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Maine's

Coastal Program

Procedures for:

Coastal Shorefront Access and Protection

Shoreline Erosion Assessment and Mitigation

Energy Facility Siting

August 1978

THIS REPORT WAS PREPARED IN ORDER TO FULFILL THE REQUIREMENTS OF THE 1976 AMENDMENTS TO THE COASTAL ZONE MANAGEMENT ACT.

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SHOREFRONT ACCESS AND PROTECTION PLANNING IN MAINE

Fulfilling Requirements of Section 305 (b) 7 of the Coastal Zone Management Act Amendments of 1976.

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COASTAL SHOREFRONT ACCESS AND PROTECTION

IN MAINE

0. INTRODUCTION

The importance of the coast in Maine to the recreational and economic well being of both residents and out-of-state visitors is self-evident. However, in recent years patterns of shoreland use have been changing. Some shore areas convenient to many users have been usurped by commercial developments, landfills, or industrial sitings. Major beaches have been markedly altered by shoreline developments, dredging projects, and the construction of seawalls. Additionally, access to shorelands traditionally used by the public has been diminished by permanent and seasonal residential developments and widespread changes in coastal land ownership. As a result, shoreline, and particularly beach access, is evolving into an issue of far-reaching social, legal, political and economic significance.

A number of strides toward maintaining and improving access to the ocean in Maine have been realized in the past few years. However, Maine faces some unique problems as well - problems which will require attention and resolution soon if many of the shoreline use conflicts restricting access in other areas are to be avoided.

0.1 Land Ownership

There are 2,449,969 acres in the 143 minor civil divisions of Maine's coastal area (excluding most coastal submerged lands). Of this, about 2,348,000 acres (95.9%) are privately owned. The balance, about 101,900 acres, is open space land maintained in a natural condition by public agencies or private conservation organizations. Figure 1 illustrates land ownership in the coastal area.

In Maine, unlike many states, the vast majority of coastal land is privately owned. More than 60 percent of the shoreline of California, and 90 percent of the coast in Oregon is in the public domain. Even in New England as a whole the proportion of public shorefrontage is higher than in Maine - about eight percent.

The small percentage of public coastal land in Maine is largely the result of the state's settlement heritage and its geography. Colonial settlement, for instance, was encouraged by the granting of vast tracts to private landowners. At the same time, the irregularity of the coast requires the setting aside only of pockets of seaside land. By contrast, on much of the Pacific coast one can see for miles from the high, open bluffs fringing the sea. This offers excellent,

sweeping panoramas, but also dictates the setting aside of large areas to protect scenic vistas. The irregularity of the Maine coast and our history of private seaside ownership present both opportunities and constraints for public use and resource protection.

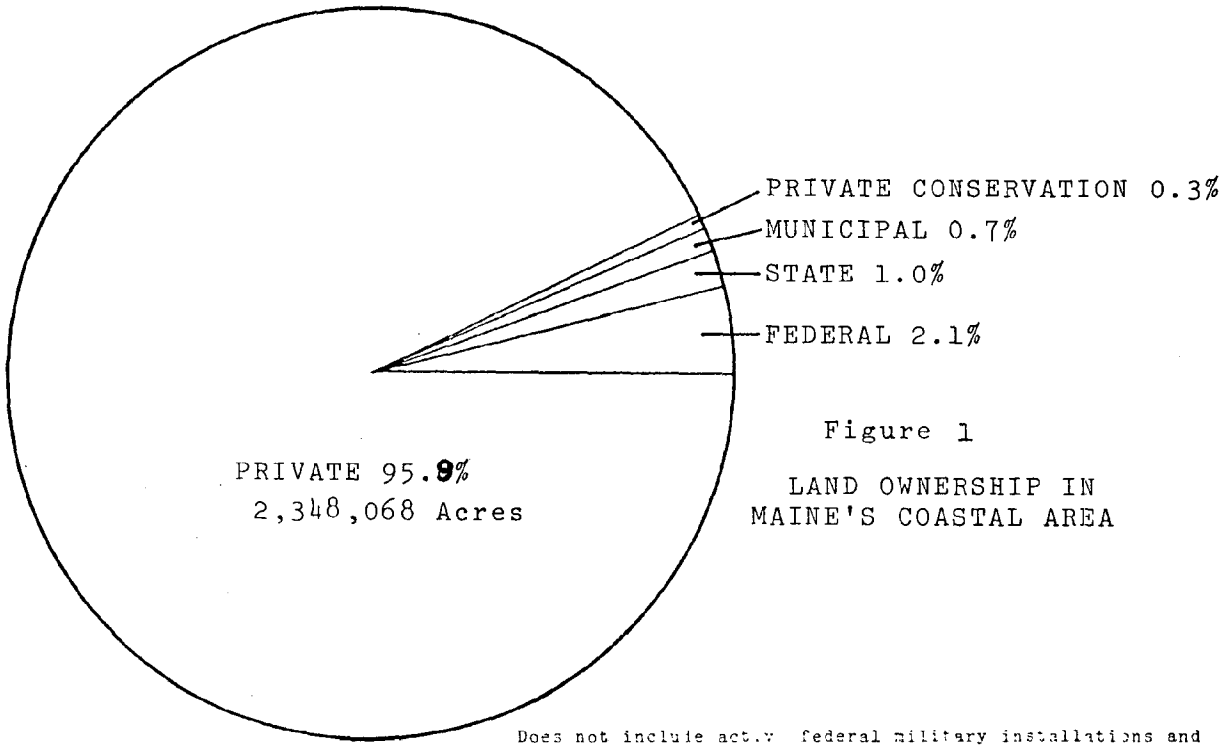


Figure 1

LAND OWNERSHIP IN MAINE'S COASTAL AREA

Does not include active federal military installations and light stations, General Services Administration holdings, Maine Department of Transportation properties, unregistered State owned islands, and some municipal beaches.

0.2 Requirements of the Coastal Zone Management Act

Amendments to the federal Coastal Zone Management Act, passed in 1976, require that states develop a planning process to identify public shorefront areas appropriate for access or protection. In Maine, it is clear that such a process is evolving. However, it is difficult to limit the process to public areas alone. Most public coastal sites in Maine were acquired for resource protection or ocean access in the first place. The areas most in need of access or protection planning are those portions of the coast now outside the public domain. Accordingly, this discussion will necessarily deal with both public and private coastal areas.

0.3 Purpose of the Paper

The purpose of this discussion is to outline a planning process that can identify public and private shorefront areas in Maine appropriate for access or protection.

Five considerations consistent with Federal CZM regulations are expressly dealt with:

1. Outline the current procedure for assessing (1.1) areas requiring access or (1.2) protection.

2. Define the term "beach" and identify areas meeting that definition.

3. Articulate enforceable state policies pertaining to shorefront access and protection.

4. Demonstrate the current method for designating shorefront areas as areas of particular concern or areas for conservation or restoration.

5. Identify legal authorities and funding programs that can be used to satisfy access or protection needs.

PROCEDURE FOR ASSESSING AREAS REQUIRING ACCESS OR PROTECTION

1

SHORELINE ACCESS AND PROTECTION

1. PROCEDURE FOR ASSESSING AREAS REQUIRING ACCESS OR PROTECTION

The purpose of assessing areas requiring additional access or protection planning is to express more than local concern with respect to additional access or protection needs for beaches and other coastal areas of environmental, recreational, historic, esthetic, ecological or cultural value. Because the needs and means for access improvement and site protection are in many cases quite different, assessment of each is treated here separately.

1.1 Assessing Access Needs

The procedure for assessing coastal physical access needs in Maine is a six-fold approach based on the following activities and studies:

1.11 Public Facilities For Boats Program

1.12 Inventories of Public Coastal Areas

1.13 Analysis of State Park Use

1.14 Statewide Comprehensive Outdoor Recreation Plan

1.15 Surveys and Studies

1.16 Litigation

Although physical access is emphasized here, visual access to the shore and the ocean is also very important. Visual access is discussed separately below (1.17).

1.11 Public Facilities For Boats Program - One approach to the assessment and provision of actual access to the coast is offered in the State's Public Facilities for Boats Program. Administered by the Bureau of Parks and Recreation, a Public Facilities For Boats Plan was prepared by the Bureau (January, 1976) to guide the provision of access sites. Funding for the Program comes from the Boating Facilities Fund. Money from this Fund is to be used among other things, to "acquire, construct and maintain, within the funds available, public facilities for boats in the waters of the State, including but not limited to launching ramps, parking sites and access roads."

1.12 Inventories of Public Coastal Areas - The second aspect of an assessment and documentation of access needs is an inventory of publicly owned properties in the coastal area. Undertaken cooperatively by the State Planning Office and the Bureau of Parks and Recreation, the inventory covers publicly owned coastal area parcels, not including submerged lands. Public lands throughout Maine's coastal area are being included, not just those contiguous to the water, to help assess the possibility of banking land.

Complementing this is an inventory of public accessways to the water, including those on public beaches, being undertaken by the State Planning Office (unpublished). Local officials and knowledgeable citizens have been contacted for this information. All claimed public accessways identified in this manner are being mapped and described on inventory forms. By identifying the parcels of land in which the public holds proprietory rights, it can be insured that existing public land is not lost by adverse possession or other procedures, or so encumbered by adjacent development as to destroy the existing access or use potential.

The successive step in needs assessment is the selection of sites which have high potential for public access. This has been done in part in a report, The Maine Coast: Recreation and Open Space, prepared for the Committee on Coastal Development and Conservation. The report identifies coastal sites suitable for resource protection or outdoor recreation. The Waterways Division of the Bureau of Parks and Recreation also selects sites suitable for recreational boat access as mentioned above.

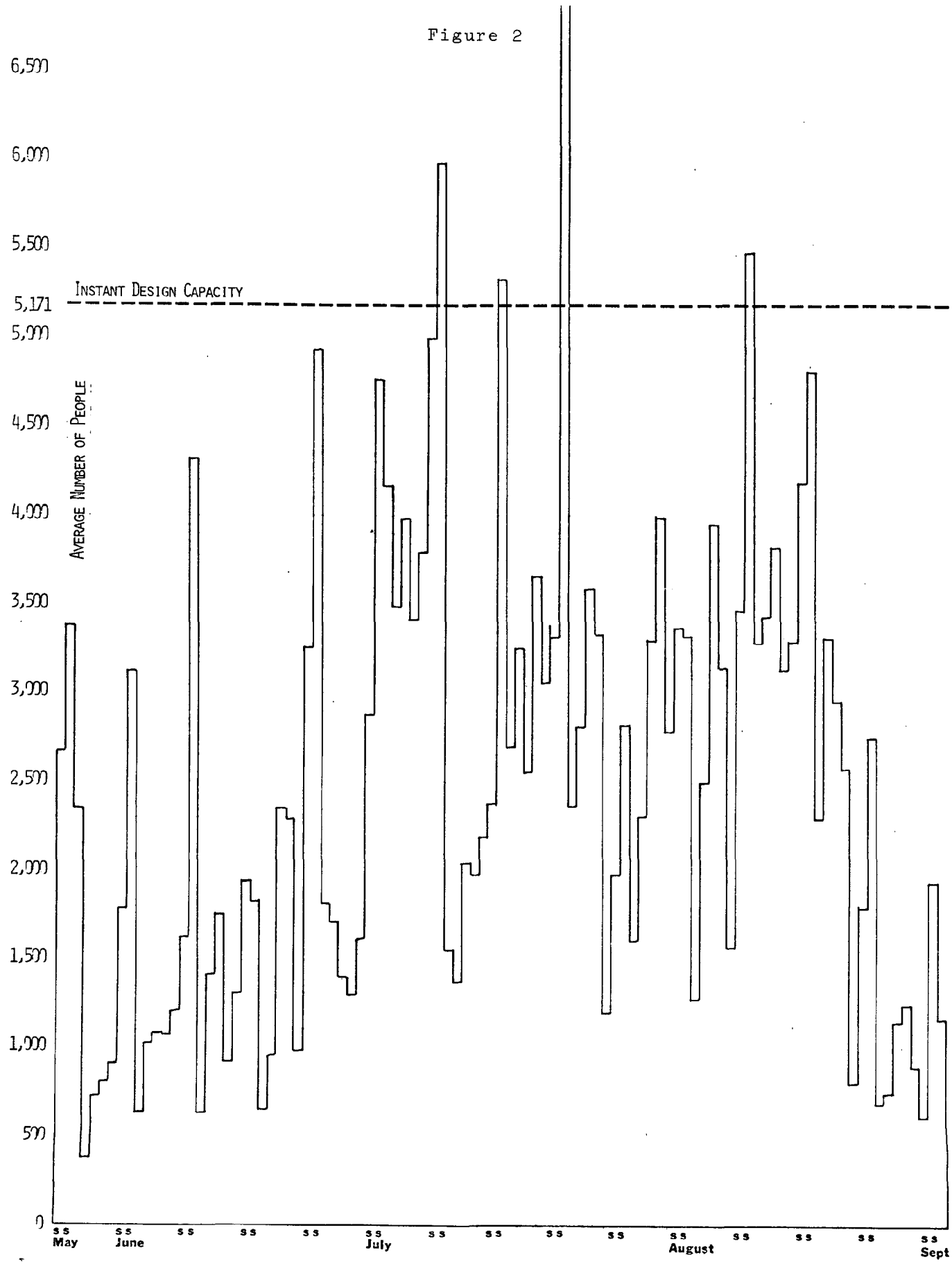
Once potential sites have been selected, onsite assessments can be conducted to determine the relative suitability of each for public access use. This field inventory should consist of two major parts: (1) a physical characteristic/ownership component, and (2) an assessment of environmental impacts.

The product of the foregoing will be a definition of what the State intends to do, where it intends to do it, and how it proposes to do it. This process has been initiated. Prior to adoption or other action extensive public discussion will be required.

1.13 Analysis of Park Use - The third aspect of an assessment of access needs is analyses of public use of supervised state parks and memorials. Histograms were prepared by the Bureau of Parks and Recreation as part of its State Park System Plan (in preparation) to show public use patterns. Each graph was prepared by determining the average number of people using an area each day during the operating seasons of 1974, 1975 and 1976. Areas of the same use-type were grouped and this information was plotted for the 101 day period between Memorial Day weekend and Labor Day. The shapes of the resultant graphs indicate how visitation is distributed in time. Figure 2 is the graph for Popham Beach, Peacock Beach and Reid State Parks, three swimming-picnicking parks in the coastal area.

An indication of the extent to which the public is utilizing existing recreational capacities can be gained by examining the figures. (In this respect, the reader is cautioned that the graphs represent, for the most part, groups of facilities of the same use-type. Thus, individual facilities may exhibit use patterns which differ from those illustrated.) All graphs were prepared in the same scale making it possible to compare directly the volume of use. Instant Design Capacities on each graph refer to the total number of people who can be accommodated at the areas at any given moment.

Figure 2



Swimming/Picnicking (Peacock Beach, Popham Beach and Reid State Parks)

1.14 SCORP - The fourth aspect of assessing access needs is the analysis of facility and land deficiencies for recreation activities in the Statewide Comprehensive Outdoor Recreation Plan (1977). Detailed analyses of a number of coastal related activities were prepared for the four coastal planning districts in Maine. Table 1 is a summary of calculated land deficiencies in the coastal planning districts.

The Maine SCORP also identified the need for "a study of the needs for additional State Park areas with visual or foot access to the Maine coastal shoreline." 1/

1.15 Surveys and Studies - The fifth aspect of access needs assessment is a series of Maine resident preference surveys. A 1975 survey conducted for the SPO found that 53% of the coastal area respondents favored increasing publicly accessible coastline in Maine. 2/ These figures are consistent with an earlier survey which found that 55% of those interviewed across the state reported they would like to see the State spend more money to acquire coastal beaches and scenic areas, were the funds available. 3/ In a 1977 survey, 42.6% of those surveyed in the coastal area said that, public coastal land was less than adequate. 4/

In addition to the statewide and coastal surveys citied, there have been in recent years a number of local and regional studies and surveys which have reported the problems of access needs along the Maine coast. At a recent meeting of the Land and Water Resources Planning Committee of the Hancock County Planning Commission, the "lack of access to the shoreline by fishermen due to increasing sales of shore property for residential use" was identified as a serious problem. 5/

1/ Maine Bureau of Parks and Recreation, Maine Statewide Comprehensive Outdoor Recreation Plan (Augusta, 1977) p. II-18.

2/ Maine State Planning Office, Citizen Evaluation of Public Policy in the Coastal Zone (Augusta, 1975), prepared by the Social Science Research Institute, Univ. of Maine, p. 85.

3/ Maine State Planning Office, An Appraisal by the People (Augusta, 1973), prepared by Northeast Markets, Inc., p.30.

4/ Maine Bureau of Parks and Recreation, Maine Resident Outdoor Recreation Participation and Preferences - A Look of the Coast (Augusta, 1977), prepared by Northeast Markets, Inc.

5/ Meeting of the Land and Water Resources Planning Committee, Hancock County Planning Commission, February 15, 1978.

Table 1
DISTRICT SUMMARY OF LAND DEFICIENCIES IN MAINE*

Activity	Planning District											
	Southern			Cumberland			Mid-Coast			Eastern		
	1976	1980	1990	1976	1980	1990	1976	1980	1990	1976	1980	1990
Swimming				X	X	X	X	X	X			X
Camping						X						
Picnicking	X	X	X	X	X	X		X	X			
Boating	X	X	X	X	X	X	X	X	X			
Canoeing										X	X	X
Interpretive Trails	X	X	X	X	X	X	X	X	X			
Hiking	X	X	X	X	X	X	X	X	X			X
Horseback Riding				X	X	X						
Ski Touring	X	X		X	X	X	X	X	X			X
Bicycling	X	X	X	X	X	X	X	X	X			

*An X indicates a deficiency.

Source: 1977 Maine Comprehensive Outdoor Recreation Plan

Other studies have cited the need for public access in Maine as well. A 1975 Assessment of Water and Related Land Resources in New England listed access to recreation areas as lacking in three of seven coastal water basins in Maine. 1/ A 1973 Open Space Plan for the Bath-Brunswick region specified sites for the acquisition for boat launch and recreation areas. 2/ RC&D Projects on the coast have identified lack of access for area residents as among serious problems. 3/

Related to these studies are the activities of towns in identifying existing accessways. The communities of Brunswick, Belfast, and Southwest Harbor for example, have conducted indepth investigations to locate existing public rights of way to the water. Funded by a grant from the Maine Coastal Program the town of Cumberland is currently researching the public's legal rights to the shore in several southern Maine communities.

To promote increased local activity of this sort, the Time and Tide RC&D in midcoastal Maine has conducted workshops on locating old public rights of way. A report is being issued to reach more towns interested in this same type of project. 4/

1.16 Litigation - The final aspect of Maine's process of access evaluation is an ongoing program of litigation. Currently several law suits relating to various aspects of the access issues are pending. 5/ As opportunities arise, legal issues will be raised and the Maine Attorney General will intervene in the public's interest where appropriate.

1/ New England River Basins Commission, 1975 Assessment of Water and Related Land Resources, New England Region Summary Report, Severe Resource Problems and Recommendations for their Resolution, (Boston, December, 1977) p. 143.

2/ Bath/Brunswick Regional Planning Commission, Open Space Plan, prepared by Community Planning Services, 1973.

3/ Time and Tide RC&D, Program of Action, assisted by USDA, et al, 1974; Down East RC&D Council, Framework Plan, assisted by USDA, et al, 1977.

4/ Maine Department of Marine Resources in cooperation with Time and Tide RC&D, Public Access to Maine Shoreline: A Workshop Discussion, DMR Fisheries Information Series #1, June, 1978.

5/ Suits are pending, e.g. in the communities of Brunswick and Deer Isle.

1.17 Visual Access - Visual access to the water is as important to many users of the coast as is physical access. The Maine Department of Transportation provides highway rest areas in scenic coastal locations. The Maine Comprehensive Outdoor Recreation Plan also recognizes the value of coastal scenery and supports the protection of outstanding coastal areas coupled with the provision of visual access to the shore. 1/

In addition, of all the states, the most prevalent use of conservation easements as a technique for shoreline preservation has been in Maine. Conservation easements have been granted on approximately 9,000-10,000 acres of private lands in the coastal area to protect shorelands and to preserve the visual attractiveness of the coast.

1/ Maine Bureau of Parks and Recreation, Maine Comprehensive Outdoor Recreation Plan (August, 1977), p. II-18.

1.2 Assessing Protection Needs

Presented here is a review of those activities undertaken or underway to assess needs for the protection of important coastal sites in Maine. The development of a process for the protection of such areas is also dealt with in other sections of Maine's coastal Program concerned with Geographic Areas of Particular Concern (Appendix C), Areas for Preservation or Restoration (Appendix D), and Goals, Objectives and Policies (Section 6).

The procedure for assessing coastal protection needs in Maine is a manifold approach involving the conservation of:

1.21 Critical Areas

1.22 Wildlands

1.23 Rivers

1.24 Wildlife Areas and Wetlands

1.25 Islands

1.26 Historic Sites

1.27 Beaches

A summary of thirteen principal statutes governing land and water use and quality on the coast is presented at the end of this section (1.28).

1.21 Critical Areas - The systematic identification, registration and conservation of coastal critical areas is the first aspect of protection needs assessment.

In 1974, an act establishing a State Register of Critical Areas was enacted. Under this legislation, the State Planning Office has the responsibility to develop a Critical Areas Program for the purpose of identifying, documenting, and encouraging the conservation of critical areas. An eleven member Critical Areas Advisory Board was created to advise and assist the State Planning Office in this endeavor. The Critical Area Program essentially refines an inventory completed through the Natural Resources Council in 1972. This initial project by the NRC established an interest in the identification and protection of natural areas.

According to the legislation, critical areas are officially recognized (registered) areas which contain natural features of state significance--either highly unusual natural features or outstanding examples of more common features. Critical areas may include exceptional plant or animal habitat, areas of great geological or historical interest, and outstanding scenic areas. Examples include colonial bird nesting sites, naturally occurring rhododendran stands, significant fossil deposits, and scenic gorges and waterfalls.

The Critical Areas Program consists of two phases: Registration and conservation. The registration process consists of the identification of subjects for investigation, the preparation of planning reports on priority subjects, recommendations for registration from the planning reports, a preliminary decision on the registration with a 60 day review period for the landowner, and final registration if appropriate. The conservation process is dependent upon the cooperation of the landowners and may, with the owners consent, involve management agreements and the sale or donation of property rights. In this process, the State Planning Office attempts to maintain a close relationship with the owners of critical areas. Wide dissemination of information on critical areas is not encouraged without the landowners consent.

As discussed in 2. below, the Critical Areas Program has undertaken an inventory and detailed description of the sand beaches of the Maine coast. This information goes a long way toward long term protection of coastal beach systems.

1.22 Wildlands - The second aspect of protection needs assessment deals with the "wildlands" of Maine's coastal area. The Maine Land Use Regulation Commission (LURC) has a mandate to plan for and zone all land use in the unorganized territory of Maine (often colloquially called the "wildlands"), including six unorganized townships and 254 islands in the coastal area. To assist in the evaluation of the attitudes of Maine residents toward wilderness conservation at least three surveys have been undertaken.

Lessees In the Unorganized Townships of Maine, by the Maine Land Use Regulation Commission, collected background information, opinions and attitudes, and lease information from lessees of land in the unorganized area. When asked what they liked particularly about the Maine woods, 80 percent indicated the quiet and solitude, 64 percent the wilderness atmosphere, 66 percent the fishing opportunities, 54 percent the hunting opportunities, 12 percent the vacation communities, and seven percent other. At the very least, these responses indicated a desire to protect and maintain the natural environment characteristics of the unorganized area.

Maine, An Appraisal by the People, conducted for the State Planning Office in 1973, also addressed the wilderness issue. The survey found that the features of Maine that respondents liked the most were its scenic beauty and its wide open, uncrowded feeling. The same survey found that a majority of respondents statewide supported the maintenance of undeveloped wildlands.

An Analysis of the Attitudes of Residents Toward Land Use In Maine's Unorganized Area undertaken for the Land Use Regulation Commission in 1974, found that 88 percent of the Maine residents surveyed felt that "certain wilderness areas, lakes and rivers should be set aside for primarily primitive recreation like hiking and canoeing." Eighty-three percent of the respondents favored State regulation of land use in the unorganized areas of Maine.

A synopis of these studies indicates an underlying concern for the protection of Maine's "wilderness" but at the same time a recognition of the need for industry and jobs. There seems to be a desire to balance the two, to have some of both if at all possible.

One method of limiting development in the unorganized area is through the planning and zoning responsibilities of the Maine Land Use Regulation Commission. Existing areas are being identified by the Commission and zoned as protection districts. These efforts may also serve as an inventory of important recreation and natural areas. From the inventory list, important areas could be selected for possible acquisition by federal or State agencies.

The Land Use Regulation Commission has published a Comprehensive Land Use Plan (September, 1976) for the plantations and unorganized townships of the State. The Commission has also conducted and published A Preliminary Study of the Coastal Islands in the Land Use Regulation Commission's Jurisdiction (April, 1976). Both of these documents go a long way toward outlining the State's interest in conserving its coastal wildlands.

1.23 Rivers - Although Maine does not have a State wild and scenic rivers program, there has been considerable activity recently regarding assessment of rivers deserving protection, including several rivers in Maine's coastal basins.

Maine has passed special legislation for the zoning and protection of the Saco River in southern Maine and it has the limited river zoning and regulating protection afforded by the Land Use Regulation Commission.

Maine has one designated wild and scenic river, the Allagash. Though State administered, the Allagash is designated as a National River under the National Wild and Scenic Rivers Act of 1968. Several coastal rivers in Maine have been suggested as potential study rivers under the Act. These include the Machias River, the St. Croix River, the Kennebec River and the Sheepscot River. Recently the National Park Service has been surveying rivers throughout the country, utilizing general criteria, to preliminarily determine which rivers might qualify for further in depth study as potential national wild and scenic rivers. This survey effort has just been completed for Maine and several rivers are expected to meet the general criteria.

In addition, 25 coastal basin rivers in Maine have been recommended for screening as potential wild, scenic and recreational rivers in a report, The Maine Coast: Recreation and Open Space, prepared for the Committee on Coastal Development and Conservation.

To assess the attitudes of residents toward wild and scenic rivers, the subject was addressed in the 1973 survey, Maine, An Appraisal by the People, in the context of several recreation questions. On a statewide basis, the protection of wild and scenic rivers was the third most popular in a list of seven choices. The protection of wild and scenic rivers was number one or number two priority in several districts, including York County.

1.24 Wildlife Areas and Wetlands - The acquisition or protection of wildlife areas and wetlands in Maine's coastal areas are largely accomplished through the programs of the Department of Inland Fisheries and Wildlife and the Department of Marine Resources and through the regulations of the Coastal Wetlands Alterations Act and the Site Location Act, administered by the Department of Environmental Protection, and the Stream Alteration Act administered by the Department of Inland Fisheries and Wildlife.

The long term acquisition objectives of the Department of Inland Fisheries and Wildlife include the acquisition of vulnerable salt marsh areas and coastal eider and seabird nesting islands. To aid in the assessment of which islands to acquire the Department has been cooperating in a multiyear study of significant nesting islands with the U.S. Fish and Wildlife Service and the State Cooperative Wildlife Unit. Exhaustive nesting inventories have been undertaken and a selection procedure formulated to select habitat of highest significance.

The zoning activities of the Land Use Regulation Commission in the unorganized area of Maine is also a means of assessing the need for protection of coastal wildlife areas and wetlands. LURC's final comprehensive plan, approved in 1976, includes a Wetland Protection Subdistrict, a Flood Prone Protection Subdistrict, and a Fish and Wildlife Protection Subdistrict.

Finally, the mandatory shoreline zoning law for organized towns in Maine offers some protection of smaller wildlife or wetland areas at the local level. Each town is required to identify fragile wetlands and important wildlife areas. Many of these areas are put into resource protection districts or other zones of restricted use.

1.25 Coastal Islands - Maine's coastal islands are unique to the entire eastern coast of the United States in that few other states have islands with such geological and biological diversity. Many have argued that these islands are not only nationally significant but of worldwide significance as well. As such, a strong case can be made for the protection of a representative sample of Maine's coastal islands from development.

A number of agencies and organizations in Maine are involved in the assessment and protection of islands. One hundred-three coastal island properties are owned by federal or state public agencies or private conservation organizations in Maine. Several others are held by local governments for recreation or resource conservation. At the state level, the principal island conservation activities are undertaken by the Department of Inland Fisheries and wildlife, the Bureau of Public Lands, the Bureau of Parks and Recreation, and the Land Use Regulation Commission.

The work of the Department of Inland Fisheries and Wildlife and the Land Use Regulation Commission concerning island evaluation and protection is described above (1.22 and 1.24).

The Coastal Island Registry, a program of the Maine Bureau of Public Lands includes jurisdiction over approximately 1,300 islands which have not been registered with the State.

The Coastal Island Registry was created to clarify and establish the State's interest in coastal islands and to develop and implement management policies for the use and protection of State owned islands. In accordance with MRSA Title 33, Chapter 25, the Registry is authorized to identify, described and assign numbers to all ledges and islands in Maine's coastal waters, to require registration of all these islands, and to promulgate all rules and regulations necessary to carry out its lawful purposes. As amended in 1975, the law further requires the Registry to review all claims to coastal islands and determine the validity of these claims through a systematic search and analysis of island titles.

The second phase of the Registry program, a review of island titles, is underway. The Bureau of Public Lands must review each island registration with a view toward disallowing registrations by or on behalf of persons who are not true owners of the islands. This involves the review and title search of up to 1,500 islands followed by an administrative process and possibly judicial proceedings.

At the same time, the Bureau is developing A Management Plan for the Unregistered Coastal Islands of Maine. The plan will allocate management responsibility for specific islands to public agencies which have a clear interest in assuming such responsibilities. For example, islands which are significant as bird nesting sites will be transferred to Fish and Wildlife. Islands which lend themselves to recreational development will be transferred to Parks and Recreation. The plan will suggest the most suitable use of each island based largely on natural resource inventories already completed for the islands. Many islands will be set aside for resource protection in the public interest.

Other island protection efforts in Maine relate to island trusts and conservation easements. The passage, in 1971, of an Act to Provide for Coastal Island Trusts outlined a method by which municipalities, the State, and the Federal government could work together towards planning for and protecting significant island groupings. The legislation resulted primarily from a federal study of coastal islands. A major recommendation of that study was the Casco Bay Islands be initially studied as a model island grouping.

As of the end of 1976, the Maine Coast Heritage Trust had secured conservation easements on 64 entire islands and 57 portions of islands. The recipient agencies for these easements include the State Bureau of Parks and Recreation, the National Park Service, the Nature Conservancy, the Department of Inland Fisheries and Wildlife, the Maine Audubon Society, and several municipalities. (See 1.17 and 5.2 for further discussion of conservation easements.)

1.26 Historic Sites - The recognition of sites of historic significance is the sixth aspect of assessing protection needs in Maine.

At the State level, it is primarily the responsibility of the Maine Historic Preservation Commission to screen and nominate areas on the coast as candidates for the various national historic registers. Twenty-three coastal sites in Maine are National Historic Landmarks. Of the 328 Maine sites on the National Register of Historic Paces, 215 are located in coastal area communities. Twenty-five of the 32 sites in Maine on the National Register of Historic Districts are in coastal towns.

The Historic Preservation Commission is also responsible for the preparation and maintenance of the State Comprehensive Historic Preservation Plan, and all of the state responsibilities as required under the National Historic Preservation Act.

Additionally, the Bureau of Parks and Recreation directly administers twenty-two historic sites and memorials in the coastal area.

1.27 Beaches - Maine's coastal beaches are one of the state's most important social, ecological recreational assets. They also represent a large part of the public's access to the sea. As such they are treated separately below.

1.28 Statutes - Currently there are about 75 state laws, administered by more than a dozen separate agencies, which pertain to management of coastal resources in Maine. Many of these have already been mentioned in this discussion. Table 2 is a summary of thirteen principal state statutes governing land and water use and quality along the coast.

Table 2

PRINCIPAL STATE STATUTES GOVERNING LAND AND WATER USE

ALONG THE MAINE COAST

STATUTE	PURPOSE
Coastal Wetlands Act (38 M.R.S.A. 471-478)	Directs the Board of Environmental Protection to regulate uses that could harm tidal and subtidal lands.
Coastal Island Trust Act (12 M.R.S.A. 641-646)	Enables coastal island trusts administered by coastal island commissions to be set up to control and guide the development of Maine's coastal islands.
Submerged Lands Act (12 M.R.S.A. 514-A)	Reaffirmed the State's ownership of submerged lands.
Coastal Conveyance of Petroleum Act (38 M.R.S.A. 541-560)	Established an oil spill prevention and clean-up program financed by a fee on oil brought into Maine ports.
Land Use Regulation Commission (12 M.R.S.A. 681-689)	Directs LURC to zone all land use in the unorganized areas of the state, including six unorganized townships and 116 islands in Maine's coastal area.
Mandatory Shoreland Zoning Act (12 M.R.S.A. 4811-4814)	Requires municipalities to enact and enforce zoning for shore areas within 250 feet of water.
Protection and Improvement of Waters Act (38 M.R.S.A. 356)	Mandates that the quality of all state waters be protected from degredation.
State Plumbing Code (22 M.R.S.A. 42)	Sets up minimum standards for subsurface waste water disposal.
The Subdivision Law (30 M.R.S.A. 4956)	Specifies that communities have to review proposed subdivisions to see that they meet minimum state criteria.
Site Location of Development Act (38 M.R.S.A. 481-489)	Controls large development projects through a permit procedure.
Protection and Improvement of Air Law (38 M.R.S.A. Ch. 4)	Directs the Board of Environmental Protection to regulate all air emissions to protect public health, property, and natural resources.
Solid Waste Management Act (38 M.R.S.A. Ch. 13)	Encourages programs that will reduce the volume of and assure the environmentally sound disposal of solid waste, and promote the reuse and recovery of valuable resources.
Conservation of Marine Species Act (12 M.R.S.A. 3504)	Gives the Department of Marine Resources broad regulatory powers to manage almost all phases of marine fisheries.

