



State of Michigan Coastal Management Program and Final Environmental Impact Statement

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



INFORMATION FOR READERS

PURPOSE This document is both a final environmental impact statement (FEIS) and a program document on the Michigan Coastal Management Program. It is being circulated by the U.S. Department of Commerce for public and government agency review. Part II is the Program document, and was written by the Michigan Department of Natural Resources, Division of Land Resources Programs. The Summary and Parts I and III were prepared by the U.S. Department of Commerce, Office of Coastal Zone Management. Four new appendices and an attachment have been added to the FEIS. Of particular importance to readers is Appendix D where specific responses have been developed by OCZM to comments by various reviewers of the Draft Environmental Impact Statement (DEIS). These responses in addition to citing where changes have been made in the program document, provide further clarification on specific questions and concerns raised by reviewers of the DEIS. For this reason, Appendix D forms an integral component of the FEIS.

HOW TO USE THIS DOCUMENT: Readers who are not familiar with the EIS standard format for coastal management programs will want to examine the following pages as aids to the reader:

	PAGE
Table of Contents	*
Table cross-referencing requirements of the Federal Coastal Zone Management Act with sections of this document	7
Table cross-referencing National Environmental Policy Act (NEPA) requirements with sections of this document	8
Summary of Michigan's proposed program	9

As mentioned in a memorandum to recipients of the DEIS, the appendices in the DEIS are not included in this FEIS. Please use your copy of the DEIS if you need to refer to the following Appendices:

- Appendix A Federal Contributions
- Appendix C State Regulatory and Incentive Programs
- Appendix D Geographic Areas of Particular Concern
- Appendix E Public Hearing Summary

*NOTE: Appendix B—Local Contributions—was printed in the Michigan public review document dated August, 1977, but was not printed in the DEIS.

WHERE TO ASK QUESTIONS ABOUT THIS DOCUMENT Informational questions on this FEIS can be handled in Washington by Eileen Mulaney, Great Lakes States Regional Manager of the Office of Coastal Zone Management (202/634-4237) and in Michigan by Chris Shafel, Program Manager, Michigan Coastal Management Program (517/373-1950).



UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Science and Technology
Washington, D.C. 20230
(202) 377-3111

In accordance with the provisions of Section 102(2)(C) of the National Environmental Policy Act of 1969, we are enclosing for your review and consideration the Final Environmental Impact Statement prepared by the Office of Coastal Zone Management on the proposed Michigan Coastal Zone Management Program.

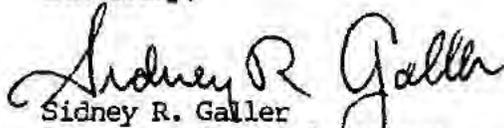
Any written comments you may have should be submitted in duplicate to the person listed below by August 4, 1978.

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

Elaine Mulaney
Great Lakes Regional Manager
Office of Coastal Zone Management
3300 Whitehaven Street, N.W.
Washington, D. C. 20235
Phone: 202/634-4237

Thank you for your cooperation in this matter.

Sincerely,


Sidney R. Galler
Deputy Assistant Secretary
for Environmental Affairs

Enclosures



STATE OF MICHIGAN
OFFICE OF THE GOVERNOR
LANSING

WILLIAM G. MILLIKEN
GOVERNOR

May 19, 1978

Mr. Richard Frank, Administrator
National Oceanic and Atmospheric Administration
U. S. Department of Commerce
Washington, D.C. 20204

Dear Mr. Frank:

I am pleased to submit the final environmental impact statement for Michigan's Coastal Management Program for your review and approval under the provisions of Section 306 of the Coastal Zone Management Act of 1972, as amended. Based upon comments received on the draft environmental impact statement, the program description has been refined and clarified, particularly with respect to program organization and procedures for considering the national interest during program implementation.

I have reviewed the substance of the program and, as Governor, reaffirm my approval of the program. As Chief Executive, I will insure that state agencies will be consistent to the maximum extent practicable with the Coastal Management Program. Coordination and conflict resolution needs will be accomplished through my Cabinet Committee on Environment and Land Use, the Michigan Natural Resources Commission, the Michigan Environmental Review Board and other established forums.

The Coastal Management Program, as presented in the final environmental impact statement, represents state policy for managing Michigan's coastal area, and, as Governor, I reaffirm my commitment that:

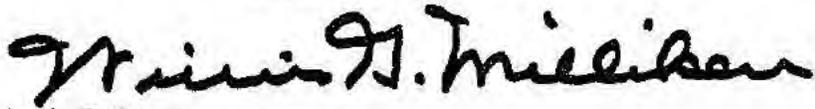
- (1) The Department of Natural Resources, Division of Land Resource Programs, is the designated lead agency to receive and administer Section 306 program implementation grants; and
- (2) Michigan has the authorities and organizational structure required by the Coastal Zone Management Act of 1972, to fully implement the management program and to consider all interests in accomplishing program objectives.

Mr. Richard Frank
Page Two
May 19, 1978

The citizens of Michigan will benefit substantially from implementation of the Coastal Management Program through improved administration of state shoreline statutes and significant provisions of financial and technical assistance to local units of government. I, therefore, request your expeditious review and final approval of this program. I look forward to working with you and your staff to insure its effective administration.

Kind personal regards.

Sincerely,

A handwritten signature in black ink, reading "William G. Milliken". The signature is written in a cursive style with a large, prominent initial "W".

Governor

**United States
Department of Commerce
Combined Coastal
Management Program
and Final Environmental
Impact Statement
for the
State of Michigan**

Prepared by:

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

and

Michigan Coastal Management Program
Division of Land Resource Programs
Michigan Department of Natural Resources
Lansing, Michigan 48909

July 1978

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Summary

- Draft Environmental Impact Statement
- Final Environmental Impact Statement

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

Office of Coastal Zone Management
National Oceanic and Atmospheric Administration
Attn: Eileen Mulaney
3300 Whitehaven Street, N.W.
Washington, D.C. 20235
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Type of Action

- 1. Proposed Federal approval of the Michigan Coastal Management Program
 Administrative Legislative

Brief Description of Proposed Action

2. It is proposed that the Assistant Administrator for Coastal Zone Management approve the Coastal Management Program of Michigan pursuant to P.L. 92-583. Approval would permit implementation of the proposed program, allowing program administration grants to be awarded to the state and require that Federal actions be consistent with the program.

Summary of Environmental Impacts and Adverse Environmental Effects

3. Approval and implementation of the program will restrict or prohibit certain land and water uses in parts of the Michigan coast, while promoting and encouraging development and use activities in other parts. This may affect property values, property tax revenues, and resource extraction and exploration. The program will provide an improved decision-making process for determining coastal land and water uses and siting of facilities and protection of resources of national interest and will lead to increased long-term protection of and benefit from the state's coastal resources.

Alternatives to the Proposed Action

4. All alternatives would involve a decision by the Assistant Administrator to delay or deny approval of the Michigan Coastal Management Program. Delay or denial of program approval could come under the following conditions:

- If the program policies are not specific enough to direct State agencies managing uses, areas and activities in the coastal zone.
- If the organizational arrangements and authorities of the Program are not sufficient to enforce policy and resolve conflicts.
- If the Program does not designate properly geographic areas of particular concern.
- If the Program does not satisfactorily delineate an inland boundary.
- If the Program fails to adequately consider the national interest.
- If the Program fails to include Federal consistency procedures.

State options center on responding to the conditions for delay or denial of program approval. The state, therefore, could:

- accept the decision and do nothing to remedy the deficiencies.
- amend its management program to overcome the deficiencies for Federal approval.
- reject the decision and seek administrative or judicial review of the Assistant Administrator's decision.

5. List of all Federal, State and local agencies and other parties from which comments were requested on the DEIS. The list of comments received and responses to those comments are found in Appendix D.

Draft Environmental Impact Statement Review

6. The Draft Environmental Impact Statement (DEIS) was transmitted to the Council on Environmental Quality, and the Notice of Availability of the DEIS to the public was published in the *Federal Register* on November 18, 1977. The 45-day comment period ended January 2, 1978. At the request of several commentators, the comment period was extended to January 17, 1978.

Final Environmental Impact Statement Review

7. This Final Environmental Impact Statement has been prepared based on oral/written comments made at the public hearings held on December 13, 14, and 15, 1977 and comments submitted in response to the DEIS. A total of twenty-eight interested parties submitted written comments including fifteen Federal Agencies, three regional agencies, one county agency and nine other parties. The commentators are identified in Appendix D.

Attachment I is the full text of the written comments received by OCZM. Included in this Attachment is a summary of the public hearings held on the DEIS. This Attachment has been forwarded to individuals and organizations who have made comments on the DEIS, as well as all Federal agencies. Additional copies of the written comments will be distributed by OCZM on request.

The written comments and responses to those comments received on the Michigan Coastal Management Program and Draft Environmental Impact Statement are summarized in Appendix D. Generally, the response to the comments is provided in one or a combination of forms:

- Expansion, clarification, or revision of the Michigan Coastal Management Program document,
- Comments by OCZM in response to similar issues raised by several reviewers, and
- Brief responses by OCZM to detailed comments received from each reviewer.

Responses to these comments have been coordinated between the staff of the Michigan Coastal Management Program and OCZM. No attempt has been made to distinguish between comments made on the DEIS and those made on the management program due to the combined format of the document and the interrelated nature of most comments received.

PART I

Introduction



Chapter I

Introduction

A. THE FEDERAL COASTAL ZONE MANAGEMENT ACT (CZMA)

In response to the intense pressures upon coastal areas of the United States, Congress passed the Coastal Zone Management Act (P.L. 92-583). This Act was signed into law on October 27, 1972. The Act authorized a Federal grant-in-aid program to be administered by the Secretary of Commerce, who in turn delegated this responsibility to the National Oceanic and Atmospheric Administration's (NOAA) Office of Coastal Zone Management (OCZM). The Coastal Zone Management Act of 1972 was substantially amended on July 26, 1976 (P.L. 94-370). The Act and the 1976 amendments affirm a national interest in the effective protection and development of the coastal zone by providing assistance and encouragement to coastal states to develop and implement rational programs for managing their coastal zones.

Broad guidelines and the basic requirements of the CZMA provide the necessary direction for developing these state programs. These guidelines and requirements for program development and approval are contained in 15 CFR Part 923, as revised and published March 1, 1978 in the *Federal Register*. In summary, the requirements for program approval are that a state develop a management program that:

- Identifies and evaluates those coastal resources recognized in the Act that require management or protection by the state;
- Reexamines existing policies or develops new policies to manage these resources. These policies must be specific, comprehensive and enforceable, and must provide an adequate degree of predictability as to how coastal resources will be managed;
- Determines specific uses and special geographic areas that are to be subject to the management program, based on the nature of identified coastal concerns.

The basis for managing uses (or their impacts) and areas should be based on resource capability and suitability analyses, socio-economic considerations and public preferences;

- Identifies the inland and seaward areas subject to the management program;

- Provides for the consideration of the national interest in the planning for and siting of facilities that meet more than local requirements; and
- Includes sufficient legal authorities and organizational arrangements to implement the program and to insure conformance to it.

In arriving at these substantive aspects of the management program, states are obliged to follow an open process which involves providing information to and considering the interests of the general public, special interest groups, local governments and regional, state, interstate and Federal agencies.

Section 305 of the CZMA authorizes a maximum of four annual grants to states to assist them in development of a coastal management program. After developing a management program, the state may submit it to the Secretary of Commerce for approval pursuant to Section 306 of the CZMA. If approved, the state is then eligible for annual grants under Section 306 to implement its management program. If a program has deficiencies which need to be remedied or has not received Secretarial approval by the time Section 305 program development grants have expired a state may be eligible for preliminary approval and additional funding under Section 305(d). Section 307 of the Act stipulates that Federal agency actions shall be consistent, to the maximum extent practicable with approved state management programs. Section 307 further provides for mediation by the Secretary of Commerce when a serious disagreement arises between a Federal agency and a coastal state with respect to a Federal consistency issue. Section 308 of the CZMA contains several provisions for grants and loans to coastal states to enable them to plan for and respond to on-shore impacts resulting from coastal energy activities. To be eligible for assistance under Section 308, coastal States must be receiving Section 305 or 306 grants, or, in the Secretary's view, be developing a management program consistent with the policies and objectives contained in Section 303 of the CZMA.

