicited if warranted to protect public safety and if funds are appropriated by congress. Funds for restoration and stabilization can be obtained from the Corps, SCS, and the state Waterways Program, and will be solicited through coordination with local government requests. Funding is available from both the Division of Waterways and the Corps for structural solutions to erosion problems. Waterways Program funds are allocated on an annual basis in response to requests from municipalities; CZM priorities and benefit criteria will be used in this allocation process, and consistency of federal programs with CZM policy will be required.

In addition to the above, CZM will be monitoring and coordinating research related to erosion problems along the Massachusetts coast and will incorporate research findings into policy refinement where appropriate. For example, the Corps, through its Section 22 program is currently conducting a review for the CZM program of the effectiveness and impacts of previous erosion control projects constructed in the Massachusetts coastal zone. The results of this study will be used to refine criteria for evaluating permit applications and selecting appropriate state funded structural projects. The Corps is also in the process of completing a study of erosion in the entire outer Cape area, including analysis of beach profile changes and wave refraction. The results of this study will be used to refine priorities for restoration or erosion control in that area. Additionally, CZM is monitoring the efforts of scientific studies be conducted by MIT and other academic institutions to test alternative semi-structural solutions on the Cape.



MICHAEL S. DUKAKIS
GOVERNOR

The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02202

MEMORANDUM

EVELYN F. MURPHY
SECRETARY

DATE: July 29, 1977

SUBJ: Fulfillment of 305 (b)() Regulations: Shorefront Access Planning

SHOREFRONT AREAS PLANNING

- (1) A procedure for assessing public areas requiring access or protection.

The CZM program sets forth a procedure to determine access needs based on three factors: the adequacy of existing publicly owned recreation areas to meet demand; transportation availability to existing sites; environmental impacts of recreation on coastal resources.

In Massachusetts, private shorefront ownership to the mean high water mark was granted by a 17th century Colonial Ordinance, and those private property rights have been upheld by successive Massachusetts court decisions. The result is that beach recreation is primarily dependent on public acquisition of lateral beach access.

The state and coastal towns have, over the years, acquired lateral shorefront lands for public beaches. However, such acquisitions have not been adequate in all areas to meet demand. Several steps were taken to analyze where and why recreation was deficient: First, the CZM program used the demand/supply analysis from the State Comprehensive Outdoor Recreation Plan (SCORP) to identify regions where public shorelands were not adequate to meet current and projected coastal recreation needs. (CZM Plan pp. 194-195).*

*The SCORP data was refined and supplemented by a CZM inventory of Coastal Recreation, including information on ownership and access. (CZM Plan, Chapter 5 maps). As described in the Public Participation Appendix, these maps will be updated on a systematic, periodic basis.

Next, transportation networks and plans were evaluated relative to the location of existing recreation sites to determine if people from "high need" areas could reach regions with adequate recreation. Questionnaires were distributed both by SCORP and by CZM (see Public Participation Appendix) to help determine the significance of transportation problems.

Based on the evaluations and questionnaires, the improvement of transportation to existing public sites was determined to be crucial to improving access and meeting recreation needs in Massachusetts. Policies 21 and 22 were written to establish a procedure under which the CZM program would support the planning and funding of non-automobile transportation alternatives or trails to existing public sites. Under these policies, projects are consistent with CZM objectives when: existing transportation is inadequate; the recreation site is underutilized because of lack of parking; benefits from improved transportation will stimulate commerce; or the improved transportation will serve many recreation sites. (Summarized from page 205)

The CZM Questionnaire also indicated that many existing Massachusetts recreational beaches are used inefficiently or are underutilized. Upgraded maintenance, improvement of related facilities or small expansions would greatly improve use thereby improving the "supply" of beach recreation. Policies 23 and 25 were written to establish criteria for determining where existing sites could be improved to support increased access. Under the procedure, increased access can be achieved through improving maintenance and facilitating multiple use when:

- Opportunities for physical expansion are limited; or
- The operational aspects of activities do not conflict; e.g., picnicking, and sunbathing; or
- Improved management and maintenance can control operational conflicts between uses; or
- The seasonality of the activities facilitates multiple use sequencing; or
- Recreational use of non-recreational areas can be accommodated on weekends; or
- Improvements in water quality provide expanded opportunities for water contact sports; and
- Where there is adequate access for additional uses to benefit from such improvements; and
- Resources are capable of supporting increased use with degradation.

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If projects meeting the above criteria do not sufficiently increase beach supply in order to meet demand, expansion of existing sites or new acquisitions of lateral access will be made. CZM favors such expansions/acquisitions when the following criteria are met: (Policies 25 and 26)

- Undeveloped areas abutting or near existing recreation sites are suitable for expansion; or
- Existing sites are over-utilized and there is no nearby substitute which might shift demand for the activity; or
- Other public improvements have been made or are proposed on/near existing recreation sites; for example, where state or federal funding has been used to slow or prevent erosion of beaches; and
- Access, including transit, roads and parking, is sufficient or will be sufficient subsequent to implementation of transportation improvements under Policy (21).