2. DEFINITION AND IDENTITY OF BEACHES

2.1 Confusion of Terms

Beaches can be defined in a variety of ways. The Maine courts have had a difficult time defining the beach and the shore. The study, Maine Law Affecting Marine Resources, included the following definitions from shorefront cases:

> What is the sea shore must first be defined. The sea shore must be understood to be the margin of the sea in its usual and ordinary state. Thus, when the tide is out, the low water mark is the margin of the sea, and when the sea is full, the margin is high water mark. The sea shore is therefore all ground between high water mark and low water mark (Storer v. Freeman, 6 Mass 435, p. 439; Laysesk v. Bangor Bank, 8 Me. 85 pg. 90 (1831).
>
> . . . . By beach, it is to be understood the shore or strand; and it has been decided, that the seashore is the space between high and low water mark (Coltis v. Hussey 15 Me. 237, 241 (1839).
>
> . . . . The word beach, must be deemed to designate land washed by the sea and its waves; and to be synonymous with shore (Littlefield v. Littlefield, 28 Me. 180, 181 (1848).
>
> The 'shore' is the ground between ordinary high and low water mark, the flats, and a well defined monument (Montgomery v. Reed,69 Me. 510, 514 (1879); Morrison v. Bank, 88 Me. 155, 160, 33 A. 782 (1895).
>
> The word [shore] strictly means that space which is alternately covered and exposed by the flow and ebb low water mark (Morrison supra).

The term intertidal zone also refers to the area between high and low water, the area over which the ordinary tides flow daily.

2.2 Ownership

Federal regulations state that the purpose of defining the term "beach" is to aid in the identification of those public beach areas requiring further access and/or protection. In states where most of the shoreline is beach frontage and public ownership extends only to high tide or the line of vegetation, planning for improved access to and protection of public beach areas is a relatively easy task. In Maine the situation is quite different.

In Maine, except in a very few cases, private ownership extends to low tide or 100 rods (503 meters) from high tide whichever is less. However, many beaches in this state, while technically privately owned, have for years been used as public common lands. In several instances coastal communities have budgeted funds for private beach maintenance (e.g. Scarborough, Wells, York, Saco). In one or two

towns recent research has suggested that beaches heretofore thought to be private may actually be publicly owned (e.g. Kittery).

Hence, there are no definitive figures on beach ownership for the entire Maine coast. The Army Corps of Engineers in its National Shoreline Study, issued in 1971, estimated that only one-half of one percent of the Maine coast was in public recreational use though 3.2% was in local, state or federal public ownership[1/] (not all of which is available for public use). A report on Coastal Conservation Priorities, prepared for the State Planning Office in 1973, estimated total coastal federal ownership to be 1.2%, state ownership 1.3%, and local ownership 0.5% of the shoreline of the Maine coast[2/].

Total linear (mean high tide) sand beach ownership has been estimated as follows:

Table 3

Jurisdiction	Miles (Km)		% of Coast	% of Beach
Federal Beaches	0.2	(0.3)	*	0.3
State Beaches	6.3	(10.1)	0.2	8.5
Local Beaches	9.2	(14.9)	0.3	12.6
Private Beaches	58.2	(93.7)	1.7	78.6
TOTAL**	73.9	(119.2)	2.1	100.0

*Less than 0.01%
**Columns are not necessarily additive due to rounding

Clearly, public beaches, as defined, comprise a small percentage of the total coastal frontage.

Regardless of the statistics, ownership does not tell the entire story. Some private beaches along the Maine coast are used as if they were public and some publicly owned beaches remain unavailable because they are inaccessible or undeveloped.

To add to this confusion the public has certain rights along specific parts of the beach irrespective of ownership (except perhaps on federal military lands). Anyone can, for example, moor or rest a boat on tidal flats, sail over the flats, cross the flats to go to or from one's boat, take on or discharge passengers or cargo, fish, dig clams and worms, and hunt for wildfowl below the high water mark.

1/ U.S. Army Corps of Engineers, National Shoreline Study, North Atlantic Region (NY, 1971), p. 103.

2/ Reed and D'Andrea, Coastal Conservation Priorities Plan (South Gardiner, Maine, 1973), p. I-6.

These rights are stated in the Colony Ordinance of 1641 as amended in 1647 which it is generally assumed, forms the basis for public shore rights in Maine. The Colony Ordinance was enacted in Massachusetts and Maine was previously a territory of that Commonwealth. Notably absent from the list of permitted uses of the intertidal area is mention of recreational activities. Judicial interpretation of the application of the Colony Ordinance in Maine suggests that recreational bathing may be a permitted shore use, although the point has never been clearly tested. In any case, it is certain that the right of trespass across private lands to the seashore as applies to Great Ponds is not in force. The inability to get to the intertidal zone across private property from inland points makes public recreational rights for most people a moot advantage.

2.3 Definitions

Beaches can be defined in geologic terms as coastal accumulations of unconsolidated materials (sand beaches of particles ±0.625mm - 2mm in diameter; cobble beaches of particles ±2mm - 256mm in diameter) around the limit of wave action.

Beaches can also be described in terms of their physiographic parts (Figure 3). Seaward of the mean low tide line are the offshore zones of the sea; the land under the sea is the seabed or submerged marine lands. The area between mean low tide and mean high tide lines, which is subject to the normal flow of the tides, is the wet sand. "Foreshore", "intertidal zone", and "tideland" are used synonymously with this term. The area between the mean high tide line and the line of vegetation, the storm ridge scarp, or an artificial structure parallel to the water line, such as a seawall, is the dry sand or backshore. The wet sand and dry sand together comprise the beachface. The area landward of the vegetation line, the storm ridge scarp, or a seawall or similar structure is the upland.

2.31 Access Planning - For purposes of access planning, beaches are defined as all local and state sand beachface areas on the coast as well as the tidelands where the public has the rights specified in the Colony Ordinance of 1641-47 and the submerged marine lands held in trust by the sovereign State of Maine for the public. This definition encompasses both public sand beaches, which are among the State's most important recreational resources, and shorelands below mean high tide where the public has an interest in commercial as well as recreational pursuits.

In identifying access needs the following is being analyzed: (a) the supply of existing public facilities and areas, (b) the anticipated pressures for future use of these areas, and (c) the capability and suitability of existing areas to support increased access.

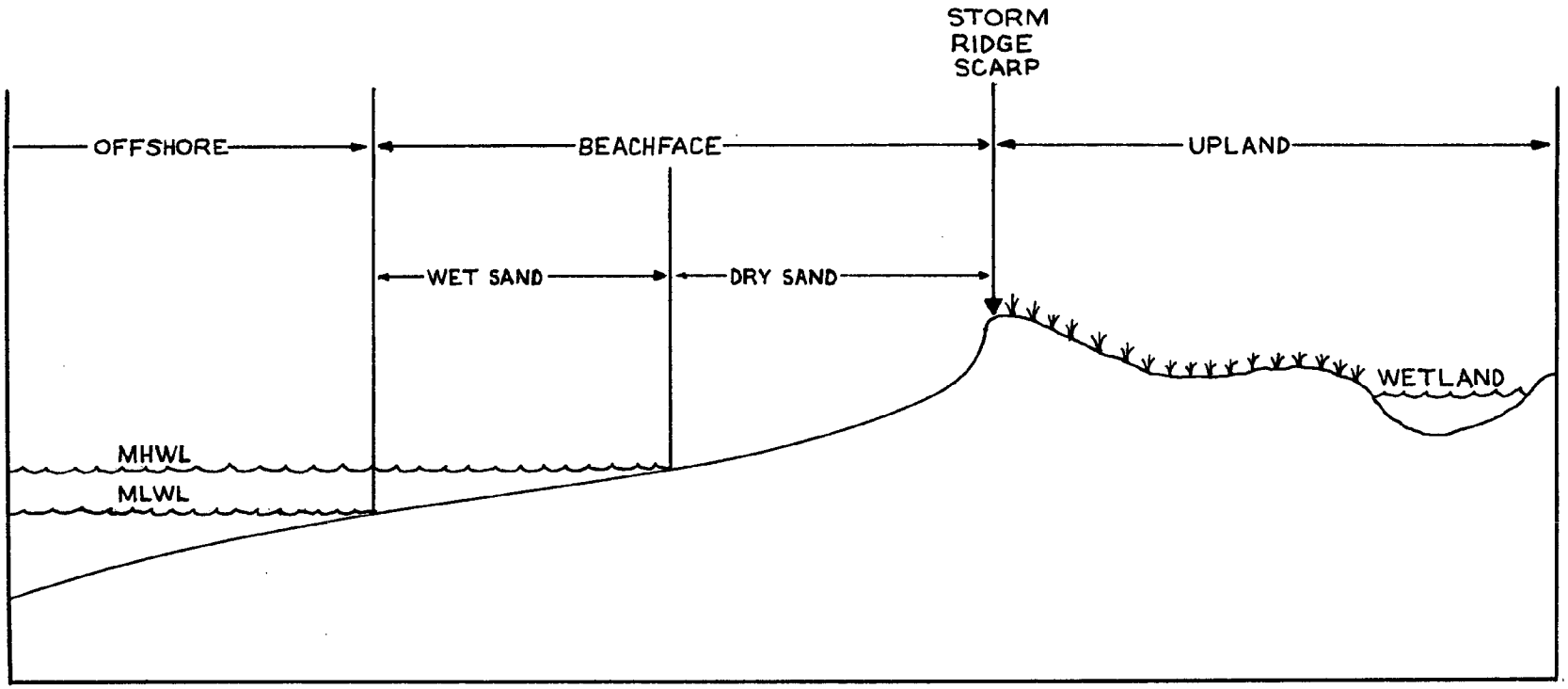


Figure 3 Shoreline Terminology

The body of literature available for use in determining access needs includes the following:

Creteau, Paul G. Principles of Real Estate Law. Portland: Castle Publishing Co., 1977.

Ducsik, Dennis. Shoreline for the Public. Cambridge: The MIT Press, 1974.

Henry, H.P. Coastal Zone Mgt. in Maine: A Legal Perspective. Prepared for the Maine SPO, 1973.

Maine Association of Conservation Commissions. "Boat Access Site Needs Survey Results." Kennebunkport, 1977.

Maine Audubon Society. "Areas of Concern Questionnaire Results." Falmouth, 1977.

Maine Bureau of Parks and Recreation. Maine Comprehensive Outdoor Recreation Plan. Augusta, 1977.

_____. Maine Resident Outdoor Recreation Participation and Preferences Survey - A Look at the Coast. Augusta, 1977.

_____. 1975 Visitor Use Survey: Day Use State Parks & Coastal Municipal Beaches from Portland to Kittery. Augusta, 1975.

Maine Department of Transportation. File information on "Highway layouts." Right of Way Division, Augusta.

Maine State Planning Office. File information on public access ways to water. Augusta, 1976.

New England River Basins Commission: Summary Report: Severe Resource Problems and Recommendations for their Resolution. Boston, 1977.

Northeast Markets, Inc. Maine, An Appraisal By the People. Prepared for the Maine State Planning Office, 1973.

Parks, Richard B. "Public and Private Rights to Maine Tidal Waters." in Maine Fish and Game (Summer, 1967).

Social Science Research Institute. Citizen Evaluation of Public Policy in the Coastal Zone. Prepared for the Maine State Planning Office, 1975.

Waite, G. Graham. "Public Rights in Maine Waters," in Maine Law Review, 17. 1965.

In addition, there are a number of local and regional reports, prepared over the past ten years, which have identified access needs in particular coastal areas.

Ongoing programs concerning beach access planning are described above (1.1).

2.32 Protection Planning - For purposes of protection planning, beaches are defined as those state and local sand beachface and dune sites identified (1) by the Maine Critical Areas Program as significant geological and/or botanical ecosystems and (2) by the Maine Bureau of Parks and Recreation as significant recreational beach systems. This definition includes those public sand beaches which are among the State's most important natural and recreational resources.

It is anticipated that nonsand beaches, including those in the public domain, will be inventoried and studied by the Critical Areas Program. All beach systems, sand and nonsand, which meet the following criteria could be considered areas of particular concern:

(1) areas of unique, scarce, fragile or vulnerable natural habitat, unique or fragile, physical, figuration, historical significance, cultural value or scenic importance;

(2) areas of substantial recreational value and/or opportunity;

(3) areas of significant hazard if developed due to storms, floods, erosion and salt water intrusion; or

(4) areas needed to protect, maintain or replenish coastal lands or resources.

The Maine Critical Areas Program has identified 44 principal coastal beaches with a cumulative length of 60 km. From this list, 29 beaches were selected for field checking based on the geological and botanical criteria outlined in Attachment A. To date, two dozen coastal beach sites have been placed on the State Registry of Critical Areas.

The Critical Areas Program list of beaches does not include many of the states major recreational beaches. However, these are precisely the beaches which most need protection to preserve their recreational values. Thirty-four sand beaches have been identified as of state level recreational significance in a report prepared for the Bureau of Parks and Recreation. These were selected due to their size, sand texture, history of use or geographic location. The majority of these beaches are located southwest of Casco Bay.

A number of the beach areas identified for the Critical Areas Program and the Bureau of Parks and Recreation are publicly owned. These beach areas can be managed for resource conservation under Shoreland Zoning, the statutes of the Land Use Regulation Commission, the Submerged Lands Law and the Coastal Wetlands Act.

The administration of each of these laws is described in Section 7 of Maine's Coastal Program. That these laws are being enforced to protect the public rights in Maine's coastal beaches is evidenced by the denial of an application to construct a seawall on Popham Beach. The project was denied, in part, because it was found that it would "unreasonably interfere with existing recreational and navigational uses in that the wall will restrict the use of the beach by the public" and "may contribute to erosion of adjacent properties."

There is a growing body of literature on beach protection in Maine, including public beaches. In determining the needs for protection of public coastal beaches, consideration is being given to such factors as (a) environmental, esthetic or ecological conservation (including protection from overuse and mitigation of erosion losses[1/]), and (b) protection for public use benefits (including recreational or historic uses). These factors have been considered in the preparation of the draft document Maine's Coastal Beaches: Recreation and Conservation, prepared for the Bureau of Parks and Recreation.

Among the sources available for guidance in the protection of Maine's coastal beaches are the following:

Maine Audubon Society. Seawall Policy. Approved April 5, 1978

Maine Bureau of Parks and Recreation. 1975 Coastal Beach Analyses-Kittery to Portland. Unpublished. Augusta, May, 1975.

_____. Maine Comprehensive Outdoor Recreation Plan. Augusta, March, 1977.

_____. 1975 Visitor Use Survey: Day Use State Parks and Coastal Municipal Beaches from Portland to Kittery. Augusta, September, 1975.

_____. "Southern Coastal Research-Initial Report". Unpublished memorandum by B.L. Walker, Augusta, April 15, 1975.

_____. Maine Resident Outdoor Recreation Participation and Preferences Survey.

Natural Resources Council of Maine. Resolution Re: The Need for a Comprehensive State Policy Regarding Protection of the State's Sand Beaches. Approved March 10, 1978.

1/ See also the element of Maine's Coastal Program dealing with erosion/mitigation planning.

Nelson, B.W. and L.K. Fink, Jr. Geological and Botanical Features of Sand Beach Systems in Maine. Prepared for the Maine Critical Areas Program, 1978.

St. Pierre, James A. Maine's Coastal Beaches: Recreation and Conservation. Prepared for the Maine Bureau of Parks and Recreation, 1978.

Timson, Barry and Donald Kale. Maine Shoreline Erosion Inventory. Unpublished. Prepared for the Maine State Planning Office, 1977.

Trudeau, Philip, Paul J. Godfrey and Barry S. Timson. Beach Vegetation and Oceanic Processes Study of Popham State Park Beach, Reid State Park Beach, and Small Point Beach. Unpublished. Maine Department of Conservation and Soil Conservation Service. September, 1977.

Maine Board of Environmental Protection. Policy on New Seawalls. Adopted May, 1978.

Ongoing programs relating to beach protection planning are described above (1.2).

SHORELRONT ACCESS AND PROTECTION

3. ACCESS AND PROTECTION PLANNING POLICIES AND LEGAL AUTHORITIES

3.1 Access Policies and Legal Authorities

As discussed in section 2.2, all coastal planning in Maine must progress within the unusual framework of the Colony Ordinance of 1641-47, which authorized private land ownership in the intertidal zone, subject to certain public rights:

> It is declared, that in all creeks, coves, and other places about and upon salt water, where the sea ebbs and flows, the proprietor, or the land adjoining, shall have propriety to the low water mark, where the sea doth not ebb above a hundred rods, and not more wheresoever it ebbs further.
>
> Provided, that such proprietor shall not by this liberty have power to stop or hinder the passage of boats or other vessels, in or through any sea, creeks or coves, to other men's houses or lands.[1]

While private ownership of the intertidal lands limits the public's opportunities along the seashore, the Colony Ordinance also specified the public's rights in the area between high and low tide.

> Every inhabitant who is an householder shall have free fishing and fowling in any great ponds, bays, coves and rivers, so far as the sea ebbs and flows within the precincts of the town where they dwell, unless the freemen of the same town, or the general court, have otherwise appropriated them.[2]

Original authority, then, to provide public access to the shore is rooted in this mid seventeenth century statute. For without the ability to get to the intertidal zone across private property, it is difficult, and in many cases impossible, to exercise those rights explicitly reserved for the public.

Besides the Colony Ordinance, a number of policies pertaining to the improvement of physical and visual shorefront access in Maine have been articulated in recent State statutes and other documents. These policies, with legal authorities, are listed in Table 4.

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[1] From the 1814 Edition of Ancient Charters and Laws of the Colony and Province of Massachusetts Bay, p. 148.

[2] Ibid.

Table 4

STATE POLICIES AND LEGAL AUTHORITIES PERTAINING TO SHOREFRONT ACCESS

Purpose	Authority
Require permits for activities on or over tidal or subtidal lands to insure no unreasonable interference with recreational and other uses.	*Coastal Wetlands Act, 38 M.R.S.A. §471-478
Subject shoreland areas to zoning and subdivision controls in order to conserve cover, visual as well as actual points of access to inland and coastal waters and natural beauty.	*Shoreland Zoning, 12 M.R.S.A. §4811-4814
Assure that activities do not unreasonably interfere with navigational or recreational uses of rivers above head of tide.	*Stream Alteration Act, 12 M.R.S.A. §2206-2212
Acquire in behalf of the State, land or any interest therein within the State, with or without improvements, by purchase or gift, and by eminent domain.	*Bureau of Parks and Recreation, 12 M.R.S.A. §203
Acquire, construct and maintain public facilities for boats to improve public access to the public waters of the State.	Bureau of Parks and Recreation, Public Facilities for Boats Program, 38 M.R.S.A. §321-329
Identify methods and procedures to assure public access to navigable waters for recreation purposes.	Department of Environmental Protection responsibilities under Federal Water Pollution Control Act Amendments of 1977, Section 208(b)(2)(A)
Permits will not normally be approved for new seawalls or similar obstructions inasmuch as they interfere with recreational and navigable uses of the intertidal zone.	Policy of the Board of Environmental Protection
Acquire, construct, operate, and maintain such harbor facilities as may be necessary to implement the planned development of coastal resources, ports and harbors.	Department of Transportation, 23 M.R.S.A. §4206
Enhance and protect the natural scenic beauty of the State by controlling the indiscriminate use of outdoor advertising.	*Maine Traveler Information Services, 23 M.R.S.A. §1901-1925
Assure that the subdivision of land is conducted in such a way that air and water quality standards are maintained and scenic values and areas of natural beauty are conserved.	*Subdivision law, 30 M.R.S.A. §4956
Retain land or water areas in their natural, scenic, open or wooded conditions (to preserve visual access).	*Conservation Restrictions, 33 M.R.S.A. §667-668
Protect outstanding coastal areas and provide adequate visual or foot access to coastal shoreline.	Bureau of Parks and Recreation, S.C.O.R.P.

*Enforceable policies.

Those that refer to enforceable laws which provide some control over the restriction of the public's rights in shore areas are distinguished by an asterisk. The most important laws pertaining to the protection of physical access are the Coastal Wetlands Alteration Act and the Mandatory Shoreland Zoning and Subdivision Control Act.

3.11 Coastal Wetlands Act - A history and description of uses and areas regulated by the Coastal Wetlands Act are included in Section 7.3 of Maine's Coastal Program. Briefly, the purpose of the law is to assure that dredging, draining, filling, or construction of permanent structures on or over any tidal or subtidal land, is conducted such that it *does not unreasonably interfere with existing navigational or recreational uses*, cause unreasonable soil erosion, unreasonably interfere with the natural flow of any waters, unreasonably harm wildlife or freshwater, estuarine, or marine fisheries, or lower the quality of any waters. The law requires that any person proposing such activity first obtain a permit.

Permits for alterations may be issued by the Board of Environmental Protection (BEP) (provided the alterations are consistent with the standards in the Act) or by a municipality, provided the municipality has a) established a planning board, b) adopted a Shoreland Zoning ordinance approved by the BEP and by the Land Use Regulation Commission, and c) has made provision by ordinance or regulation for prompt notice to the BEP and the public upon receipt of the application and for written notification to the applicant and the BEP of the issuance or denial of a permit. The BEP may, after a public hearing, revoke the municipality's permit granting authority.

Persons proposing to permanently alter an intertidal or subtidal area must fill out the permit application form supplied by the Department of Environmental Protection (DEP) or by the municipality, if that municipality has permit granting authority. Applicants must indicate the location of the proposed project on the appropriate U.S.G.S. topographic map, and submit it with both a sketch of the project and a scale drawing of the coastal wetland to be affected (showing the project in detail, the landowner's property boundary lines, and low and high water marks). The applicant must describe: a) the present use of the wetland, b) the project, and c) the measures which will be taken to protect the surrounding area from any adverse effects of the project.

When the application is received by the DEP, it is checked for completeness and then assigned a permanent identification number. A visit to the site is made by at least a Department of Marine Resources staff member, and perhaps representatives of the Department of Inland Fisheries and Wildlife or the Soil Conservation Service. A summary of the information is then sent to the following Review Agencies, with a request for their comments within two weeks: the municipality, the Department of Marine Resources, the Regional Planning Commission, the Soil and Water Conservation Commission, and the Department of Inland Fisheries and Wildlife. After the review comments are received, the application is acted on by either the Department of

Environmental Protection staff or by the Board of Environmental Protection.

The DEP staff act on the following types of applications: a) pile structures entirely above mean low water, b) repairs and/or maintenance necessary to preserve or restore an existing structure or land contour or one which has existed on the applicant's property within one year prior to the date of application, if the proposed project will not result in any harm to the natural environment, c) erosion preventive measures, d) trenching operations where there will be immediate restoration, e) marine railways or ramps where no significant dredging or filling is involved. The staff order is then written either approving, denying, or approving with conditions, and the order is mailed to the applicant.

If the BEP action is required, a working document with recommendations is prepared by the DEP staff and mailed to the BEP members one week prior to the next scheduled Board meeting for its consideration and deliberation. At the meeting, a decision is made on the application to either approve, approve with conditions, deny, or set a date for a public hearing on the application. Within 30 days after receipt of an application, the BEP or the municipality must either issue or deny the permit, or order that a public hearing be held within 30 days of the order. If a public hearing is held, the permit must be issued or denied within 30 days after adjournment of the hearing. An applicant may request a public hearing.

Before issuing a permit, the BEP must notify the municipality wherein the planned activity is proposed and consider any comments received from the municipality within a "reasonable period" (usually two weeks). A permit issued by the BEP is effective on the date of approval, while a permit issued by a municipality does not become effective until 30 days after issuance. Immediately after issuance of a permit by a municipality, a copy of the application for the permit and the permit issued must be sent to the BEP. The BEP may then review the permit and either approve, deny, or modify it. Failure of the BEP to act within 30 days of receipt of the permit from the municipality constitutes effective approval of the permit.

If a permit is denied, the applicant may request a hearing by the Board or municipality. An average of perhaps half a dozen applications are appealed annually, and perhaps one of those may be reversed. Within 10 days of the applicant's receipt of the final Board decision, anyone who is aggrieved by the decision may petition the BEP for an opportunity to present new or additional evidence which may result in reconsideration of the conditions of approval or denial. The BEP may, within 30 days of receipt of such petition and after appropriate notice, grant the petition in full or in part, order a public hearing, or dismiss the petition. Municipalities which handle an application may handle appeals in the same manner as does the BEP.

Anyone aggrieved by any order or decision of the Board or municipality in regard to any matter upon which there was a hearing before the Board or municipality and of which a transcript is available, may, within 30 days after notice of the filing of such order or decision, appeal to the Superior Court. The court's review is limited to

questions of law and to whether the Board or municipality acted regularly and within the scope of its authority. The decision of the Board or municipality is final so long as supported by substantial evidence. The court may affirm, reverse, or remand the decison of the Board or munciipality for further proceedings.

Any filling, dredging, depositing, altering, or erecting of permanent structures which takes place on tidal or subtidal land without a permit or contrary to the provisions of a permit is a violation of the law and is subject to a fine of not more than $500 for day of violation, regardless of whether or not the violation was unintentional. In the event of a violation, the Attorney General may institute proceedings to prevent further violation and to compel restoration of the affected area to its prior condition. Enforcement of the regulations in the law can be carried out by all law enforcement officers, but is primarily done by the Department of Marine Resources (DMR) coastal wardens, and to a lesser extent by Department of Inland Fisheries and Wildlife wardens, under a formal cooperative agreement with the DEP.

To date, in at least one case a wetlands alteration permit to repair a seawall on a sand beach has been denied. The BEP rejected the application because, among other things, "*the project will unreasonably interfere with existing recreational and navigational uses in that the wall will restrict the use of the beach by the public.*"

Recently the Board of Environmental Protection has approved a policy that hereafter it will normally be unable to make the necessary favorable findings of fact set forth in the Coastal Wetlands Law when an application is made for new seawalls on sand beaches. By emphasizing the burden of proof on applicants, the Board has clearly recognized that seawalls can be "physical obstructions in the intertidal zone which obstruct public rights in that zone."

3.12 Shoreland Zoning Act - A detailed history and description of uses and areas regulated by the Shoreland Zoning Act are to be found in Section 7.4 of Maine's Coastal Program.

Section 4811 of the statute specifies that one purpose of the act is to "*conserve* shore cover, *visual as well as actual points of access* to inland and *coastal waters* and natural beauty."

The Act states: "Cities and towns pursuant to presently existing enabling legislation are authorized to plan, zone, and control the subdivision of land." Section 4813 gives the Department of Environmental Protection (DEP) and the Land Use Regulation Commission (LURC), power to adopt suitable ordinances, following consultation with the State Planning Office (SPO) for those municipalities that fail to meet the requirements of the Act, and requires the municipalities to administer and enforce the State imposed ordinance.

The role of the DEP, LURC, and SPO is that of ensuring that the objectives of the law are met. The State Planning Office is responsible for coordinating the efforts of the Board of Environmental Protection and the Land Use Regulation Commission and ensuring that municipalities and all state agencies mutually cooperate to accomplish the purposes of the Act.

The Act requires towns to submit their shoreland ordinances to the State Planning Office for review for conformance with the laws. In practice, this administrative procedure has worked well, and despite inadequate funding, the State Planning Office (with assistance from the Regional Planning Commissions) has helped the coastal towns achieve reasonable shoreland ordinances. Nonetheless, there is still more to be done as many ordinances should be strengthened and refined.

The Act makes provision for ensuring that municipalities enforce their ordinances:

> If a municipality fails to administer and enforce zoning ordinances adopted by it or the State, pursuant to the requirements of this chapter, the Attorney General shall seek an order of the Superior Court of the county in which the municipality lies requiring the municipal officials to enforce such zoning ordinance. The Attorney General shall be made a party to all civil and criminal actions in which the pleadings challenge the legality of any ordinance or portion thereof adopted pursuant to the guidelines promulgated under section 4813.

Every coastal town administers and enforces its own "Shoreland Ordinance." Decision making typically rests with the Code Enforcement Officer, who is often the Town Manager, or the Planning Board, depending on the permit required. (In some towns the Board of Selectmen act as the Planning Board.) Appeals are generally heard by a Board of Appeals appointed by the municipal officers.

Each local shoreland ordinance lists which uses require a permit from the Code Enforcement Officer or the Planning Board and, although exact submission requirements may vary locally, applications must be submitted in writing. Additional information may then be required to determine if the application conforms with the ordinance. Generally, action as to whether a permit has been approved, approved with conditions, or denied, should occur within 60 days of receipt of a complete application. No permit can be denied if it is in conformance with the provisions of the ordinance. Among other things, the minimum Guidelines require that the Planning Board of Enforcement Officer find that the proposed use *"will conserve actual points of public access to waters,"* and *"will conserve visual points of access to waters as viewed from public facilities."*

Any person found in violation of any provision of a local shoreland ordinance may, after reasonable notice, be fined for each violation.

3.2 Protection Policies and Legal Authorities

Enforceable State policies and legal authorities pertaining to shoreland protection have been articulated in the section of Maine's Coastal Program concerned with Goals, Objectives and Policies

(Section 6). Drawn from the eleven "core" laws of Maine's Coastal Program, the primary protection policies can be summarized as follows:

- Assure that development in shoreland areas is conducted so that healthful conditions and water quality are maintained, wildlife habitat is conserved and structures are placed so as to conserve shore cover, water access, and points of natural beauty.

- Assure that the subdivision of land is conducted in such a way that air and water quality is maintained, soils remain stable, safe highway conditions prevail, and scenic values and areas of natural beauty are conserved.

- Assure that activities in coastal wetlands conserve wildlife, and freshwater, estuarine or marine fisheries and their habitats, through a permit procedure.

4. DESIGNATION OF SPECIAL MANAGEMENT AREAS

Areas of Particular Concern and Areas for Preservation or Restoration may be considered special because of their coastal related values or because they may face pressures which require detailed attention.

4.1 Areas of Particular Concern

Maine's Coastal Program has defined as geographic areas of particular concern all land areas within 250 feet of normal high water of any great pond, river, or salt water body in the state's coastal area (Appendix C). The Shoreland Zoning Law and Land Use Regulation Commission, in its jurisdiction, provide a means to control and guide development in these areas.

4.2 Areas for Preservation or Restoration

Besides this, the Program includes as areas for preservation or restoration (1) Class A waters, (2) resource protection districts within 250 feet of shoreline and (3) certain specified protection districts under the jurisdiction of the Land Use Regulation Commission (Appendix D). Each of these areas has been designated under existing state law for the purpose of preserving or restoring them for their conservation, recreational, ecological, or esthetic values.

The Coastal Program is also supportive of Maine's Critical Areas Program (Appendix D3). The Critical Areas Program identifies, documents, registers, and encourages the conservation of areas with natural features of state significance. The Program has been described in greater detail elsewhere in this discussion.

SHOREFRONT ACCESS AND PROTECTION

5. LEGAL AUTHORITIES AND FUNDING PROGRAMS

Every level of jurisdiction and each agency has specified concerns and responsibilities pertaining to shorefront access and protection. The following concepts outline general responsibilities of legal authorities.

> Federal jurisdiction - protection, acquisition, development and management of land and facilities of national importance;
>
> State jurisdiction - protection, acquisition, development and management of land and facilities of statewide importance;
>
> Municipal jurisdiction - protection, acquisition, development, and management of land facilities of local importance.

Of course, there is cooperation among jurisdictionswhere, for instance, the federal government provides financial assistance for state and local programs as through the Land and Water Conservation Fund.

The provision of increased access and protection opportunities depends to a large extent upon adequate funding at all levels. It is germaine to cite the major funding sources through which monies are available for access and conservation projects in coastal Maine.

5.1 Federal

A major source of federal funds for public recreation and open space projects in Maine is the Land and Water Conservation Fund (LAWCON) administered by the Heritage Conservation and Recreation Service. The State of Maine received $1.75 million in LAWCON monies during fiscal year 1977. Beginning in FY 1980, Maine is expected to receive approximately $4.7 million annually due to a recent amendment to LAWCON authorizing a total national expenditure of $900 million annually. This new level means a major increase in matching funds available to the State. In addition, LAWCON monies can be matched with revenue sharing funds under Public Law 94-488. They can also be matched with Community Development Block Grants.