Section 309 allows the Secretary to make grants (90 percent Federal share) to states for developing and administering studies, plans, and implementation activities which are interstate in nature.

Section 310 allows the Secretary to conduct a program of research, study, and training to support state coastal management programs. The Secretary may also make grants (80 percent Federal share) to states to carry out research studies and training required to support their programs.

Section 315 authorizes grants (50 percent Federal share) to states to acquire lands for access to beaches and other public coastal areas of environmental, recreational, historical, aesthetic, ecological, or cultural value, and for the preservation of islands. This is in addition to the estuarine sanctuary program which is established to preserve a representative series of undisturbed estuarine areas for long-term scientific and educational purposes.

**B. OCZM REQUIREMENTS FOR PROGRAM APPROVAL
UNDER SECTION 306 OF THE
COASTAL ZONE MANAGEMENT ACT:**

Requirements	Sections of Approval Regulations	Page
Sec. 306(a) which includes the requirements of Sec. 305:		
305(b)(1): Boundaries	923.31, 923.32, 923.33, 923.34	29
305(b)(2): Uses subject to management	923.11, 923.12	109
305(b)(3): Areas of particular concern	923.21, 923.23	85
305(b)(4): Means of control	923.41	105-120
305(b)(5): Guidelines on priorities of uses	923.22	86, 102
305(b)(6): Organizational structure	923.45	103
305(b)(7): Shorefront planning process	923.25 Not required at this time	
305(b)(8): Energy facility planning process	923.14 Not required at this time	
305(b)(9): Erosion planning process	923.26 Not required at this time	
Sec. 306(c) which includes:		
306(c)(1): Notice; full participation; consistent with Sec. 303	923.58, 923.51, 923.55, 923.3	117, 127, 130, 105
306(c)(2)(A): Plan coordination	923.56	122, 172
306(c)(2)(B): Continuing consultation mechanisms	923.57	105, 117, 122, 127, 130
306(c)(3): Public hearings	923.58	139
306(c)(4): Gubernatorial review and approval	923.47	iv, 103
306(c)(5): Designation of recipient agency	923.46, 923.47	iv, 103
306(c)(6): Organization	923.45, 923.47	103
306(c)(7): Authorities	923.41, 923.47	109
305(c)(8): Adequate consideration of national interests	923.52	154
306(c)(9): Areas for preservation/restoration	923.24	91
Sec. 306(d) which includes:		
306(d)(1): Administer regulations, control development, resolve conflicts	923.41	103
306(d)(2): Powers of acquisition, if necessary	923.41	60
Sec. 306(e) which includes:		
306(e)(1): Technique of control	923.41, 923.42	105-120
306(e)(2): Uses of regional benefit	923.13, 923.41, 923.43	115
Sec. 307 which includes:		
308(b): Adequate consideration of Federal agency views	923.51	139-187
307(f): Incorporation of air and water quality requirements	923.44	114

C. REQUIREMENTS OF THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969

On January 1, 1970, the President signed into law the National Environmental Policy Act (NEPA), which requires each Federal agency to prepare a statement of environmental impact in advance of each major action that may significantly affect the quality of the human environment. An environmental impact statement (EIS) must assess potential environmental impacts of a proposed action in order to disclose environmental consequences of such action.

To comply with NEPA's requirement of preparing an EIS, OCZM has combined the state's coastal management program (which is the proposed action) with a discussion of the environmental impacts. The CZMA is based upon the premise that the environmental aspects of the coastal management program should receive significant consideration in the development of state management programs. Therefore, as you read this EIS, you should be aware that the state CZM Program is the core document included in its entirety supplemented by the requirements of NEPA, Section 102(2)(c). For reviewers more familiar with the NEPA requirements for content of an EIS, below is an index of where you will find this information:

	Pages
Description of the proposed action	15-170
Description of the environment affected	15, 171
Relationship of the proposed action to land use plans, policies, and controls for the affected areas	172
Probable impact of the proposed action on the environment	176
Alternatives to the proposed action	183
Relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity	176
Probable adverse environmental effects which cannot be avoided	176
Irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented	172
Consultation/Coordination with others	117, 130, 139

D. SUMMARY OF THE MICHIGAN COASTAL MANAGEMENT PROGRAM

Stretching from the rugged and undeveloped areas of Lake Superior to the major urban industrial areas such as Detroit, Benton Harbor, and Muskegon there is an incredible variation in the use of Michigan's 3,200 miles of coastline and 39,000 square miles of Great Lakes waters. Not unexpectedly, this diversity of use has resulted in incompatible and conflicting demands being placed upon the State's lands and water resources. In the past Michigan attempted to resolve these conflicts and balance several important State and national concerns in an ad-hoc manner. This piecemeal approach to managing its coastal resources was found to be inadequate. As a result the State elected to develop under the Federal Coastal Zone Management Act a program to comprehensively manage its coastal resources.

Michigan's New Focus on Coastal Lands and Waters

Over the past three years with extensive public involvement, Michigan has developed a management process that relies on specific State policies and objectives that will promote the wise use and protection of the resources contained within the coastal area. In order to implement the state coastal policies, the Governor has directed the Michigan Department of Natural Resources to manage and coordinate the various aspects of the Program. In fulfilling its statutory responsibilities and the gubernatorial charge, the Department of Natural Resources will ensure consistency with the policies of the program.

Components of the Program

1. Areas of Concentration

In addressing the major State and national concerns over the use of coastal areas the specific coastal management policies and action programs have been grouped under five major resource areas:

- Areas of natural hazard to development — including erosion and flood-prone areas;
- Areas sensitive to alteration or disturbance — including ecologically sensitive areas (wetlands), natural areas, sand dunes, and islands;
- Areas fulfilling recreational or cultural needs — which include areas managed to recognize recreational, historic or archaeological values;

- Areas of natural economic potential — including water transportation, mineral and energy, prime industrial and agricultural areas;
- Areas of intensive or conflicting use — which encompass coastal lakes, river mouths, bays and urban areas.

For each of the five areas and the specific policies addressing each of them, the program will concentrate on performing the following functions:

- Improve administration of existing State shoreline statutes (e.g., Shorelands Act, Submerged Lands Act, Sand Dunes Act);
- Improve governmental coordination to reduce time delays, duplication and conflicts in coastal management decision-making; and
- Provide substantial technical and financial assistance to local units of government for creative coastal projects;

2. Organization

The Department of Natural Resources is one of 19 operating State agencies; it administers directly or plays a formal role in the administration of all significant State coastal programs and authorities which regulate direct and significant impacts upon the coast. Of the various coastal related legislative enactments that it administers, the following are the most important:

- Shorelands Protection and Management Act;
- Great Lakes Submerged Lands Act;
- Natural Rivers Act;
- Soil Erosion and Sedimentation Control Act;
- Wilderness and Natural Areas Act;
- Farmland and Open Space Preservation Act;
- Inland Lakes and Streams Act.

The Division of Land Resource Programs, located within the Department of Natural Resources, has the day to day responsibility for administering the above statutory authorities and it is the principal division for orchestrating the Coastal Management Program in Michigan.

3. *Coordination and Conflict Resolution*

As a result of the Department of Natural Resources broad based legislative authority to manage those activities which have a direct and significant bearing on coastal resources, the Governor of Michigan determined that the Department was a natural forum for coordinating and resolving conflicts over coastal issues. To formalize this process and to insure consistency and linkages with the program's policies, the following mechanisms will be relied upon:

A. ADOPTION OF THE PROGRAM BY THE NATURAL RESOURCE COMMISSION (NRC):

With the formal adoption of the program by the Natural Resources Commission, the Commission has directed the Department of Natural Resources when carrying out its various statutory responsibilities such as review of permits, granting of licenses, and managing and protecting the natural resources, to act in accordance with the coastal management policies.

B. THE STANDING COMMITTEE ON SHORELANDS AND WATER (SAW) COMMITTEE

The Standing Committee on Shorelands and Water (SAW), which was formed by the DNR and which is comprised of representatives from the DNR's divisions and offices and eight other State agencies, will:

- identify and recommend priority projects and activities for coastal management program consideration;
- evaluate State agency activities for consistency with program goals, objectives, policies and legislated areas of particular concern;
- actively consider the national interest;
- coordinate Federal permit reviews and projects.

C. INTER-DEPARTMENTAL ENVIRONMENTAL REVIEW COMMITTEE AND THE MICHIGAN ENVIRONMENTAL REVIEW BOARD:

The DNR is a member of both the Interdepartmental Environmental Review Committee and the Michigan Environmental Review Board (MERB). The MERB with assistance provided by the Interdepartmental Committee reviews State and Federal EIS's for major actions which have potential for significant impact. It is required, as a result of Executive Order 1974-4 to recommend to the Governor those actions of State agencies that should be suspended or modified.

D. GOVERNOR'S CABINET COMMITTEE ON ENVIRONMENT AND LAND USE:

The Cabinet Committee, which is composed of several representatives from the State agencies including the Department of Natural Resources, reviews ongoing program operations, identifies emerging problems in the implementation of executive policies, and resolves interdepartmental policy and communication differences.

E. THE GOVERNOR:

The Governor as chief executive has the authority under the Michigan constitution to coordinate State policy and resolve conflicts that may not be resolved in the forums discussed above.

F. JUDICIAL RELIEF:

The judicial process also serves as a method for resolving conflicts in Michigan. Under Michigan law there are several avenues available for relief, including two major provisions. The Michigan Environmental Protection Act provides both a procedural and substantive basis for any party in the State to seek judicial relief against any other for any action in order to preserve, protect and enhance the natural resources of the State. Also, under the State Administrative Procedures Act any party aggrieved by a decision, such as the Department of Natural Resources issuing or denying a permit, may seek relief in the circuit courts of Michigan.

4. *Coastal Areas of Particular Concern*

The Michigan Coastal Management Program uses the areas of particular concern (APC's) process to provide an additional vehicle for identifying and addressing coastal areas which need management attention. APC's originate from two sources:

- State-legislated areas of particular concern;
- publicly-nominated areas of particular concern.

The State-legislated APC's are those coastal sites mandated to receive particular attention by State law. The specific sites are determined by the Department of Natural Resources based upon statutory criteria. The priority of uses for these areas are also mandated by State law.

The second group of APC's are those nominated by any person, group or local, regional, State, or Federal agency. These publicly-nominated APC's which become designated as action APC's by the State will be eligible for funding and technical and financial assistance to provide more effective management of these areas in accordance with the program's objectives and policies.

5. *Federal Consistency*

Under the Federal Coastal Zone Management Act, Federal licenses or permits and Federal assistance to State and local governments must be consistent with the Michigan Coastal Management Program, while Federal activities and development projects must be consistent to the maximum extent practicable.

The Coastal Management Program Unit is located within the Land Resources Programs Division of the DNR, and will be responsible for coordinating consistency review in the State.

One of the major objectives of the program is that through Federal consistency there will be an enhanced State-Federal agency cooperation on mutually desirable projects affecting the Michigan coast.

6. *Consideration of the National Interest*

In return for obtaining Federal consistency with the coastal management program, the State of Michigan will provide adequate consideration of the national interest in the siting of facilities and natural resources.

While no national interests are excluded from the lands and waters of Michigan's coastal zone, the specific resources and facilities of national interest that the Michigan program will focus on are:

- national defense and aerospace;
- recreation;
- transportation;
- air and water quality;
- wetlands;
- hazard areas;
- historic and archaeological sites;
- energy.