With regard to the protection of public recreation areas, Massachusetts CZM first compiled an inventory of public coastal recreation sites. As would be expected, the locations of these sites coincide with the most significant ecological resources - barrier beaches, sandy beaches, dune, salt marshes, salt ponds, and shellfish beds. As a result of staff research and the findings of sensitivity analyses performed by the University of Massachusetts under subcontract to Massachusetts CZM, policies were written to define appropriate/permmissible uses for these areas (Policies 1 and 2). The policies allow a wide range of recreational uses provided certain conditions are met in constructing and siting associated facilities. Other development activities which could adversely impact ecological or recreational values are prohibited or conditioned as appropriate.

Policy 27 was also developed to establish a case by case review of development activities that could negatively impact existing public recreation sites, in order to ensure that such impacts are minimized through appropriate mitigation steps.

Policies 3-6 of the Marine Environment program, as well as 8-12 of the Coastal Hazards program, and 13-16 of the Visual Environment section provide direct and incidental protection to recreation values through management of water quality impacts, dredging and mining impacts, and visual impacts, among other aspects.

- (2) A definition of the term "beach" and an identification of public areas that meet that definition.

"Beach" is defined in two ways. The first is the physical description to which the Marine Environment policies apply (CZM Plan p. 35). Beaches defined this way are Geographic Areas of Particular

Kathryn Cousins
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Concern (see page 35). The second definition relates to ownership and access policy. Massachusetts beaches except for publicly owned beaches, are private to the mean low water mark. CZM defines public beaches as those which are publicly owned, possess perpendicular access open to the greater public, with a minimum of 25 parking spaces. Shorelines that meet this public beach definition are listed at the end of the Recreation section (pp. 220-223) and shown on the maps in Volume II. These beaches are of sufficient public concern that Massachusetts CZM will ensure that proposed adjacent developments do not jeopardize the public benefits provided by the sites (Policy 27), and determine if access can/should be increased as defined in (1) of this memo.

(3) Articulation of state policies pertaining to shorefront access and/or protection.

All Recreation policies and Marine Environment policies relate to these broad issues. They are listed on pages 204-216 and pages 79-107 of the CZM plan.

(4) A method for designation of shorefront areas as areas of particular concern for protection and/or access purposes, if appropriate.

As discussed in (2) above, policies were developed which provide for the protection of the resource areas significant for both ecological and recreational values. These areas are designated as GAPC's on the regional maps contained in Volume II. Protection is ensured for these GAPC's as articulated in the Marine Environment Policies 1-5, Coastal Hazards Policies 8-10, and Recreation Policy 27. Permissible recreation activities for specific categories of GAPC's are described in these policies.

Complexes of GAPC's are designated as APR's where the collective importance of the GAPC's warrants the highest level of management. Acquisition for limited access to APR's is also a high priority (Policy 26).

(5) A mechanism for continuing refinement and implementation of necessary management techniques, if appropriate.

The Recreation policies establish a priority for management techniques. Transportation improvements, as determined through criteria in Policy 21, are the highest priority (p. 284). The second priority management technique is to expand the physical size of existing sites or purchase new sites in areas with a high need: "CZM's first priority is to improve transportation to and maintenance of existing facilities. Where those policies are not sufficient to improve recreation within areas of high need, CZM will provide funds for acquisition of new land." (p. 212)

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As projects are completed or land is acquired, the CZM inventory and SCORP inventory - will be updated. Needs will be reevaluated, and priorities for management techniques will be updated relative to new needs. Regional Advisory Councils will be helping in the update, establishing new priorities for recreation actions consistent with the policies. The role of the Councils is documented in the Management Chapter (p. 364).

Thus, the management techniques needed will be dependent upon the need for various projects established through the SCORP and Citizen Advisory Councils.

- (6) An identification of funding programs and other techniques that can be used to meet management needs.

Each Recreation policy is followed by a section describing both the overall strategy and specific agencies needed to implement the respective policy (pp. 204-216). Each policy will be implemented by funds, programs, or agencies that are best suited to the advocated action.

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SRS:mc

**COASTAL ZONE
INFORMATION CENTER**

MASSACHUSETTS COASTAL ZONE MANAGEMENT

PUBLIC HEARINGS

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|-------------------|---|
| November 14, 1977 | Upper and Lower North Shore
Essex Agricultural and Technical
Institute
Hathorne, Mass.
Room 201, John Berry Building
(Distributive Education)
7:30 p.m. |
| November 15, 1977 | Buzzards Bay and Mt. Hope Bay
Fall River Government Center
Hearing Room
7:30 p.m. |
| November 16, 1977 | South Shore and Plymouth Bay
Marshfield Town Hall
Hearing Room 3, <u>2nd</u> Floor
7:30 p.m. |
| November 17, 1977 | Cape Cod, Martha's Vineyard and
Nantucket
Cape Cod Regional Technical
High School
Rt. 124; Harwich, Mass.
7:30 p.m. |
| November 22, 1977 | Greater Boston Harbor
New England Aquarium
Central Wharf "Discovery" Pavillion
1:00 p.m. - 7:00 p.m. |