The U.S Fish and Wildlife Service has three major refuges in coastal Maine; the Rachel Carson National Wildlife Refuge in southern Maine and the Moosehorn and Petit Manan National Wildlife Refuges in Washington County. Additions, funded through the sale of "duck stamps" will be made to the Rachel Carson Refuge to round out the 4,011 acre total authorized acquisition. Further funding may be available under recent amendments to the Land and Water Conservation Fund. The Service now has authority to purchase

"nationally significant wildlife ecosystems" and "unique wildlife ecosystems." Increases in authorized LAWCON monies bring the national projected funding level to $75-80 million per year for FY 1980-89. The Service may, in the near future, acquire one or more large coastal island properties in eastern Maine to add to its refuge holdings.

The National Park Service during the 1970's, has been preparing a master plan for Acadia National Park. This process continues and is expected to include a review of proposed island acquisitions in Hancock and Knox Counties.

The U.S. DOT, Bureau of Public Roads can assist the state highway department in the control of outdoor advertising, and the screening of junk yards under the Highway Beautification Act of 1965, both of which improve visual attractiveness of coastal areas.

The Office of Coastal Zone Management has funds for three types of relevant programs. Coastal Zone Management monies can be used for (1) state regional and local planning for coastal resource conservation and development, (2) the establishment of estuarine sanctuaries, and (3) the acquisition of lands to provide access to public coastal areas, particularly beaches, and to preserve coastal islands. The last of these is the most relevant to this discussion. Under Section 315 (2) of the CZMA Amendments of 1976, the Secretary of Commerce is authorized "to make 50% grants to any coastal state to acquire lands to provide access to public beaches and other public coastal areas." To meet these ends, an annual appropriation of $25,000,000 through FY 1980 has been authorized.

While not a direct funding program, federal surplus properties should also be mentioned. Several military service branches, including the Air Force, Navy and Coast Guard, hold important pieces of real estate on the Maine coast. If and when these become available as surplus properties, the State or local governments could acquire them for open space and access.

5.2 State

A principal source of funds for outdoor recreation and resource conservation at the state level is the Maine Bureau of Parks and Recreation. As of November, 1977, the Bureau had $3.2 million remaining from two land acquisition bond issues and $1.8 million from a development bond issue approved in referendum. Much of the acquisition money will be used to purchase land inland at Bigelow Mountain under a referendum mandate approved by Maine voters in 1976. Besides these bond issue funds, the Bureau anticipates a $25,000 legislative appropriation in matching funds during FY 1979 for community recreation projects. Finally, $16,050 remains in a nonlapsing account available on a 50 percent matching basis to local conservation commissions for open space and recreation planning.

There are a number of considerations which affect the funds needed and available for development of unimproved properties currently

held by the Bureau of Parks and Recreation. Pending litigation over the ownership of public lot grass and timber rights is one variable. If the State does not win its claim to ownership of the rights, the Bureau may be able to use the donated value of the rights as the State's share to apply for matching LAWCON monies. Another unknown factor is the cost of development of some presently undeveloped holdings. Estimates have been made for most but not all of these parcels. Third, development costs of many projects are not matched 50-50, state-federal, since some improvements are not eligible for federal reimbursement. The match is often closer to 60-40, state-federal.

All of these considerations aside, it is estimated that through 1980 the State will be able to come up with funds sufficient to match about 40 percent of the Land and Water Conservation Fund monies allocated to Maine as potential matching funds for both state and local projects.

As discussed in 1.11, the Bureau of Parks and Recreation also administers the State's Public Facilities for Boats Program, financed through a Boating Facilities Fund. Money for the fund comes from a segment of the gasoline tax paid by the nonhighway gasoline user. Based on the 1965 legislative "finding of fact" that motorboat users account for at least 1.25% of the total gasoline consumption, there is set aside 1.25% of the total excise tax on internal combustion engine fuel sold or used within Maine (excluding aircraft). From this 1.25% are deducted refunds paid to purchasers and users of gasoline for commercial motorboats. Eighty percent of the balance of the 1.25% after paying out such refunds is credited to the Boating Faciliti-s Fund. About $350,000 is channelled to the fund annually.

Aside from the Bureau of Parks and Recreation, the major state agency with funding for land conservation and access is the Department of Inland Fisheries and Wildlife. In 1974, a $4 million referendum was approved by voters for acquisitions by the Maine Department of Inland Fisheries and Wildlife. The Department planned to allocate these funds according to the following habitats:

1. Upland Areas . . . . . 40-50% of money
2. Coastal Salt Marsh 20-25%
3. Inland Wetland and Stream Flow Augmentation 20-25%
4. Eider Nesting Islands 5-10%
5. Miscellaneous. 5-10%

Some coastal lands have already been acquired by the Department with these monies; approximately $1.3 million dollars remains. The Department also provides water access in important coastal areas for wildfowl hunters.

Visual access on the coast is enhanced both by the activities of the Maine Department of Transportation and the granting of conservation easements by private landowners to State and other land holding agencies.

In addition to budgeting money for highway rest areas, the Department of Transportation also will assist in the implementation of the Maine Traveler Information Services Act, which is designed to protect the scenic beauty of Maine roadsides by controling indiscriminate use of outdoor advertising. Both of these programs improve visual access to the shore.

Under Maine statutes Title 33 § 667-668, "conservation restrictions" are defined and authorized for acquisition by any governmental body having power to acquire interest in land. Some non-governmental organizations may also accept conservation easements under particular circumstances, for example, if they hold title to lands adjacent to or within sight of the land for which an easement is being sought. To date about 9,000 acres of private lands have been encumbered with conservation easements in the coastal area. Easements have been accepted along the Maine coast which restrict development, thus preserving visual access, by the National Park Service, the U.S. Fish and Wildlife Service, the Maine Bureau of Parks and Recreation, the Maine Department of Inland Fisheries and Wildlife, the National Audubon Society, the Nature Conservancy, the Maine Audubon Society, and a number of coastal towns.

5.3 Local

According to the 1977 Statewide Comprehensive Outdoor Recreation Plan, through 1990 communities in Maine are expected to provide approximately $23 million for acquisition of land for outdoor recreation statewide. Local funds are provided through municipal recreation committees and/or conservation commissions.

SHOREFRONT ACCESS AND PROTECTION

Attachment A

CRITERIA FOR PROPOSED COASTAL SANDY BEACH AND DUNE CRITICAL AREAS

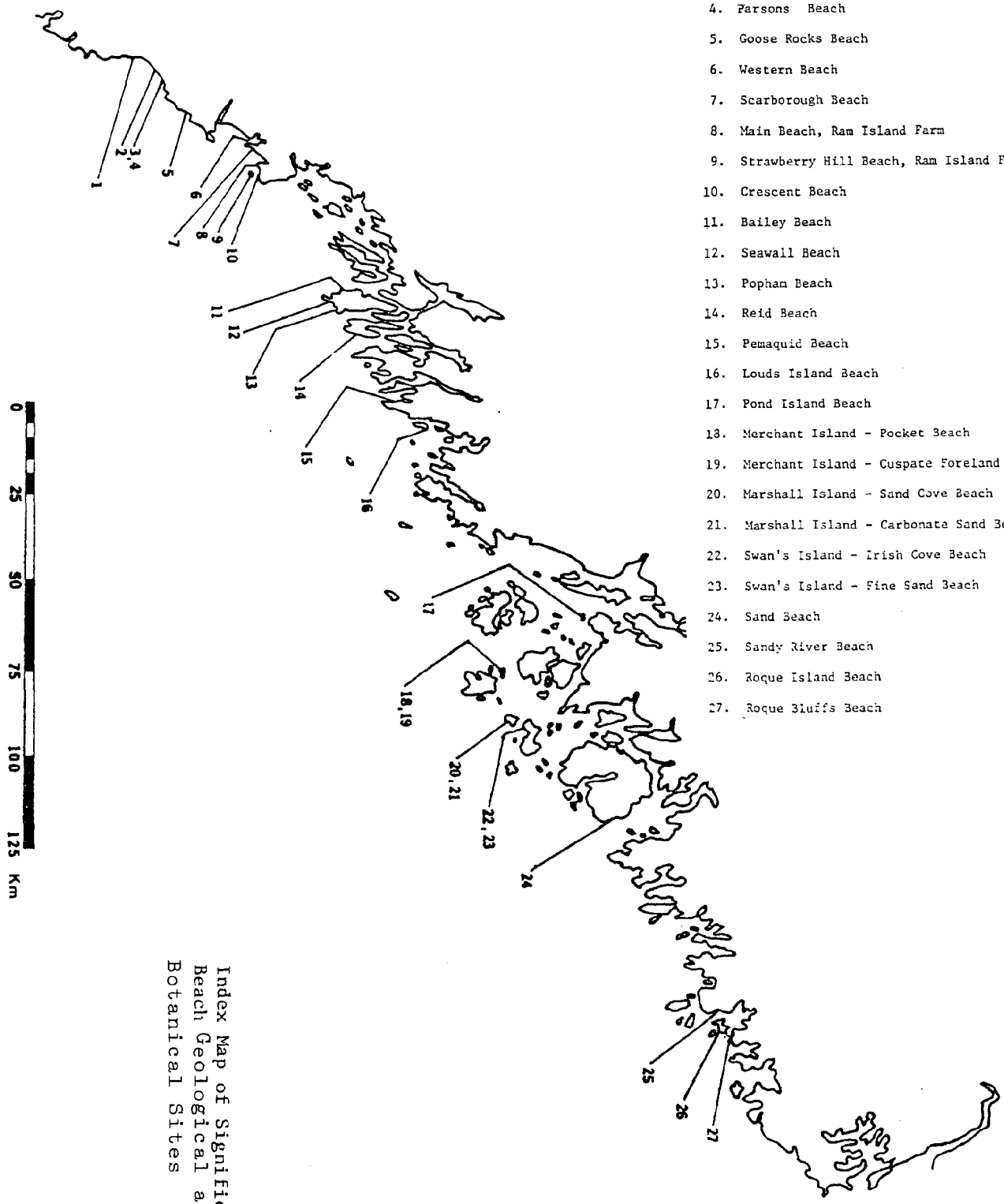
1. Beach and Dune areas must be in a natural state.
2. Geographic distribution.
3. Scientific and educational values.
4. Only geological and botanical criteria are considered.

Geological Criteria - Two criteria were developed to determine the geological significance of a beach or dune area. One criterion was whether an area constituted a good example of the various geomorphic types and features. The second criterion was to include those examples which, either through their dune and beachface morphology or actual response behaviour, manifest the interaction between the physical elements of beach systems and various process agents. These criteria produced two lists, those geomorphic types and features which occur in Maine and those various process agents which leave their imprint on Maine beaches and dunes. These lists are as follows:

Botanical Criteria - All undisturbed coastal sand dune and berm plant habitats in Maine are significant simply because of their limited extent. Additional criteria for the determination of significant coastal sandy dune and berm plant habitats are based on the following botanical features.

- Landward to seaward zonation caused by salt spray effects, soil nutrient changes, and sand burial or deflation rates.
- Mosaic floristic patterns in stabilized parabolic dune fields.
- Dune field successional stages subsequent to accretion, fire, foot traffic, grazing, cutting or eolian activity.
- Vegetation development in overwashes and breaches.
- Vegetation patterns on perennially accreting berms and spits.
- Good stands of species with limited acreage in the state; e.g. American Beachgrass, Beach Heather, Wormwood, Jointweed.
- Disjunct populations, especially stands of American Beachgrass north of Reid State Park.
- Geographic trends in abundance or ecotype which are of scientific value.
- The range limits of the following coastal sandy dune and berm plants in Maine: wormwood, beach plum, beach heather, earthstar puffball, jointweed, pinweed, seaside spurge.

Source: Bruce W. Nelson & L. Kenneth Fink, Jr. Geological and Botanical Features of Sand Beach Systems in Maine, prepared for Maine Critical Areas Program, March 1978.



1. Ogunquit Beach
2. Laudholm Beach
3. Crescent Surf Beach
4. Parsons Beach
5. Goose Rocks Beach
6. Western Beach
7. Scarborough Beach
8. Main Beach, Ram Island Farm
9. Strawberry Hill Beach, Ram Island Farm
10. Crescent Beach
11. Bailey Beach
12. Seawall Beach
13. Popham Beach
14. Reid Beach
15. Pemaquid Beach
16. Louds Island Beach
17. Pond Island Beach
18. Merchant Island - Pocket Beach
19. Merchant Island - Cuspate Foreland Beach
20. Marshall Island - Sand Cove Beach
21. Marshall Island - Carbonate Sand Beach
22. Swan's Island - Irish Cove Beach
23. Swan's Island - Fine Sand Beach
24. Sand Beach
25. Sandy River Beach
26. Roque Island Beach
27. Roque Bluffs Beach

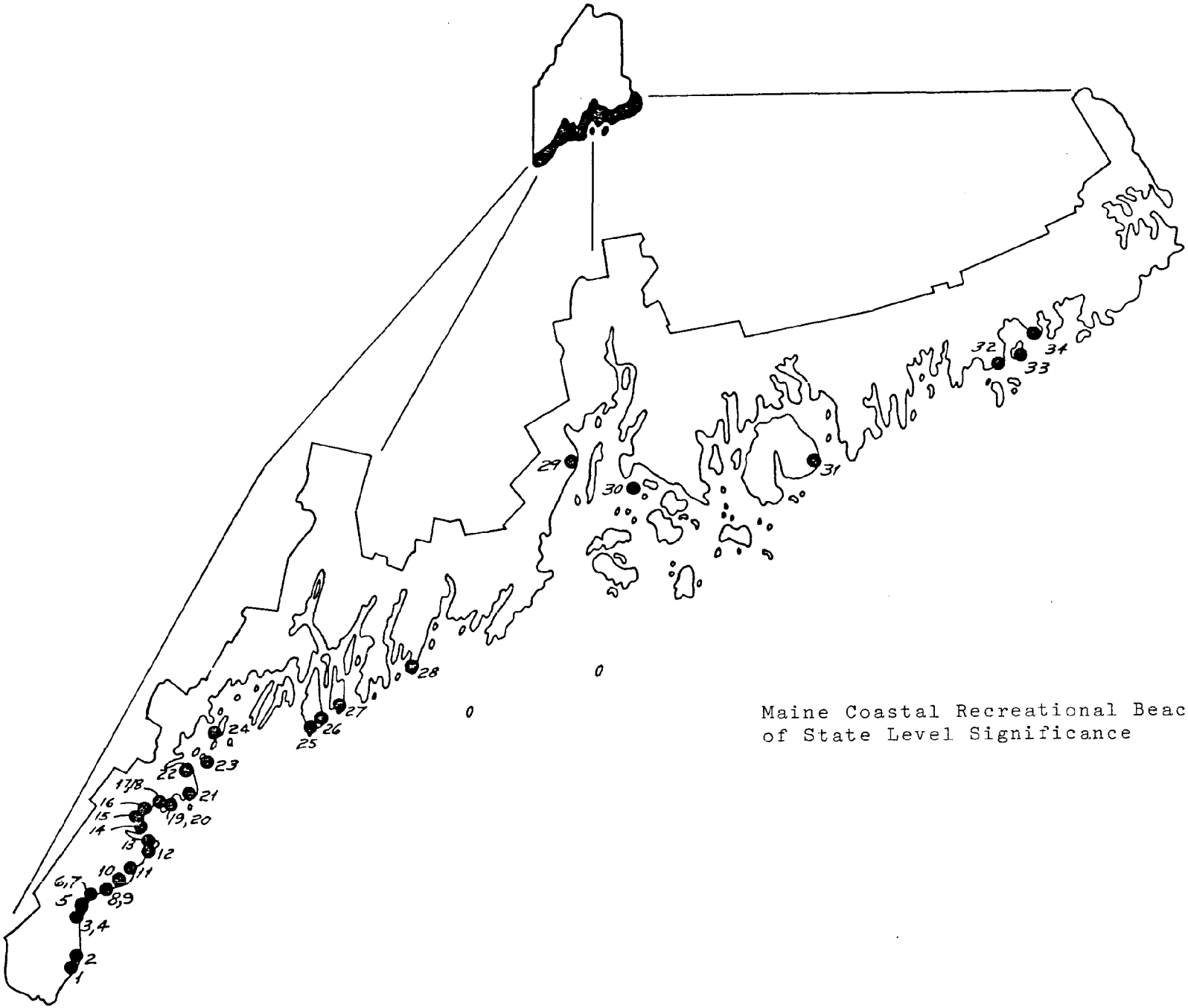
Index Map of Significant Maine Beach Geological and Botanical Sites

Attachment B

MAINE COASTAL RECREATIONAL BEACHES OF STATE LEVEL SIGNIFICANCE
(west to east)

	BEACH	MUNICIPALITY	OWNERSHIP	OPEN TO PUBLIC
1	Long Sands	York	Municipal	Yes
2	Short Sands	York	Municipal	Yes
3	Ogunquit	Ogunquit	Municipal	Yes
4	Moody	Wells	Private	Yes
5	Wells	Wells	Private	Yes
6	Drakes Island	Wells	Private	Yes
7	Laudholm	Wells	State	Yes
8	Crescent Surf	Kennebunk	Private	No
9	Parsons	Kennebunk	Private	Yes
10	Goochs	Kennebunk	Municipal	Yes
11	Goose Rocks	Kennebunkport	Private	Limited
12	Fortune Rocks	Biddeford	Private/Mun	Limited
13	Hills	Biddeford	Private	No
14	Saco Beaches	Saco	Private/State	Limited
15	Old Orchard	Old Orchard Beach	Municipal	Yes
16	Pine Point	Scarborough	Private	Yes
17	Ferry	Scarborough	Municipal	Yes
18	Western	Scarborough	Private	Limited
19	Scarborough	Scarborough	Private/State	Limited
20	Higgins	Scarborough	Private	Yes
21	Crescent	Cape Elizabeth	State	Yes
22	Willard	So. Portland	Municipal	Yes
23	Andrews	Portland	State	Yes (Limited)
24	Little Chebeaque	Portland	State	Yes (Limited)
25	Seawall	Phippsburg	Private	Limited
26	Popham-Hunnewell	Phippsburg	Private/State	Yes
27	Reid	Georgetown	State	Yes
28	Pemaquid	Bristol	Municipal	Yes
29	Lincolnville	Lincolnville	Private/Mun	Yes
30	Pond Island	-	Private	Yes
31	Sand	Bar Harbor	Federal	Yes
32	Sandy River	Jonesport	Private	Limited
33	Roque Island	Jonesport	Private	Yes (Limited)
34	Roque Bluffs	Roque Bluffs	State	Yes

Source: James A. St. Pierre, Maine's Coastal Beaches: Recreation and Conservation (Draft), prepared for Maine Bureau of Parks and Recreation, July 1978.



Maine Coastal Recreational Beaches
of State Level Significance

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DRAFT

ENERGY FACILITIES PLANNING IN MAINE

Fulfilling Requirements of Section 305 (b) 8 of
The Coastal Zone Management Act Amendments of 1976

The assistance of the Office of Energy Resources in the preparation of this report is greatly appreciated.

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INTRODUCTION AND SUMMARY

ENERGY FACILITY SITING

0. INTRODUCTION AND SUMMARY

This report documents Maine's existing framework for anticipating and managing the impact from energy facilities in or affecting Maine's Coastal Area. The report will supplement Maine's Coastal Program document adding descriptions of the Public Utilities Commission and the Office of Energy Resources, and amplifying the descriptions of laws which are the core of Maine's Coastal Program but focusing on their role in regulating the siting of energy related facilities.

For the purpose of this report, energy facilities will include any equipment or facility which is used primarily for exploration, storage, transfer, processing or transporting any energy resource; or for the manufacture, production, or assembly of equipment, machinery, products or devices which are involved in energy producing activity.

The report is organized according to outline suggested in the Federal Register (Vol. 43, No. 41, March 1, 1978). The prargraph in parenthesis under each section is from the Federal Register.

Section 1

Identifies energy facilities which are likely to locate in, or which may significantly affect, the coastal area. Based on existing and future demands, it is anticipated that facilities related to liquified natural gas (LNG), petroleum industry, electric generating plants, facilities related to OCS activities and coal storage/handling may wish to locate on the Maine coast and be subject to the State's site review process.

Section 2

Describes the procedures used for assessing the suitability of sites for the proposed facility. This procedure includes both the regulatory mechanism and the availability of technical planning services which aid the developer in selecting sites prior to seeking a license or permit.

The State Planning Office through its work under Section 305 has developed an extensive series of resource maps, sponsored planning reports and initiated a policy refining process all of which serve to guide the planning for energy facilities.

The primary, and most important regulatory measure for assessing suitability of energy facility sites is the Site Law administered by the Board of Environmental Protection. Other agencies with related roles, described in this section are:

Land Use Regulation Commission, Department of Inland Fisheries and Wildlife, Bureau of Public Lands, Maine Geological Survey, State Planning Office and the local municipalities.

The role of the Public Utilities Commission with respect to new energy producing utilities is considerable and is described in this section.

Section 3

Describes the existing State policies for managing energy facilities and their impacts. In addition to the enforceable policies expressed in the laws of the Governor and the State's Comprehensive Energy Plan has also set policies which guide decisions regarding energy facilities.

Key policies of the State's energy plan are to encourage the development of alternate energy source in order to create and to improve the regulatory process governing energy development to minimize government interference while protecting the State's consumers and environment.

Maine has no policies excluding energy facilities from the coastal zone. Management policies reflect the State's concern for resource preservation and conservation. The policies are embodied in the 11 core laws contained in the Proposal for Maine's Coastal Program.

Section 4

Describes the current planning activities and the information considered in that process.

Short and long-range energy planning as well as forecasting is primarily the responsibility of the Maine Office of Energy Resources (OER).

The State Planning Office has ongoing work on planning for OCS development in Georges Bank, mapping and resource analysis work for identifying suitable sites, providing socio-economic data for other private and public planning purposes and through its coastal program of local agents and regional planning agencies.

Additionally, the coastal unit of the SPO provides staff for the Governor's Advisory Committee on Coastal Development and Conservation which is presently engaged in examining existing State policies regarding the siting of heavy industry on the Maine coast.

The State of Maine cooperates with several Regional and Federal agencies on assessing the energy needs of the State, region and nation. This cooperation has ranged from receiving and reviewing data/projections to advisory arrangements with various interstate agencies.

Agencies that Maine is currently cooperating with in an advisory capacity on energy planning matters include the New England River Basins Commission, Northeast Solar Energy Center, New England Federal Regional Council Energy Resource Development Task Force, and the Massachusetts Energy Facilities Siting Council.

Section 5

Briefly describes the principle agencies with functions related to the planning for a regulation of energy-related facilities. Agencies whose function was already covered in previous sections of this report include the Department of Environmental Protection, Public Utilities Commission, Land Use Regulation Commission, Maine Geological Survey, Maine Office of Energy Resources and the State Planning Office.

ENERGY FACILITIES LIKELY TO LOCATE ON THE MAINE COAST

1

ENERGY FACILITY SITING

1. ENERGY FACILITIES LIKELY TO LOCATE ON THE MAINE COAST

(An identification of energy facilities which are likely to locate in, or which may significantly affect, the coastal zone. (Federal Register, Vol. 43, No. 41, Section 923.14 (1))

1.0 INTRODUCTION

Recent history has shown that the Maine coast has been considered as a desirable location for several different types of energy related facilities. This interest is likely to continue in the future. The types most likely to locate in Maine are energy conversion or energy storage facilities which would be attracted by Maine's clean air, cold water, and relatively undeveloped land.

In this report "energy facilities" considered were those described in the Coastal Zone Management Act Amendments of 1976 (P.L. 94-370), Section 304(5). These included any equipment or facility which would be used primarily

1) "in the exploration for, or the storage, transfer, processing, or transportation of, any energy resource; or

2) for the manufacture, production, or assembly of equipment, machinery, products, or devices which are involved in any activity described...in part (1)."

Examples of energy facilities are electric generating plants, petroleum refineries, oil terminals, liquefied natural gas (LNG) terminals, and Outer Continental Shelf (OCS) platform construction.

The existing flow of energy in Maine in 1974 is shown on Figure 1. It is obvious that Maine is currently heavily dependent on Petroleum fuel. (Source: Maine Comprehensive Energy Plan, 1976, Volume II, Appendix 2)

1.1 NATURAL GAS

The United States uses natural gas for 34% of its total energy consumption. Since 1970, domestic finds of natural gas have decreased in the face of more intensive drilling efforts. Consequently, efforts have been made to increase available supplies of natural gas through development of facilities for receiving imported liquefied natural gas (LNG).

In 1976, Tenneco Inc. announced plans to locate an LNG gasification plant in St. John, New Brunswick. If approved, the LNG would be regasified and put into a pipeline traversing the State of Maine. The existence of the pipeline would probably attract other LNG importers to consider the Maine coast for LNG ports.

Figure 1

FLOW OF ENERGY IN MAINE, 1974

SOURCES	BILLION BTU	PER CENT
All Sources:	317,780	100.0
Coal	1,315	0.4
Fuelwood	6,773	2.1
Natural gas	1,724	0.5
Petroleum	243,724	76.7
Residual	96,015	30.2
Distillate	66,894	21.1
Kerosene	6,328	2.0
LPG	4,326	1.4
Jet Fuel	5,181	1.6
Gasoline	64,981	20.4
Hydropower	33,290	10.5
Nuclear power	38,099	12.0
Net exports of electricity	-7,145	-2.2
Intermediate uses:	116,865	36.8
Hydroelectric generation	33,290	10.5
Nuclear electric generation	38,099	12.0
Other thermal electric generation	45,470	14.3
Ultimate uses;	317,780	100.0
Residential	78,242	24.6
Commercial	33,502	10.5
Industrial	105,757	33.3
Transportation	87,021	27.4
Miscellaneous	5,726	1.8
Electricity transmission losses	7,532	2.4

Between 1985 and 2000 there is a strong possibility that LNG re gasification could occur in Maine. Despite best efforts to convert industry to coal, and conservation efforts, rising demand and decreasing domestic gas supplies are expected to bring about a need for more LNG imports.

Three types of facilities will be required to handle LNG imports: 1) a terminal to offload ships, 2) a regasification plant to change liquid natural gas to its gaseous state, and 3) a pipeline to carry the gas to market.

The LNG imports are carried in vessels having a storage capacity of up to 125,000 cubic meters. Proposals to date indicate that the natural gas pipelines to carry regasified LNG will have a capacity of 1 billion cubic feet per day.

1.2 PETROLEUM

Figure 1 indicates Maine is currently very heavily dependent upon petroleum fuel.

Three types of petroleum-related facilities are possible in Maine during the next 25 years. These include: 1) oil terminals, 2) oil refineries and 3) strategic petroleum reserve/regional storage. Oil terminals are an ancillary facility to either an oil refinery or a petroleum distribution system.

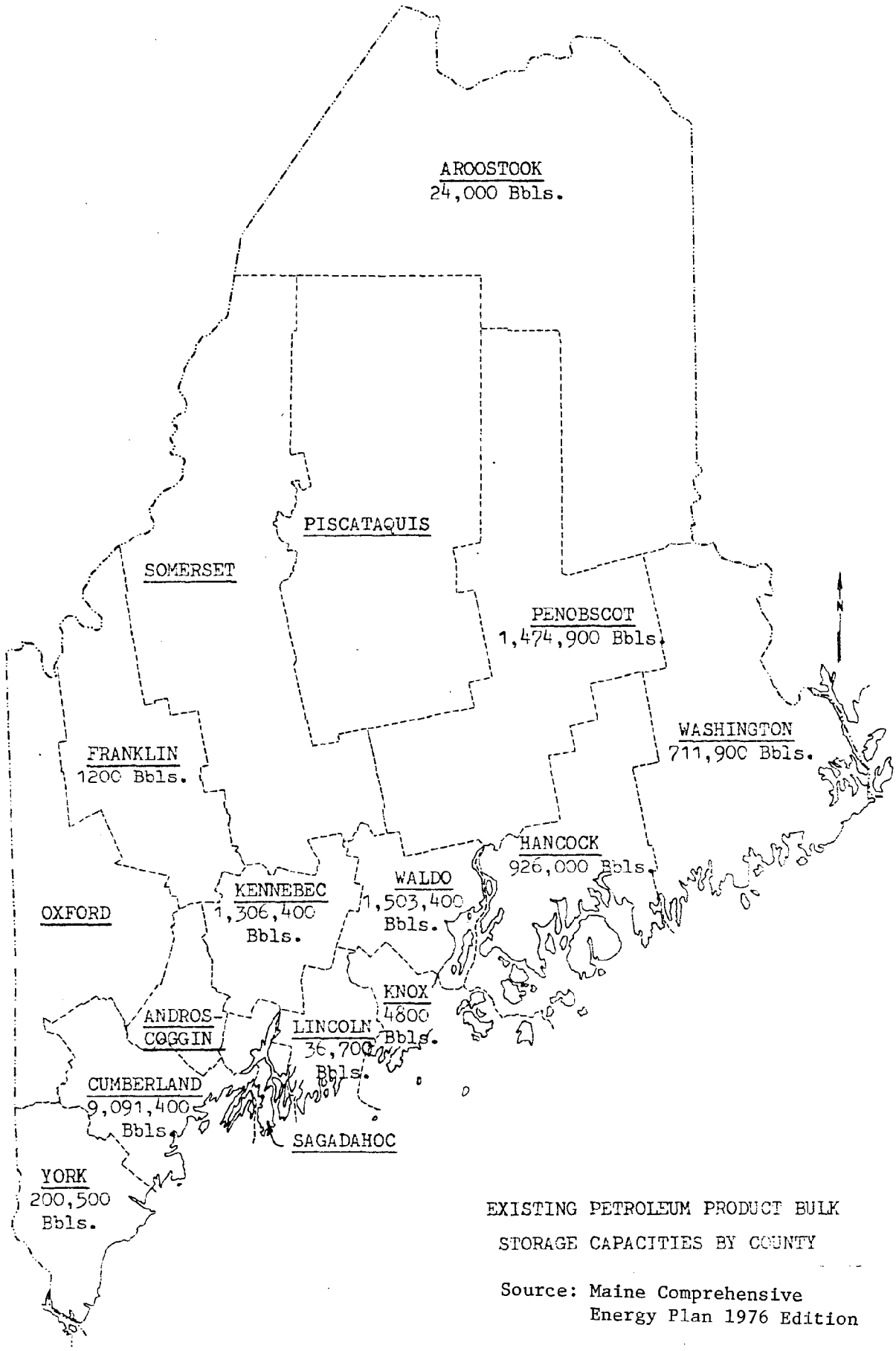
Oil Terminals

Figure 2 shows Maine's current storage facility for bulk petroleum products. Current information indicates adequate storage capacity for all but industrial residual fuels. (Source: Maine Comprehensive Energy Plan, 1976. More detailed information may be obtained from the Office of Energy Resources, Augusta, ME) Inventory levels at any instant in time are not generally available. The expectation is that oil terminals will be added to meet expanded demand. Total added capacity for storage of all fuel types except crude oil is expected to be no more than four million barrels between 1975 and 1985 for the State of Maine, according to Maine Office of Energy Resources and Department of Energy estimates.

A marine oil terminal for a 250,000 barrel per day oil refinery would require sufficient capacity to store about 30 day's supply of crude oil (industry average) or approximately 7.5 million barrels of oil. Oil refineries will probably be served by their own marine terminals.

Figure 3 shows the petroleum and gas pipelines currently in use in Maine. The oil handling facility in So. Portland is the beginning of the Portland-Montreal Pipeline. In the recent past up to 169,000,000 barrels of oil have been shipped through Portland.