The Michigan Coastal Management Program provides three major forums for ongoing consideration of the national interest: the Natural Resources Commission; the Michigan Environmental Review Board; and the Michigan Department of Natural Resources in response to the specific charge of its Director (See Director's letter #17, Appendix B). Each of these State entities encourages and provides for public participation in their decision-making in order that the national interests will be adequately considered.

PART II
Michigan Coastal
Management
Program



Chapter II

Michigan's Coastal Area and Its Character

More than 39,000 square miles of the Great Lakes and 3,200 miles of Great Lakes coastline are within Michigan's coastal boundaries — giving the state the longest freshwater coast in the world.

Throughout history, the Great Lakes and the resources they support have been important to Michigan. Fish, furs, fertile land and lumber first attracted settlers who built towns along the coast and used the Great Lakes to transport their harvests to other parts of the growing nation. A century later, loggers chopped their way through virgin timber, floating their logs to boom towns along the coast. Logging and fishing were soon replaced by manufacturing industries which concentrated along the coast to use the lakes for shipping and processing. As the automobile industry flourished, workers traveled away from cities to vacation at coastal beaches and resorts. Improved roads and freeways shortened travel time between industrialized cities and the coast, making it possible for more people to enjoy seasonal or permanent residences on the Great Lakes.

Today, we continue to depend on the coast for our livelihood and recreation. Coastal lands support industry, recreation, residential areas, resorts, forests, farms and orchards, energy and mining facilities. Coastal waters support commercial navigation, fisheries, recreational boating, waste assimilation, industrial and public water supplies.

The following pages of this chapter describe important characteristics of Michigan's coast including coastal use and development, shoreline ownership, and geomorphic shore types. The geographic limit of the coast is then defined, using more specific use and geomorphic ownership patterns. The resulting coastal area boundary defines the focus of Coastal Management Program funding efforts and technical services.

CHARACTER OF THE COAST

The first portion of this chapter describes the important characteristics of Michigan's 3,200 mile coast including: (1) a description of the coastal area by regional boundaries; (2) shoreline ownership; (3) coastal use and development; and (4) geomorphic shore types.

Coastal Character — Regional Boundaries

Following is a description of coastal characteristics for each of Michigan's ten coastal planning and development regions. This discussion demonstrates that coastal uses, developments and physical characteristics vary greatly along our 3,200 mile coast. Figure II-A illustrates the boundaries of Michigan's coastal planning and development regions.

Region 1

In southeast Michigan, officials of numerous state and federal agencies, four counties (Macomb, Monroe, St. Clair and Wayne), and at least 36 minor civil divisions regularly make decisions concerning coastal resource use. The coastal resources over which these public officials exercise their authority have diverse characteristics.

Portions of Lake Erie,* Lake Huron and Lake St. Clair and the Detroit and St. Clair Rivers are resources defined as coastal waters in southeast Michigan. These bodies of water support a variety of fish and wildlife with shallow areas acting as breeding, feeding and nursery areas.

Individuals also rely on these coastal waters. Many communities and industries draw their water supplies and discharge treated wastewater to these lakes and rivers. They are used for transporting raw materials and goods into and out of the region. Finally, these coastal waters are heavily used for recreational purposes.

The Detroit metropolitan area is heavily dependent upon the coast for recreation, shipping, industry and other uses. The entire Wayne County waterfront has been identified as an area of particular concern. Current efforts are being directed toward providing more opportunities along the Detroit waterfront for recreation.

The uses of the region's shorelands are also varied. The shorelands are dominated by homes, with industrial development distributed throughout its length. Commercial and recreational facilities account for a portion of the shorelands in the region as do wetlands that serve as nesting and feeding areas for waterfowl.

Region 4

Within the southwestern Michigan region, the two counties of Berrien and Van Buren border Lake Michigan. Berrien County's six townships, four cities, and three villages encompass about 42 linear miles of coastline; while Van Buren County's two townships and one city cover approximately 13 linear shore miles. Major urban centers include the cities of New Buffalo, St. Joseph-Benton Harbor and South Haven.

Sand beaches, bordered by clay bluffs and sand dunes are characteristic of the Lake Michigan shoreline in this region. The several hundred acre Grand Mere area,

*Nearly all of Michigan's share of Lake Erie shoreline is located in Monroe County. Shore types of this shoreline vary, but basically consist of wetlands interspersed with artificial shore types in and near the more developed areas. Residential development accounts for 15 miles or about 50 percent of the total shorelands use of the Michigan portion of Lake Erie frontage. About 11 miles, (or 33.8 percent) of Michigan's Lake Erie shorelands are state owned designated recreational and wildlife areas. Agriculture and vacant, undeveloped lands account for about 5.8 miles of shoreline. The Monroe Port area, Erie State Game Area, Sterling State Park, and Erie State Game area islands are some of the many areas of particular concern which have been identified in this important area. (Coastal Zone Management, July 1976, Monroe County Planning Department and Commission).

FIG. II-A
Coastal Regional Agency Boundaries



adjacent to the lake in Berrien County, is one of the region's most valuable assets. The area illustrates a variety of habitats, including woodlands, wetlands, inland lakes, sand dunes, and beach and serves as a valuable nature study area for local and state residents. The Thunder Mountain area in southern Van Buren County is another of the region's major natural resource sand dune areas.

Demands for the use of shore areas continues to increase — particularly demands for recreational and residential uses, and commercial and industrial uses. Historically, there has been little regulation and guidance of often competing, conflicting and sometimes adverse uses of shoreland areas. For example, lack of location and density standards for residential developments along the coast have at times contributed to severe private and public property loss and damage caused by shoreline bluff erosion.

Region 7

The east central Michigan region includes the coastal counties of Iosco, Arenac, Bay, Tuscola, Huron and Sanilac. The larger urban communities in this region include Oscoda, East Tawas-Tawas City and Bay City.

Located within the region are valuable wetlands with significant fishery and wildlife values. The Saginaw Bay area, which borders the majority of the region's coastal area, is one of the most productive habitats for fish, waterfowl and fur bearers on the Great Lakes.

Saginaw Bay has a number of islands. One of the most significant is Charity Island. The island's lighthouse has served as a navigation aid since 1857. It has also served in the past as a place of refuge for the ship-wrecked and storm driven.

The shore of the region is quite different from that of Lake Michigan and Lake Superior. The bay area is characterized by wetlands, while the lower areas of the region are characterized by sandy beaches, backed by low bluffs. One stretch along the eastern shore of Huron County consists of exposed bedrock and rocky shorelands, contributing to the picturesque beauty of the area.

Region 8

The west Michigan region consists of Allegan and Mason counties. Urbanized areas in the region include Ludington, Holland and Saugatuck-Douglas. The shoreline in this two county area is characterized by high clay bluffs and sand dunes, with some excellent swimming beaches. The high rolling dunes with blow-out areas add much to the scenic beauty of the coastline. North of the City of Saugatuck, the rolling dunes are interrupted by the mouth of the Kalamazoo River. The booming lumber town of Singapore was founded near the river mouth in the 1830's and has long since been buried beneath the sand of Lake Michigan.

Region 9

The four Lake Huron counties in the northeast Michigan region consist of Alcona, Alpena, Cheboygan and Presque Isle. The larger shoreline communities include the cities of Alpena, Cheboygan, Harrisville and Rogers City. There are 15 townships and one village along Lake Huron in the region. The northeast Michigan coast is comprised of about one-third sandy beaches, one-third marshy wetlands and one-third rocky outcrops.

Beautiful scenic sites can be found along the US-23 highway which follows the region's shore. Attractions in the coastal area include the Old Presque Isle Lighthouse, Besser Natural Area, Misery Bay, and, of course, the Mackinaw Bridge.

Northeast Michigan has a stable shoreland's economy in quarry operations and cement production. The region has the distinction of having the world's largest cement plant, located north of Alpena, and the world's largest limestone quarry, near Rogers City. Quarry operations, utilizing high quality metallurgical and chemical grade limestone deposits, are located at three sites along the coast between Alpena and Rogers City. There is considerable acreage of proven limestone reserves of similar quality contiguous to the shoreline being held for future development. All of these industrial activities are complemented by Great Lakes shipping and port facilities.

Northeast Michigan also offers many recreational opportunities. Tourism plays an important role in the economic structure of the entire region. The three state parks of Harrisville, P. H. Hoefft and Cheboygan are major recreational facilities located along the shores. In addition, the Thunder Bay bottomlands, off Alpena, have one of the highest concentrations of shipwrecks on the Great Lakes bottomlands.

Region 10

The northwest Michigan region encompasses Emmet, Charlevoix, Antrim, Grand Traverse, Leelanau, Benzie and Manistee counties. The urban areas in the region include Manistee, Frankfort, Traverse City, Charlevoix and Petoskey.

The high recreational value of the Lake Michigan shoreline in this region has resulted in much development oriented toward recreation. The famous Sleeping Bear Dunes area in Leelanau County has been established as a National Lakeshore. Six state parks and numerous county, township and city parks also provide recreational opportunities.

The shoreline of the area is irregular, consisting of several bays and points. The most notable are Grand Traverse Bay, Little Traverse Bay, Big and Little Sable Points, Point Betsie and Waugoshance Point.

Two major island groups are located within the Lake Michigan waters of the region — the North and South Manitou Islands and the Beaver Island group.

Region 11

Chippewa, Luce and Mackinac counties constitute the eastern Upper Peninsula region. The region is bordered by three of the five Great Lakes — Michigan, Huron and Superior, and by the St. Marys River. The Soo Locks at Sault Ste. Marie permit vessels to bypass the shallow rapids of the St. Marys River and handle more water-borne tonnage annually than any other lock system in the world.

The three counties have Great Lakes shorelands encompassing 722 linear miles, including over 300 miles of island shoreline. Larger islands are Neebish and Sugar Island in the St. Marys River, Les Cheneaux Islands, Mackinac Island, Bois Blanc Island and Drummond Island. The 34 Les Cheneaux Islands extend along the north shore of Lake Huron midway between the Straits and the St. Marys River. Drummond Island at the eastern tip of the Upper Peninsula supports a permanent population as well as numerous summer homes and cottages. A dolomite quarry on Drummond Island is the major source of island employment.

Mackinac Island, situated east of the Mackinac Bridge, has played a strategic role in American history as a mission, trading post and military fortress. The island has been restored to its original condition and is now one of the most popular tourist attractions in the midwest.

Region 12

Marquette, Alger, Schoolcraft, Delta and Menominee counties are the five coastal counties of the central Upper Peninsula region. Lakes bounding the region are Lake Superior and Lake Michigan. The principal urban shoreland communities are Manistique, Escanaba, Gladstone, Menominee, Marquette and Munising.

Portions of the shoreline in the region are characterized by high bluffs which possess outstanding aesthetic beauty. Rock outcrops in the vicinity of Seul Choix Pointe and rock bluffs along the Garden Peninsula are especially scenic. The eastern portion of the region is generally underlain by sedimentary rocks as evidenced by the Cambrian sandstones of the Pictured Rocks near Munising.

Extensive sand beaches can be found near the mouth of the Huron River in Marquette County, along a 13-mile reach east of Marquette and along a 12-mile stretch in the Pictured Rocks area. The towering Grand Sable Dunes extend for five miles to the west of Grand Marais and are the largest dune formations in the Upper Peninsula. The marsh shore of Big and Little Bays de Noc provide excellent fish and wildlife habitat and are heavily used for fishing and hunting.

Region 13

The coastal counties of Gogebic, Ontonagon, Houghton, Keweenaw and Baraga encompass the coastal areas of the western Upper Peninsula. The region's shoreland terrain is quite varied, including flat lake plains, steep sloped areas, igneous and sedimentary bedrock. The shoreline is further characterized by rugged, rocky bluffs and sand beaches, and a collection of outcroppings along the tip of the Keweenaw Peninsula.

Isle Royale, situated 48 miles northwest of the Keweenaw Peninsula in Lake Superior, is one of the nation's most unique national parks. It is a living museum of northern animals and forest bounded by rocky coasts.