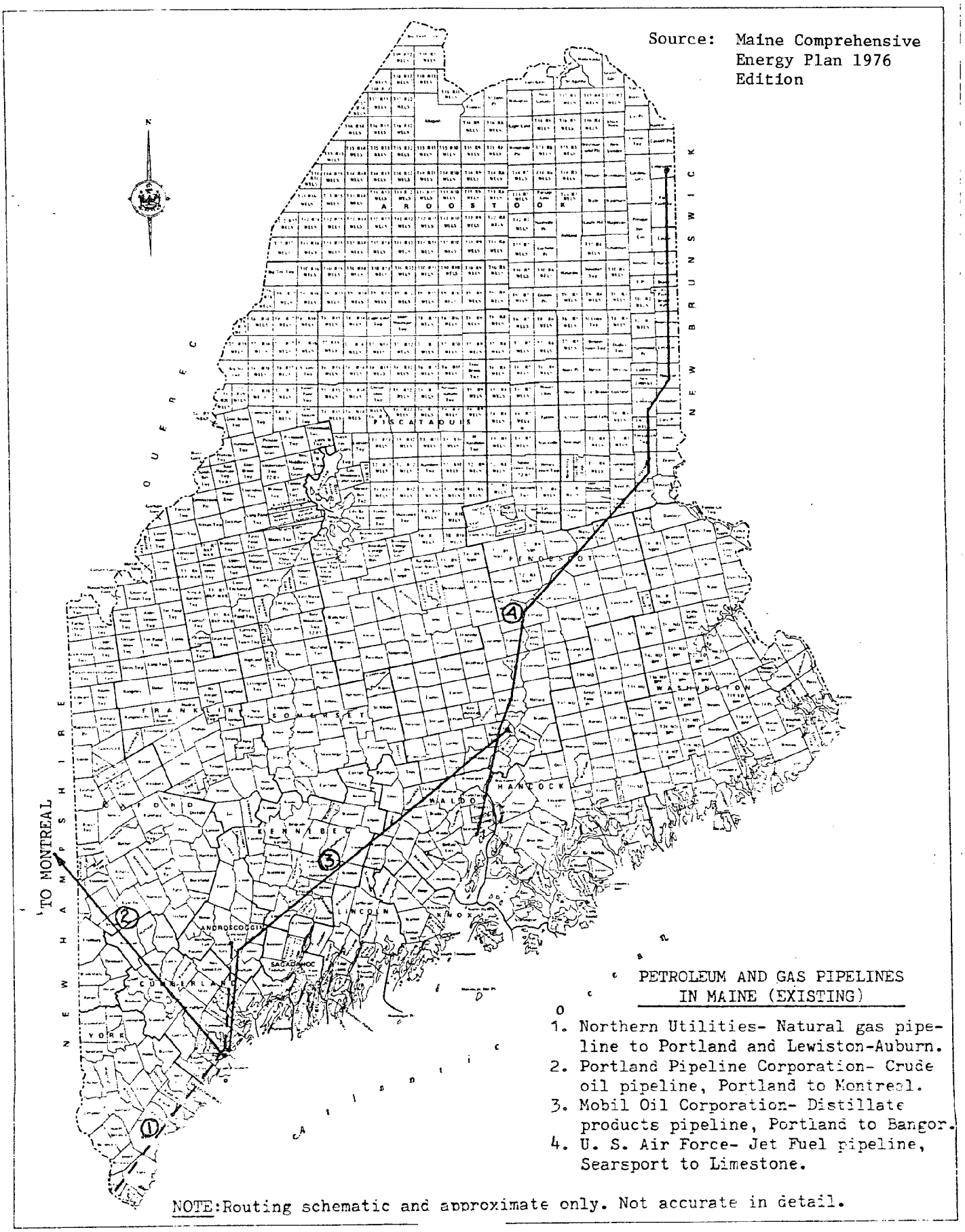
FIGURE 2



EXISTING PETROLEUM PRODUCT BULK STORAGE CAPACITIES BY COUNTY

Source: Maine Comprehensive Energy Plan 1976 Edition

FIGURE 3


Source: Maine Comprehensive Energy Plan 1976 Edition
TO MONTREAL
NEW HAMPSHIRE
QUEBEC
NEW BRUNSWICK
AROOSTOOK
PISCATAQUIS
PENOBSCOT
WASHINGTON
FRANKLIN
SOMERSET
HANCOCK
WALDO
OXFORD
KENNEBEC
LINCOLN
KNOX
ANDROSCOGGIN
SAGADAHOC
CUMBERLAND
YORK
1
2
3
4
PETROLEUM AND GAS PIPELINES IN MAINE (EXISTING)
1. Northern Utilities- Natural gas pipeline to Portland and Lewiston-Auburn.
2. Portland Pipeline Corporation- Crude oil pipeline, Portland to Montreal.
3. Mobil Oil Corporation- Distillate products pipeline, Portland to Bangor.
4. U. S. Air Force- Jet Fuel pipeline, Searsport to Limestone.
NOTE: Routing schematic and approximate only. Not accurate in detail.

Oil Refineries

Oil refining is expected to occur in Maine between 1975 and 2000 for a number of reasons: 1) the Pittston oil refinery application may finally be resolved by Canada in Pittston's favor, 2) the Federal Government has made strong indications that the New England States should locally supply more of their demand for refined products, 3) Maine has deep water anchorage to make supertanker traffic relatively safe and crude oil imports relatively inexpensive, and 4) the demand for petroleum products (barring extremely effective conservation measures) will increase in Maine and New England.

Strategic Petroleum Reserve/Regional Storage

The Federal strategic petroleum reserve program calls for storage of crude oil or petroleum products in underground caverns. Inclusion of this facility occurs for two reasons: 1) the facility transportation modes and the construction period work force correspond in size and scale to the same characteristics of other energy facilities, and 2) a regional petroleum reserve site in Maine would run the same environmental risks, transportation problems, and regulations as an oil terminal. Although the use is functionally different, the characteristics of the facility and the impacts upon the community are similar.

1.3 COAL

Currently coal is not a major source of energy in Maine, only 4% of the energy generated. There is a proposal by Central Maine Power Company for the construction of a 600 MW coal fired electric generation plant at Sears Island. The facility is to consist of both a power plant and a coal storage and handling terminal.

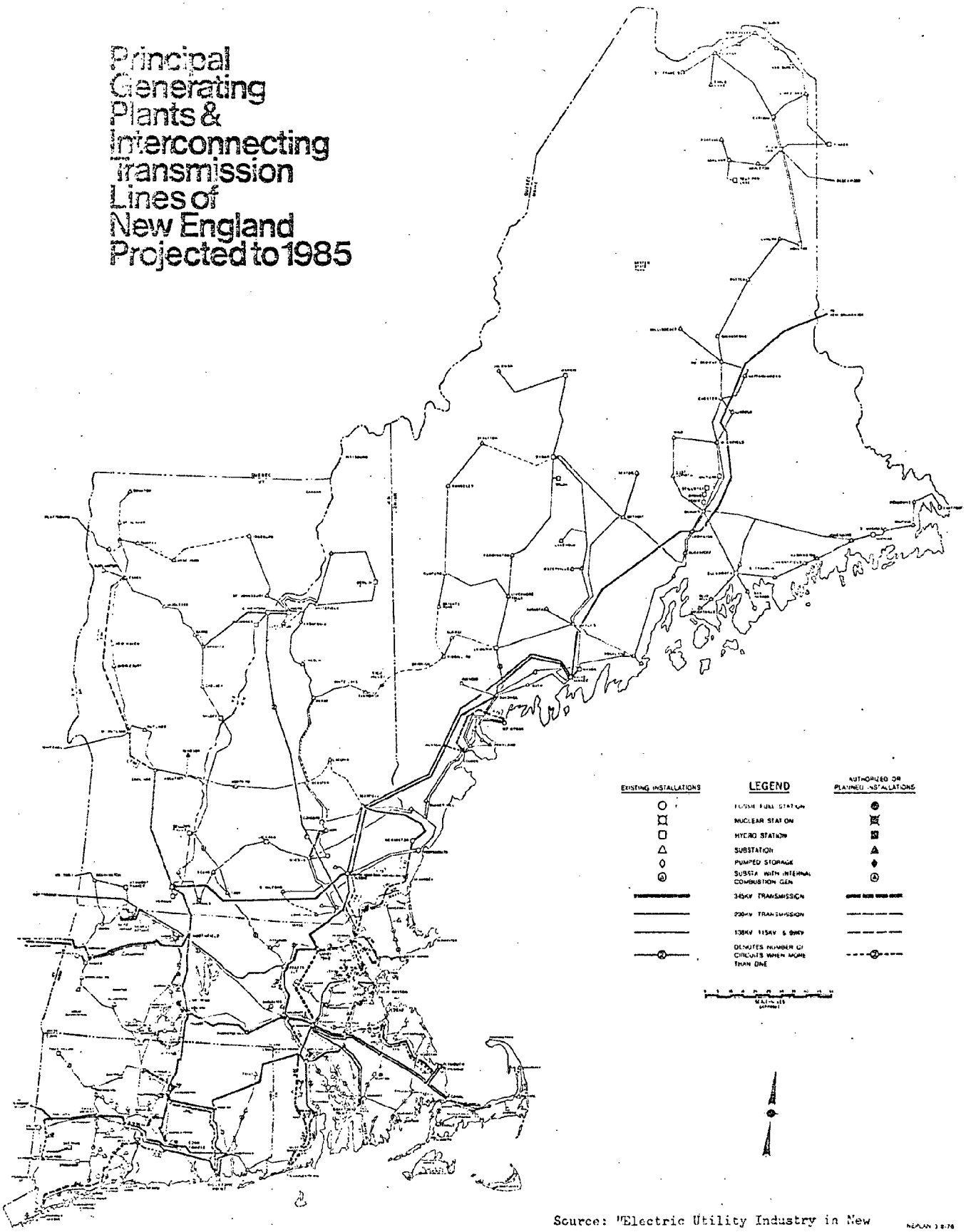
Apart from the use of coal for electric generation, there is a likelihood of increased industrial coal use. Since barge or ship transport of coal is less expensive per ton/mile than rail, there is a possibility that rising coal use will require at least one major coal handling terminal and storage facility. Rail-borne coal is expected to offer strong competition to water borne transportation in capturing the energy market in the near future.

The largest industries in Maine consume approximately 1.25 million barrels of oil per year. In equivalent energy terms, this translates to an average of 1,000 tons per day of coal. This limit is somewhat arbitrarily determined to be the size of a facility requiring large investment in equipment and storage space. Under these conditions, locations at docking facilities used to support industry and in proximity to rail transportation are desirable.

1.4 ELECTRICITY

Figure 4 shows the location and type of all generating plants and the voltage of existing transmission lines. Currently, Maine has sufficient electric generation capacity to meet the State's needs.

FIGURE 4



Source: "Electric Utility Industry in New England", Statistical Bulletin 1975, from the Electric Council of New England (ECNE)

Five types of electric generation facilities are possible choices for the near future: 1) coal, 2) nuclear, 3) wood, 4) tidal, and 5) hydro power.

1.4.1 Coal

In 1976, Central Maine Power Company (CMP) announced their intention to build a 600 MW coal-fired power plant on Sears Island. A coal receiving and handling facility would also be built. This plant would come on line by approximately 1985 to supply power to Maine and the rest of New England.

1.4.2 Nuclear

Maine's currently existing nuclear power plant, Maine Yankee at Wiscasset, has a capacity of 855 MW. In 1974 it generated 12% of the total energy in the State.

Tentative plans exist for a nuclear power plant to be built in Richmond, Maine to begin operations in 1992. Options on the land have already been purchased. The plant would supply approximately 1,000 MW power. Recently, CMP postponed further action on this proposal until there has been a resolution of the regulatory questions surrounding the process of siting nuclear power plants. A study by the U.S. Nuclear Regulatory Commission is now in progress.

1.4.3 Wood

Considerable efforts are being made to obtain funds for a 50 to 100 MW wood-fired electric power plant. Although wood-fired electric generation will probably occur in Maine before the end of the century, there is no real need to locate such a facility in the coastal towns. It will most likely be located next to large sources of wood waste such as a pulp mill or saw mill. Bucksport is the only coastal community which has a pulp mill.

1.4.4 Tidal

Analysis of the Passamaquoddy Tidal Power project is under way by the U.S. Army Corps of Engineers. The project was first seriously proposed in 1919; construction was initiated in 1935, but halted two years later due to lack of funds. Since that time the project has been studied several times. The most recent study (1977) by Stone and Webster Engineering Corporation shows that the life cycle costs of the project are acceptable but not likely favorable. Funding for the project is uncertain. If a decision is made to build the project, construction probably would not begin before the mid 1980's. Tidal power is subject to unique natural resource conditions found only in Washington County.

1.4.5 Hydro

The rejuvenation of hydroelectric facilities along the coast is being currently evaluated by the Office of Energy Resources. Central

Maine Power is currently expanding a hydroelectric facility from 2400 MW to 12,000 MW in Topsham. CMP is also evaluating upgrading a dam at Cataract Falls in Saco. Maine Hydro Electric Development Corporation is studying an American Tissue abandoned dam at Cobbossee Stream in Gardiner and the Town of Frankfurt and Kennebunk are looking into upgrading small dams in those towns.

1.5 OUTER CONTINENTAL SHELF PLATFORM CONSTRUCTION

OCS exploration for petroleum on Georges Bank raises the potential for an oil platform construction yard to be located in Maine. Since there is a 50/50 chance of a commercially large find of oil or natural gas and a substantial find would have to occur to warrant construction of a platform yard, the probability that a yard would be located in Maine is extremely low. Competition in the platform construction industry is intense and location of one platform construction yard in New England would lead a competitor to want a close location. Competition in the market place will determine whether this occurs.

While platforms may be constructed of either steel or concrete platforms may be used primarily because of the severe weather conditions, in the North Atlantic and their built in storage capability. Virtually all of the potential sites for concrete platform construction on the East Coast of the U.S. exist in Maine.

Since Georges Bank weather conditions are presumably as bad as the North Sea, and concrete platforms have played a major part in the development of that regions oil fields, it is realistic to assume that a large find of oil in Georges Bank may result in the use of concrete drilling platforms.

1.6 ENERGY FACILITIES NOT CONSIDERED LIKELY

Other types of energy facilities considered were: 1) petrochemical plants, and 2) uranium enrichment or nuclear fuel processing facilities, both with such a low probability that they were ruled out, at least at this time.

Petrochemical plants require the by-products from approximately one million barrels per day of refining capacity to be economic. Since it is easier to expand capacity at existing refineries in other areas of the U.S. than it is to build a new refinery, at the most, no more than two are expected in Maine between now and the year 2000. However, development of a terminal able to accept very large crude carriers (VLCC) may induce greater development.

Enrichment and nuclear fuel processing facilities are not expected to come to the State. Although the Department of Energy is promoting expanded enrichment capacity to provide fuel for operating and planned reactors, no overtures have ever been made to locate processing facilities in Maine. Furthermore, the State has no known commercial quantities of uranium ore. A processing plant could be built in Maine, utilizing imported raw materials, but the probability appears low at the present time.

1.7 DEEP WATER PORTS

Maine has a number of existing and potential sites for deep water ports. The port of Portland is currently the site of a major oil transport and storage facility is the most active port on the coast of Maine. The average depth at mean low tide is 28 feet.

The port at Searsport has a controlling depth of 35 feet. It is currently the major dry cargo port primarily for forest and agricultural products. With the proposed Sears Island coal-fired plant it will also be a coal port.

Other areas with a natural but undeveloped deep harbor include Eastport which has been approved as a site for the Pittston Oil Refinery. Machias has been mentioned as a site for a terminal or oil refinery.

A detailed analysis of Maine's port facilities is available on request "Maine Port Development Study Phase I, Port Facility Inventory and Evaluation, Volumes I" from the State Planning Office.

ASSESSING THE SUITABILITY OF SITES

2

ENERGY FACILITY SITING

2. ASSESSING THE SUITABILITY OF SITES

(Procedures for assessing the suitability of sites for energy facilities)

To explain Maine's procedures for assessing the suitability of sites, this section will first indicate the type of available information that developers may use in assessing alternative sites, describe in some detail how the regulations and related statutes work to assess site suitability and show how the national interest is considered by the State in its siting decisions.

2.1 ASSESSMENT OF ALTERNATIVE SITES

Prior to submitting an application for review under Maine's regulatory system an applicant should consult with the State Planning Office and the Department of Environmental Protection or the Land Use Regulation Commission for technical information gathered through the years of the planning and regulatory process. The State Planning Office through the 305 planning programs has developed an extensive mapping system at a scale of 1:48,000 for the entire coast. These maps are available at the State Planning Office. Of particular use to developers are the land use maps and the favorability maps. The favorability for development map series groups different soils and slopes into three catagories and rates their favorability for accommodating large residential developments with sewers or with septic tanks, and commercial, light industrial developments. The maps may be used when searching for suitable large development sites or to identify areas most likely to come under development pressure because of soil and slope favorability. Further detailed studies are obviously required before specific site proposals can be made. The coastal land use inventory displays a large array of information, including government lands, conservation lands and easements, and infrastructure.

The Department of Environmental Protection and the LURC can also offer invaluable assistance to applicants considering the suitability of sites. The application hearing records, findings, and permit conditions from previous such proposals will help the applicant prepare his application. Proposals which have extensive hearing records include an oil storage facility on Long Island, King Resources in 1969, a refinery in South Portland, Maine Clean Fuels in 1969, the Pittston oil refinery proposal in Eastport in 1973, and other proposals for expansion such as is now in process of the Cousins Island Power Plant, 1972.

The Land Use Regulation Commission should be also consulted for their extensive Comprehensive Plan which outlines policies for development and has zoning maps showing areas suitable for development.

Staff in all of these agencies stand ready to aid all persons in providing necessary information and guiding the preparation of applications.

2.2. REGULATORY PROCEDURES

This section will describe the regulatory procedures prescribed by Maine statutes for the siting of energy-related facilities.

The regulatory pathway for siting of energy facilities which are utilities differ from energy facilities which are not, in that the utilities must pass through a Public Utilities Commission Permit Procedure.

2.2.1 Energy-related utility

The Public Utilities Commission (PUC) and the Board of Environmental Protection (BEP) are the two principal regulatory State agencies in any utility siting decision in Maine.

Public Utilities Commission Approval

The initial step in the siting of power plants, transmission lines, and gas pipelines is to establish the need for additional facilities. The applicant must apply to the PUC for a Certificate of Public Convenience and Necessity to build any power generating facilities of more than 1,000 kilowatts, or transmission lines carrying 100 kilovolts or more, and gas pipelines (35 M.R.S.A. Sec. 13-A). If a gas company obtains a Certificate of Convenience from the Federal Energy Regulatory Commission, it need not obtain one from the PUC.

The PUC will schedule a public hearing after receiving the application. Any person, firm, or corporation, including transportation industry organizations, associations, or conferences, have the right to intervene in a PUC hearing if they show direct and substantial interest in the subject matter of the proceeding, and their participation does not unduly broaden the issues (Rules of Practice and Procedure before the Public Utilities Commission of Maine, Rule 16). During the hearing, the Office of Energy Resources may provide input on forecasting of long term electrical demand and growth rates, alternative energy sources, and the effects of conservation measures. The Commission will make its final decision based on testimony presented at the hearing as well as its own findings. The PUC must also approve long term financing of any public utility project (35 M.R.S.A. Sec. 17).

Assuming the PUC has approved the utility proposal, the applicant must next seek approval for the proposed site. The State and municipal agencies involved in this step of the process will depend on the location of the proposed site as described below.

Approval for Sites in the Unorganized Territories

In the unorganized territories of which the coastal area is only 5%, the Land Use Regulation Commission (LURC) has jurisdiction over zoning and land use (12 M.R.S.A. Sec. 681-689). Normally the LURC will process the application in accordance with its statures, comprehensive plan, and procedures zoning standards promulgated pursuant to its statute. However, a public utility may be completely or partially exempt from LURC regulation if the PUC decides it is in the public welfare or convenience; in which case, LURC may only impose terms or conditions on the utility. LURC may also waive the requirement for a hearing if the proposal has received approval under the Site Location of Development Law administered by BEP.

Local Approval for Sites in the Organized Territories

Local zoning laws, including shoreland zoning under the Shoreland Zoning Act (12 M.R.S.A. Sec. 4811-4814), apply to the organized territories. If a desired site is unavailable because of zoning restrictions, the utility may seek a variance from the municipality involved. If a variance is denied, the utility may apply to the PUC for exemption from local zoning laws, including shoreland zoning (30 M.R.S.A. Sec. 4962).

Approval by State Agencies with Responsibility for Protecting the Environment

When a site is selected that meets the approval of the municipality or LURC, if in unorganized territory, the utility must comply with a number of environmental laws administered principally by the Board of Environmental Protection.

The Department of Environmental Protection coordinates and assists in the issuance of all environmental permits issued by agencies of the State within the organized municipalities. Within the unorganized territories this function is carried out by the Land Use Regulation Commission. Both agencies have established procedures for ensuring the following: 1) availability to the public of necessary information concerning such environmental permits, 2) provision of assistance to applicants in obtaining permits from other State agencies, 3) coordination of application procedures, time schedules, and application forms to reduce delay and duplication of effort by the applicant and issuing agencies. An application will not be considered unless an applicant has demonstrated right, title or interest to the property under consideration. These procedures are contained in DEP Regulations for the Processing of Applications (Sections 1.1-1.17) and LURC Rules of Practice (Sections 4.01-4.12).

The developer must obtain from the Board of Environmental Protection (the decision-making authority of the Department of Environmental Protection) BEP permits and approval of its proposed facility. The BEP will automatically schedule public hearings on any application deemed by the BEP to be of significant public interest. Conditions are specified in DEP Special Regulations for Hearings on Applications of Significant Public Interest (Sections 30.1-30.26), Appendix A. Although a separate public hearing may be scheduled to determine compliance with each law under BEP's jurisdiction, the normal procedure is to schedule one set of hearings that covers all the laws involved. The latter action streamlines the procedure and appears to meet with the approval of both BEP and developers.

The most comprehensive law administered by BEP is the Site Location of Development Act (38 M.R.S.A. Sec. 481-489) since it covers all developments over 20 acres. This Act requires the applicant to demonstrate that the proposal will meet air and water pollution standards, dispose of waste properly, be built on suitable soil types, not disrupt traffic flow, or adversely affect the environment. Other acts administered by BEP are directed at protecting specific natural resources. The Protection and Improvement of Air Act (38 M.R.S.A. Sec. 581-608) requires the licensing of air emissions from the proposed facility. Liquid waste effluents from any facility, including thermal pollutants, must be licensed under the Protection and Improvement of Waters Act (38 M.R.S.A. Sec. 361A-452). If the proposed facility requires an oil terminal capable of storing more than 500 barrels of oil, a license will be required under the Oil Discharge Prevention and Pollution Control Act (38 M.R.S.A. Sec. 541-560). If the proposed facility will result in any alteration of coastal wetlands, great ponds, rivers, streams or brooks permits will be required under the corresponding acts (38 M.R.S.A. Sec. 471-478, 386-396; 12 M.R.S.A. Sec. 2206-2212 respectively). All these environmental laws are administered by BEP except the Alteration of Rivers, Streams and Brooks Act, which is under the jurisdiction of the Department of Inland Fisheries and Wildlife. In cases where this act applies joint hearings may be held with BEP, but the final decision rests with the Commissioner of Inland Fisheries and Wildlife.

During the hearing process, testimony is received from intervenors, the public, and representatives of federal, state, municipal or other governmental agencies (DEP, Special Regulations for Hearings on Applications of Significant Public Interest (Sections 30.1-30.26)), Appendix A. The State Planning Office and the Department of Marine Resources are a major source of advisory input for any coastal development.

Final approval by BEP of all the applicant's permits and licenses will be granted only after it has been determined by the Board that the proposal will not substantially harm or alter the natural resources protected by the appropriate laws.

Transmission lines (gas and electric) crossing public lots, submerged land, and intertidal land require approval from the Director of the Bureau of Public Lands (BPL). At his discretion, the Director may

hold a separate hearing or act as an intervenor at a BEP hearing in any proposal to site utility transmission lines on public lands. Approval by BPL is normally granted at approximately the same time BEP approves a proposal. These two agencies are the final step of the utility siting process in Maine.

Joint Hearings with the Maine Board of Environmental Protection (BEP) and the U.S. Environmental Protection Agency (EPA)

The BEP and EPA may hold joint hearings on air and water emission licenses, where both Federal and State laws have jurisdiction. If joint hearings are to be held, it is necessary for the BEP to initiate them with the EPA entering after the process has begun since the BEP must schedule hearings within 30 days after receipt of an application for a new development, whereas, the EPA must announce its intention to hold hearings within 30 days. The EPA usually follows BEP's hearing regulations.

2.2.2 Energy facilities which are not utilities

Energy facilities which are not utilities include oil terminals and refineries, petroleum pipelines, liquid natural gas (LNG) terminals, LNG regasification facilities and pipelines, strategic petroleum reserves/regional storage, coal storage and handling yards, and OCS platform construction yards.

Siting of these types of facilities is very similar to the utility siting process already described except that the PUC is removed from the State decision making process. Consequently, this category of energy facilities cannot be granted the power of eminent domain and cannot be exempted from local zoning or LURC regulation. A developer may seek a variance for a proposal if it does not conform to local zoning.

2.3 STATUTES WITH REGULATORY AUTHORITY

2.3.1 Public Utilities and Carriers Law
35 M.R.S.A. Sec. 1 et seq.

1. Purpose

The law establishes the Public Utilities Commission (PUC) and enables it to regulate and license all public utilities within the State, including electric generating plants, electric transmission lines, gas plants, and natural gas pipelines.

2. Administrating Agency

The provisions of the law are administered by the PUC, which consists of 3 members appointed by the Governor. One member designated by the Governor serves as Chairman (Sec. 1). The regulations of the PUC must be consistent with the Federal Natural Gas Act (Sec. 2539).

3. Planning and Enforcement Powers: Authority to Act

The Commission has authority to regulate new energy facilities in the following ways:

a. Any electric utilities or gas companies within the State proposing to build an electric power plant of more than 1,000 kilowatts, transmission lines carrying 100 kilovolts or more, or natural gas pipelines, must obtain a Certificate of Public Convenience and Necessity from the PUC. A public hearing must be held before a decision is made to issue a certificate (Sec. 13-A).

b. Electric power companies have the power of eminent domain for locating transmission lines of 5,000 volts or more (Sec. 2306). Gas companies also have the power of eminent domain for locating pipelines if a Certificate of Public Convenience and Necessity has been granted under the Federal Natural Gas Act or if authorized by the PUC. The power of eminent domain does not extend to the taking of homes (Sec. 2306, 2535).

c. The PUC must consider alternative routes when determining if a proposed transmission route is the proper location. It must also take into consideration all factors affecting the public interest, including environmental factors, safety, quality of service, and cost. (Re Bangor Hydro-Electric Co. (1974) Me., 314 A.2d 800.)

d. A natural gas pipeline company, which has obtained a Certificate of Public Convenience and Necessity under the Federal Natural Gas Act for an interstate pipeline or approval from the PUC for an intrastate pipeline, is authorized to proceed in its application process for obtaining all necessary State permits with regard to location, construction, completion and operation. This section exempts a company from obtaining right, title or interest prior to application for State approval. A natural gas company that has not obtained a Certificate of Public Convenience and Necessity or approval from the PUC, must file a bond not to exceed $50,000 with the Department of Environmental Protection to pay for the cost of processing the application in the event the applicant is denied a Certificate of Public Convenience and Necessity (Sec. 2545).

4. Shared Powers with Other Intrastate Agencies

The Board of Environmental Protection must also approve any transmission lines carrying 100 kilovolts or more, electric power plants of more than 1,000 kilowatts, and gas pipelines (38 M.R.S.A. Sec. 484) and unless specifically exempted by the Land Use Regulation Commission. Even if exempted, the LURC can impose conditions

on new facilities to make them consistent with the provisions of 12 M.R.S.A. Chap. 206-A.

The Director of the Bureau of Public Lands (BPL) and the PUC both have jurisdiction over pipelines on submerged and intertidal lands owned by the State. The BPL must approve the site (12 M.R.S.A. Sec. 514-A). Companies constructing pipelines or electric transmission lines across roadways must first obtain a permit from the municipality or the Maine Department of Transportation, depending on who has jurisdiction (Sec. 2346-2347).

2.3.2 Shoreland Zoning Act
12 M.R.S.A. Sec. 4811-4814

1. Purpose

This Act requires the zoning of land within 250 feet of the normal high water mark of any pond, river or salt water body. The purpose of the zoning is to maintain " ...safe and healthful conditions; prevent and control water pollution; protect spawning grounds, fish, aquatic life, bird and wildlife habitat; control building sites, placement of structures and land uses; and conserve shore cover, visual as well as actual points of access to inland and coastal waters and natural beauty" (Sec. 4811). Further details are described in the FEIS, Maine Coastal Program Section 7.

2. Administering Agency

The State Planning Office under the guidance of the Board of Environmental Protection (BEP) and the Land Use Regulation Commission (LURC) insures that all municipalities have adopted State approved shoreland zoning. Actual administration of the zoning standards is the responsibility of municipalities.

3. Enforcement Powers: Authority to Act

The Department of Environmental Protection and the Land Use Regulation Commission may adopt a shoreland zoning ordinance for a municipality if it failed to adopt its own ordinance by July 1, 1974, or if the existing ordinance is found to be inadequate by BEP and LURC. If a municipality fails to enforce shoreland zoning laws, the Attorney General may seek a court order from the Superior Court directing municipal officials to enforce the ordinance.

2.3.3 Planning and Zoning
30 M.R.S.A. Sec. 4961-4964

1. Purpose

The Act sets forth State standards for the establishment of local municipal zoning ordinances.

2. Administering Agency

Local municipalities may adopt zoning ordinances. If this occurs, a board of appeals must be established (Sec. 4963).

3. Planning or Enforcement Powers: Authority to Act

In adopting a zoning ordinance under the home rule power granted by the Constitution, Article VIII-A and Chapter 201-A, specifically Section 1917, municipalities are subject to the following conditions:

a. the ordinance must be consistent with a comprehensive plan adopted by its legislative body;

b. a zoning map must be part of the ordinance;

c. land to be used by a public service corporation is exempt or partially exempt from local zoning if the Public Utilities Commission decides the exemption is necessary for public welfare and convenience;

d. county and municipal governments must abide by local zoning ordinances;

e. zoning ordinances are advisory with respect to the State; and

f. a person petitioning for rezoning of an area for the purpose of development must post a bond of 25% of the estimated cost of development (Sec. 4962).

2.3.4 Land Use Regulation
12 M.R.S.A. Sec. 681-689

1. Purpose

The Act regulates the land use activities in the unorganized territories of the State, including 5 per cent of the coastal area. Its objective is "...to extend principles of sound planning, zoning and subdivision control to the unorganized and deorganized townships of the State" (Sec. 681).

2. Administering Agency

The provisions of the Act are administered by the Maine Land Use Regulation Commission within the Department of Conservation. The Commission consists of seven public members appointed by the Governor (Sec. 683). A Director administers commission activities (Sec. 685).

3. Planning or Enforcement Powers: Authority to Act

Land use is regulated by zoning standards and site criteria.

A permit is required from LURC for any new construction in the unorganized territories (Sec. 685-B(1)), which may be granted if the use is consistent with LURC standards and the developer demonstrates a strategy for meeting the following criteria:

a. Provision has been made to comply with the State's environmental laws;

b. Provision has been made to prevent disruption of traffic;

c. Provision has been made for fitting the proposal harmoniously into the existing natural environment;

d. Use of topography, soils and subsoils meet State standards; and

e. If the proposal is for a structure on a lot in a subdivision, the subdivision must have been approved by the Commission (Sec. 685-B(4)).

More details on the LURC may be found in the FEIS, Maine Coastal Program Section 7 and Appendix F.

4. Shared Powers with Other Intrastate Agencies

The Commission may waive the requirement of a hearing if the proposal has already received approval by the Board of Environmental Protection under the Site Location of Development Law 38 M.R.S.A. Sec. 481-488. Commission approval of a proposal is considered prima facie evidence that it meets the requirements of the Site Location of Development Law, Alteration of Coastal Wetlands Law 38 M.R.S.A. Sec. 471-478, Great Ponds Law 38 M.R.S.A. Sec. 422, and the Stream Alteration Law 38 M.R.S.A. Sec. 2206-2212.

If the Public Utilities Commission approves a public service corporation proposal, following a public hearing, LURC can only impose conditions on it, not prohibit it (Sec. 685-B (1)).

2.3.5 Site Location of Development Act
38 M.R.S.A. Sec. 481-489

1. Purpose

Many developments because of their size and type are capable of causing irreparable damage to the people and the environment if they are sited improperly. This Act provides a flexible

means by which the State can assess development proposals and control the location of developments that substantially affect the environment by locating them in a manner which will have minimal adverse impact on the environment, thereby protecting the economic and social well-being of the citizens (Sec. 481).

2. Administering Agency

The Act is administered by the Department of Environmental Protection (DEP), and its decision making authority, the Board of Environmental Protection. The Board, which has permit granting authority for all laws within DEP's jurisdiction, consists of the Commissioner and 10 members appointed by the Governor based on their broad interest and experience with laws administered by DEP.

3. Planning or Enforcement Powers: Authority to Act

Any person planning a development must notify the Board and provide them information required to assess the proposal (Sec. 483). The application form, regulations, and more detailed description of the Site Law are found in the FEIS Maine Coastal Program Section 7.7 and Appendix F. The Board may schedule a public hearing within 30 days after receipt of a proposal (Sec. 483). At the hearing the Board must solicit and receive testimony regarding the development's effect on the environment, public health, safety or general welfare. They may also receive testimony regarding the economic effect of the proposed development (Sec. 484). A developer can propose alternative sites for separate review under the Site Location Act and witnesses may suggest alternative sites at public hearings, helping to insure that State, national and local interests are adequately considered.

The Board may approve a proposal if it finds the developer has met the following conditions:

a. has the financial capacity and technical ability to meet air and water pollution standards, and will be able to dispose of solid waste properly, control noxious odors, and obtain adequate potable water;

b. the development will not cause disruption of traffic flows;

c. the development will fit harmoniously into the natural environment and will adversely affect existing uses, scenic character, or natural resources in the area; and

d. the development will be built on suitable soil types (Sec. 484).

A permit may be obtained prior to land acquisition for transmission lines carrying 100 kilovolts or more and gas pipelines. An applicant proposing to build a transmission line or pipeline must notify all the owners whose property lies in the path of the proposed route before applying to the Board for approval. The Board may consider alternatives to the proposed route and character of the transmission line or pipeline, taking into consideration its impact on the environment, cost, and the risks to public health and safety (Sec. 484).

At hearings held on a proposed development, the burden of proof is on the developer to demonstrate that all of the criteria for approval have been met and that the public's health, safety and general welfare will be protected. When granting permission for a new development, the Board may impose terms and conditions to protect and preserve the environment and the public health, safety and general welfare (Sec. 484).

Criminal and civil penalties for violations are up to $25,000 and $10,000, respectively, for each day of violation (Sec. 349).

4. Shared Powers with Other Intrastate Agencies

Electric generating facilities of more than 1,000 kilowatts and transmission lines carrying 125 kilovolts, or more must obtain approval under this Act and the Public Convenience and Necessity Law 35 M.R.S.A. Sec. 13-A.

The Board may cooperate with other agencies of this State and other states as well as the Federal government in carrying out the provisions of laws within its jurisdiction (Sec. 366). Other State agencies are often consulted to determine if criteria are met.

2.3.6 Protection and Improvement of Air
38 M.R.S.A. Sec. 581-608

1. Purpose

The purpose of this Act is to control air pollution for the protection of human health, property, and plant and animal life (Sec. 581).

2. Administering Agency

The Act is administered by the Department of Environmental Protection with permit granting authority vested in the Board of Environmental Protection.

3. Planning and Enforcement Powers: Authority to Act

The Board has established five air quality regions in the State for the purposes of conducting air quality studies, and establishing air quality and emission standards (Sec. 583). Ambient air quality standards for each of the five regions are designed to preserve or enhance the air quality (Sec. 584). Emission standards established by the Board are designed to maintain ambient air quality (Sec. 585).

A variance may be granted from ambient air quality standards or emission standards if the emissions do not:

a. endanger human health or safety;

b. compliance would produce a serious hardship; and

c. no adequate means of controlling the pollution is available (Sec. 587).

The Board may require any air contamination source to be licensed (Sec. 590). Employees of the Department of Environmental Protection are permitted to make on-site inspections to insure compliance with State air quality laws. Sources emitting more than 100 tons per year of any pollutant must submit a standby emergency plan to the Department (DEP Emission License Regulation 100.8.4).

The Board may order a hearing within 30 days after receipt of an application for an air emission license. An applicant may also request a hearing within 10 days after denial of a license. A hearing must be held in the municipality where the proposed emission will occur at which time the Board will receive testimony regarding the nature of the proposed emissions, their effect on ambient air quality in the region, the availability and effectiveness of pollution control equipment, and the cost of purchasing and installing that equipment (Sec. 590).

The Attorney General enforces the provisions of the law (Sec. 348). Noncompliance can result in criminal and civil fines of $25,000 and $10,000, respectively, for each day of violation.

2.3.7 Protection and Improvement of Waters
38 M.R.S.A. Sec. 361-A-452

1. Purpose

The purpose of the Act is to control, abate, and prevent pollution in all inland and tidal waters. Waste discharges into all surface waters of the State are controlled by provisions of the Act.

2. Administering Agency

The Act is administered by the Department of Environmental Protection with permit granting authority vested in the Board of Environmental Protection.

3. Planning and Enforcement Powers: Authority to Act

Standards of classification have been established for assessing water quality in the State. Inland fresh waters, except great ponds, and tidal waters have five classifications. Great ponds have two classifications (Sec. 363-364).

A license must be obtained from the Board before any waste discharges are permitted. Both private and public sources are regulated by the law. The Board may require a public hearing prior to issuing a discharge license (Sec. 414(6), 345). The following conditions must be met before a license is issued:

a. the discharge either alone or in combination with others will not lower water quality below its present classification;

b. the discharge receives the best practicable treatment based on existing technology, available alternatives, and the economic feasibility of alternatives; and

c. the discharge into waters of higher quality than the assigned classification, acting either alone or in combination with others, will not lower the existing quality unless that lowering is the result of necessary economic and social development (Sec. 414-A).

Discharge of forest products refuse, toxic or hazardous substances, radiological, chemical or biological warfare agents, high level radioactive wastes, and waste from watercraft is prohibited (Sec. 417, 420, 423).

The BEP and Attorney General can make on-site inspections to insure compliance with the Act (Sec. 414(3)). Criminal and civil penalties for violations are up to $25,000 and $10,000, respectively, for each day of violation (Sec. 349).

2.3.8 Oil Discharge Prevention and Pollution Control
38 M.R.S.A. Sec. 541-560

1. Purpose

The purpose of the Act is to prevent oil spills, during transfer and storage between vessels and vessels and onshore facilities in order to preserve the recreational and fishing interests of the coast (Sec. 541).

2. Administering Agency

The Act is administered by the Department of Environmental Protection with permit granting authority vested in the Board of Environmental Protection.

3. Planning and Enforcement Powers: Authority to Act

Discharge of oil into any coastal waters, tidal flats, lands adjacent to the coast, and streams or rivers flowing to the coast is prohibited. However, the Board may license a discharge if it receives the best available treatment, does not degrade existing water quality or violate the classification of the receiving waters, and does not create a visible sheen on the water (Sec. 543). A license must be obtained to operate an oil terminal facility (capable of storing more than 500 barrels) (Sec. 542,545). The Act applies to oil discharges up to 12 miles from the coast (Sec. 544). The Board may conduct public hearings in the administration of this act (Sec. 345,347). The Board has the authority to regulate operation of facilities and vessels, clean-up, safety and inspection methods (Sec. 546). No penalties are levied against those causing accidental discharges if they are promptly reported and cleaned up (Sec. 550).

A Maine Coastal Protection Fund is maintained by the State with a tax of ½¢ per barrel of oil transferred by the licensed terminal operators. Currently, the fund is maintained at $4,000,000, but will be increased to $6,000,000 after July 1, 1978. The fund is used to pay for administrative expenses, removal of oil pollutants, and 3rd party damages (Sec. 551).

The State does not need to prove that a prohibited discharge took place due to negligence in order to establish liability for an oil spill (Sec. 552). A vessel believed to be responsible for an oil spill may be detained until any fine or penalty due has been repaid (Sec. 552-A).

A separate section of the Act regulates vessels at anchorage that are carrying or are capable of carrying oil if they are not waiting for a scheduled loading or unloading. The Board may adopt regulations concerning the following areas:

a. location, duration and type of anchorage;

b. type and capacity of vessels permitted at anchorage;

c. systems and precautions necessary for safety on a vessel;

d. crew size and training;

e. contingency plans in case of accident, fire, storm or unforseen acts; and

f. protection of the natural environment, aesthetic and recreational uses of the coast, and fishing.

A vessel at anchorage under the previously listed conditions must obtain a license from the Board and pay a fee of ½¢ per deadweight ton for each 30 days at anchorage (Sec. 560).

Criminal and civil penalties for violations are up to $25,000 and $10,000, respectively, for each day of violation (Sec. 349).

4. Shared Powers with Other Intrastate Agencies

The Governor can declare an emergency if a catastrophic oil spill occurs or appears imminent (Sec. 547).

Municipalities may pass ordinances regulating oil discharge and transfer provided they do not conflict with this Act (Sec. 556).

2.3.9 Alteration of Coastal Wetlands
38 M.R.S.A. Sec. 471-478

1. Purpose

The purpose of the Act is to prevent any proposed activity such as dredging, draining, or construction on any tidal or subtidal lands, including submerged lands, from unreasonably interfering with recreation and navigation, cause unreasonable soil erosion, unreasonably interfere with the natural flow of any waters, unreasonably harm wildlife or freshwater, estuarine or marine fisheries, or lower the quality of any waters. If these conditions are met, a permit will be granted for the proposed activity (Sec. 474).

2. Administering Agency

The Act is administered by the Department of Environmental Protection with permit granting authority vested in the Board of Environmental Protection.

3. Enforcement Powers: Authority to Act

Within 30 days after an applicant submits a form (Appendix B) for a wetlands permit, the Board may call a public hearing (Sec. 474).

The Board may deny a permit if information indicates conditions will not be met (Sec. 474) or impose conditions on any permit granted (Sec. 471). It may also grant exemptions for some activities. Violation of the Coastal Wetlands Act is a Class E crime (Sec. 349), punishable by $500 and $5,000 fines for individuals and corporations, respectively, and imprisonment of up to 6 months (17 M.R.S.A. Sec. 1301, 1252). More specific information on this Act is found in Section 7.3 of FEIS, Maine's Coastal Program.

4. Shared Powers with Other Intrastate Agencies

Other agencies may review permit applications, including the Department of Marine Resources and the Department of Inland Fisheries and Wildlife, and the State Planning Office.

The Board of Environmental Protection has the power to transfer authority to grant permits to a local municipality provided it has met the following provisions:

a. established a planning board;

b. adopted a shoreland zoning ordinance approved by the Board and the Land Use Regulation Commission;

c. made a provision for prompt notice to the Board and the public upon receipt of an application and written notification to the applicant and the Board of the issuance or denial of a permit; and

d. uses an application form provided by the Board.

If the Board believes that a municipality has failed to meet the requirements, it may revoke the municipality's authority to grant permits following a public hearing (Sec. 473). So far the municipalities of Harrington and Southport have been granted the authority to administer the Wetland Act.

2.3.10 Great Ponds Alteration
38 M.R.S.A. Sec. 386-396

1. Purpose

To protect and enhance the environment of great ponds by facilitating research, developing programs, establishing environmental standards and regulating alterations (Sec. 386). A great pond is any body of freshwater having a surface area greater than 10 acres in its natural state, or 30 acres if artifically created and owned by 2 or more persons (Sec. 392).

2. Administering Agency

The Act is administered by the Department of Environmental Protection with permit granting authority vested in the Board of Environmental Protection.

3. Planning and Enforcement Powers: Authority to Act

The Board may classify great ponds and establish guidelines for waste disposal systems to prevent environmental damage to great ponds.

The following activities are prohibited in great ponds with-

out first obtaining a permit from the Board of Environmental Protection:

a. dredging or removing materials;

b. constructing or repairing structures;

c. depositing dredged spoil or fill in or adjacent to great ponds such that it may be washed into the pond; and

d. bulldozing or scraping land adjacent to great ponds such that it may be washed into the pond (Sec. 391).

The Board may issue a permit for a proposed activity if it will not unreasonably:

a. interfere with aesthetic, recreational, navigational or scenic uses;

b. harm the environment of the great pond or any stream flowing into or out of the pond;

c. cause soil erosion;

d. harm aquatic or wildlife habitat;

e. interfere with the flow of any water; or

f. lower water quality (Sec. 393).

Violation of the Great Ponds Act is a Class E crime (Sec. 349), punishable by $500 and $5,000 fines for individuals and corporations, respectively, and imprisonment up to 6 months (17-A M.R.S.A. Sec. 1301, 1252).

2.3.11 Alteration of Rivers, Streams and Brooks
12 M.R.S.A. Sec. 2206-2212

1. Purpose

The purpose of the Act is to prevent environmental damage to rivers, streams, and brooks from dredging, filling and construction on or over waterways by regulating those activities (Sec. 2206) which may affect the stream.

2. Administering Agency

The Act is administered by the Department of Inland Fisheries and Wildlife, which has the authority to grant permits through the Commissioner of that agency.

3. Enforcement Powers: Authority to Act

An applicant for a permit must demonstrate to the Commissioner that the proposed activity will not cause unreasonable harm to any river, stream or brook before a permit will be granted. If the waterway is used as a public water supply, the applicant must also notify the water company or water district (Sec. 2207). The Commissioner may hold hearings in the administration of this act (Sec. 2209).

An applicant may appeal an adverse decision (Sec. 2208).

Persons engaging in construction activities on rivers, streams or brooks without a permit are subject to fines of up to $200 a day for each day of violation (Sec. 2210). The Attorney General can begin proceedings to halt further violations and restore the area to its former condition (Sec. 2211).

2.3.12 Mining and Minerals
12 M.R.S.A. Sec. 541-548

1. Purpose

Establishes the Maine Geological Survey within the Department of Conservation to "...gather, analyze, interpret, publish and disseminate information relating to the geologic features of the State, and to administer mineral exploration and development activities on state-owned lands" (Sec. 541).

2. Administering Agency

The State Geologist serves as the Director of the Maine Geological Survey and is responsible for carrying out its functions, including the issuance of permits and promulgating rules and regulations within its jurisdiction (Sec. 542, 543, 547).

3. Enforcement Powers: Authority to Act

The following powers of the survey relate to energy production:

a. "The survey may review the geologic aspects of environmental and site development applications under consideration by state and federal regulatory agencies" (Sec. 542).

b. The director has the power to regulate the exploration and mining of hydrocarbons on private and State owned land. On State lands these powers include specifying the size of the area explored, permit fees, and length of permits (Sec. 547).

2.3.13 Public Lands Laws
12 M.R.S.A. Sec. 514-A, 552-553

1. Purpose

Establishes the Bureau of Public Lands within the Department of Conservation to carry out the State's role of public lands planning and management. This role must follow principles of multiple land use to produce a sustained yield of products and services, while adhering to prudent and fair business practices, as well as the principles of sound planning (Sec. 551).

2. Administering Agency

The duties of the Bureau of Public Lands are the responsibility of the Director, which functions within the Department of Conservation (Sec. 551, 553).

3. Enforcement of Powers: Authority to Act

The following powers of the Bureau of Public Lands relate to the location of energy facilities on public lands:

a. The Director may lease under terms and conditions he deems reasonable, for up to 30 years, the right to dredge, fill or erect permanent causeways, bridges, marinas, wharves, docks or other permanent structures on lands, including submerged and intertidal lands owned by the State. The Director shall consult with the Commissioners of Conservation, Marine Resources, Inland Fisheries and Wildlife, and other agencies he may deem appropriate in developing and implementing terms, conditions and consideration for conveyances under this section. He may also make proprietary conveyances under this section solely on the basis of the issuance of environmental or regulatory permits by other State agencies (Sec. 514-A).

2.4 STATUTES WITH ADVISORY AUTHORITY

The following statutes are not regulatory, and their administration does not require a permit, however, they provide advice to agencies with regulatory responsibilities.

2.4.1 Maine State Energy Resources Act
5 M.R.S.A. Sec. 5001-5009

1. Purpose

The Act provides for long-range planning and management of energy sources in the State, and encourages the development of new sources of energy in Maine. The Act is specifically aimed at meeting the energy needs of Maine. Major consideration must be given to conservation of natural resources and protection of the environment (Sec. 5002).

2. Administering Agency

The Office of Energy Resources (OER) within the Executive

Department carries out the provisions of the Act. The Office is directly responsible to the Governor (Sec. 5003).

3. Planning and Enforcement Powers: Authority to Act

The Director of OER must provide information, when requested, to public and private groups in the field of energy. He is empowered to apply to Superior Court for a subpoena to obtain witnesses and evidence needed to carry out energy related duties (Sec. 5004). The office has the responsibility to:

a. Formulate a comprehensive State energy resources plan and a State energy policy;

b. Coordinate State energy programs; and

c. Administer federal energy programs within Maine (Sec. 5004-5005).

The development of new energy sources must take into consideration the wise use and conservation of the State's natural resources, protection of the environment, orderly development of industry (Sec. 5002).

4. Administrative Process

The office handles all energy matters within the State which are not the specific responsibility of another State agency under federal or State law. A State Energy Resources Advisory Board, appointed by the Governor, advises the Office of Energy Resources.

2.4.2 Act for a State Register of Critical Areas
5 M.R.S.A. Sec. 3310-3314

1. Purpose

The Act creates an official "Register of Critical Areas" for listing of areas ..."of unusual natural, scenic, scientific or historical significance." It is the policy of the State to encourage the preservation of critical areas (Sec. 3311).

2. Administering Agency

A Critical Areas Advisory Board appointed by the Governor advises the State Planning Office (SPO) in the maintenance of a Register of Critical Areas (Sec. 3313).

3. Enforcement Powers: Authority to Act

Critical areas are identified by studies conducted by the State Planning Office. Areas are included in a registry. Landowners are notified 60 days prior to any action by the Critical Areas Board. The SPO may recommend that the appropriate State or private agencies take action to protect critical areas. The recommendations of SPO are advisory only.

SUMMARY

MAINE STATUTES FOR ASSESSING SITE SUITABILITY

Statute	Administering Agency	Resource Protected
Shoreland Zoning Act (12 M.R.S.A. Sec. 4811-4814)	State Planning Office and Municipalities	Land/Water
Planning and Zoning Act (30 M.R.S.A. Sec. 4961-4964)	Municipalities	Land/Water
Land Use Regulation Laws (12 M.R.S.A. Sec. 681-689)	Land Use Regulation Commission	Land/Water
Site Location of Development Act (38 M.R.S.A. Sec. 481-489)	*BEP/DEP	Land/Water/Air
Protection and Improvement of Air (38 M.R.S.A. Sec. 581-608)	BEP/DEP	Air
Protection and Improvement of Waters (38 M.R.S.A. Sec. 361-A-452)	BEP/DEP	Water
Alteration of Coastal Wetlands (38 M.R.S.A. Sec. 471-478)	BEP/DEP	Land/Water
Great Ponds Alteration (38 M.R.S.A. Sec. 386-396)	BEP/DEP	Land/Water
Alteration of Rivers, Streams and Brooks (12 M.R.S.A. Sec. 2206-2212)	Department of Inland Fisheries and Wildlife	Land/Water
Mining and Minerals Act (12 M.R.S.A. Sec. 541-548)	Maine Geological Survey	Land
Public Lands Laws (12 M.R.S.A. Sec. 514-A, 552-553)	Bureau of Public Lands	Land
Critical Areas Act (5 M.R.S.A. Sec. 3310-3314) (Advisory Only)	State Planning Office	Unique Natural Areas

*Board of Environmental Protection/Department of Environmental Protection

2.5 MEMORANDA OF AGREEMENT

Maine's Coastal Program has provided for coordination between the State Planning Office and the State agencies responsible for administering the 11 core laws through the Memoranda of Agreement in Appendix Ia of the Coastal Program Document in the Draft Environmental Impact Statement issued in April 1978. "These memos establish cooperative procedures and spell out understandings between the Department of Environmental Protection and the Land Use Regulation Commission and the State Planning Office. They also clarify the State Planning Office's administrative duties in implementing the Program and explain State agency Federal Consistency responsibilities."

Two additional Memorandums of Agreement have been included in this section to assure complete coordination in the siting of energy facilities. These two memos establish cooperative procedures and spell out understandings between the Public Utilities Commission and the Office of Energy Resources.

MEMORANDUM OF AGREEMENT

Under the Terms of this Agreement between the:

Public Utilities Commission, hereafter referred to as the "P.U.C.," and the

Maine State Planning Office, a staff agency within the Executive Department, hereafter referred to as the "S.P.O."

it is hereby recognized that in order to strengthen the roles that both agencies play in helping achieve a balance between conservation and development, it is in the best interests of the people for the P.U.C. and the S.P.O. to cooperate and coordinate those activities that further the goal. Towards this end, (and in furtherance of 35 M.R.S.A. Sec. 13-A), the

P.U.C. agrees to submit to the S.P.O. (Resource Planning Division) for their review, information, and comment all those plans, reports and research documents that, in its judgement, are significant to the management of activities in the coastal area.

By this agreement S.P.O. agrees to provide the following information and services to the P.U.C. and persons or corporations residing, or planning business ventures in Maine's coastal area:

- copies of relevant Maine Coastal Inventory resource maps,
- land capability maps,
- copies of S.P.O. planning, or economic reports that have relevance to development proposals;
- advice on favorable locations or sites for specific types of residential, commercial, or industrial enterprises; and
- information from the MIDAS computer inventory.

P.U.C. agrees to refer persons contemplating utility development activities in the coastal area to the S.P.O. for the above advice. The above information will be used by the P.U.C. in its regulatory capacity of assessing the need for new energy facilities, which are utilities.

Furthermore, the P.U.C. recognizes that there are facilities and resources that are in the national interest and is in agreement with the statements relating thereto in the Appendix (E1) of Maine's Coastal Program.

Signed at Augusta, Maine, this _____

PUBLIC UTILITIES COMMISSION	STATE PLANNING OFFICE
_____	_____
Ralph Gelder, Commissioner	Allen G. Pease, Director

MEMORANDUM OF AGREEMENT

Under the terms of this Agreement between the:

Maine Office of Energy Resources, an agency within the Maine Executive Department, hereafter referred to as the "O.E.R.," and the

Maine State Planning Office, a staff agency within the same Executive Department, hereafter referred to as the "S.P.O."

it is hereby recognized that in order to strengthen the roles that both agencies play in helping achieve a balance between conservation and development, it is in the best interests of the people of Maine for the O.E.R. and the S.P.O. to cooperate and coordinate those activities that further the goal. Towards this end, (and in furtherance of 5 M.R.S.A. Sec. 5002), the

O.E.R. agrees to submit to the S.P.O. (Resource Planning Division) for their review, information, and comment all those plans, reports, and research documents that, in its judgement, are significant to the management of activities in the coastal area.

By this agreement S.P.O. agrees to provide the following information and services to the O.E.R. and persons or corporations residing, or planning business ventures in Maine's coastal area:

- copies of relevant Maine Coastal Inventory resource maps,
- land capability maps,
- copies of S.P.O. planning, or economic reports that have relevance to development proposals;
- advice on favorable locations or sites for specific types of residential, commercial, or industrial enterprises; and
- information from the MIDAS computer inventory.

O.E.R. agrees to refer persons contemplating energy facility development activities in the coastal area to the S.P.O. for the above advice. Such referrals, however, shall be made only with the concurrency of the client. The above information will be used by the O.E.R. in its advisory capacity of assessing the need for new energy facilities.

Furthermore, the O.E.R. recognizes that there are facilities and resources that are in the national interest and is in agreement with the statements relating thereto in the Appendix (E1) of Maine's Coastal Program.

Signed at Augusta, Maine, this _____

OFFICE OF ENERGY RESOURCES

_____
John Joseph, Director

STATE PLANNING OFFICE

_____
Allen G. Pease, Director

2.6 STATE CONSIDERATION OF THE NATIONAL INTEREST

The State of Maine recognizes the need to consider national interest in the siting of energy facilities. Consideration of this issue has been specifically addressed in Appendix E1 of the FEIS Maine Coastal Program, August 1978, and Section 3 of this document delineates major State policies and laws acting in the national interest.

Briefly, the State of Maine has considered and continues to consider energy facilities within the context of national interest in the following ways:

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

Maine's Response - Maine's Energy Policy document, as adopted by the Governor, has as a prime objective the conservation of energy "through the reduction or elimination of processes that waste energy." Conservation related policies call for, for example: public education; mandatory conservation where necessary; incentives and penalties; public funding to improve energy efficiency in production, ..."("Maine Comprehensive Energy Plan" Office of Energy Resources, 1976")

2.6.2 Oil Refineries

Maine's Response - Maine recognizes that Congress has said in the CZM Act that the siting of energy related facilities such as oil refineries may be in the national interest. Applications for siting such facilities are handled in the same way as other large projects. They are subject to existing applicable laws, especially the Site Location Act, and are acceptable to the State provided they meet environmental controls.

There have been a number of oil proposals for oil refineries on the Maine coast. The State has generally not been the reason that none have been built so far. The most recent proposal is the Pittston Oil Companies proposal for the construction of 250,000 barrel/day oil refinery and terminal at Eastport. The Board of Environmental Protection has given its approval as has EPA.

Other proposals and their fate include:

Occidental Petroleum proposed a refinery complex and a 300,000 barrel/day oil terminal in a Machiasport free trade zone in 1968. The application was supported by Maine, but ran into opposition from major oil companies. The King Resources Inc. proposal for oil terminal on Long Island was turned down by DEP, overturned by the courts but never built because the company went bankrupt. Atlantic Richfield proposed constructing a 100,000 barrel/day refinery located inland from Machiasbay but withdrew application in 1969. In 1969 Maine Clean Fuels was refused a permit both in So. Portland and Searsport because they could not demonstrate

financial capability to meet the environmental standards of the State. The New England Energy Company submitted a proposal to build a refinery in Sanford (not coastal) with terminals at Portland. There was considerable favorable response to this proposal even from some "environmental" organizations. The application was withdrawn, however in 1975 with the collapse of the funding for Burmah Oil Company.

2.6.3 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)

Maine's Response - OCS related development is permitted in Maine's coastal area subject to applicable laws. The Governor has committed the State to taking the lead in assisting coastal communities to prepare for onshore facilities related to OCS development. Several Maine communities including Kittery, South Portland, Portland and Bath, Rockland, Belfast and Searsport have notified the Governor of their desire to attract service and supply bases to their harbors. The Governor's open letter to the offshore oil industry is attached in the Appendix.

The State Planning Office, using funds provided by the Office of Coastal Zone Management, has an ongoing program to offer communities funds and technical assistance to plan for onshore facilities. The following is a list of completed products in this endeavor. (They are all available upon request from the State Planning Office, 189 State Street, Augusta, ME)

Maine and the Search For OCS Oil and Gas by Charles S. Colgan, the State Planning Office, January 1978, accompanied by - Two Technical Memoranda: Service Bases for Offshore Oil and a Bibliography.

Offshore Oil Exploration

Potential Service Base Sites, City of Bath, Maine, October 31, 1977.

Outer Continental Shelf Service Source Base Development on the Portland Water Front, August 15, 1977

Rockland, Maine: Home Port of Industry. October, 1977.

Stockton Springs, Searsport, Belfast: Onshore Service, Offshore Drilling, A Site Study, June, 1977.

Maine's Coastal Program, through 306 funding intends to continue the support of local planning efforts and the State intends to use future Coastal Zone Management funds to assist in this endeavor. Maine has made known its concerns relating to OCS boundary settlement and the effect of some leases on the Maine fishery.

2.6.4 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).

"In addition, the President is requesting that the (Nuclear Regulatory) Commission develop firm siting criteria with clear guidelines to prevent siting of future nuclear plants in densely populated locations, in valuable natural areas, or in potentially hazardous locations. Finally, the waste generated by nuclear power must be managed so as to protect current and future generations." (p. 72 of the Plan).

Maine's Response - Maine's Energy Plan states that it is the policy of the State: "To take no action which would preclude the development of nuclear electric generating facilities in Maine. However, questions regarding disposal of nuclear wastes, the future availability of nuclear fuels, and the general safety of nuclear facilities must be resolved at the Federal level before new nuclear plants are built in Maine."

Currently one half of the nuclear electric generation produced in Maine's coastal zone goes to utilities in southern New England and New York.

2.6.5 Liquefied 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 a more flexible policy that sets 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.

Maine's Response - Sears Island was one of two sites picked by the consultants as an LNG port terminal. The recommendation was for Pride Island in Rhode Island. The Federal Energy Regulatory Commission is currently considering the Maine site as an alternative in a draft EIS on the effect of the proposed Tenneco Gas Pipeline.

Such a facility, if proposed, would be considered under the Site Location Law and other applicable laws.

2.6.6 Pipelines - "It is clear that the energy transportation routes built in the first half of the century will have to be supplemented by new routes." (p. 58-59).

Maine's Response - Maine recognizes that Congress has said that the siting of energy related facilities such as pipelines may be in the national interest. Applications for siting such facilities are handled in the same way as other large projects. As mentioned above, a trans-state gas pipeline that would cross much of the coastalarea is presently under consideration by the Federal Energy Regulatory Commission and the State. Proposed by Tenneco, the pipeline would transport 1 billion cubic feet/day for use in states to the south of Maine. Recent legislation enacted in Maine permits the sppeded-up review of this proposal by the Department of Environmental Protection because of the national energy situation. Thus pipelines are allowed and are subject to applicable laws.

South Portland is currently the terminal for the Portland Pipeline Company leading to Montreal. Presently, twice as much petroleum is shipped through Maine as is consumed in the State. In the recent past up to 169,000,000 barrels of oil have been shipped through Portland annually.

Additionally the 200 mile Searsport to Limestone Pipeline currently supplies refined petroleum products to Loring Air Force Base from its southern terminus at the port of Searsport.

2.6.7 Strategic Petroleum Reserve/Regional Storage

Maine's Response - The Governor has demonstrated his support for locating a Strategic Petroleum Reserve/Regional Storage facility either in Maine or New England. Many of the possible sites identified in Maine are within the coastal zone. Please see Appendix for copy of Governor's letter and list of sites nominated for consideration.

Maine's analysis of National Strategic Petroleum Reserve and Maine's storage capacity is available from the Office of Energy Resources and a paper "Strategic Petroleum Reserves in Maine: A Discussion Paper by George Tibbetts, July 1977. Another reference is "Preliminary Geologic Survey of Potential Underground Oil Storage Sites in Maine, a Report to Maine Bureau of Geology, Department of Conservation, by Charles Guidotti, Robert Gerber, July 8, 1977.

ENERGY FACILITY SITING

3. STATE POLICIES FOR MANAGING ENERGY FACILITIES AND THEIR IMPACTS

(Articulation of State policies for managing energy facilities and their impacts, including a clear articulation of policies regarding conditions that may be imposed on site location and facility development) (Federal Register Vol. 43, No. 41, Section 923.14 (1).

3.1 POLICIES RELATING TO THE DEVELOPMENT OF ENERGY RESOURCES IN THE STATE

The following policies guide the State's actions in dealing with issues relative to siting energy facilities and managing their impacts.

1.	To institute emergency and long-range planning and management of the energy sources and energy currently available to the people of the State; and to take into consideration in such planning the wise use and conservation of the natural resources of the State, the protection of the environment, the orderly development of industry, and above all the present and future well being of the people of the State.	5 M.R.S.A. §5002 State Energy Resources Act
2.	To prepare a comprehensive energy resources plan to be revised and updated at least annually, which plan shall include, but is not limited to, a description and quantification of the projected needs, rate of use and availability of various energy resources to meet future State needs; a cost analysis of providing energy to meet the State's future needs; a description of the assumptions upon which the predictions and costs are based and the probability of error in the projections of the plan.	5 M.R.S.A. §5005 State Energy Resources Act
3.	To encourage and direct or sponsor research and experiments within the State to develop alternate energy sources, particularly, but not limited to, those sources which rely on the renewable natural resources of the State, such as the water of the tides and rivers, the forests, the winds and other sources which to date have not been fully explored or utilized.	5 M.R.S.A. §5005
4.	To provide conservation alternatives to new electric power generating plants and render an account of the long-term and short-term energy savings realized by the conservation alternatives.	5 M.R.S.A. §5005
5.	To encourage and direct, in conjunction with private industry, the practical development and operation on a small scale of experimental projects involving alternate energy sources, in order to ascertain the potential usefulness of such alternate energy sources and their costs, provided only that such projects shall be subject to the regula-	5 M.R.S.A. §5005

	tions of those State agencies concerned with the protection of the environment and preservation of the natural resources of the State, and with regulation of other energy sources. (Federal Register Vol. 43, No. 41, Section 923.14 (1).	* 5 M.R.S.A. §5005 * * *
6.	To prepare a State energy policy to include, but is not limited to, the following: the direction or directions most feasible for Maine to pursue in the field of energy resources use and development, feasible alternatives to implement the State energy plan and long-range as well as short-range energy programs.	* 5 M.R.S.A. §5005 * * * * * *
7.	To encourage voluntary energy conservation among State and local government, industry, business, and the public for the most efficient utilization of available energy.	* 5 M.R.S.A. §5005 * * *
8.	To encourage the use of solar energy equipment under the State policy of providing tax incentives to develop alternate energy resources.	* 5 M.R.S.A. §5005 * *
9.	Assure a supply of energy, at costs at least competitive with those of other states, which is adequate for the future health and economic welfare of the people of Maine.	* The Halfway Point: * Goals and Major * Activities for * 1977-1978
10.	To continue to provide public information on ways to utilize native energy resources.	* Governor's Execu- * tive Order of * April 25, 1977: * State of Maine * Energy Policy
11.	To work with State colleges and universities to investigate and promote utilization of Maine's native energy resources.	* Governor's Execu- * tive Order of * April 25, 1977: * State of Maine * Energy Policy
12.	To encourage, through legislation, tax exemption or other economic incentive, at both State and federal levels, the use of solar, wind, and small-scale hydroelectric energy resources.	* Governor's Execu- * tive Order of * April 25, 1977: * State of Maine * Energy Policy
13.	To diversify the energy supply base in the State and promote a more equitable distribution of energy resources. Maine should reduce its dependence on petroleum as a major energy supply, replacing it with more abundant conventional and renewable sources. Greater diversification of the types of energy supply and the distribution system within Maine should also be encouraged.	* Governor's Execu- * tive Order of * April 25, 1977: * State of Maine * Energy Policy * * *

14. To promote the use of coal for heavy industrial and electric generation uses.	* Governor's Executive Order of April 25, 1977: State of Maine Energy Policy
15. To evaluate the possible costs, benefits and supply potential to Maine of energy resources transported or transmitted through, and primarily designated for use outside the State.	* Governor's Executive Order of April 25, 1977: State of Maine Energy Policy
16. To improve the regulatory process governing energy development in Maine so as to minimize government interference yet insure the protection of Maine's consumers and the State's environment.	* Governor's Executive Order of April 25, 1977: State of Maine Energy Policy
17. To promote industrial siting and development which allows one facility or process to utilize energy rejected by another facility or process (cogeneration).	* Governor's Executive Order of April 25, 1977: State of Maine Energy Policy

3.2 NATURAL RESOURCE MANAGEMENT POLICIES AFFECTING THE DEVELOPMENT OF ENERGY FACILITIES

Natural resource management policies of Maine were written to cover all types of activity that might cause environmental degradation, including development and siting of energy facilities. A complete listing of these policies is given in Section 6 of the Coastal Program Document.

The following natural resource policies affect the siting of energy facilities. Starred items * indicate policies which are enforceable by incorporation into existing law.