Region 14

The west Michigan shoreline region includes Oceana, Muskegon and Ottawa counties. The shoreline in the region is characterized by sand dunes — some towering to great heights over Lake Michigan. The large dunes at Silver Lake are a special scenic and recreational attraction.

Oceana, Muskegon and Ottawa counties were at one time rich in timber, consisting largely of white pines. Thus, much early development was located around the dune impounded lakes and the mouths of rivers — the focus of lumbering activities. The lumber industry eventually dissolved, but the markets which the counties supplied timber remained, and thus were available for the trade of other commodities. Today, major development in the region is centered around these river mouths and lakes, particularly Muskegon Lake, and the mouth of the Grand River at Grand Haven.

Coastal Character — Shoreline Ownership

Figure II-B illustrates ownership characteristics for the Great Lakes and connecting waterways. Ownership of the Great Lakes coastal area varies, although not to the extent that use and development vary. Great Lakes bottomlands are held in public trust. The majority of coastal land areas are in private ownership.

Coastal Character — Use and Development

As shown in Figure II-C., Michigan's coastal use and development differs greatly. Lake Superior's 666 miles of shoreland are the most rugged, undeveloped, and inaccessible of all the Great lakes, yet support valuable mining and tourist industries. While recreation facilities are an important development along the Lake Superior shoreline, residential housing remains the most common type of shoreland development. The St. Marys River — a major highway for water-borne traffic — is the connecting waterway between Lake Superior and Lake Huron. Important to this area is commercial and industrial development adjacent to the famous Soo Locks at Sault Ste. Marie.

The 845 miles of Lake Michigan shoreline are characterized by heavy residential development in the southern end of the Lower Peninsula and some seasonal housing development in the northern Lower Peninsula and Upper Peninsula. Seventeen state parks with over 47 miles of shoreline, state and national forests, 33 commercial and recreational harbors, and numerous public access sites accommodate intensive recreational use of the lake. Commercial and industrial development is limited directly on Lake Michigan, but is important to communities surrounding coastal lakes such as Muskegon, Manistee and Ludington. More than 165 miles of island shoreland

contribute greatly to the historic, cultural and environmental significance of the Lake Michigan shoreline.

Nearly 50 percent of *Lake Huron's* coast is in forest land, agricultural or undeveloped use. The other predominant type of use is residential development along the lake's 634 miles of coast. Certain shoreland areas, such as those found along Saginaw Bay, Potagannissing Bay, Munuscong Lake and many islands, comprise more than 345 miles of shoreline that are valuable to the preservation of Great Lakes fish and wildlife species.

Lakes Erie, St. Clair and the St. Clair and Detroit Rivers are bordered by 147 miles of highly developed shoreline. Urban-industrial complexes centering in this area have decreased the amount of remaining agricultural and undeveloped lands. Much in demand are recreational facilities which, to date, occupy less than five percent of the shore. Marshlands located along Lake Erie at the mouth of the St. Clair River, and Dickinson and Harsens Island are congregation points for migratory waterfowl.

Coastal Character — Geomorphic Shore Types

Important to the use and development of coastal areas is the unique mix of shore types found on each of the Great Lakes. Clay bluffs and sand beaches and some of the largest sand dunes in the world border Lake Michigan. The incredible beauty of Lake Superior is enhanced by towering rock bluffs, sandstone cliffs and sand beaches. In contrast, the Lake Huron coast is characterized by wetlands and rock beaches, while shoreline alterations along Lakes Erie and St. Clair and the Detroit and St. Clair Rivers characterize the largely flat and low coastal plain of southeast Michigan.

Diverse shore types contribute to the unique quality of the Great Lakes coast. The following shore types can be used to describe Michigan's coast: erodible bluff; nonerodible bluffs; sand dunes; low plains and wetlands.

Erodible Bluffs

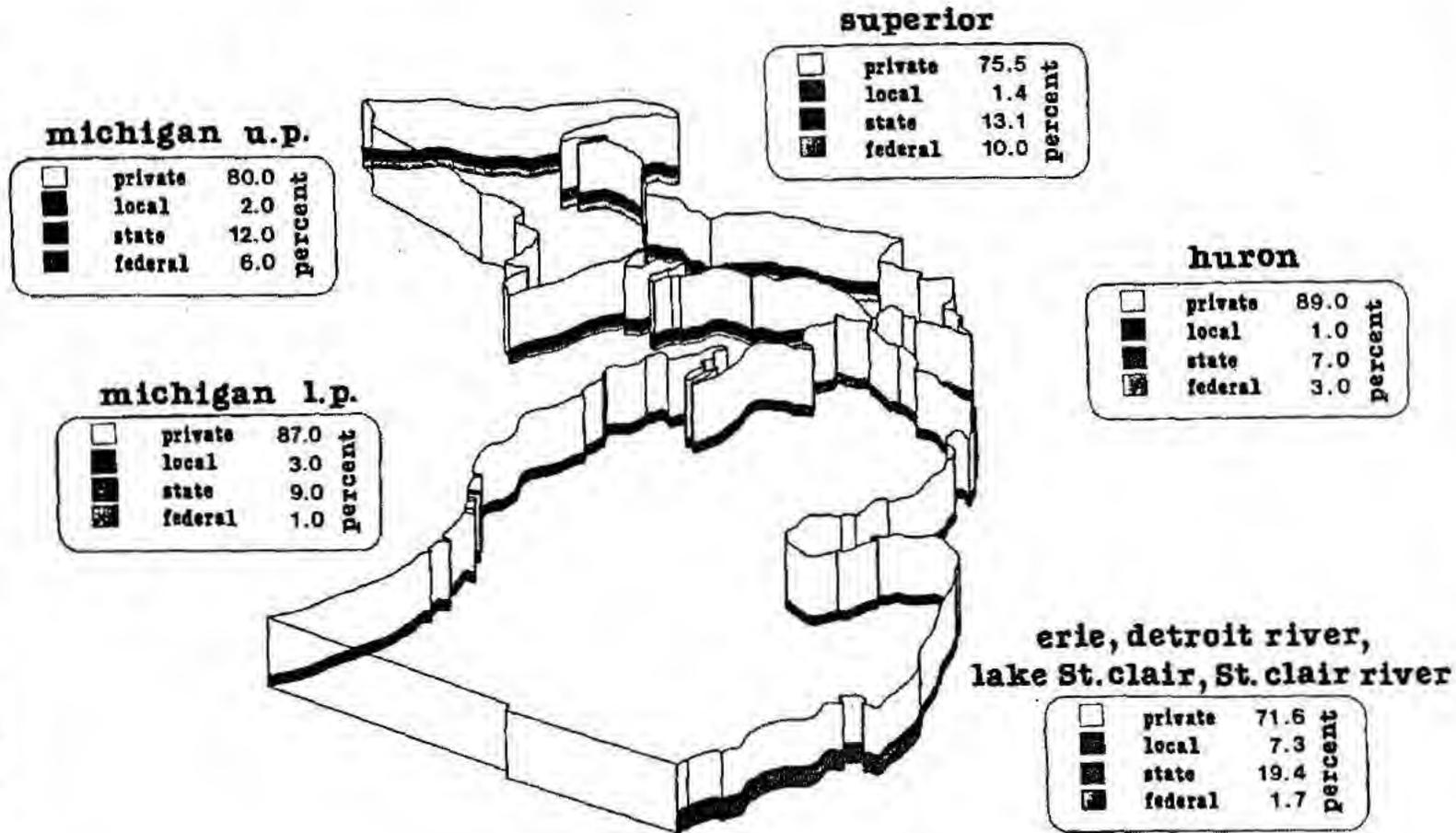
Erodible bluffs comprise 26 percent of Michigan's shoreline. Bluffs are composed of unconsolidated materials, such as sand and gravel, that are highly unstable under wave attack. Along the Great lakes, erodible bluffs range in height from 10 to 300 feet, and in steepness from about 20 degrees to nearly 90 degrees. Due to frequent erosion caused by waves, runoff and wind, the bluff face is usually devegetated, prone to failure, and consequently these areas pose severe hazards for most land uses.

Nonerodible Bluffs

Nonerodible bluffs, by contrast, are extremely stable because they are usually composed of bedrock or rock rubble. This shoreland type is generally steeper than the erodible bluffs, exhibiting a sea cliff form in many places. In addition, the bluff face is usually barren of vegetation. Because of their rocky composition, nonerodible bluffs are the most stable shoreline in the Great Lakes, and, as a whole, the least problematic for residential development. Nonerodible bluffs are found along 13

Michigan's Mainland Great Lakes Coast

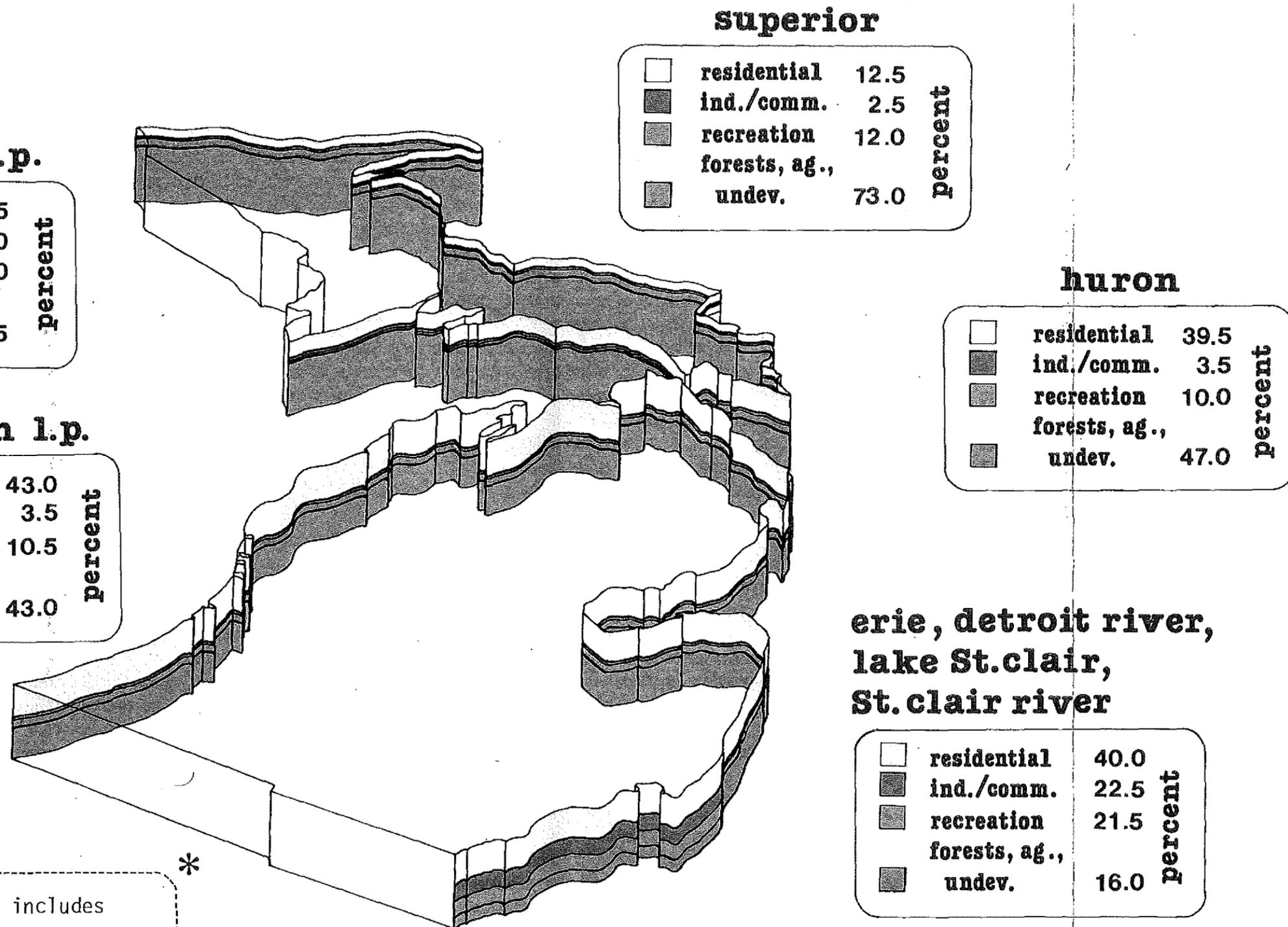
FIG. II-B



Ownership

Michigan's Mainland Great Lakes Coast*

FIG. II-C



erie, detroit river,
lake St. clair,
St. clair river

residential	40.0
ind./comm.	22.5
recreation	21.5
forests, ag.,	
undev.	16.0

Use and Development

*
Industrial and Commercial includes
Public Service Facilities
Recreation includes wildlife preserves

percent of the Michigan coast — mostly in the Upper Peninsula.