1. To control the location of those developments substantially affecting the local environment in order to insure that such developments will be located in a manner which will have minimal adverse impact on the natural environment of their surroundings.	* 38 M.R.S.A. §481
2. To approve such developments when: 1) The developer has the financial capacity and technical ability to meet State air and water pollution control standards, and has made adequate provision for solid waste disposal, the control of offensive odors, and the securing and maintenance of sufficient and healthful water supplies. 2) The developer has made adequate provision for traffic movement of all types out of or into the development area.	* 38 M.R.S.A. §484

3) The developer has made adequate provision for fitting the development harmoniously into the existing natural environment and that the development will not adversely affect existing uses, scenic character, or natural resources in the municipality or in the neighboring municipalities.	*	38 M.R.S.A. §484
4) The proposed development will be built upon soil types which are suitable to the nature of the undertaking.	*	
3. In the case of proposed construction of a transmission line of 100 kilovolts or more or a gas pipeline, consideration shall be given to whether any proposed alternatives to the proposed location and character of such transmission line or pipeline may lessen its impact on the environment or the risks it would engender to the public health or safety, without unreasonably increasing its cost. Approval or disapproval of all or portions of such a proposed project may be made and orders shall be made regarding its location character, width and appearance as will lessen its impact on the environment, having regard for any increased costs thereby caused.	*	
4. To take no action which would preclude the development of nuclear electric generation facilities in Maine. However, questions regarding disposal of nuclear wastes, the future availability of nuclear fuels, and the general safety of nuclear facilities must be resolved at the Federal level before new nuclear plants are built in Maine.	*	Governor's Executive Order of April 25, 1977: State of Maine Energy Policy and 10 M.R.S.A. §253

3.3 STATE POLICIES ON OCS DEVELOPMENT

Since the Governor has clearly explained Maine's policies regarding OCS development these are used for more information in state's role in OCS in Section 2.6.3.

1. Where significant new business opportunities are identified which, on balance, would produce more gains than losses, the State will seek to work in partnership with oil and gas development interests, coastal area communities, and the Federal government to bring those opportunities to reality.	*	Governor Longley, Statement to the House OCS Subcommittee, 1975
2. The realization that Georges Bank oil and gas development, if it occurs at all, will be a memory in 50 years will be a guiding factor in Maine's approach to OCS development. Careful attention must be given to insuring a high degree of environmental protection.	*	Governor Longley, Statement to the House OCS Subcommittee, 1975

3.	Maine supports changes in the way oil and gas development decisions are made so that affected states and communities can become partners with the Federal government and the petroleum industry in making decisions about the pace and location of development, both onshore and offshore.	* From Governor * Longley's State- * ment to the House * Subcommittee, * 1975
4.	The development of a national energy policy and plan which examines the desirability of accelerating offshore oil and gas production within an overall framework of energy supply, conservation, and use, and which establishes the rationale for accelerating offshore oil and gas production is essential for sensible development of offshore petroleum resources.	* From Governor * Longley's State- * ment to the House * Subcommittee, * 1975
5.	Any outstanding boundary issues, including those between the United States and Canada, and between adjacent states, should be settled as quickly as possible in order to clarify the situation regarding future lease sales, inshore management responsibilities, and distribution of related Federal grants and loans.	* From Governor * Longley's State- * ment to the House * Subcommittee, * 1975
6.	The State will take the lead in helping coastal communities and coastal area citizens prepare for the onshore activities which could accompany offshore oil and gas development. The objective of this assistance will be to pinpoint new business opportunities for Maine, to evaluate the likelihood of Maine coastal communities being asked to host specific types of oil related development and to develop an understanding of the needs and consequences of oil related development.	* Governor Longley, * Statement to the * House OCS Sub- * committee, 1975

ENERGY FACILITY SITING

4. PLANNING PROCESS FOR NEW ENERGY FACILITIES

(Identification of how interested and affected public and private parties may be involved in the planning process, and a discussion of the means for continued consideration of the national interest, in the planning for and siting of energy facilities that are necessary to meet more than local requirements, after program approval) (Federal Register Vol. 43, No. 41, Section 923.14 (1))

The consideration of the national interest and how Maine responds to it was discussed in Section 2.6 of this report. The opportunities for participation of public and private parties in the regulatory process was discussed under Section 2.2. Additionally, all Planning reports and proposed legislative changes are subject to public hearing requirements under the State Administration Act. This document as well as all major amendments to the Coastal Program will be subjected to public discussion.

Rather than repeating information, this section will describe the State's planning efforts in identifying need for and siting of future energy facilities.

4.1 Maine Office of Energy Resources

State authority to engage in planning for energy programs is vested in the Maine Office of Energy Resources under the power promulgated in the State Energy Resources Act (5 M.R.S.A. Sec. 5001-5009). The Office engages in both short and long-range planning as well as forecasting.

The Director of the Office of Energy Resources has the authority and the responsibility to act in the following ways:

1. To obtain assistance from the New England Power Pool and departments, agencies, authorities, boards, commissions and other instrumentalities of State Government in the gathering of information, reports and data which relate to planning and development of energy resources;

2. To be responsible for the coordination of all State energy programs and the coordination of State programs with programs and plans developed by private organizations and the Federal Government;

3. To be responsible for the administration of all Federal energy programs within the State of Maine;

4. To be responsible for the dissemination of energy related information to the public; and

5. To be responsible for the formulation of a comprehensive State energy resources plan and a State energy policy.

The Office of Energy Resources must comply with the following requirements:

1. Prepare a comprehensive energy plan that includes, but is not limited to, a description and quantification of the present supply, rates of use and energy needs of the State; a description and quantification of the project needs, rate of use and

availability of various energy resources to meet future State needs; a cost analysis of providing energy to meet the State's future needs; a description of the assumptions upon which the predictions and costs are based and the probability of error in the projections in the plan;

2. Prepare a State energy policy that includes, but is not limited to, the following: the direction or directions most feasible for Maine to pursue in the field of energy resource use and development, feasible alternatives to implement the State energy plan and long-range as well as short-range energy programs;

3. Encourage voluntary energy conservation among State and local government, industry, business and the public for the most efficient utilization of available energy;

4. The Director of Energy Resources shall be responsible for collecting and analyzing energy data from all available energy sources in and outside the State;

5. Provide technical assistance to the Governor and the Legislature in identifying the emergency and long-range needs and resources to meet these needs for the State;

6. Upon request, provide planning and technical assistance to public and private groups in the field of energy planning;

7. Encourage and direct or sponsor research and experiments within the State to develop alternate energy sources, particularly, but not limited to, those sources which rely on the renewable natural resources of the State, such as the water of the tides and rivers, the forests, and winds and other sources which to date have not been fully explored or utilized;

8. Encourage and direct, in conjunction with private industry, the practical development and operation on a small scale of experimental projects involving alternate energy sources, in order to ascertain the potential usefulness of such alternate energy sources, and their costs, provided only that such projects shall be subject to the regulations of those State agencies concerned with the protection of the environment and preservation of the natural resources of the State, and with regulation of other energy sources;

9. The Office of Energy Resources, with the consent of the Governor, may employ such expert and professional consultants as it deems necessary within the limit of funds available and consistant with the powers and duties of the office.

The Office of Energy Resources is assisted by the State Energy Resources Advisory Board, appointed by the Governor to advise him, the Legislature and the Director of the Office of Energy Resources. The members of the Board shall provide information and assistance in the development of a State energy

resources plan and in the research and development phase of the office's activities as requested by the Director.

Membership in the Advisory Board consists of a broad cross section of concerned persons and must include the following:

- one member of the Maine House of Representatives;
- one member of the Maine Senate;
- one Representative of the Public Utilities Commission;
- and six members to be selected on the basis of their interest, education and experience in the areas of energy planning, research and development, to include one representative of industry, one representative of labor, one representative of the academic community, 2 representatives of the general public and one representative of the business community.

4.2 STATE PLANNING OFFICE

The State Planning Office, Natural Resources Planning Division, including the Coastland Planning Program is engaged in extensive planning work much of which is directly related to or helpful in energy facility planning.

The Coastal Program under the 305 planning has completed an extensive inventory of coastal resources. "Maine Coastal Inventory: a Handbook" lists and explains the information contained in the Coastal inventory maps. Mapped information primarily at the scale of 1:48,000 includes topography, slopes, watersheds, water classification, general soil, fish and wildlife resources, land cove types and recreational facilities and activities. Of particular use to developers are the favorability maps referred to in section 2.1 which shows the construction and opportunities for large scale individual development.

Other resource maps on the coastal region include Maine environments (1:24,000) yield of Bedrock levels, Thickness of Overburden Bedrock Surface Topography, Potentiometric surface of Bedrock Wells, all at the scale of (1:125,000) Water Supply and Demand and Surficial Geology, at 1:24,000.

"The Maine Coast, a Statistical Source" provides extensive demographic, socio-economic information on coastal towns and counties.

Another report identifying areas suitable for acquisition or development for recreational purposes "The Maine Coast: Recreation and Open Space", eventhough in draft form, provides additional useful information.

Another study and process which is useful, in the identifying areas which development has to proceed with caution is the Critical Areas Program of the State. The Program is described in Appendix D of the FEIS. "A Preliminary Listing of Noteworthy Natural Features in Maine", published in 1976, updated information is always available from the State Planning Office.

There are a number of studies and projects currently in progress which are supported by the State Planning Office either by funds or through the use of the above mentioned information.

Ecological Characteristics of the Maine Coast being conducted by the U.S. Fish and Wildlife Service promises to be the most detailed and defined study of coastal environments. A pilot study area report for the Sheepscot River Waterbed has already been published. The authors used SPO inventory data for this study.

The SPO is also funding a study by Water Resource Center of the University of Maine to assess the capability of Maine coastal waters to assimilate pollution loading (including thermal discharges) of various kinds relating to onshore development. In addition, the SPO through its review function of EIS's and other plans provides input in data and coordination with its own planning processes.

Also, coordinated by the State Planning Office is the work of the Commission on Maine's Future. The policies of the Commission have not yet been adopted but the Commission on Maine's Future, Final Report, December 1, 1977, has some recommendations regarding energy. Aside from recommendations on energy conservation, the following are relevant to this report:

"4. A tidal plant such as the one proposed at Cobscook Bay should be studied to evaluate economic and environmental impacts".

"5. Encourage all non-destructive hydro potential in the state... Massive hydro-electric projects which involve environmental sacrifices should not be permitted if feasible alternatives exist."

"6. Do not prohibit additional nuclear facilites but consider each on a case-by-case basis with special emphasis placed on thermal pollution, operational safety of the plant, and a satisfactory solution to the problem of disposal of radioactive-spent fuel."

Another policy recommendation effort, coordinated by the Coastal Program has been the study of the Committee on Coastal Development and Conservation, (The CCDC which is advisory to the Governor and the SPO on coastal planning) on heavy industrial siting. Directed by the Governor, the Committee was asked to prepare a report on the question "where should heavy industry be sited in coastal Maine". The work was carried out by Department of Conservation in cooperation with the Office of Energy Resources.

The study identified heavy industries most likely to locate in the coastal zone during the next 25 years. Heavy industries thought most likely to locate where energy facilities, (included in Section 1 of this report) and identified the industries with the most constraining site requirements. Using these constraints, the coast of Maine was screened for areas that met those requirements.

The recommendations were discussed at a set of public hearings held in early August. The CCDC will evaluate the response and make its recommendations to the Governor and Legislature. If there are substantial changes to the legal framework which is the core of the current coastal program, then there will be public hearings and other notification pursuant to the required procedures for amending the Coastal Program.

Since 1975 the State Planning Office has been engaged in planning efforts for the possible development of OCS petroleum reserves on Georges Bank.

Through the OCS Planning Program, a part of Maine's Coastal Program, an attempt has been made to develop information about offshore petroleum development which will be useful to State and local government agencies, and to Maine citizens in general. The uncertainty about future events on Georges Bank as well as onshore activities is a limiting factor on planning, but it can be reduced substantially through an examination of similar experience in other parts of the world -- a study of the characteristics of onshore facilities, and a review of the research on OCS development.

The report from these planning efforts has already been listed under Section 2.6.3.

4.3 OTHER GOVERNMENTAL AGENCY

The Land Use Regulation Commission in its comprehensive planning effort has addressed the energy question briefly. Its policies regarding development essentially encourages monitoring the existing patterns.

Regarding energy facilities the plan

"7. Requires that new utility lines, pipelines, and public transportation right-of-ways and their associated facilities be located away from scenic areas or be landscaped so that they do not degrade a scenic area". (Comprehensive Land Use Plan for The Plantation and Unorganized Townships of the State of Me. LURC Augusta, ME., August, 1976)

The plan was adopted by the LURC and approved by the Governor on September 17, 1976.

The Air Bureau in Department of Environmental Protection is responsible for an air quality implementation plan to show how Maine will meet and maintain air quality standards and pursuant to the 1977 amendments how existing air quality will not be degraded beyond minimum allowable levels. Developers are encouraged to consult with the Air Bureau for assistance in facility siting.

Some Regional Planning Commissions have completed or are working on comprehensive plans for regional development. The Greater Portland Council of Governments, has adopted "Regional Development Framework" in February 14, 1978. This document outlines the policies regarding development and energy

energy facilities siting.

The Hancock County Planning Commission is currently discussing with its member municipalities a "Proposed Growth Management Framework Plan". The process includes suggested policies for guiding individual development to current urban and major activity centers. While no specific policies regarding energy facilities are explicated, the proposed policies regarding forest, agricultural, marine resources and recreation/tourism are related by identifying potential conflicts with energy facility sites.

Developers are urged to contact these and other Regional Planning Commissions both for guidance in their policies as well as for more detailed technical information and data than is available on the State level.

A list of Regional Planning Commissions, their addresses and phone numbers are included in the Appendix.

4.4 IN COOPERATION WITH OTHER AGENCIES

4.4.1 New England River Basins Commissions (NERBC)

The State is an active participant of NERBC with the Director of the State Planning Office serving as Maine's member of the Commission.

NERBC was created at the request of the Governors of the New England States and New York by an Executive Order in 1967 under Title II of the Water Resources Planning Act of 1965 (P.L. 89-80). The Commission is a federal-state partnership consisting of members of the previously named states, ten federal agencies and six interstate agencies.

Special studies presently underway by NERBC directly related to energy facility planning and siting in the coastal zone, which is consistent with the objectives of CFR 923.14, include the following:

a. OCS Pipeline Study -- An Outer Continental Shelf (OCS) Pipeline Study of the potential environmental impacts of submarine pipelines used to transport oil and/or gas from the outer continental shelf to shore. Recommendations on methods to minimize problems will be included.

b. Siting of OCS-Related Facilities -- Extensive studies on the Siting of OCS-Related Facilities have been completed and will continue to be updated. This program includes provisions for technical assistance to local and State planning groups.

c. Power Plant Siting -- NERBC is preparing a set of water and related land resource criteria and guidelines to aid in the development of a planning strategy for use in siting bulk power plants in New England. The study will be coordinated with a related project underway by the Massachusetts Energy Facility Siting Council.

d. Hydroelectric Power Potential in New England -- NERBC is investigating the potential benefits and impacts of hydroelectric development in New England.

e. Natural Resource Information Management System -- NERBC is investigating the feasibility of developing a natural resources data management system for the region.

4.4.2 Northeast Solar Energy Center

Maine is a regional participant in the Northeast Solar Energy Center (NESEC), which is a regional center to foster the widespread commercialization of solar energy. Northern Energy Corporation developed the center with a grant from the U.S. Department of Energy.

The Governor of Maine has appointed three persons to serve as Maine's Regional Participant, Regional Council Member, and Board of Trustees member, respectively. Maine members are assisting in both the planning and project work of NESEC, which will fulfill the President's decision that the best way to provide widespread use of solar energy is through a regionally diversified effort.

Among the objectives of the Center are:

- to reduce the regional dependence on oil, especially foreign oil and gas;

- to utilize the natural resources of the region for energy needs, including biomass from forests and farms, wind energy, and ocean energy; and

- to engage the instutional resources of the region--governmental, intellectual, financial and industrial--in the solution of the problem.

In meeting these objectives, NESEC will support and engage in regionally oriented programs in the following solar technologies:

1) solar heating and cooling

2) wood and other biomass energy conversion

3) wind energy conversion

4) solar photovoltaic conversion

5) ocean wave and tidal energy conversion.

4.4.3 New England Regional Commission (NERCOM)

The State continues to receive and supply information to this agency on the energy needs of the region. NERCOM has established an Energy Research and Policy Formulation Program which is responsible for the Commission's Energy Program.

The goal of the Energy Program is to supply the members of the New England Regional Commission, which is comprised of the six New England Governors and a Federal Cochairman appointed by the President, with reliable baseline information on New England's energy requirements and vul-

nerability, and to provide the Governors and the region with viable energy policy options and recommendations to guide New England's energy future. The Commission's Energy Program staff works closely with the Energy Advisors to the Governors and Energy Offices of the six New England states in formulating, analyzing and disseminating the output and results of the Energy Program, thereby achieving a measure of regional coordination in tackling the complex of energy problems facing the region.

The Energy Program is also involved in a broad range of projects including examination and response to national energy policy, outer continental shelf policy formulation, regional petroleum and natural gas industry development programs, the New England Energy Management Information System, regional power management program, U.S. Canadian cooperation on energy matters, and technical policy assistance to the staffs of the New England Governors on other numerous matters of regional energy policy formulation and analysis.

4.4.4 New England Federal Regional Council Energy Resource Development Task Force

Maine is a member of the New England Federal Regional Council, which is an interagency, inter-governmental coordination group. The purpose of the council is to make a three tiered governmental system efficient and responsive to the needs of citizens. Membership in the council including the heads of 10 grant making federal agencies, ad hoc members in several fields, including energy, economic development, and land use planning as well as State and local officials and the agencies which they represent.

The council's Energy Resource Development Task Force consists of representatives of federal agencies, the New England Governors, the New England Regional Commission and the New England River Basins Commission.

4.4.5 National Governor's Association (NGA)

Maine's Governor is an active member of the National Governor's Association, a national organization representing the fifty-four Governors. The NGA insures the informed participation of the nation's Governors in the National policy-making process.

The NGA Energy Policy Project was begun several years ago to suyport the Governors' participation in energy-related policy areas. This program functions under the direction of the Natural Resources and Environmental Management Committee (NEEMC), which has established energy subcommittees for oil and gas, energy conservation, impact assistance, energy facility siting, emergency preparedness, and coal.

4.4.6 Massachusetts Energy Facilities Siting Council

The State of Maine through several of its agencies, including the Office of Energy Resources, is cooperating with the Massachusetts Energy Facilities Siting Council in developing a U.S. Nuclear Regulatory Commission funded research project "An Integrated Regional Approach to Regulating Energy Facility Siting."

The purpose of the project is "to assemble a set of regional electrical demand forecasting, generation planning, and environmental assessment tools which will be of direct use in the work of New England organizations involved in energy facility siting." The project is regional in scope because of overlapping State and utility boundaries, regional inpacts of power facilities, and the regional planning of the New England Power Pool (NEPOOL).

The environmental assessment capability of the project will include the ability to examine site suitability and environmental impact issues. According to the Energy Facility Siting Council, environmental and socioeconomic data will be used in conjunction with computer capabilities to accomplish the following:

a. initial site screening and selection;

b. detailed site suitability analysis;

c. assessment of alternative sites, generation types and designs;

d. integration of siting factors into traditional generation planning tools; and

e. analysis of the implications of water availability and other constraints for long-range generation and siting alternatives.

The capabilities of the project will be part of the public domain allowing interagency use in the region.

PRINCIPAL STATE AGENCIES FOR MANAGING ENERGY FACILITIES

5

ENERGY FACILITY SITING

5. PRINCIPAL STATE AGENCIES FOR MANAGING ENERGY FACILITIES

Several State agencies have legislated authority for managing energy facilities and their impacts. A key aspect of the State's management role is to reduce environmental impact and protect the public welfare. The State agencies involved in this process are listed below.

5.1 Department of Environmental Protection (DEP)

The DEP, consisting of the Board of Environmental Protection, Commissioner, and Staff is the principal agency for administering the State's environmental laws listed in Section 3. Authority for granting permits within this Agency rests with the Board. Legislatively mandated authority permits the Board of Environmental Protection to impose special conditions on both the siting and operation of energy facilities. In permit proceedings the Board reviews input from other State agencies, Federal agencies, and the public and private sector. The procedure is outlined in Section II of this document.

5.2 Public Utilities Commission (PUC)

The PUC has regulatory authority over utility rates and the number of new electric power plants in Maine. It also has this same authority over natural gas pipelines. The PUC is responsible for assuring the financial stability of utilities while protecting consumer interests. The PUC forecasts supply and demand for electricity.

5.3 Land Use Regulation Commission (LURC)

The LURC has the authority to grant permits for facilities in its jurisdiction to impose special conditions on public utility facilities constructed in the unorganized territories of the State to insure that principles of sound planning are adhered to. It is in the Department of Conservation.

5.4 Maine Geological Survey

The Director of the Survey has the power to regulate the exploration and mining of hydrocarbons on private and State owned land.

5.5 Maine Office of Energy Resources (OER)

Under the authority of the State Energy Resources Act, OER provides long-range planning and promotes new sources of energy. The two major objectives of the Energy Resources Act are conservation of natural resources and environmental protection. OER has only advisory power, acting as a primary source of information on siting and operation of energy facilities.

5.6 State Planning Office (SPO)

The role of the SPO has been and will continue to be to offer technical assistance to developers or government agencies, coordinate the implementation of State policy by other State/local governments and provide other advisory services as requested. Included is the considerable responsibility of offering technical assistance to consultants who prepare environmental impact statements and the review of these statements on development proposals.

Under the 306 program, as more fully described in Section 8.2 of the FEIS, the State Planning Office will continue to work on refining State policy regarding the siting of heavy industry with the objective of streamlining the regulatory process, and providing positive guidance to developers, allowing local initiative yet still protecting the environmental resources of the coast.

Under the 306 program, the State Planning Office will also guide and coordinate activities to bring about federal consistency. The review will be conducted by the core law agencies with the SPO acting as administrative agent of the process (please see Appendix E of the FEIS for full description).

APPENDICES

ENERGY FACILITY SITING

REGULATIONS

SPECIAL REGULATIONS FOR HEARINGS ON APPLICATIONS OF SIGNIFICANT PUBLIC INTEREST

30.1 - 30.26

EFFECTIVE DATE SEPTEMBER 11, 1975

AMENDED DATE FEBRUARY 8, 1978

Supercedes all Previous
Regulations for
Hearings on Applications

State of Maine
Department of Environmental Protection 1/78

BOARD OF ENVIRONMENTAL PROTECTION

SPECIAL REGULATION FOR HEARINGS
ON APPLICATIONS OF SIGNIFICANT PUBLIC INTEREST

30.1 Scope of Regulations

These regulations shall be applicable to all hearings before the Board of Environmental Protection on applications for new, renewed, amended or transferred licenses, permits, certificates, variances, approvals or other determinations on specific matters (hereinafter "licenses") where the Board has determined that the subject matter of the application is of significant public interest.

These regulations shall not apply to Enforcement Hearings pursuant to 38 MRSA, Section 347, or to Hearings on Applications where no determination of significant public interest has been made by the Board.

These regulations shall be construed to secure the just, speedy and inexpensive determination of such matters.

30.2 Consolidation

On motion and for good cause shown, or on its own initiative, the Board may consolidate for hearing two or more proceedings if it finds that such action will be conducive to just and proper dispatch of its business, the rights of any party are not prejudiced and that opportunites for public participation will not be compromised.

A consolidation under this section may be for any purpose or issue of the proceedings.

30.3 Notice

A. Prior to any hearings conducted by the Board or the Department, the Department shall provide notice:

1. to the applicant at least 10 days prior to the hearing by registered mail return receipt requested;

2. to any intervenors who have qualified under Section 30.5 (a) of this regulation at least 10 days prior to the hearing by registered mail return receipt requested;

3. at least 10 days prior to the hearing by regular mail to persons who have filed a written request, within the calender year, to be notified of hearings;

4. at least 10 days prior to the hearing to persons who have made a timely request to be notified of a specific hearing;

5. by publication twice in a newspaper of general circulation in the area of the proposed activity. The date of the first publication shall be at least 14 but no more than 21 days prior to the date of the hearing and the second publication shall be at least 7 but no more than 10 days prior to the date of the hearing.

B. Contents of Notice. Notices of hearings shall contain the following minimum information:

1. reference to statutory authority;

2. the purpose of the hearing;

3. time, date, place of the hearing;

4. the manner in which views may be submitted for consideration;

5. the place and time where relevant material may be examined prior to the hearing; and

6. the name, address and telephone number of the person to contact for information.

A notice for a hearing involving regulations shall contain a clear concise description of the regulation and the purpose for which the regulation is being proposed.

30.4 Location

A. Hearings on air emission license applications shall be held within the Air Quality Region where the proposed emission would occur.

B. Hearings on air emission variance applications shall be held in the municipality where the building or business in connection with which the variance is sought is located; except that if the building or business in connection with which the variance is sought is located in an unorganized area, the hearing shall be held in such place as the Board or the Commissioner determines is most convenient to the Board, the applicant and other interested parties; provided, however, that if 5 or more requests for variances are pending within the same Air Quality Region, a single hearing on all such requests may be held at one place within that region.

C. Hearings on sanitary district applications shall be held within the proposed district.

D. All other hearings held pursuant to these regulations shall be held either in Augusta or in the general location of the proposed activity for which license or approval is sought, at the discretion of the Board or the Commissioner.

30.5 Public Participation

A. Intervention

1. Any person who desires to participate as a party, offer testimony and evidence and participate in cross-examination shall file a petition for leave to intervene within 10 days of the Board designation of the hearing as one involving significant public interest unless otherwise ordered by the Board or Commissioner. A petition shall be granted if it demonstrates:

a. that the petitioner has a direct and substantial interest which may be affected by the proceedings;

b. that the petitioner has reasonably specific contentions regarding the subject matter of the hearing and the appropriate statutory criteria; and

c. that the petitioner is prepared and capable of participation in the hearing in order to support such contentions.

2. A petition for leave to intervene which is not timely filed will be denied unless the petitioner shows good cause for failure to file on time.

3. A person permitted to intervene shall become a party to the proceeding and shall be permitted to participate in the hearing, subject, however, to such reasonable terms as the Board, Commissioner or Presiding Officer may direct.

4. Petitioners may be required to consolidate or join their appearances in part or in whole if their interest or contentions are substantially similar and such consolidation would expedite or simplify the hearing without prejudice to the rights of any party or petitioner. A consolidation under this section may be for all purposes of the proceeding, all of the issues of the proceeding, or with respect to any one or more issues thereof.

5. Unless otherwise specified by the Board in granting a petition to intervene, intervenor status shall be deemed to have been granted for the duration of the hearing, the post-hearing consideration of the application, and any appeals arising from Board action on the application. In addition, any applicant whose application is

approved shall be required to provide notice to any intervenors of the filing of any documents presented to the Department indicating (a) actions to comply with conditions attached to the approval or (b) proposals to vary or amend development activities, timetables, emission or effluent levels or volumes of solid waste as approved by the Board, provided, however, that the applicant's responsibility under this paragraph (5) shall be deemed fulfilled when such notice is mailed to the person designated to represent an intervenor in the petition for intervention status.

B. Participation By Interested Persons

Any person who is not an intervening party under subsection (A) may, in the discretion of the Presiding Officer, be permitted to participate in a hearing by making oral or written statements of his position on the issues, attend and participate in pre-hearing and mid-hearing conferences, and submit written or oral questions through the Presiding Officer, within such limits and on such terms and conditions as may be fixed by the Board, Commissioner or Presiding Officer.

C. State, Federal or Municipal Agencies

The Presiding Officer shall afford a representative of an interested federal, state, municipal or other governmental agency which has not petitioned to intervene a reasonable opportunity to participate in such hearing and introduce evidence and question witnesses. Such representative shall be permitted such rights as are granted by this paragraph only if representing the views and position of the agency on whose behalf that representative appears and not personal views and opinions.

30.6 Pre-hearing Review

A. In all hearings under this regulation, the Board may order that within specified time:

1. Designated intervenors shall review all materials provided by the applicant and prepare in writing and serve on all parties;

a. specific questions which the intervenor believes should be asked about the application and other supporting materials, and

b. requests for additional materials which the intervenor believes the applicant should provide.

2. Without precluding any further inquiry, Board members and staff may also present to the applicant, in writing, specific questions about the application and other supporting materials or requests for additional materials.

3. The applicant shall respond in writing to requests pursuant to paragraphs (1) and (2) providing the answers to questions and the requested materials or a statement as to why answers cannot or should not be provided.

4. The applicant and each intervenor shall provide a list of witnesses and an outline of the areas to be covered in their direct testimony, provided however, that witnesses and areas of testimony may be added at any time with the permission of the Board.

5. When the above is completed, or a reasonable time has passed the Board shall hold a pre-hearing conference and expeditiously thereafter commence the public hearing.

a. Materials provided hereunder or that portion of such materials which are relevant to the hearing may be made part of the record upon request of any party.

b. The provisions of this section may be invoked with the consent of the applicant prior to commencement of the public hearing or where the Board deems necessary for expeditious processing after a hearing has commenced.

30.7 Staff Review Paper

A. At least 14 days in advance of each hearing the Department staff shall prepare a paper reviewing the application. Such paper shall:

1. Identify issues which the staff believes that the Board must consider in reviewing the application,

2. Present a comparison of the applicant's proposed air emissions and water effluents with any specific air emission or water effluent requirements which would apply to the applicant's proposal under State or Federal statutes or regulations, and

3. Include any recommendations the staff has made to the applicant.

B. The above described staff review paper shall be mailed to the Board, the applicant and any parties and shall be available to the public not less than 7 days in advance of the date set for commencement of the public hearing.

C. Nothing in this Section (30.7) shall be construed to preclude the staff from presenting testimony or questioning the applicant on any matter relevant to the application.

D. Any party may, prior to the commencement of the hearing, provide to the Board written comments regarding the staff review paper.

30.8 Conferences

A. The Board, the Commissioner or the Presiding Officer may upon notice to the applicant, other parties and any other persons whom the Commissioner or the Presiding Officer deems appropriate, hold conferences for the purpose of formulating or simplifying the issues, obtaining admissions of fact and of documents, arranging for the exchange of proposed exhibits or prepared expert testimony, limiting the number of witnesses and consolidating of the examination of witnesses, specifying procedure at the hearing, and such other matters which may expedite orderly conduct and disposition of the proceedings.

B. All such conferences shall be open to the public, and the action taken, and any agreement made at any such conference shall be stated on the record by the Presiding Officer. Any person may ask questions about or raise objections to such actions or agreements at the time they are stated on the record.

C. At any pre-hearing conference:

1. Intervenors and other persons who will participate in a hearing shall indicate what information they will be requesting of the applicant that is not provided pursuant to Section 30.6.

2. The applicant shall be prepared to make available any background or working papers or other documents, including raw data, which have been prepared in connection with preparation of the application but were not provided with the application where such is requested by the Board, staff or any other person participating in the pre-hearing conference and is deemed relevant and necessary by the Board.

3. Documents or other material requested which are not provided at the pre-hearing conference shall be provided to all parties at a time designated by the Presiding Officer in advance of the hearing, or that portion of the hearing where such material is relevant, which will allow reasonable opportunity to examine the material and prepare testimony and questions.

4. Where the documents or other material requested are of such a nature that they do not lend themselves to reasonable and inexpensive reproduction, the Presiding Officer may designate the manner by which such materials may be reviewed.

30.9 Hearing Procedures

A. Presiding Officer

1. The Presiding Officer at any hearing shall be either (a) the Commissioner if present and willing to preside, (b) a member of the

Board selected by those members present at the hearing, or (c) if no Board member is present and willing to preside a qualified employee or representative of the Department as designated by the Commissioner.

2. The Presiding Officer shall have the authority to:

a. require and administer oaths or affirmations;

b. rule upon issues of evidence;

c. regulate the course of the hearing;

d. rule upon issues of procedure;

e. grant or deny petitions for intervention which have not previously been ruled upon by the Board;

f. certify questions to the Board for its determination; and

g. take such other actions as may be ordered by the Board or that are necessary forthe efficient and orderly conduct of the hearing, consistent with these regulations and applicable statutes.

3. Whenever any action or order is required of the Presiding Officer and the Presiding Officer is unavailable, such action or or der may be issued by the Commissioner.

4. In special cases, where good cause appears, the Presiding Officer may permit deviation from these procedural rules in so far as compliance therewith is found to be impractical or unnecessary.

B. General Conduct

1. Opening Statement. The Presiding Officer shall open the hearing by describing in general terms the purpose of the hearing and the general procedure governing its conduct.

2. Transcription of Testimony. All testimony at hearings before the Board shall be recorded and, as necessary, transcribed.

3. Witnesses. Witnesses shall be sworn. Witnesses may be compelled to attend, testify and produce records if subpoenaed by the Board. Witnesses will be required to state for the record their name, residence, business or professional affiliation, whether or not they represent another individual, firm, association, organization, government agency or other legal entity for the purpose of

the hearing.

4. Testimony in Written Form. At any time, prior to or during the course of the hearing, the Commissioner or Presiding Officer may require that all or part of the testimony to be offered at such a hearing be submitted in written form at such time as may be specified. Such written testimony shall be submitted in such form and at such time as the Presiding Officer may specify. All persons offering testimony in written form shall be subject to cross-examination. All testimony offered in such written form shall be available for public inspection. The party submitting the written testimony may be required to serve a copy thereof on the applicant and all intervening parties by the time specified, in order that all persons participating in such hearings may have a reasonable opportunity to examine such testimony and prepare such question or cross-examination as they deem necessary.