Low Plains

Low plains are the most common shoreland type, comprising 33 percent of the Michigan shoreline. They are distinguished primarily by relatively low elevations only a few feet above lake level, and flat or gently rolling topography. Low plains may be composed of clay, loose sand, bedrock or manmade landfills. They may, therefore, be described according to their variable erodibility, drainage capacity, and suitability for development as either erodible (sandy, clay, etc.) low plains, nonerodible (rocky) low plains, or manmade low plains such as landfills.

Wetlands

Wetlands are those areas where the water table is at, near or above the land surface for a significant part of most years. The water regime is such that aquatic or hydrophytic vegetation is usually established, although flood plains and some low-lying shoreline areas can be nonvegetated. Wetlands are frequently associated with topographic lows, even in hilly regions. Examples of wetlands include marshes, mud flats, wooded swamps, and floating vegetation situated on the shallow margins of bays, lakes, rivers, ponds, streams and manmade impoundments such as reservoirs. They include wet meadows or perched bogs in hilly areas and seasonally wet or flooded basins or potholes with no surface water outflow.

A Wetlands Value Study, recently conducted by the Coastal Management Program, provided important confirmation about the significant ecological functions and economic values of coastal wetlands. Study results revealed that about 21 percent of the waterfowl harvest, 14 percent of the duck production, 11 percent of the muskrat take, 15 percent of the commercial fish landings, and a large proportion of the sport fishing occurs in coastal wetlands or adjacent shallow waters. A 1972 inventory showed that Michigan has 105,855 acres of coastal wetlands — about 3.5 percent of the state's total wetland acreage. The Wetlands Value Study summarized that coastal wetlands contribute an estimated \$489.69 per wetland acre/year, for a total of \$51.8 million yearly. This value was derived from analysis of sport fishing, nonconsumptive recreation, waterfowl hunting, trapping of furbearers and commercial fishing uses. Phase II of the study, yet to be conducted, will examine hydrological, chemical and geological characteristics and the primary productivity of coastal wetlands.

Sand Dunes

Sand dunes are unstable, windblown formations which lie inland from the shore. In places, dunes may extend inland several hundred yards and reach heights of 400 feet above lake elevations. Usually they are well drained and partially covered by grasses, shrubs and small trees. Due to their attractiveness as building sites, sand dunes are highly prone to development. Dunes also serve as a local catchment source of precipitation and ground-water recharge. As development takes place, dune

GEOMORPHIC SHORE TYPES OF MICHIGAN'S COASTAL AREA



Erodible bluffs are prone to erosion and pose severe development hazards



Nonerodible bluffs are extremely stable and are found primarily along the Upper Peninsula shoreline



Low plains are the most common coastal shoretype



Coastal wetlands provide for maintenance of fish and wildlife populations



Coastal sand dunes are valuable resources for their scenic, recreational, and economic qualities

formations and their erosion of deposition activities are often disrupted. Dunes are found along over 12 percent of the Michigan coastline.

GEOGRAPHIC EXTENT OF MICHIGAN'S COASTAL BOUNDARY

Nearly all of Michigan has some coastal interest or dependence. Only a much smaller area, however, has a strictly coastal character. Defining the limits of that coastal boundary describes the lands and waters eligible for Coastal Management Program financial and technical assistance, and the geographic area in which specific regulatory authorities will be enforced to control uses or activities which may have an adverse impact on coastal resources.

Although establishing a coastal boundary is an administrative necessity of the Coastal Management Program, it must also be accomplished within the perceptions of what the coast means to Michigan citizens — in terms of its character, problems, issues or opportunities. The boundary must be easily understood and identified on maps and on the ground.

The Coastal Management Program defines the coastal boundary in terms of lakeward and landward limits, using the ordinary high water mark of the Great Lakes to define the land-lake interface. Lakeward areas of the coastal boundary are easily visualized but the landward boundary involves more complex considerations.

Lakeward Coastal Boundary

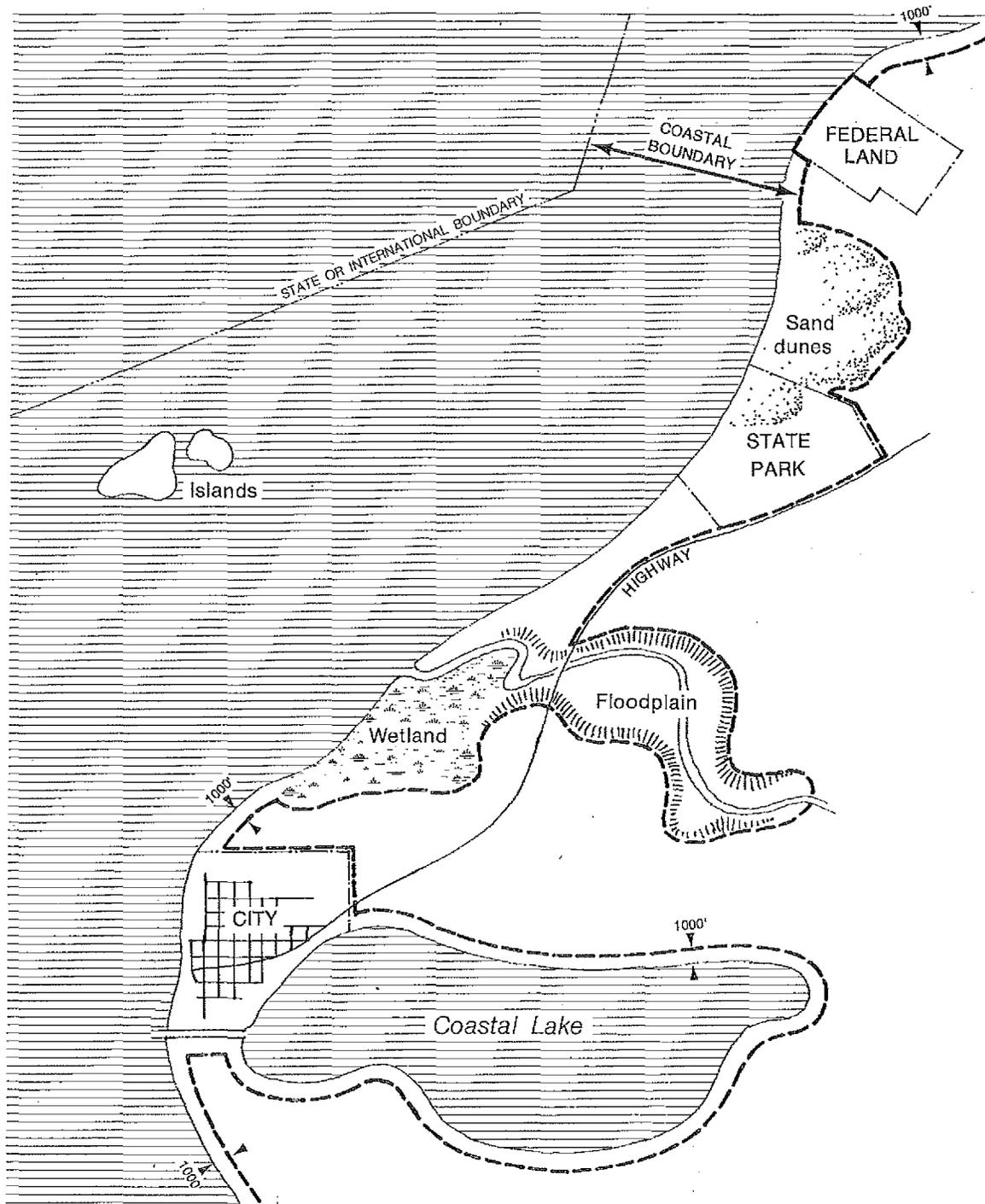
By federal definition, the lakeward coastal area must include all submerged lands, waters and islands of the Great Lakes and connecting waterways, (Keweenaw Waterway, St. Mary's River, Lake St. Clair, St. Clair River and Detroit River), to the state or international boundary in the middle of the lakes. This boundary includes, in their entirety, islands and transitional areas (such as coastal wetlands) lying lakeward of the ordinary high water mark.* Thus, the lakeward coastal boundary is the jurisdictional border Michigan shares with Canada's Province of Ontario and the states of Minnesota, Wisconsin, Illinois, Indiana and Ohio, (see Figure II-D).

*The ordinary high water mark is established by Act No. 247 of the Public Acts of 1955, as amended. The ordinary high water mark means the line between upland and bottomland which persists through successive changes in water levels, and below which the presence and action of the water is so common or recurrent as to mark upon the soil a character, distinct from that which occurs on the upland, as to the soil itself, the configuration of the surface of the soil and vegetation. The ordinary high water mark shall be deemed at the following elevations above sea level, international Great Lakes datum of 1955:

On Lake Superior it is 601.5 feet, on Lakes Michigan-Huron it is 579.8 feet, on Lake St. Clair it is 574.7 feet, and on Lake Erie it is 571.6 feet.

The ordinary high water mark of inland waters is determined under the authority of the Inland Lakes and Streams Act, Act No. 346 of the Public Acts of 1972, as amended. Elevations for connecting waters linking the Great Lakes are interpolated from established ordinary high water marks for the adjoining lands. Actual location of the ordinary high water mark for the Great Lakes and connecting waterways is determined by field survey.

FIG. II-D
Schematic Diagram of the
Michigan Coastal Management
Program Boundary



Landward Coastal Boundary

The landward coastal area extends inland to encompass resources and resource using activities which influence or are influenced by the coastal area in both a direct and significant fashion. These resources and activities involve lands which have a demonstrable interaction with coastal waters in physical, biological, chemical, thermal or other terms. Analysis of these relationships indicates the Michigan's landward coastal boundary includes: (1) lands abutting the ordinary high water mark of Great Lakes and their connecting waterways; (2) lands abutting other water bodies which are directly affected by water levels of the Great Lakes and their connecting waters such as floodplains or inland lakes; (3) transitional areas landward of the ordinary high water mark such as sand dunes, wetlands, etc.; and (4) other lands which are sensitive to intense use pressure related to coastal waters such as recreation areas, urban areas, etc.

Several alternatives were considered by the Coastal Management Program in delineating the landward boundary. One alternative approach might have been based on political borders, encompassing whole cities, townships, etc. Although this option could have some administrative advantages, it was deemed more efficient to focus attention on territory, needs and problems of truly coastal character. Using natural features such as watershed boundaries or cultural features such as service areas for water supply or wastewater treatment encompassed virtually all of the state and was considered impractical.

A compromise solution was selected from mandates contained in one of the most definitive descriptions of land-lake interactions and the resultant boundary in state legislation — Michigan's Shorelands Protection and Management Act (Act No. 245 of the Public Acts of 1970, as amended). This Act and other state statutes, such as the Great Lakes Submerged Lands Act, Inland Lakes and Streams Act, and the Sand Dunes Protection and Management Act use the state-legislated ordinary high water mark as the definition of Michigan's Great Lakes shoreline. Landward from that line, Act No. 245, for example, considers certain coastal areas of statewide concern in terms of their resources and impacts of resource-using activities. Geographically, however, Act No. 245's authority is limited to a maximum of 1,000 feet landward from the ordinary high water mark.

Though the area affected by Act No. 245, and the other acts referred to above, is too limited to satisfy the boundary requirements of the Coastal Management Program, their boundary concepts provides a valuable precedent.

Michigan's Coastal Management Program accordingly adapted a similar approach which delineates an inland boundary extending in most cases a minimum of 1,000 feet from the ordinary high water mark. The boundary also has inland extensions or bulges around areas containing resources or uses which have a physical, chemical, biological or other demonstrable impact upon the Great Lakes. Areas which are included by extending the boundary further inland from that baseline include the following coastal areas as illustrated in Figure II-D and described in the following text. To provide for ease of identification, the coastal boundary is often simplified on maps and on the ground using physical or cultural features, which approximate the 1,000 foot distance from the ordinary high water mark. Thus, the coastal boundary adopts such recognizable features as roadways, section lines, electrical power lines, political

boundaries, rail lines where such features provide reasonable approximation for meeting boundary criteria.

- Coastal lakes, river mouths and bays
- Floodplains
- Wetlands
- Great Lakes sand dune areas
- Public park, recreation and natural areas
- Urban areas

Coastal Lakes

Chemical, biological and hydrologic properties diffuse freely throughout a lake. Such interchange may also take place between a Great Lake and a coastal lake, particularly where they are connected by a channel. Coastal lakes are also affected by uses of their shores, (e.g., industrial plants, marinas, etc.). The influence of the Great Lake on a coastal lake may be minimized where the coastal lake is impounded above its natural level.

Thus, the coastal boundary includes in its entirety any lake within 1,000 feet of the shore of a Great Lake or connecting waterbody. In addition to the entire coastal lake, a minimum 1,000-foot buffer around the lake is included to account for effects of shore uses. Lakes further inland which are connected by channels to a Great Lake or connecting water body are treated as river mouth areas.

Coastal River Mouths

There are important relationships between tributary mouths and Great Lakes waters. Free flow of water from one to the other results in sharing of chemical and biological properties. Stream flow from tributaries replenishes the Great Lakes, and river mouth areas are subject to flooding from high Great Lakes water levels. Lake freighters dock and load at sheltered and convenient river mouth locations. Similarly, river mouths provide desirable locations for Great Lakes pleasure craft marinas. Anadromous Great Lakes fish travel far upstream to spawn. However, extending the coastal area too far upstream may include an unreasonable amount of territory which would dilute the coastal focus of this program.

For the purpose of coastal boundary delineation, tributary river mouths are treated as coastal water in the same manner as open coast. There is a landward boundary consisting of a 1,000-foot strip on both sides of the tributary. These 1,000-foot strips are enlarged by bulges for uses and resources which have a demonstrable land-lake interaction. The inland point to which the coastal boundary extends up a tributary is: (1) the point at which the tributary bed's elevation is higher than the nearest Great Lakes 100-year flood level; or (2) the upstream limit to which the U.S. Army Corp of Engineers maintains a deep draft navigation channel, whichever is further inland.

Flood Plains

Areas subject to flooding from Great Lakes influences deserve consideration in coastal management. Surveyed contours are a stable and logical tool for identifying such lands and have been mapped for almost the entire Michigan coast. The Corps of Engineers' report on Great Lakes Open-Coast Flood Levels, (1977, termed Phase I of the two phase study), identifies 10-year, 50-year, 100-year, and 500-year flood elevations for open coast on Lakes Superior, Michigan, Huron, Erie and St. Clair. These calculated elevations have not been made for bays (including Saginaw Bay), other inlets, coastal lakes, or the Great Lakes connecting streams.

Thus, the 1,000-foot strip landward boundary is extended to encompass areas adjacent to the shore and bounded by the U.S. Geological Survey contour line which is: (1) closest to the 100-year flood elevation, (depending upon contour intervals which vary, depending upon the map available for boundary delineation), established for the nearest reach of Great Lake; or (2) encompassed in existing FIA flood hazard maps or Flood Insurance Rate Maps prepared by Federal Insurance Administration, (not including rough maps printed for review purposes without dates).

For all bays and inlets in which the 100-year flood elevations has not been determined, the contour level established as the 100-year flood elevation is used to develop the boundary. Floodplain estimates of the Great Lakes connecting waterways are based on elevations derived under Phase II of the Corps of Engineers studies. The boundary in these areas may be extended landward in areas where communities have elected to develop local floodplain zoning ordinances, in anticipation of the Federal Flood Insurance Administration guidelines, in lieu of elevations derived under Phase II of the Corps study.

Wetlands

Coastal wetlands are important transitional areas with special biological and hydrologic value. Many have been destroyed by urban development and others are similarly threatened. The location and extent of the state's coastal wetlands vary with Great Lakes water levels. A coastal floodplain, based on geologic contours, is a fairly stable measurement which correlates with characteristics which create wetlands.

Therefore, the 100-year floodplain is used as an approximation of the area where coastal influences create wetlands. In addition, areas beginning within 1,000 feet of the Great Lakes ordinary high water mark, which have been identified by airphotos or otherwise as being wetlands over extended periods of time are also included in the boundary in their entirety.

Great Lakes Sand Dunes

Dunes have scientific and scenic value, and their sands are valuable to industry. Dunes are fragile and unstable if vegetative cover is disturbed. Some support unusual vegetation types. Dune formations may extend as much as a mile or more inland. Vegetated dunes are difficult to identify from air-photos, and inland sand hills may

require inspection to determine whether they consist of wind-and-water-processed dune sand or not. The state has proposed delineations of dunes according to mandates of Act No. 222 of the Public Acts of 1976 for the first seven areas to be designated under this Act.

The coastal boundary incorporates designated sand dune formations in their entirety to the extent they have been identified.

The coastal boundary will be refined in the future to incorporate additional designated sand dune areas in administering the state's Sand Dune Protection and Management Act. Since the coastal boundary will include entire dune formations, no buffer zone is added.

Public Park, Recreation and Natural Areas

The Coastal Management Program will seek to improve the wise use of recreational areas and the protection of coastal natural areas. The degree of use and development fostered in such public open areas partly determines whether recreation will have any destructive impacts on the coastal environment, although some recreational areas may contain portions so far inland that coastal relationships are minimal.

The coastal boundary, therefore, includes, in their entirety, publicly owned park, recreation or other natural areas which fall anywhere within 1,000 feet of the ordinary high water mark which have been designated by a public agency and administered for the preservation of natural values.

Urban areas

Some coastal activities and some effects on coastal waters depend, directly or indirectly, on activities and conditions elsewhere in an urban area. The original terrain in some urban areas may have been altered by leveling and filling to the point where true contours and hence floodplains are not discernible. Uses of heavily built-up land are fairly well fixed and less easily influenced by coastal management actions than other lands.

For *moderately urbanized* areas — where the first 1,000 feet of shore may contain a mixture of urban uses and undeveloped land — the basic 1,000-foot strip, augmented by extensions for features defined above, is retained. For *heavily urbanized* areas, the boundary is, in most cases, the first major roadway along the shore, with the provisions that: (1) river mouths are treated as coastal waters; (2) publicly owned and administered parks, recreation areas and natural areas within 1,000 feet of the shore are included within the coastal boundary in their entirety; and (3) where the Federal Insurance Administration has identified a 100-year floodplain beginning within 1,000 feet of the ordinary high water mark, the coastal boundary is extended landward to include the entire floodplain; and (4) areas designated pursuant to Act No. 245 of the Public Acts of 1970, as amended, the Shorelands Protection and Management Act are included in the boundary, (Act No. 245's authority extends 1,000 feet from the ordinary high water mark).

Other Boundary Delineation Considerations

Excluded Lands

All lands owned, leased, held in trust or otherwise legally subject to the sole discretion of federal agencies in their use are specifically excluded from the state Coastal Management Program boundary by the federal Coastal Zone Management Act. Although federally owned lands are excluded from the boundary, federal activities on these lands must be shown to be consistent "to the maximum extent practicable" with the Coastal Management Program (as described further in Chapter VI). An inventory of federally owned lands has been conducted. An ongoing process to assure accurate identification of these lands will continue. A description of these lands is contained in Appendix A of "State of Michigan Coastal Management Program and Draft Environmental Impact Statement".

Indian trust lands are eligible for assistance as regional entities although such lands are excluded from the boundary.

Private inholdings which are presently located in such areas as national forests and lakeshores have been identified from analysis of plat books and will be included in the coastal boundary and are subject to policies of the Coastal Management Program. As additional lands are acquired by federal agencies as national forests, lakeshores, etc., these federally owned lands will be excluded from the boundary. In addition, many of these inholdings are subject to specific requirements established by federal agencies which administer the adjacent federally owned lands.

Interstate Coordination

To avoid conflicts with coastal boundaries defined by neighboring states' coastal management programs, this program will employ ongoing interstate coordination efforts (most notably through the Great Lakes Basin Commission) in making its boundaries conceptually and cartographically compatible with other states' efforts.

Boundary Revisions

The coastal boundary may be revised as necessary based upon criteria which include: (1) additional sand dune areas as designated under the Sand Dune Protection and Management Act (Act No. 222 of the Public Acts of 1976); (2) floodplain elevation contours as completed; (3) additional public recreation, park or natural areas as established; (4) existing or future state legislation or revised regulations issued pursuant to existing legislation which identifies areas with a strong relationship to the coast which merit special management attention; (5) areas of particular concern as nominated which demonstrate land-lake relationships for such areas as scenic access, etc.; and (6) other areas as their relationship to coastal impacts or resources becomes more evident, (e.g., extent of tributary pollution loadings). In cases where boundary is revised, the Office of Coastal Zone Management will determine if the revision is an amendment or a refinement to the program.

Availability of Boundary Maps

Michigan's ten coastal planning and development regional agencies provided draft boundary maps which have been finalized by the state to insure that boundary lines at regional agency borders are compatible and to incorporate recently designated sand dune areas, (designated under Act No. 222 of the Public Acts of 1976). This mapping effort consists of over 230 separate quadrangles, primarily at 7½ or 15 minute topographic scales. Due to the poor reproductive capability of many maps and the high degree of variability in existing map scales, it is, at present, extremely time consuming and costly to provide a reproducible set of boundary maps. Individuals of agencies may, however, consult coastal boundary maps at either the office of the Coastal Management Program, 7th floor, Stevens T. Mason Building, Lansing, Michigan; or at the office of coastal regional planning and development agencies. Xerox copies of coastal boundary maps may currently be provided by the Coastal Management Program at a cost which will vary according to the number of maps requested and the size of the map(s) which must be reproduced.

In an attempt to assess the usefulness of other mapping documents, the Coastal Management Program conducted a demonstration project with the Michigan Department of State Highways and Transportation to identify land use/land cover and the coastal boundary for 23 Michigan ports. In the near future, a second demonstration project will map land use cover and the coastal boundary for the coastline from Manistique to Escanaba, along the northern Lake Michigan shore. As a result of this activity, computer reproductions of both land use/land cover and the boundary will be available for the pilot areas at virtually any map scale requested. During implementation, this program will determine the feasibility of expanding this project statewide along the coast.

Boundary Field Inspection

If it should become necessary to ascertain whether or not certain land areas are located in the coastal boundary, field checks will be made within two to three weeks of the request by either the Department of Natural Resources or participating planning and development regional agencies.

SUMMARY

Michigan's coastal character is varied with magnificent resources, worthy of protection and management. The coastal boundary provides a focus for Coastal Management Program implementation activities to protect coastal resources and solve coastal problems.

Chapter III

Program Policies and Action Programs

Michigan's Coastal Management Program fully addresses the range of issues envisioned by the United States Congress as reflected in Sections 302 and 303 of P.L. 92-583, as amended, including ecological concerns (e.g., fisheries management, wetlands protection, habitat management, water quality), cultural resources, (e.g., recreational opportunities, historic and archaeological values), commercial importance (e.g., energy facility siting, mineral extraction, commercial harbors, prime agricultural lands), and hazard area management (erosion and flood prone areas).