This rule shall not be construed to prevent oral testimony at a scheduled hearing by any member of the public who requests and is granted time to testify at a hearing.

30.10 General Evidence

A. Evidence which is relevant and material to the subject matter of the hearing and is of a type commonly relied upon by reasonable prudent persons in the conduct of their affairs shall be admissible. Evidence which is irrelevant, immaterial or unduly repetitious shall be excluded. The Department's experience, technical competence and specialized knowledge may be utilized in the evaluation of all evidence submitted to the Board.

B. Official Notice. The Board may take official notice of any facts of which judicial notice could be taken, and in addition may take official of general, technical or scientific matters within its specialized knowledge and of statutes, regulations and non-confidential agency records. Facts officially noticed shall be included and indicated as such in the record.

C. Proof of Official Record. The Presiding Officer may require that an official record or lack thereof be evidence by an official publication or by a copy or a statement attested by a person having, or who would ordinarily have, the legal custody of the record.

D. Documentary and Real Evidence. All documents, materials and objects offered in evidence as exhibits shall, if accepted, be numbered or otherwise identified. Documentary evidence may be received in the form of copies or excerpts if the original is not readily available.

The Commissioner or the Presiding Officer may require, after prior

oral or written reasonable notice, that any party offering any documentary or photographic evidence shall provide the Board with a specified number of copies of such documents or photographs, unless such documents or photographs are determined to be of such form, size or character as not to be reasonably susceptible of reproduction. The applicant and intervening parties and state, federal or municipal agencies shall provide each other with copies of any exhibit offered in evidence unless otherwise ordered by the Presiding Officer. All documents, materials and objects admitted into evidence shall be made available during the course of the hearing for public examination. All such evidence will also be available for public examination at the Department's office in Augusta during normal business hours.

E. Record of Application. In any proceeding involving an application, the application filed with the Department, including exhibits and amendments thereto, shall be placed into evidence.

F. Objections. All objections to rulings of the Presiding Officer regarding evidence or procedure and the grounds therefor shall be timely stated during the course of the hearing. If during the course of or after the close of the hearing and during its deliberations the Board determines that the ruling of the Presiding Officer was in error, it may reopen the hearing or take such action as it deems appropriate to correct such error.

30.11 Testimony and Questions

A. Direct Testimony. Direct testimony shall be offered in the following order:

1. the applicant and representatives and witnesses the applicant selects,

2. department staff, members and consultants,

3. state, municipal and other governmental agencies and representatives thereof,

4. intervenors,

5. other interested persons.

B. Cross-Examination and Questions. At the conclusion of the testimony of each witness oral cross-examination of each witness may be permitted in the following order:

1. Board members, counsel, staff members and consultants may be permitted, by the Presiding Officer, to ask questions at any time,

2. the applicant;

3. federal, state and other governmental representatives,

4. intervenors;

5. all other persons may have the opportunity to question such witness by oral or written questions through the Presiding Officer.

The Presiding Officer may require that all examinations, either written or oral, be conducted at the conclusion of the testimony of each category of witnesses rather than at the conclusion of the testimony of each individual witness.

The Presiding Officer may require that all cross-examination be conducted in the form of written questions submitted to the Presiding Officer and read to the witness or may prohibit persons other than the applicant, intervenors, or governmental representatives from asking any questions.

C. Redirect and Rebuttal Evidence. All parties shall have the right to redirect and recross examination of any witness and to submit rebuttal evidence. Such re-examination shall be limited to matters brought out in the last examination by any other person except by leave of the Presiding Officer. Rebuttal evidence shall be directed only to matters brought out by another party except by leave of the Presiding Officer.

D. Varying Order of Appearance. When circumstances warrant, the Commissioner or the Presiding Officer may vary the order in which witnesses appear and the order in which testimony is given or witnesses are cross-examined.

E. 1. Where prior to or during the course of a hearing, the Board determines that testimony and questions at the hearing are likely to be unduly protracted or lengthy, the Board may order that oral cross-examination by each intervenor be limited to a specified duration.

E. 2. The Board may reduce the oral cross-examination time so specified for each intervenor or any one intervenor on its own motion, or on petition of any party where it determines that: (a) the large number of intervenors permitted to participate could unduly extend the proceedings, (b) an intervenor failed to properly utilize pre-hearing review procedures to obtain information, or (c) an intervenor's oral cross-examination is repetitious of areas previously covered by cross-examination in the proceeding.

A petition pursuant to this paragraph shall specify why reduced

cross-examination time is important to the petitioner and would not unduly restrict development of information relevant to the Board's decision and, if applicable, what acts or omissions of an intervenor justify the petition.

E. 3. The Board may increase the oral cross-examination time allocated to each intervenor, or any one intervenor, on its own motion or on petition of any party where it determines that: (a) the subject matter being examined is sufficiently complicated or the issues involved in an application are sufficiently numerous to warrant more extensive cross-examination; (b) new areas of inquiry have been discovered during cross-examination which were not identified in advance of the hearing, or (c) actions by the applicant including delayed or lengthy responses to questions have made it difficult for the intervenor to complete cross-examination within the specified time.

A petition pursuant to this paragraph shall specify why extended cross-examination time is important to the petitioner and include the matters which the petitioner desires to address in extended cross-examination, why these matters could not have been addressed in pre-hearing review or normal cross-examination and, if applicable, what acts or omissions of an applicant justify the petition.

F. The Board may designate times during the hearing when members of the public may ask questions and make statements, and may set time limits on such questions or statements.

30.12 Continuance

All hearings conducted pursuant to these regulations may be continued for reasonable cause and reconvened from time to time and from place to place by the Commissioner or the Presiding Officer as circumstances require. All orders for continuance shall specify the time and place at which such hearing shall be reconvened. The Commissioner or the Presiding Officer shall notify interested persons and the public in such a manner as is appropriate to insure that reasonable notice will be given of the time and place of such reconvened hearing.

30.13 Regulation of Certain Devices

The placement of television cameras, still cameras, motion picture cameras or microphones at Board hearings may be regulated by the Commissioner or the Presiding Officer in order that the use of such equipment does not interfere with the orderly conduct of the hearing.

30.14 Subpoenas

A. General. At the request of any party, or at the request of the Board, or any member thereof, the Presiding Officer may issue subpoenas

for the attendance of witnesses or for the production of documents.

B. Form. Every subpoena so issued shall bear the name of the Board, the name of the issuing officer and shall command the person to whom it is directed to attend and give testimony or produce specified documents or things at a designated time and place. The subpoena shall also advise of the quashing procedure provided herein.

C. Service. Unless receipt of the subpoena is acknowledged by the witness, it shall be served by a person who is not a party to the proceeding and is not less than 18 years of age. Service shall be made by delivering a copy of the subpoena to the person named in it and tendering the fees and milage paid to witnesses in the Superior Courts of this State.

D. Return. The person serving the subpoena shall make proof of service, by filing the subpoena and affidavit or acknowledgement of service with the Commissioner. Failure to make such proof of service shall not affect the validity of such subpoena and service.

E. Quashing. On motion made promptly, and in any event before the time specified in the subpoena for compliance by the person to whom the subpoena is directed, and on notice to the party at whose instance the subpoena was issued, the Presiding Officer may (1) quash or modify the subpoena on a finding that it is unreasonable or requires evidence not relevant to any matter in issue, or (2) condition denial of the motion on just and reasonable terms. Any person requesting a hearing on a motion to quash a subpoena shall be granted a hearing before the Board upon such motion.

F. Confidentiality. If any person served with such subpoena claims, at or before the hearing that the required production of books, records or other data may disclose secret processes, formulae or methods used by or under the direction of such person which are entitled to protection as trade secrets and the Board or the Presiding Officer determines that such claim is valid, such information from such books, records, or other data shall be disclosed only at a non-public portion of the hearing and the record thereof shall be confidential.

G. Enforcement. If any person refuses to obey a subponea issued by the Board under this section, the Board may apply to any Justice of the Superior Court for an order compelling such person to comply with the requirements of the subpoena.

H. Costs. The Board may condition denial of the subpoena upon the advancement by the person in whose behalf the subponea is issued of the reasonable cost of producing the books, papers, documents, or tangible things.

30.15 Offer of Proof

An offer of proof may be made in connection with an objection to a ruling of the Presiding Officer excluding or rejecting any testimony or question on cross-examination. Such offer of proof shall consist of a statement of the substance of the preferred evidence or that which is expected to be shown by the answer of the witness.

30.16 Conclusion of Hearing

At the conclusion of the hearing, no other evidence or testimony will be allowed into the record, except as specified by the Presiding Officer.

30.17 Reopening the Record

At any time prior to a final decision, the Board or Commissioner may reopen the record for further proceedings consistent with these regulations provided, however, that the Commissioner shall give notice of such further proceedings, in writing, to the applicant and intervenors at least 10 days prior to such proceedings, and further provided that the Commissioner shall notify other interested persons and the public in such manner as is appropriate.

30.18 Proposed Brief and Findings

All persons participating in any hearing shall have the right to submit to the Board written proposed findings of fact, briefs, and recommended conditions, provided that such documents shall be submitted in writing not later than seven days after the close of the hearing or within such other time as ordered by the Presiding Officer or the Commissioner. This paragraph shall not apply to the Department staff consultants and counsel, all whom shall have the right to submit such proposals at any time.

30.19 Oral Argument

Oral argument may be permitted before the Board at the conclusion of the evidence at a time and place to be fixed by the Commissioner or the Presiding Officer at his discretion.

30.20 Record

A full and complete record shall be kept of all hearings. The record shall include, but shall not be limited to, the application, supporting documents, all exhibits, proposed finding of facts and conclusions of the Presiding Officer, if any, staff documents, Board finding of facts and order, and the recording or transcript of the proceedings.

30.21 Proposed Orders

Proposed orders on matters which have been subject to hearing pursuant to this regulation shall be mailed to all parties at least 14 days before Board action on such proposed orders, and all parties may provide comments on such proposed orders at least 5 days in advance of Board action thereon.

30.22 Forms

All motions, proposed findings, petitions and briefs, and to the extent practicable, written testimony filed with the Board except for documents not susceptible of reproduction in the manner provided or for other good cause shown, shall be typewritten or printed on white opaque paper 8½ by 11 inches in size and bound typed matter shall be double spaced. The first page of each such document shall be headed by the title

STATE OF MAINE

DEPARTMENT OF ENVIRONMENTAL PROTECTION

and shall have a caption with (1) the title of the matter in hearing, giving the name of the applicant, the activity in issue and the location (e.g., in the matter of Scott Paper Company, Pulp and Paper Mill, Hinckley, Maine), (2) the Department's application number (e.g., Site Application #86-0931-36261) and (3) the title of the document (e.g., Petition to Intervene). The final page shall be dated and signed.

30.23 Service and Filing of Documents

A. Service

A copy of all motions, petitions, briefs and pre-filed written testimony, permitted or required to be filed with the Board pursuant to these regulations, except briefs or proposed findings prepared by the Department, its consultants or counsel, shall be served upon applicants and intervenors in the proceeding or their representatives in the manner pursuant to Rule 4 (d) of Maine Rules of Civil Procedure (Attached as Appendix A).

B. Filing

An original and 15 copies of all such motions, petitions, briefs and pre-filed testimony shall be filed with the Board by delivery to the Commissioner, Department of Environmental Protection, Augusta, Maine 04333

C. Representatives

The first document filed by any person in a proceeding shall

designate the name and address of a person on whom service may be made and to whom all correspondence from the Board and staff may be sent.

D. Services Papers by the Board

Except for subpoenas, the Board and Presiding Officer shall assure that all orders, decisions, notices and other papers issued by the Board are served upon all parties to the proceeding in the manner prescribed by this section.

30.24 Ruling

The Commissioner or Presiding Officer may be overruled by a majority vote of the Board members present on any decision or ruling relating to a hearing.

30.25 Computation of Time

All computations of time under these regulations shall be in the same manner as provided by Maine Rules of Civil Procedure, Rules 6 (a), (b), and (e).

30.26 Effective Date

These regulations shall be effective upon the date of filing with the Secretary of State and shall supersede all previous regulations adopted by the Board dealing expressly with hearings on applications. These regulations shall apply to all matters pending before the Board on the effective date hereof.

After public notice and public hearing on November 21, 1977 the above regulation is hereby adopted this 28th day of December, 1977.

BOARD OF ENVIRONMENTAL PROTECTION

_____
Henry E. Warren, Chairman

Approved as to form and legality

_____ _____
Gregory W. Sample, Date
Assistant Attorney General

Filed with the Secretary of State on February 8, 1978

An Open Letter to the Offshore Oil Industry...

June, 1977

The first lease sale on Georges Bank is not far off. We wish to encourage you to think of Maine as a potential site for basing your onshore service activities.

In September, 1975, I stated my administration's basic policy on OCS development: "Where significant new business opportunities are identified which on balance would produce more gains than losses, the State will seek to work in partnership with oil and gas development interests and coastal communities to bring these opportunities to reality."

In December, 1975, I followed up that statement with a letter to leaders of the offshore industry encouraging them to consider Maine for locating OCS facilities and to cooperate with us in developing projects which will be profitable and which also will meet our environmental standards and help advance economic goals of the State.

I believe service and supply bases would be economically beneficial, compatible with the character of the Maine Coast and consistent with its seafaring traditions. Maine also has much to offer the offshore service industry:

Our many harbors are less congested than counterparts in Southern New England, and are actually closer to eastern tracts on Georges Banks.

There are privately owned facilities in these ports which would make excellent temporary bases and also numerous sites which could accommodate development of permanent installations.

Maine's shipbuilding and repair facilities, including the world famous Bath Iron Works, have a reputation for delivering high quality work, on time. I am sure these companies will develop services and schedules to respond to your needs for good fast work.

And most importantly, our coastal labor force has a depth of experience in the maritime industries. The graduates of the Maine Maritime Academy have an outstanding reputation for skill and job longevity. We can also point with pride to the recent example of the Searsport stevedores who responded quickly and efficiently to a tremendous increase in their workload caused by potato shipments to drought stricken Europe.

This administration has placed a high priority on improving the climate for business expansion in Maine and these efforts are succeeding. We have encouraged an affirmative partnership between government and industry and stand ready to help you in any way we can. In return we ask only that you observe the following public interest guidelines while developing plans to locate in Maine.

1) Inform local officials as early as possible of your intentions and what the impacts will be on their communities. Several Maine communities including Kittery, South Portland, Portland, Bath, Rockland, Belfast and Searsport have notified me of their desire to attract service and supply bases to their harbors. You will find material on these ports enclosed. These local initiatives have my full support.

2) Contact state and local officials, especially directors of the Vocational-Technical Institutes to design programs for training and hiring as much Maine labor as possible.

3) Communicate specifications of your material and service needs to suitable Maine companies either directly or through the State or municipal development offices.

4) Work with representatives of the fishing industry and the Department of Marine Resources to identify and resolve potential conflicts with our fishing fleet.

Hadley Atlass, the State Development Director, will furnish you with further information on Maine. Local contacts are also listed in the enclosed brochures describing some of Maine's port communities.

Welcome to our State.

Sincerely yours,

James B. Longley

James B. Longley
Governor

POST FILE

STATE OF MAINE
OFFICE OF THE GOVERNOR
AUGUSTA, MAINE
04333

JAMES B. LONGLEY
GOVERNOR

December 16, 1977

Mr. James Schlesinger
Office of the Administrator
Department of Energy
1200 Pennsylvania Avenue
Washington, D.C. 20515

RECEIVED
DEC 1977
OFFICE OF ENERGY RESEARCHES

Dear Mr. Schlesinger:

I have recently been informed of your favorable recommendation on the Regional Petroleum Reserve (R.P.R.) Program. I would like to say that I appreciate your support of this program. As you know our state is extremely dependent of residual oils and it has always been my belief that residual supplies can not be compromised. The 20 million barrel storage called for in the R.P.R. would go a long way toward protecting the economic vitality of our state during a petroleum shortfall.

Again, I appreciate your support of this important project.

If I can be of any assistance in insuring implementation of the R.P.R. please do not hesitate in letting me know.

Sincerely,

Jim Longley

James B. Longley
Governor

cc: Congressional Delegation
G. Linton, OER

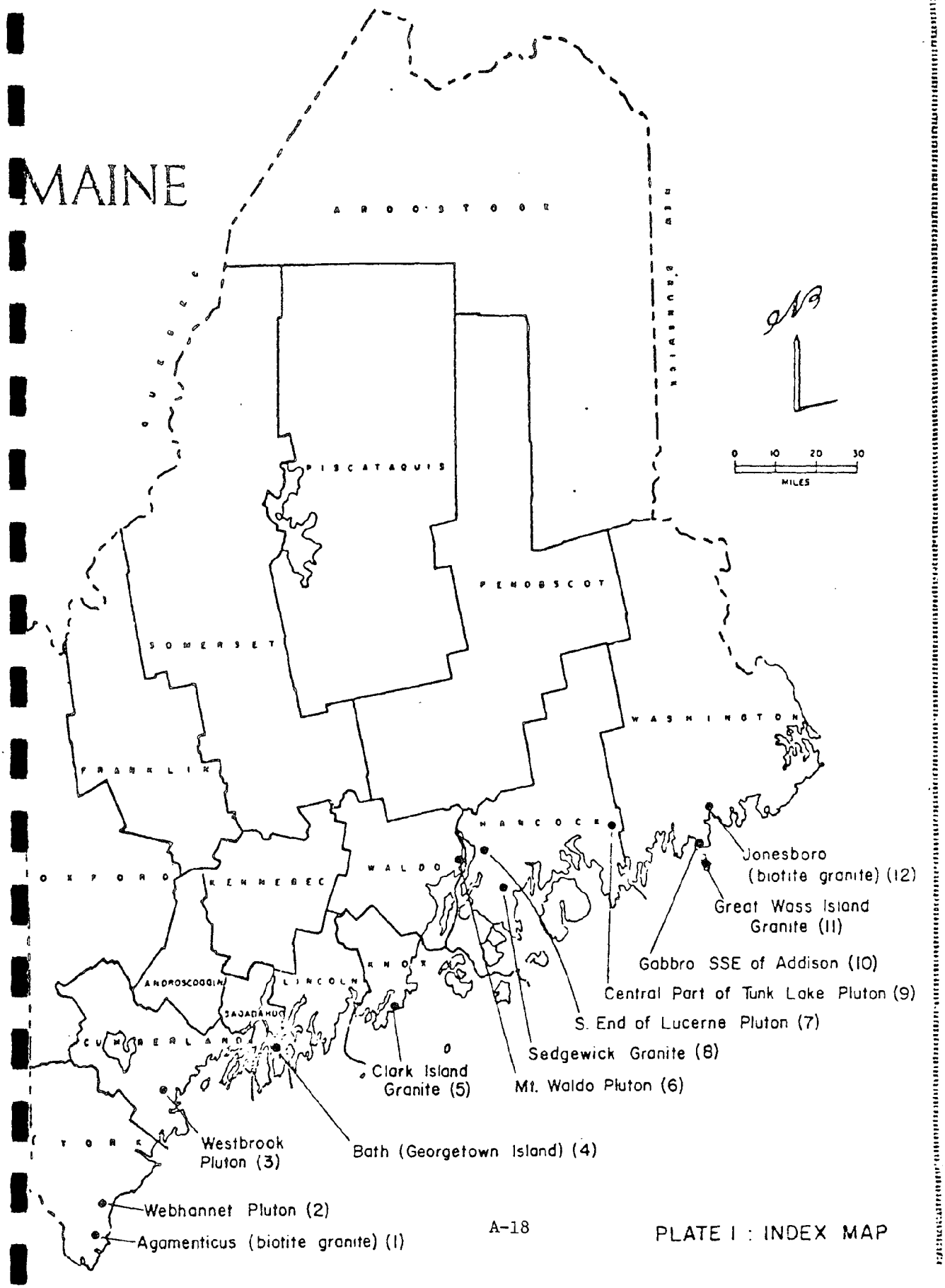


PLATE I : INDEX MAP

TABLE 1
Summary of Site Characteristics

Preliminary Geologic Survey of Potential Underground Oil Storage Sites in Maine
8 July 1977

Site, Rock Type & Age	Joints & Foliation	Seismicity & Faults	Hydrogeology	Overburden Thickness & Type	Distance to Oil Transfer Points
Lucerne Pluton; coarse-grained granite 356 MY	No detailed information on joints; strong N35W physiographic lineaments	3 Hist. & 1 instr. MM V 20 miles to NE; inferred fault along NW contact; at SE end of N35W trending seismic zone	Potentiometric level 50' to 60' below ground; some mod. high yield wells within pluton	Generally less than 20' lodgment till	6 miles to 60' ocean depth in Blue Hill Bay; Bucksport oil facilities 11½ miles to NW
Sedgwick Pluton; coarse to medium-textured biotite granite; 395 MY	Sheet joints 2'-8' apart at surface; vert. N40W, N50E, N67E, N67W joints at 15'+ spacing	No significant seismicity in area; NE trending fault along SE contact	Potentiometric level 40' below ground; high yield wells to the S	Generally less than 20' lodgment till	2 miles to 60' ocean depth in Eggmoggin Reach; ship transfer also possible in Blue Hill Bay
Tunk Lake Pluton; granite; Devonian	No detailed information on joints; reported to be relatively unjointed in the core	No significant seismicity in area; ENE trending fault along SSE edge of pluton	Potent. level less than 20' in core, but deeper in rock around core; no reported high yield wells in pluton	40' to 60' till & lacustrine deposits over core, but less than 10' till on rock around core	8 miles to 60' ocean depth at Sorrento; Maine Central RR just to S
Gabbro SSE of Addison; gabbro; Devonian	No detailed information on joints; strong NW physiographic lineaments	Instrumental MM V 5 miles to SE; NE trending Fundy Fault 8 miles to SE	Potentiometric level 40' below ground; mod. high well yields to E	Up to 60' of lodgment till	2½ miles to 60' ocean depth in Western Bay; Maine Central RR 7 miles to N
Great Wass Island granite; coarse-grained biotite granite; Devonian	Sheet joints 5'-15' apart at surface; vert. N10E joints at 5'-10' spacing; vert. N90W joints at 20'+ spacing	Instrumental MM V 2-1/3 miles to N; NE trending Fundy Fault 1 mile to S	Potentiometric level 20' below ground; mod. high yield wells to N	Less than 40' lodgment till and silty marine-laid sediments	1 mile to 120' ocean depth; no highway to mainland
Jonesboro Granite Pluton; medium-textured biotite granite; Devonian	Sheet joints ½'-5' apart at surface; vert. joints in NE part of pluton striking N60E, N50W, & N70W	Instrumental MM V 10 miles to S; NE trending Fundy Fault 12 miles to SE	Potentiometric level 60' below ground; high yield wells to NW within pluton	Less than 20' of lodgment till	5 miles to 60' ocean depth in Chandler Bay, 2½ miles to 30' depth; Maine Central RR 3½ miles to N

TABLE I

Summary of Site Characteristics

Preliminary Geologic Survey of Potential Underground Oil Storage Sites in Maine

8 July 1977

Site, Rock Type & Age	Joints & Foliation	Seismicity & Faults	Hydrogeology	Overburden Thickness & Type	Distance to Oil Transfer Points
Agamenticus Pluton; binary granite, alkali syenite; 225 MY	Sheet joints; widely spaced vert. N20E, N40W joints, some slickensides; N10E, N45W lineaments in SW portion; no major joints in alkali syenite	Historical MM VIII 30 miles to SSE	Potentiometric level 60' below ground; moderately high well yields to SW & SE	Up to 40' fine-grained lodgment till	2½ miles to 60' ocean depth; Boston & Maine RR 5 miles to W; no nearby port facilities
Webhannet Granite; granite; Devonian	Generally massive; no detailed information on joints; reported to be locally free of closely spaced joints	Historical MM VIII 35 to 40 miles to SSE	Potentiometric level 10' or less below ground; no high yield wells in vicinity	20' to 60' of fine-grained lodgment till, sandy outwash	5 miles to 60' ocean depth; Boston & Maine RR runs near site; no nearby port facilities
Westbrook Pluton; biotite granite; Devonian	Sheet joints ½' to 2½' apart at surface; locally closely spaced N10E joints dipping 55W; granite often foliated	Historical MM VI 15 miles to N; instrumental MM VI 25 miles to SE; inferred regional faults trending NE run along SE and NW contact with country rock	Potentiometric level 50' below ground; high yield wells around contact with country rock; several moderately high yield wells within pluton	Generally less than 5' of lodgment and ablation till	7 miles to Portland oil port facilities; Maine Central RR runs nearby
Cape Elizabeth formation (high grade metamorphics); high grade quartzose metapelites; Ordovician-Silurian	nearly vert. bedding & foliation striking N5E with no parting on foliation; nearly horizontal joints several feet apart; widely spaced nearly vert. N75W joints	Historical MM IV 4 mi. to W; historical MM VI 25 miles to N; historical MM VI 20 miles to NW; instrumental MM VI 20 miles to S; NNE trending regional fault just east of subsite 3	Subsite 1--potent. level 20' to 40' below ground; mod. high well yields to S & W Subsite 2--potent. level 60' below ground; high yield wells to N, E, and S Subsite 3 -potent. level 100' below ground; high yield wells to E	Generally less than 10' of till and silty marine-laid sediments	Subsite 1--2½ miles to 60' ocean depth in New Meadows River Subsite 2--1½ miles to 30' depth in Kennebec R. Subsite 3--2½ miles to 60' ocean depth; 0.3 miles to 30' ocean depth
Clark Island granite (St. George Pluton); biotite-muscovite granite, fine to med. even-grained texture; 367 MY; crushing strength 13,000 to 15,000 psi	sheet joints 2' to 10' apart at surface; vert. N65W joints at 10' to 70' spacing	No significant seismicity or faults nearby	Potentiometric level 30' below ground; one high yield well to NE	Generally less than 5' ablation till	2 miles to 60' ocean depth; Maine Central RR 5 miles to N
Mt. Waldo Pluton; fine even grained biotite granite; 425 MY; ult. comp. strength 30,000 psi	sheet joints 8" to 8' at surface; vert. N85W & N60W at 20'-40' spacing; NNW vert. joints developed in quarrying	3 Hist. & 1 instr. MM V 15 mi. to NE; NE trending Norumbega Fault 5 miles to NW	Potent. level 100' below ground at el. 200'. high yield wells around northern contact	Generally less than 5' ablation till	2 miles to 20' ocean depth in Penobscot R.; Bangor & Aroostook RR adjacent to site; oil port 4 miles to SE

REGIONAL PLANNING COMMISSIONS IN MAINE - AUGUST, 1978

Areawide Clearinghouses in Maine

ANDROSCOGGIN VALLEY REGIONAL PLANNING COMMISSION — Barbara A. Bartle, Chairman
John J. Jaworski, Executive Director
70 Court Street
Auburn, Maine 04210 -- Tel: 783-9186

EASTERN MID-COAST REGIONAL PLANNING COMMISSION — Walter S. Foster, Chairman
Fourtin Powell, Planning Director
10 Summer Street, PO Box 228
Rockport, Maine 04856 -- Tel: 236-8408

GREATER PORTLAND COUNCIL OF GOVERNMENTS — George R. Chenell, President
Osmond C. Bonsey, Executive Director
331 Veranda Street
Portland, Maine 04103 -- Tel: 774-9891

HANCOCK COUNTY PLANNING COMMISSION — Dexter Lee, Chairman
James S. Haskell, Jr., Executive Director
69 Main Street, PO Box 608
Ellsworth, Maine 04605 -- Tel: 667-7131

NORTH KENNEBEC REGIONAL PLANNING COMMISSION — Dale Watson, Chairman
Elery Keene, Planning Director
16½ Benton Avenue
Winslow, Maine 04902 -- Tel: 873-0711

NORTHERN MAINE REGIONAL PLANNING COMMISSION — Rodney Crockett, Chairman
James A. Barresi, Executive Director
McElwain House, 2 Main Street, PO Box 779
Caribou, Maine 04736 -- Tel: 498-8736

PENOBSCOT VALLEY REGIONAL PLANNING COMMISSION — Ann Dyer, Chairman
Talbot R. Averill, Planning Director
31 Central Street
Bangor, Maine 04401 -- Tel: 947-0529

SOUTHERN KENNEBEC VALLEY REGIONAL PLANNING COMMISSION — Clarence Roth, Chairman
John B. Forster, Planning-Administrator
10 Summer Street
Augusta, Maine 04330 -- Tel: 622-7146

SOUTHERN MAINE REGIONAL PLANNING COMMISSION
Brian N. Chernack, Executive Director
PO Box Q, 2 School Street
Sanford, Maine 04073 -- Tel: 324-2952 or 324-5780

Doris Reando
Chairman

SOUTHERN MID COAST REGIONAL PLANNING COMMISSION
Jeffrey Peterson, Acting Executive Director
52 Front Street
Bath, Maine 04530 -- Tel: 443-9735

R. Allen Gaul
Chairman

WASHINGTON COUNTY REGIONAL PLANNING COMMISSION
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SHORELINE EROSION AND MITIGATION PLANNING IN MAINE

Fulfilling Requirements of Section 305 (b) 9 of the Coastal Zone Management Act Amendments of 1976.

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SHORELINE EROSION ASSESSMENT

1.0 ASSESSMENT OF SHORELINE EROSION IN MAINE
(Maine's methods for assessing the effects of shoreline erosion)

INTRODUCTION

Maine's method for the assessment of shoreline erosion includes both the funding of inventories and erosion studies and the administration of regulatory laws relating to development in shoreland areas. Inventory work initiated by the Coastal Program under section 305 of the Coastal Zone Management Act included several joint efforts by the State Planning Office and the Maine Geological Survey, Division of Marine Geology. An inventory of Coastal Marine Geologic Environments was completed in 1976, and final editing on an accompanying handbook is near completion. The Maine Coastal Shoreline Erosion Inventory, based in large part on the previous mapping of environments, was completed in 1977 along with an accompanying report which will be incorporated as part of the Marine Geologic Environments Handbook.

These inventories are designed for use by: 1) interested persons, landowners, and municipalities seeking an introduction to these subjects, 2) municipal and state agencies seeking to derive policies on erosion and development control in shoreland areas, 3) the scientific and consulting community when seeking base data for more detailed studies and management plans, and 4) state, regional programs, and private firms in providing technical assistance to problem shoreline owners.

1.1 COASTAL MARINE GEOLOGIC ENVIRONMENTS --MAPS

Scale: 1:24,000

Legend: 55 environment types distinquished by: 1) position in tidal zone, 2) size of sediments and 3) dominant processes.

Data Sources: 1) U.S.G.S. topographic map bases 2) black and white aerial photographs 3) U.S.G.S. hydrographic charts 4) field studies.

One-hundred and nine maps covering the Maine Coastal Zone were produced. The maps cover the coastal nearshore from the upland subtidal boundary to shallow, subtidal depths of approximately 8-12 m.

1.2 COASTAL MARINE GEOLOGIC ENVIRONMENTS--HANDBOOK

The Handbook of Coastal Marine Geologic Environments of the Maine Coast was written to assist land use planners, engineers, geologists, and other interested persons in interpreting the marine geologic environment maps. In addition to providing a descirption

of each geologic environment, this handbook also provides background information on how these coastal or near shore environments are interrelated to form systems such as sand beaches or coastal marshes.

One section of the report discusses in detail human impact on the specific environments identified on the maps and in the text, including coastal and inland construction and devegetation. Included in the appendix is a comprehensive description of the most important erosional and depositional agents (process agents) in the state. The Handbook of Coastal Marine Geologic Environments is currently undergoing final editing in preparation for printing.

1.3 SHORELINE EROSION INVENTORY--MAPS

Scale: 1:48,000

Legend: See sample map in Appendix.

Data source: 1) coastal marine geologic environment maps 2) historical observations 3) shoreline measurement profiles.

The 29 shoreline erosion maps covering Maine's tidal shoreline define the general erosion conditions which presently exist along the entire coast. The purpose of the maps is to inform the public of the general and relative rates of recessional erosion in order to more adequately arrive at development solutions which will ultimately conserve shoreline property, prevent erosion damage to structures, and prevent the unnecessary loss of shoreline resource property. Areas of stable and accreting shoreline are also shown.

The maps provide information on:

1) The type or types of erosion processes causing erosion at any locality.
2) The maximum amount of shoreline recession which can be expected to occur.
3) The average annual rate of shoreline recession.

1.4 ATLAS OF MAINE SANDY BEACHES

The Coastal Program, recognizing an increasing demand for a comprehensive display of existing data on Maine sand beaches, and the need for management options and recommendations based on known data, provided funds in the 1977-78 305 program for the compilation of an 'Atlas of Maine's sandy beaches'.

This work, when completed, will complement the previously discussed reports on erosion and marine environments with more detailed data displays and analysis for all

of Maine's significant sandy beaches.

The management recommendations for each beach may be utilized by shorefront owners and towns, as well as the state, in developing special management policies, regulations, or mitigation programs where such are deemed necessary. The Atlas, as a whole, can serve as the basis of state, local, or regional efforts at public education on general and local beach processes and erosion mitigation options for specific localities.