The central focus of program implementation is to: (1) improve administration of existing state shoreline statutes (e.g., Shorelands Act, Submerged Lands Act, Sand Dunes Act); (2) provide substantial technical and financial assistance to local units of government for creative coastal projects; and (3) to improve governmental coordination to reduce time delays, duplication and conflicts in coastal management decision-making.

The following text describes specific policies and action programs that Michigan will implement in response to state and national mandates to protect our valuable coastal resources and solve serious coastal problems.

MICHIGAN'S COASTAL AREAS

Michigan's coast is a complex resource — both in terms of its biologic and physical nature and its uses and developments. For example, our shorelands encompass such uses as industrial complexes, ports and harbors, intensively used parks and beaches, agricultural, energy and residential areas, as well as undisturbed duneland, beaches and wetlands.

In making decisions to assure proper management and wise use of Michigan's vast coastal area, the Coastal Management Program will direct efforts to achieve the following broad goals:

- Coordinate the operation of federal, state, regional and local programs that influence activity and impacts in Michigan's coastal area.

- Develop a partnership with citizens to promote an awareness of the value and sensitivity of the coastal area and the wise use of resources.
- Encourage and support local units of government to carry out coastal management responsibilities in an effective and efficient manner.
- Protect coastal land, water and air resources from detrimental uses and activities for the public health, safety and welfare.
- Assist in the implementation of programs which lead to wise use of the coastal area.

To clearly describe state policy and action programs which pertain to Michigan's coast, the coastal area will be discussed in this chapter under the heading of five resource areas:

- **AREAS OF NATURAL HAZARD TO DEVELOPMENT**
These include erosion and flood prone areas.
- **AREAS SENSITIVE TO ALTERATION OR DISTURBANCE**
These include ecologically sensitive areas (wetlands), natural areas, sand dunes, and islands.
- **AREAS FULFILLING RECREATIONAL OR CULTURAL NEEDS**
These include areas managed to recognize recreational, historic or archaeological values.
- **AREAS OF NATURAL ECONOMIC POTENTIAL**
These include water transportation, mineral and energy, prime industrial and agricultural areas.
- **AREAS OF INTENSIVE OR CONFLICTING USE**
These encompass coastal lakes, river mouths, bays and urban areas.

Following is a description of problems and program concerns, state policies and action programs which are common to all five of these coastal areas. This discussion is followed by a description of problems and program concerns, state policies and action programs for each individual type of coastal area.

The purpose of this text is to describe policies and programs which will be utilized and accelerated to address coastal problems and opportunities for Michigan's coastal areas. Statements of policy are derived from state statutes and rules, formal policies of the Michigan Natural Resources Commission, Executive Orders and Directives of the Governor and federal laws and regulations, (e.g. Public Law 92-500).

Michigan's Coast — Problems and Program Concerns

Michigan's shoreland resources present bright opportunities as well as pressing problems. Exceeding coastal resource tolerances typically results in property loss and damage, pollution, economic loss and/or social costs. If not carefully planned and managed, the rising demands for benefits afforded by our coast will result in increased and, in many cases, unanticipated impacts. Such complex and often competitive demands complicate the objective of making effective management decisions.

Michigan's Coastal Management Program fully recognizes the need to protect, preserve, restore and enhance the coastal area in accordance with the mandate of P.L. 92-583. The program policies and action programs provide for resource protection, preservation and restoration, while providing opportunities for recreational and commercial development which are located and designed in an environmentally responsible manner. The Coastal Management Program will encourage, and in some cases support, specific restoration activities (e.g. historic lighthouses) and commercial development (e.g. commercial harbors), in addition to enforcing statutes designed to protect essential resources (e.g. wetlands, sand dunes) and preventing hazardous development in erosion or flood prone areas.

In the past, the state's approach toward coastal management is illustrated by statutes which address, in piecemeal fashion, either specific resources, activities and/or impacts. This ad-hoc approach toward decision making has often resulted in conflicts among federal, state and local governments and citizens while, at the same time, created secondary, unanticipated impacts upon the resource which result in either temporary or permanent resource loss.

Michigan's Coastal Management Program provides the opportunity to substantially improve and accelerate regulatory, technical and financial assistance programs and intergovernmental coordination and cooperation efforts to protect coastal resources and solve coastal problems. The program's effectiveness was greatly enhanced through approval of Michigan's Coastal Management Program by Governor William G. Milliken, and the Michigan Natural Resources Commission.

Since the Michigan Natural Resources Commission is the policy formation body for the Michigan Department of Natural Resources, their approval of this program significantly strengthens Michigan's approach of integrating existing authorities to accomplish coastal management objectives. Currently, the Department of Natural Resources either directly administers or plays a formal role in the administration of coastal regulatory authorities and state programs which provide financial and technical assistance relative to coastal management. More significant, programs addressing shore erosion, coastal flooding, coastal wetland protection, soil erosion and sedimentation, natural rivers, inland lakes and streams, natural areas, and regulation of the Great Lakes submerged lands are administered by the principal administering Coastal Management Program division — the Division of Land Resource Programs in the Department of Natural Resources. Thus, the statutes which support the following policy statements and Natural Resources Commission adoption of this program insures that Michigan will effectively implement its Coastal Management Program.

Michigan has established several commissions and advisory councils to provide forums for citizen input and mechanisms to resolve state agency and/or citizen

conflicts when necessary. As described in Chapter V, the Natural Resources Commission, the Michigan Environmental Review Board, the Standing Committee on Shorelands and Water Coordination and other public bodies serve to mediate and resolve conflicts involving coastal management.

Coastal Management Program concerns pertaining to all of Michigan's coastal areas include:

- In order to insure protection of valuable coastal resources and developments, there is a need to improve the monitoring and enforcement of coastal regulatory programs, as well as streamlining the time required for processing various permits.
- The Coastal Management Program must develop and maintain a program which includes objectives, guidelines, standards and technical assistance to guide and assist federal, state, local and private efforts to accommodate planned growth and natural resource allocation consistent with the protection and wise management of our natural resources for the benefit of present and future generations.
- There is a need to provide more certainty in coastal policies, programs and procedures, that activities of the federal government fully consider state and local concerns before they are carried out, that activities of local government do not preclude larger-than-local benefits, and to consider the national interests in coastal management.
- There is a need to coordinate coastal management functions with units of government at all levels and citizens in order to reduce potential program delays, overlap or duplication, and to increase program accountability.

Michigan Policy Pertaining to All Coastal Areas*

In addressing coastal issues, resolving conflicts, and to consider the national, state and local interests in coastal management, the State of Michigan will utilize: (1) the Michigan Environmental Protection Act; (2) the Michigan Natural Resources Commission; (3) the A-95 Review Process; (4) the Michigan Environmental Review Board; (5) the Governor's Cabinet Committee on Environment and Land Use; and (6) other policies emanating from state statutes and rules, Executive Orders of the

*Individual state regulatory and incentive policies which address concerns of the Coastal Management Program are described further in Appendix C — the State Regulatory and Incentive Programs Appendix of "State of Michigan Coastal Management Program and Draft Environmental Impact Statement". Regulatory Programs include state mandates for zoning or licensing and permits while Incentive Programs include state authorities for technical assistance, cooperative and coordination incentives and others.

Governor, formal policies of the Michigan Natural Resources Commission, and federal laws and regulations, (e.g. P.L. 92-500).

It is the policy of the State of Michigan to protect the air, water and other natural resources and the public trust therein from pollution, impairment or destruction unless it can be demonstrated that there is no feasible and prudent alternative to the polluting, impairing or destroying conduct and that such conduct is consistent with the promotion of the public health, safety and welfare in light of the state's paramount concern for the protection of its natural resources; and to provide for declaratory and equitable relief for the protection of such resources, (Act No. 127 of the Public Acts of 1970; and Highway Comm. v. Vanderkloot, 392 Mich 159).

It is state policy to provide for the protection and conservation of the natural resources of the state; to create a 7-member Natural Resources Commission in which the powers and duties of the Michigan Department of Natural Resources shall be vested, (Act 17 of the Public Acts of 1921); that, by way of executive direction, statutory and constitutional authority, the Department shall, by example, by positive programs and by other actions, promote the wise use and reuse of our land resource within its natural capability and in recognition of its relationship to water and air resources. Further, the Department will not, in any way, abet any new use of land and associated water and air resources which has the potential to cause major irreversible damage to Michigan's environment. Public as well as private projects, within the purview of the Department, must meet this test. Where specific authority is lacking to halt or control development judged to be harmful, all other means — persuasion, publicity, moral force — will be employed to prevent or mitigate environmental damage, (Natural Resources Commission Policy No. 5501).

It is state policy to utilize a network of state and areawide clearinghouses for the purpose of reviewing and commenting on notices of intent to apply for federal assistance (A-95 Review) to provide for federal cooperation with state and local governments in the evaluation, review and coordination of federal and federally assisted programs and projects, (Title IV, Section 403, Intergovernmental Cooperation Act of 1968).

It is the policy of the State of Michigan to require that environmental impact statements be reviewed by the Michigan Environmental Review Board for major activities of state or federal agencies, or private parties related to state permits and licenses, which may have a significant impact on the environment or human life; and to accept written and oral public comments for consideration in determining whether or not actions should be modified or suspended; and that the Board provide the Governor with policy recommendations which will assist in conserving and developing the natural resources of the state, (Executive Order 1974-4).

It is state policy to utilize the Governor's Cabinet Committee on Environment and Land Use to review ongoing program operations, to identify emerging problems in the implementation of Executive Office policies, to assure interdepartmental communication and cooperation and to involve state department directors in the formulation of Executive Office policies to a high degree; that these subcabinets serve as a mechanism for resolving policy conflicts among state agencies and the Governor of Michigan, (Executive Directive, October 1, 1975).

It is also state policy to implement mandates established in state statutes, and rules, Executive Orders of the Governor, and formal policies of the Michigan Natural Resources Commission as directed by Article 4 of the Constitution of the State of Michigan of 1963 which declared that the conservation and development of the natural resources of the state are of paramount public concern in the interest of the health, safety and general welfare of the people.

Action Programs Relating to All Coastal Areas

In concert with Michigan policy and the goals of Michigan's Coastal Management Program, following is a description of action programs which will be conducted by the Coastal Management Program to address coastal issues inherent in all of Michigan's coastal areas.

- IMPLEMENT FEDERAL CONSISTENCY AND NATIONAL INTEREST REQUIREMENTS AND IMPROVE COORDINATION AND COOPERATION WITH LOCAL, STATE, FEDERAL AND INTERNATIONAL INTERESTS WHICH HAVE PLANS OR PROGRAMS FOR THE COAST.

This effort will be accomplished through direct contact and involvement in environmental review processes, planning processes, and coordination with entities such as the Michigan Natural Resources Commission, Great Lakes Basin Commission, International Joint Commission, Citizens Shorelands Advisory Council, regional planning and development agencies and local governmental units in the coastal area.

This activity will help assure consistency of plans and projects with Michigan's Coastal Management Program through consideration of national, state and local interests.

- IMPROVE THE REGULATORY AND ENFORCEMENT CAPABILITY OF THE STATE OVER ACTIONS HAVING DIRECT AND SIGNIFICANT IMPACTS UPON THE COAST.

This activity will ensure that, through more effective monitoring, the present laws and regulations will be more fully utilized and enforced.

- EXPEDITE THE ISSUING AND MONITORING OF COASTAL PERMITS.

Coordination of procedures, base data, plans and ordinances in effect and other permit information should shorten permit processing time while ensuring resource protection. This effort could include establishment of a base data center providing information such as: (1) a computer storage tracking and retrieval system for licenses and permits which have major impact on the coastal area; (2) maps of publicly owned coastal

areas; (3) inventories of geographic areas of particular concern in Michigan's coast; and (4) land capability information pertaining to the coastal area.

- **MONITOR THE LEGISLATION AND RULE MAKING PROCESSES FOR ACTIONS AFFECTING THE COASTAL AREA.**

This project would involve close communication between state and federal agencies to assure that coastal management concerns are registered and included in legislative and rule making activities.