The specific elements comprising the Atlas include the following:

1) General discussion of natural dynamic processes active in Maine's beach systems and the influence of man's activities on these processes.

2) Presentation of specific data elements for each beach system as follows: (Approximately 36 beaches)

   a) prevailing and dominant wind directions
   b) cross sectional morphology
   c) plant community structure and distribution
   d) history of storm damage and flood levels
   e) textural characteristics of sand for each beach physiographic division
   f) histograms of sand size classes and graphs of textural statistical measures include mean grain size, sorting, skewness, and kurtosis
   g) ground level and oblique aerial photographs
   h) shoreline change maps
   i) natural physiographic division maps
   j) identification of unusual or outstanding features
   k) a set of beach use and management options

3) A state-wide tabulation of beach erosion and accretion histories from historical data.

4) A set of beach use and management recommendations for each beach and beach system.

For each beach, then, two maps, three tables, and eight diagrams will be presented in the data compilation, in addition to a text which identifies specific and regional aspects and lists of management options and recommendations.

This report is presently in preparation for the Coastal Program by the Department of Oceanography, University of Maine at Orono, and will be completed by September 30, 1978.

1.5 RELATED STUDIES AND PROJECTS

Described below are projects which totally or in part deal with coastal erosion or oceanic process at particular localities in the state. Although designed and supported for a

specific use or location(s), projects such as these: 1) provide detailed information required for implementable management plans, 2) identify significant or unique natural features, and 3) provide a model and reference for future work, management planning, and policy formulation.

1.5.1 Beach Vegetation and Oceanic Processes Study of Popham Beach State Park, Reid State Park Beach, and Small Point Beach.

This study, prepared in 1977 under a cooperative agreement between the Maine Department of Conservation and the Soil Conservation Service, U.S.D.A., provides detailed description of three Maine beaches, and compares two state recreational beaches to an undeveloped beach system in a natural condition. Plant communities and oceanic processes and dynamics are discussed for each beach, and suggestions for long term management are included.

1.5.2 Geological and Botanical Features of Sand Beach Systems in Maine.

This report summarizes the results of recent geological and botanical investigations of Maine's sand beach systems. The results have provided the basis for a Process-Response Model for the swash-aligned beach systems in Maine. Compilations of basic information in the report include: geological and botanical criteria of significance, lists of coastal sand dune plant species and associations, and a list of all sand beaches in Maine. From 29 beaches which met the significance criteria, 27 were field checked, described, and recommended for evaluation by the Critical Areas Program.

This report, in final draft form, was prepared for Maine's Critical Areas Program by the Department of Oceanography, University of Maine at Orono, in 1978.

1.6 CONTINUED ASSESSMENT OF SHORELINE EROSION

1.6.1 Project Review in Accordance with Regulatory Laws.

Through the administration of state laws requiring permits for certain types of activities in shoreland areas, state and local officials are made aware of localized erosion problems or potential problems through the permitting process. Detailed drawings of the site, along with other information concerning soil types, vegetation, etc. provide a record of conditions existing on the site. On-site inspections may be made by state personnel and municipal officials, supplementing the information and photographic evidence provided in applications.

Permit application files provide the state, and any other interested person with a permanent inventory of erosion control activities. Regulated erosion control activities and other activities regulated by these laws likely to cause erosion include: seawalls, retaining walls, and other similar structures not replacing 'grandfathered' structures of the same size, design and material; dredging or filling activities in shoreland areas; timber harvesting and related harvesting activities when minimum standards are exceeded; certain types of construction.

1.6.2 Maine's Coastal Program Local Assistance Projects.

By making funding available to coastal towns for erosion studies, Maine's Coastal Program can supply the incentive, technical assistance, and funding for towns desiring to study and assess the effects of erosion and possible means for mitigation.

Through the local assistance segment of Maine's Coastal Program, two coastal erosion projects have been submitted for funding approval. One project includes the communities of Saco, Scarboro, and Old Orchard Beach, which propose to jointly sponsor a beach erosion and reconnaissance study including plans for any stabilization, if necessary. Another town, Falmouth, similarly proposes to undertake a study and identify and prioritize coastal erosion problems and possible steps for stabilization.

1.6.3 Further Assessment Concerning Coastal Flood Plain Management.

Two severe 'northeaster' storms occuring in the winter of 1977 inflicted heavy flood and wave damage along the Maine coast, particularly along the developed beaches in the southern part of the state.

Issues raised concerning rebuilding or replacing both dwellings and seawalls in these affected areas have prompted further state study into this matter.

In March of this year Governor Longley directed his Committee on Coastal Development and Conservation to address the issue of coastal flood plain management and prepare, by January 1, 1979, a policy report on this subject. The Governor requested that the report contain recommendations for executive, legislative, local, and federal cooperation, and that any final recommendations and proposed legislation be subject to review by the general public prior to submission.

ARTICULATION OF STATE POLOCIES PERTAINING TO EROSION

2

SHORELINE EROSION ASSESSMENT

2.0 ARTICULATION OF STATE POLICIES PERTAINING TO EROSION (including policies regarding preferences for non-structural, structural, and/or no controls)

Policies developed in the State of Maine concerning shoreline erosion have focused on: 1) the prevention of new development in areas where erosion is uncontrollable or where control measures are likely to have adverse impacts, (such as flood prone areas and unstable soils), 2) preventing or controlling erosion likely to occur in areas suitable for development, and 3) assuring that where erosion threatens pre-existing development, proposed structural mitigation measures are appropriate and are least impacting on the surrounding environment.

All of the policies contained in this section are enforceable. The laws providing for this enforcement are described in Sections 4 and 5 of this report as well as in the Maine Coastal Program document in Section 7 and Appendix F. The four laws are Shoreland Zoning and Land Use Regulation Commission (both deal with tidal and inland shoreland); Alteration of Coastal Wetlands (tidal shoreline), and Stream Alteration (inland shoreline). Numbers accompanying the policies in this report coincide with policy numeration in Section 6 of the Coastal Program document.

2.1 EXISTING POLICIES FAVORING NON-CONTROL OF SHORELINE EROSION

In the case of state policies prohibiting new development in 1) above, the net effect is essentially one of non-control of shoreline erosion, since by precluding new development in unstable shoreline areas, the need for erosion control itself is precluded except in instances where the loss of land or the impacts of erosion on natural surroundings are of concern.

The policies presented below prohibit certain types of development in shoreland areas because of their vulnerability to the effects of erosion or inducement of it, either by zoning restrictions, permissable uses, or permit approval criteria. Since these policies are derived from the core laws of Maine's Coastal Program, they are enforceable, and can be found in Section 6 of the Coastal Program document.

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9 Assure that commercial and industrial development planned for areas within 250 feet of high water is located on sites with suitable soils that have been designated as General Development areas.	12 M.R.S.A. § 4811 Shoreland Zoning and the Shoreland Guidelines

14 Encourage the relocation of development presently in flood prone areas and areas susceptible to flood damage, to nonflood prone areas; require that new building be constructed in nonflood prone areas.	Land Use Regulation Commission Comprehensive Plan
34 Provide protection for coastal wetlands from residential, commercial, and industrial development, by designating these areas as Resource Protection districts under Shoreland Zoning.	12 M.R.S.A. § 4811 Shoreland Zoning and Guidelines
37 Designate areas within 250' of high water having slopes of greater than 25% (or unstable soils that are subject to slumping or severe erosion) as protection areas and use these areas for natural resource management activities.	12 M.R.S.A. § 4811 Shoreland Zoning
39 Assure stable soils and sediment-free waters by requiring no tilling of agricultural soils in areas within 50 feet of ponds or lakes or removal of vegetation without replacement in areas within 50 feet of high water mark.	12 M.R.S.A. § 4811 Shoreland Zoning
38 Assure stable soils and sediment free waters by conducting filling, grading, and other earth-moving activities within 250 feet of high water, in conformance with established erosion prevention measures.	12 M.R.S.A. § 4811 Shoreland Zoning
44 Designate 100-year flood plain areas (or areas having recent flood plain soils) that are within 250 feet of normal high water as protection areas and use for appropriate nonintensive uses, such as forestry, agriculture, open space, recreation areas, etc.	12 M.R.S.A. § 4811 Shoreland Zoning
45 Use flood prone areas, in the unorganized areas, for natural resource and agricultural management so as to minimize flood damage to development uses.	LURC Comprehensive Plan
46 Consider natural sites of significant scenic or esthetic value, within 250 feet of high water, as areas that should be designated as protection areas; these areas to be used for natural resource protection and management such as forest management, non-intensive recreation, wildlife management, agriculture, etc.	12 M.R.S.A. § 4811 Shoreland Zoning
48 Assure, in the unorganized areas, the protection of areas containing unique, rare, or critical landforms, water resources, vegetation, animals or archaeology, so as to preserve their scientific, ecological and educational values.	Comprehensive Plan

2.2 EXISTING POLICIES FAVORING NONSTRUCTURAL CONTROL OF SHORELINE EROSION

Where development is allowed in suitable shoreline areas, or where development already exists, state policies protecting the natural character of the shoreline, the natural flow of water, and fish and wildlife habitat, favor nonstructural methods for erosion control. Increasing concern in protecting these natural elements, and broadened experience in successful nonstructural forms of erosion control (such as limited use, revegetation, and replenishment) have lead this to be the preferred type of erosion mitigation. In situations where nonstructural control of erosion has proven unsuccessful or is not practical, these same policies favor those types and designs of structural erosion control least impacting on the surroundings.

Thus, while the policies listed below favor nonstructural methods of erosion control by protecting, where possible, natural shoreline and water characteristics, they also insure that structural methods protect these same characteristics wherever possible.

8 Assure, through a permit procedure, that development activities proposed for coastal wetlands are located and conducted so that the value of these areas for wildlife habitat, recreational and navigational use, natural storm water storage, and erosion control is maintained.	38 M.R.S.A. § § 411 Coastal Wetlands
11 Assure that all development in shoreland areas is conducted in such a manner that safe and healthful conditions are maintained, water quality is maintained, aquatic, bird, and other wildlife habitat is conserved and structures are placed so as to conserve shore cover, water access, and points of natural beauty.	12 M.R.S.A. § 4811 Shoreland Zoning
31 Assure, through a permit procedure, that activities in coastal wetlands permit the natural flow of any waters.	38 M.R.S.A. § 471 Coastal Wetlands
32 Assure that recreational and navigational uses in coastal wetlands are not unreasonably restricted by permanent structures.	38 M.R.S.A. § 471 Coastal Wetlands
36 Assure the stability and value of coastal wetlands as storm runoff retention areas and natural sieves, by requiring permits for activities thay may cause erosion.	38 M.R.S.A. § 471 Coastal Wetlands

40	Assure that unreasonable soil erosion does not result from development activities adjacent to rivers, streams, or brooks by requiring a permit for such activities.	12 M.R.S.A. §§ 2206-2212 Stream Alteration
41	Utilize the capability of the soil to support development so as to determine its suitability for development, in the unorganized areas of the coast.	12 M.R.S.A. § 681 Land Use Regulation Law

2.3 POLICY ON NEW SEAWALLS

The Board of Environmental Protection recently adopted a policy whereby it will not normally approve applications for the construction of new seawalls or similar obstructions within the Wetlands Act jurisdiction, on or adjacent to a sand beach or erodable shore. The full text of this policy is included in the Appendix to this report.

Although this policy is limited to the construction of new seawalls, its impact, when coupled with that of local shoreland zoning ordinances, conservation easements, and public acquisition of undeveloped sand beaches adds additional state leverage in preserving these areas and protecting the state's interest in this resource.

Along developed areas of coastal shoreline, the beaches in southern Maine and the wetlands fringing cities such as Portland, existing policies, including this policy pertaining to seawalls, do not preclude the opportunity to repair or replace existing structures, provided they conform to regulations adopted by the Board.

2.4 STATE POLICIES REGARDING EROSION AND FLOOD PRONE AREAS AND COORDINATION WITH FEDERAL PROGRAMS

On March 4, 1968, Maine's Governor directed all heads of executive agencies, departments and commissions to provide leadership in encouraging a broad and unified effort to prevent the uneconomic uses and development of the State's flood prone areas and in particular, to lessen the risk of flood losses in connection with state-owned lands and installations and state-insured or state-approved or supported improvements.

Since the time of that executive order, Maine has had further opportunity to coordinate with federal programs designed to prevent improper development in flood and erosion prone areas and protect life and property existing in these areas.

Zoning maps, compiled by individual towns and adopted in accordance with State guidelines for Municipal Shoreland Zoning, provide the opportunity for coordination with the more recent mapping of Flood Hazard Boundary maps undertaken by the Federal Insurance Administration under the National Flood Insurance Program. While local shoreland zoning extends a minimum of 250 feet from the waters edge (see Sections 3 and 4 of this report and Section 7 of Maine's Coastal Program), federal provisions provide for regulation in all flood and erosion prone areas which are identified on FHBM's, regardless of setback, thus furthering and enlarging the area of control for most towns.

Copies of flood insurance maps for the state are retained by the Department of Civil Emergency Preparedness, which is the State Coordinating Agency for the Flood Insurance Program. The State Planning Office also maintains a complete file of these maps, as well as a complete file of all Municipal Shoreland Zoning maps.

METHOD FOR DESIGNATING AREAS FOR EROSION CONTROL, MITIGATION, AND/OR RESTORATION AS AREAS OF PARTICULAR CONCERN OR AREAS FOR PRESERVATION AND RESTORATION.

3

3.0 METHOD FOR DESIGNATING AREAS FOR EROSION CONTROL, MITIGATION, AND/OR RESTORATION AS AREAS OF PARTICULAR CONCERN OR AREAS FOR PRESERVATION AND RESTORATION

3.1 GEOGRAPHIC AREAS OF PARTICULAR CONCERN

Maine's Coastal Program considers all land areas within 250 feet of the normal high water mark of any great pond, river, or salt water body, as geographic areas of particular concern. These same areas are also those most prone to erosion due to their immediate proximity to flowing water, the cause of erosion. Activities related to recreation, development, and resource harvesting may all induce accelerated erosion in these shoreland areas, even those naturally stable. Naturally unstable soils in shoreland areas, such as steep slopes or flood prone areas, require additional protection measures to insure shoreline integrity.

The Shoreland Zoning Law and the Land Use Regulation Commission, in its jurisdiction, provide the state with the means to control and guide development in these areas assuring that their value is not unreasonably diminished by erosion. A complete description of the Areas of Particular Concern and how they are managed in Maine can be found in Section C of Maine's Coastal Program Appendix.

3.2 AREAS FOR PRESERVATION AND RESTORATION

Maine's Coastal Program considers Class A waters, resource protection districts within 250 feet of shoreline and certain specified protection districts under Land Use Regulation Commission (LURC's) jurisdiction as areas for preservation or restoration. These areas have been designated under existing state law for the purpose of preserving or restoring them for their conservation, recreational, ecological, or aesthetic values.

The criteria for designating these areas are either found in the statutes under description of the area to be protected, or are further specified in model ordinance or promulgated standards. Areas having sustained slopes of greater than 25%, or unstable soil subject to slumping, mass movement, or severe erosion, when two acres or more in size are designated as resource protection districts under the State's shoreland guidelines. Areas within 250 feet from tidal or flowing waters, precipitous slopes, and flood plains in unorganized territories along the coast are protected under LURC statutes. A more complete description of Areas for Preservation and Restoration is included in Section D of Maine's Coastal Program Appendix.

Generally, restoration activities in shoreline areas are initiated at the private or municipal level and the effect of the LURC law and shoreland zoning ordinances is to assure restoration measures are conducted properly. These same laws also serve to protect fragile shoreline from unwise development through zoning and permitting authorities.

In adopting these specific shoreline areas as Geographic Areas of Particular Concern and Areas for Preservation and Restoration, the Maine Coastal Program recognizes these areas of importance to the state and the need to protect them from erosion and restore those valuable areas lost to erosion.

SHORELINE EROSION ASSESSMENT

4.0 PROCEDURES FOR MANAGING THE EFFECTS OF SHORELINE EROSION

INTRODUCTION

Maine's procedure for managing the effects of erosion, including studying and evaluating ways to control or lessen the impact of erosion and ways to restore areas adversely affected by such erosion, are prescribed in the policies, regulations, administrative guidelines, and review and approval criteria adopted for carrying out and enforcing the policies presented in Section 2 and their respective laws presented in Section 5. These laws are:

Alteration of Coastal Wetlands
Municipal Shoreland Zoning
Land Use Regulation Commission
Stream Alteration

A comprehensive treatment of the administration, history, and uses and areas regulated by these laws is contained in Section 7 of Maine's Coastal Program, and the full text of the laws appears in the Appendix to that document. Discussion of these laws in this section is limited to describing how these laws form the basis for managing the effects of erosion and evaluating methods for its mitigation.

The problems of erosion have long been recognized, a fact reflected in the fact that all four of these laws deal directly with means for managing and preventing this type of resource loss. Both the Municipal Shoreland Zoning and LURC Laws provide for the identification and protection of erodable shoreline through an enforceable zoning process coupled with permitted, prohibited and permit regulated uses within such areas. Since LURC jurisdiction applies only to unorganized territories, these two laws do not overlap.

Likewise, although the Stream Alteration and Alteration of Coastal Wetlands Laws perform a similar function in managing and assessing shoreline erosion, Stream Alteration Law affects only non-tidal waters, while Coastal Wetlands Law is limited to tidal shoreline. These laws; however, do overlap with the zoning laws mentioned above, but provide an important opportunity for state overview and management of shoreline erosion, its effect, and the measures utilized to control it.

4.1 ALTERATION OF COASTAL WETLANDS LAW

The alteration of Coastal Wetlands Law is administered through a permit process. Proposals for development within coastal wetlands, including structural erosion control measures, must be approved by the Department or Board of Environmental Protection.

Permit applications include a complete description of the project and project area. Applications are reviewed by appropriate state, local, and federal agencies as well as the review staff of the Department of Environmental Protection.

Applicants must demonstrate to the satisfaction of the staff, Board, and any reviewing agency that the proposal will not:

1) unreasonably interfere with existing recreational and navigational areas
2) cause unreasonable soil erosion
3) unreasonably interfere with the natural flow of waters
4) nor unreasonably harm wildlife or freshwater, estuarine, or marine fisheries

This application review process assures a procedure for state study and evaluation for activities in coastal wetlands regulated under this law. Activities found to pose a significant impact on the environment, such as unreasonable erosion or obstruction of natural water flow, may be prevented from occuring in a wetland area. In many cases, erosion likely to be caused by a proposal may be prevented by reasonable plan alterations or conditions enforced in the permit. From the nature of the review critieria proposals for permanent erosion control structures, such as retaining walls and rip-rap, are generally only allowed in developed areas where natural replenishment processes no longer exist or are inadequate and where no other satisfactory means of nonstructural control is possible.

Replacement of erosion control structures is limited to the size of the original structure, and is generally limited to the same type of material. Since present administration of the Coastal Wetlands Law, as well as the other laws described in this amendment, preclude new development to occur in areas where large structural erosion control measures are required, the need for such structures is connected to the necessary replacement of original structures or protection to existing shoreland development. Replacement is limited to the dimensions and materials used in the original structure.

State review assures both the adequacy and need for proposed structural erosion control measures, and the minimization of adverse impacts associated with them.

4.2 SHORELAND ZONING ACT

The Shoreland Zoning Act addresses erosion associated with land use activities occuring within 250 feet of any fresh or tidal shoreline through the establishment of protection districts and permit standards.

The State's shoreland guidelines require that Resource Protection Districts include the following:

1) inland and coastal wetlands
2) floodplains as defined by the 100-year flood or flood of record
3) areas having sustained slopes of greater than 25%, or unstable soil subject to slumping, mass movement, or severe erosion, when these areas are 2 acres or more in size.

One of the major purposes of the Resource Protection District is to prevent erosion by prohibiting all residential, commercial or industrial structures. Development prohibition in Resource Protection Districts has been successful due largely to local support in adopting and enforcing the zoning regulations.

Where development is allowed in shoreland areas, in either the limited Recreational - Residential or General Development District, erosion control is afforded through a permit procedure. Proposed uses are reviewed to ensure that they:

1) do not result in erosion or sedimentation,
2) conserve shoreland vegetation and,
3) avoid problems associated with floodplain development and use.

Such review insures that shorelines retain their natural capacity to prevent erosion, and that where necessary, proper methods of erosion control are taken.

4.3 LAND USE REGULATION COMMISSION LAW

The Land Use Regulation Commission Law regulates shoreline areas through zoning and permit requirements. LURC jurisdiction includes 5% of the coastal area.

Shoreland areas and submerged lands are placed within appropriate Protection Districts under the LURC Zoning process. Once zoned Protection, these areas may undergo only limited development and only in conformance with established standards or upon permit approval.

The standards and criteria for approval for limited development permit approval allow only proposed land uses which will neither cause unreasonable erosion nor be subject to erosion hazards associated with unstable shorelines, flooding, or other erosional effects.

4.4 ALTERATION OF RIVERS, STREAMS, AND BROOKS ACT

The Alteration of Rivers, Streams, and Brooks Act provides for state review of all structures erected above the head of tide in, on, over, or adjacent to any river, stream, or brook in the coastal area.

One of the major criteria for permit approval under this act is the applicant's demonstration that the proposed activity will not cause soil erosion. Approved activities; therefore, have either been shown to not cause soil erosion, or have been modified through permit conditions in order to prevent erosion.

IDENTIFICATION OF THE LEGAL AUTHORITIES, FUNDING PROGRAMS AND OTHER TECHNIQUES THAT CAN BE USED TO MEET MANAGEMENT NEEDS

5

5.0 IDENTIFICATION OF THE LEGAL AUTHORITIES, FUNDING PROGRAMS AND OTHER TECHNIQUES THAT CAN BE USED TO MEET MANAGEMENT NEEDS

Legal authorities existing within the State for managing coastal shoreline erosion include all of the laws associated with policies included in Section 2 of this amendment, and the areas described in Section 3. These laws are:

1) Shoreland Zoning Law
2) Subdivision Law
3) Land Use Regulation Commission Law
4) Stream Alteration Law
5) Coastal Wetlands Law

Full texts for each of these laws are included in Section F of the Maine Coastal Program Appendix.

Funding programs within the State that can be used to meet management needs in erosion control include:

1) continued administration of the above laws,
2) local, state and federal funding of shoreline erosion studies when deemed necessary, and
3) local, state and federal funding of management measures for erosion migitation, control, or restoration and preservation of eroded areas.

In light of the U.S. Army Corps of Engineers policy preference for nonstructural control of beach erosion and the recent policy determination by the Maine Board of Environmental Protection that seawalls are unfavorable alternatives to erosion mitigation, erosion control projects, whether federally or locally financed are likely to place greater emphasis on nonstructural forms of erosion control.

Through Section 306 funding of the Coastal Zone Management Act, the Maine Coastal Program would allow coastal towns the opportunity to study, at the local or regional level, suitable erosion management alternatives in light of the Coastal Zone Management Act guidelines for funding, state policy and regulation, and local preference.

SHORELINE EROSION ASSESSMENT

BOARD OF ENVIRONMENTAL PROTECTION
POLICY ON NEW SEAWALLS

The Board of Environmental Protection has reviewed numerous applications for ocean seawalls over a five-year period in accord with its responsibility under 38 M.R.S.A. 471, Alterations of Coastal Wetlands. The Board has reviewed the plans, conducted extensive hearings, and received substantial information and expert opinion on the impact of seawalls on sand beaches and adjacent natural resources or man-made structures. As a result we conclude that the impact of seawalls or similar structures on sand beaches normally includes the following:

1. Physical obstructions in the inter-tidal zone which obstruct public rights in that zone.

2. The loss of sand and changes to the slope of the beach in front of the seawall.

3. The likelihood of rubble or debris being scattered across the beach as a result of a deteriorating seawall.

4. The significant modification to normal patterns of water movement and the erosion and accretion of sand which such structures create.

On the basis of this experience, the Board concludes that it will normally be unable to make the necessary favorable findings of fact set forth in the Wetlands law, when an application is made for:

1) a new seawall or similar obstruction,
2) within the Wetlands Act jurisdiction,
3) on or adjacent to a sand beach or erodable shore.

In these circumstances, the Board expects that its findings concerning interference with recreational and navigational uses, interference with the natural flow of waters, and the resulting soil erosion would all be unfavorable. A permit must be denied if any one required finding is unfavorable.

Should an applicant believe that his proposal is unique in some way that allows fulfillment of the criteria set forth in 38 M.R.S.A. 474, he is encouraged to file the application for Board review and action.

This policy does not apply to situations covered by Board Regulation 322, by which the Board has previously exempted from permit requirements the repair or replacement of existing structures in the coastal wetlands, under limited conditions. Persons wishing to repair or replace any existing structure in the Wetlands area should obtain a copy of the regulation.

May 1978

MAINE SHORELINE EROSION INVENTORY

1977

EROSION TYPE AND RATE* CATEGORY

XXXXXXXXX — Large-scale slide erosion; catastrophic loss of shoreline may exceed 20', sometimes reaching 100'

Shoreline erosion by wave action; shoreline retreat may exceed 20' annually

Shoreline erosion by mass wasting and wave erosion; shoreline retreat probably does not exceed 5' annually

Shoreline erosion by wave action only; shoreline retreat averages less than 2' annually but may exceed 5' locally due to storm wave erosion

Shoreline erosion by mass wasting and wave erosion; shoreline retreat averages less than 1' annually

Shoreline erosion by wave action; no shoreline retreat due to man-made protection devices but lowering of intertidal substrate surface

Shoreline erosion by current action; retreat rate unknown

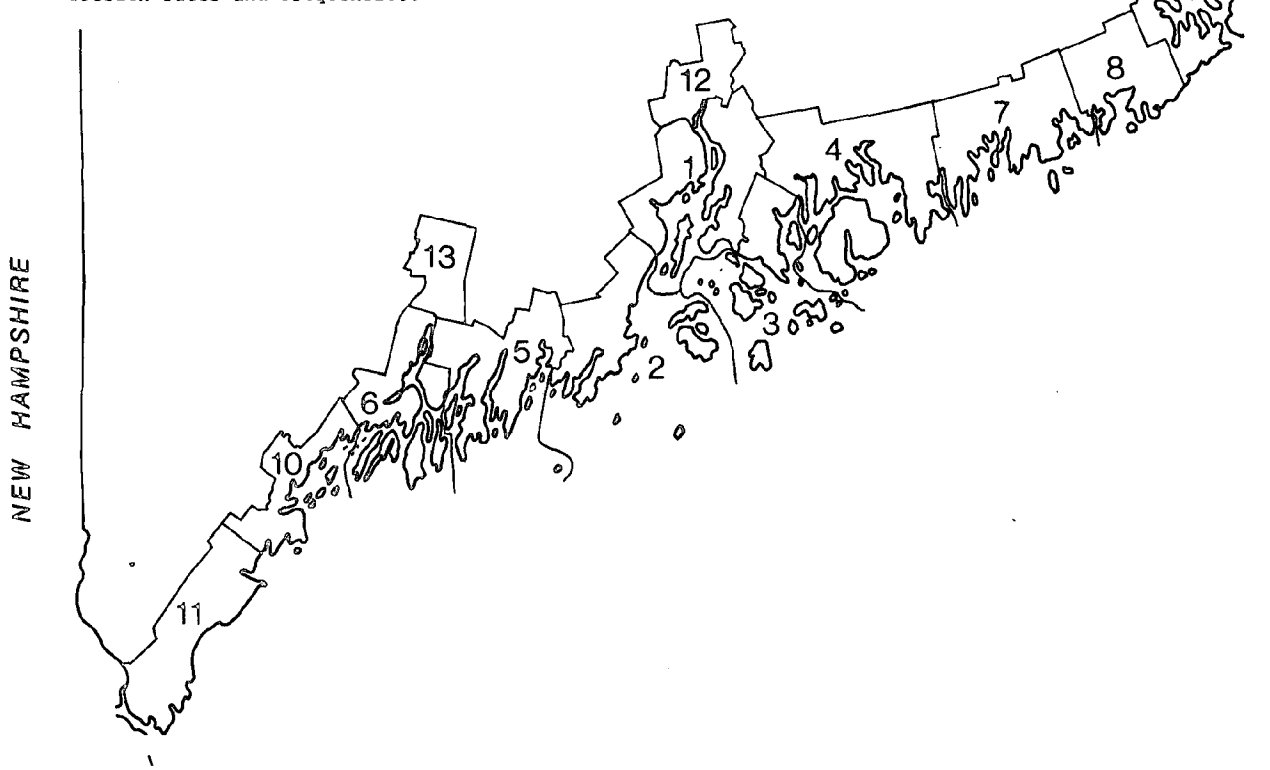
No shoreline erosion or accretion

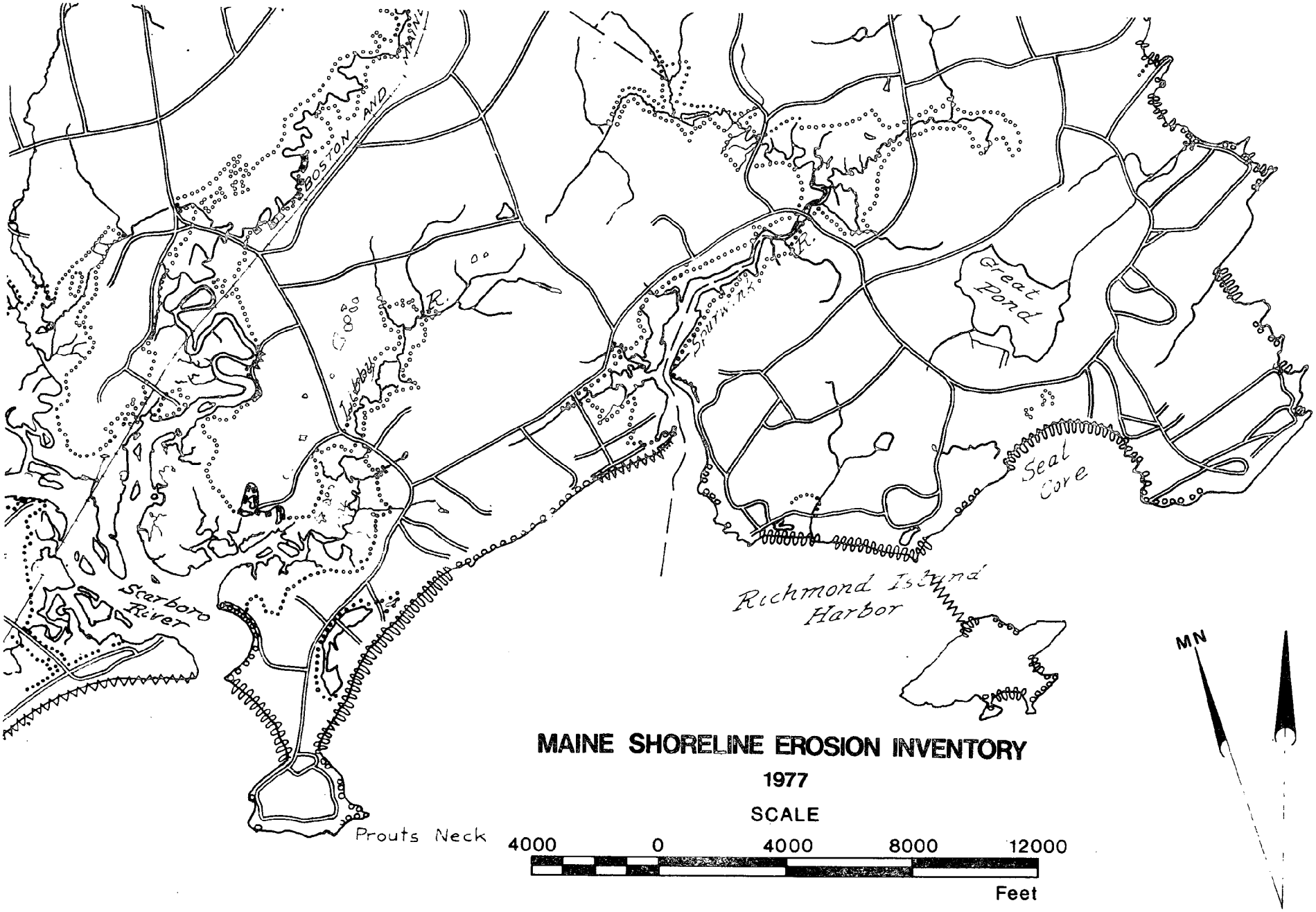
Shoreline accretion; slow vertical accretion above mean high water but subject to flooding during storm periods, and lateral accretion by current action, wave or wind deposition of sediment but subject to erosion or flooding during storms or floods

LOS — Limit of survey

* Rates of erosion are based on actual field measurements at selected shoreline localities within the past five years. Measured rates at selected localities have been extrapolated to other shorelines on the basis of general shoreline-upland slopes, surficial sediment type, vegetation type, and wave energy levels.

Rates of erosion are generalized to indicate relative levels of erosion hazards. Detailed site-inspection is necessary to determine actual erosion rates and frequencies.




BOSTON AND MAINE
R.
Great Pond
Seal Cove
Richmond Island Harbor
Scarboro River
Prouts Neck
MN
MAINE SHORELINE EROSION INVENTORY
1977
SCALE
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Feet

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