Being informed of legislation and rules which affect the coast should provide for: (1) equitable rules and regulations in the coastal area; (2) additional incentives for property owners to protect and manage coastal resources; and (3) encouraging local unit adoption and administration of responsibilities delegated by state and federal authorities.

- **PROVIDE TECHNICAL AND FINANCIAL ASSISTANCE TO LOCAL GOVERNMENTAL UNITS (COUNTIES, TOWNSHIPS, CITIES OR VILLAGES), COASTAL PLANNING AND DEVELOPMENT REGIONAL AGENCIES, AND STATE AGENCIES FOR CREATIVE COASTAL RESOURCE MANAGEMENT ACTIVITIES.**

Activities such as feasibility studies and preliminary engineering reports to address priority areas of local concern, establishing local regulations in conformance with state guidance for local unit administration of certain state delegated authorities, commercial port and harbor studies and others will be eligible for funding consideration by the Coastal Management Program.

In particular, this activity will improve the capabilities of local units of government to manage their coastal resources, and solve their specific coastal problems, in cooperation with the state's Coastal Management Program.

The remaining portion of this chapter discusses the problems, policies and action programs related to each of the five resource categories.

AREAS OF NATURAL HAZARD TO DEVELOPMENT

Coastal areas which present natural hazards to development include: (1) shoreland erosion areas; (2) earth change sedimentation and erosion areas; and (3) flood risk areas.

In making decisions to assist in properly managing areas of natural hazard to development, the Coastal Management Program will direct efforts to achieve the following goal:

- Encourage the management of properties so as to minimize environmental and property damage resulting from natural and man-induced erosion and flooding.

Following is a description of problems, general program concerns and state policies relative to each of the three coastal areas which present hazards to development, followed by a list of action programs which will be conducted during implementation of Michigan's Coastal Management Program.

Shoreland Erosion Areas — Problems and Program Concerns

Damage from shore erosion in Michigan reaches into the hundreds of thousands of dollars each year. Over 80 homes have been destroyed in the last four years by erosion, while an additional 800 homes are in immediate danger of damage or destruction. Department of Natural Resources' surveys demonstrate that over 500 miles of shoreline are subject to critical erosion problems. During periods of high water levels on the Great Lakes, recession of the bluffline is accelerated, causing increased damages to both private and public properties.

Specific concerns of the Coastal Management Program relative to shoreland erosion areas include:

- Continued damages to inappropriately sited structural development indicates a need for increased information and education efforts about the hazards of erosion as well as more uniform and efficient enforcement programs.
- Improper protective devices may accelerate erosion on neighboring property and may become nuisances to other shoreline users. In addition, the cost of shore protection is prohibitive. New and innovative techniques of shore protection, including beach nourishment and group and/or reach concepts for erosion control need to be developed and applied.
- Property appraisals in high risk erosion areas often fail to fully consider the natural limits of the site. Property appraisals should reflect natural hazards to development to reduce economic hardship.

- Structural damages may occur due to the lack of awareness by individuals buying a piece of property regarding its hazard to erosion. Property owners should be notified of erosion hazards, especially prior to purchases of property prone to erosion to minimize excessive personal losses through deed declarations or other means.
- The use of offshore, deep water sources of material for beach nourishment have been discussed. Studies show that substantial deposits of suitable material exists offshore. Thus, a need exists to develop and evaluate methods for removal, transportation and placement of this material.
- Lake level control works on the Great Lakes are a prime concern of many riparian owners, especially those on Lake Superior. Full opportunity for citizen input and sound justification is needed for actions which partially regulate levels of the Great Lakes.

Michigan Policy in Shoreland Erosion Areas

In accord with Act No. 245 of the Public Acts of 1970, as amended, it is the policy of the State of Michigan to determine the location of high risk erosion areas and determine the types of protection best suited for areas of the shorelands which are both undeveloped and unplatted and require protection from erosion*; to provide technical assistance to persons owning shore property in erosion areas by demonstrating and evaluating erosion control projects, (Act No. 14 of the Public Acts of 1973); to enable the establishment of special assessment districts for erosion control to provide for a uniform, continuous approach to control erosion, (Act No. 148 of the Public Acts of 1976); and to exempt erosion control structures from taxation, (Act No. 165 of the Public Acts of 1976).

The state requires that new structural developments in areas designated as high risk erosion comply with construction setbacks from the bluffline which are enforced either through local zoning ordinances, approved by the state in accord with Act No. 245, or state permit. These structural setbacks are calculated by the state for areas of the shore that are eroding at long-term average annual rates of one foot or greater. The state assists local governmental units in developing zoning ordinances which comply with structural setback requirements so that local governmental units may effectively administer mandates of Act No. 245 of the Public Acts of 1970, as amended, which pertain to high risk erosion areas.

* Michigan is currently proposing rules which would extend the authority of Act No. 245 of the Public Acts of 1970, as amended, to developed and platted shoreland areas. Currently, rules for the Act only apply to undeveloped and unplatted shoreland areas.

In such high risk erosion areas, the state will not issue permits for, or engage in, uses or activities where it can be determined that the use or activity will likely be damaged by shoreline bluff erosion. In other areas prone to bluff erosion, the state will not issue permits for, or engage in, uses or activities where it can be determined that the use or activity will likely be damaged by shoreline erosion, so long as there is a feasible and prudent alternative, consistent with reasonable requirements of the public health, safety and welfare, (Act No. 127 of the Public Acts of 1970).

It is also the policy of the state to participate on the International Joint Commission's Great Lakes Levels Board and provide input into decisions affecting Great Lakes water levels. (Michigan's role in the regulation of Great Lakes water levels will be more completely described in a document entitled: "Michigan's Shoreline Erosion Planning Process", which will be developed in accord with Section 305(b) of the Coastal Zone Management Act. Public hearings will be conducted on this planning process during 1978 to receive comments.)

Earth Change Sedimentation and Erosion — Problems and Program Concerns

Michigan's diverse topography, geology, climate and population distribution have long contributed to serious erosion problems. Soil by volume is Michigan's greatest pollutant. Sediments degrade water quality, destroy plant growth, transport nutrients and decrease the water carrying capacity of water courses. New structural developments will continue to be a major contributor to erosion problems.

Specific concerns of the Coastal Management Program relative to earth change sedimentation and erosion include:

- To reduce soil losses, new and innovative techniques of erosion control such as vegetative methods, need to be developed and applied.
- The character of Michigan's coast will continue to attract an increasing number and variety of new earth changing uses which increase the potential for sedimentation and erosion to coastal waters. Such earth changes will continue to require regulation at the state and local levels through authorities which control such soil losses.
- To reduce soil losses from agricultural and other open space uses, there is a need to develop and apply best management practices through the medium of soil and water conservation plans.

Michigan Policy in Areas of Earth Change Sedimentation and Erosion

As mandated by Act No. 347 of the Public Acts of 1972, the Soil Erosion and Sedimentation Control Act, it is state policy to provide for the control of soil erosion and to protect the waters of the state from sedimentation; that controls be based upon construction plan review and approval by: (1) a permit program approved by the Department of Natural Resources and administered by a county or municipal enforcing agency; (2) state approval of an authorized public agency, exempt from permit requirements but subject to other controls of the Act; and (3) a permit program administered by the Department of Natural Resources in the event of overlapping jurisdiction, local enforcing agency violation, or violations of an authorized public agency. Earth changes which may result in, or contribute to, soil erosion or sedimentation of waters of the state are regulated if the earth change is connected with land use activities which disturb one acre or more of land, or if the earth change is within 500 feet of a lake or stream of the state. All Department of Natural Resources planning, design, construction and maintenance activities shall consider earth change and sedimentation control as part of routine operations, (Natural Resources Commission Policy No. 4602).

Technical assistance is provided to persons proposing earth changes and to local agencies who administer the soil erosion and sedimentation control program. It is state policy that local erosion control ordinances be reviewed and approved by the Michigan Department of Natural Resources. Through permit approval requirements, it is state policy that earth changes be designed, constructed and completed so as to limit the exposed areas of disturbed land to as short a time span as possible, or include other measures which reduce soil losses both during and after construction, (Act No. 347 of the Public Acts of 1972).

Flood Risk Areas — Problems and Program Concerns

Damage from flooding in Michigan reaches into the tens of millions of dollars annually. Approximately 50,000 acres of Michigan's shorelands are susceptible to flooding, with the coastal areas of Saginaw Bay, Lake Erie and Lake St. Clair being the most vulnerable. Flooding occurred in 33 out of 41 Michigan coastal counties in a period from November of 1972 to June of 1973 and has occurred periodically in several areas. Problems resulting from flooding along the Great Lakes range from nuisance conditions to major property destruction. Flooding that occurred from 1972 to 1973 resulted in personal property losses estimated at \$8 million and forced expenditure of \$47 million by governmental agencies. Flooding also impacts biological resources adjacent to the Great Lakes. Long-term inundation can effect marshes, change vegetative patterns, increase turbidity and disrupt valuable fish and wildlife habitats.

Specific concerns of the Coastal Management Program relative to coastal flood risk areas include:

- To help protect coastal properties from damages to future structures, flood plain delineations need to be completed.

- Flood protection devices may be prohibitively expensive for coastal property owners. Innovative low cost protective techniques, including nonstructural measures, need to be developed and applied.
- Property appraisals in flood hazard areas often fail to fully consider the natural limits of the site. Property appraisals should reflect the natural hazards of flooding to minimize economic hardships.
- Continued flood-related damages (especially during periods of high Great Lakes water levels) indicate a need for increased information and education efforts about the hazards of flooding.

Michigan Policy in Coastal Flood Risk Areas

It is state policy to provide for the protection and management of shorelands affected by flooding; to determine flood risk areas based upon studies and surveys of shorelands subject to flooding from effects of levels of the Great Lakes, (Act No. 245 of the Public Acts of 1970, as amended); to have control over the alteration of the watercourses and the flood plain of all rivers and streams; to prohibit the obstruction of the floodways of the rivers and streams of the state; to assure that the channels and the portions of flood plains that are floodways are not inhabited and are kept free and clear of interference or obstruction which will cause any undue restriction of the capacity of the floodway, (Act No. 167 of the Public Acts of 1968).

It is also state policy that state agencies directly responsible for construction shall preclude the uneconomic, hazardous or unnecessary use of flood plains in connection with facilities; and that encroachments within the floodway of a stream that would result in any increase in flood stage shall be prohibited unless approved by the Department of Natural Resources; that all new construction and substantial improvements shall have the lowest floor elevated to or above the base flood level; that all flood hazard evaluations shall be based upon a base flood that has a one percent chance of being equaled or exceeded in any given year. In areas where regulation of flood plains cause financial hardship, the state will attempt to identify sources of low cost financial assistance to the landowner. Where the state will not have a delineation of the 100-year flood plain available to comply with these policies, the state will, as needed and upon request, identify and develop procedures for on-site determination of the 100-year flood plain according to standard acceptable engineering practices, (Executive Order of the Governor, 1977-4).

It is the policy of the State of Michigan to not finance, engage in, or issue permits for new structural developments proposed within the 100-year flood plain which are inadequately elevated or flood proofed. Existing public facilities shall receive flood proof measures wherever practical and feasible. All state agencies responsible for the disposal of state lands or properties shall evaluate flood hazards in connection with lands or properties proposed for disposal as may be desirable in order to minimize

future public expenditures for flood protection and flood disaster relief and as far as practicable, shall attach appropriate restrictions with respect to uses of the lands or properties by the purchaser and his successors and may withhold such land or properties from disposal. It is also state policy to assist in creating public awareness of the knowledge about flood hazards. (Executive Order of the Governor, 1977-4).

It is state policy that approval of preliminary and final plats shall be conditioned upon compliance with rules of the Department of Natural Resources, adopted for the determination and establishment of flood plain areas or rivers, streams, creeks or lakes, (Act No. 288 of the Public Acts of 1967).

To provide relief and increased information about flood hazards, Michigan also participates in the National Flood Insurance Program and is cognizant of the President's Executive Order of May 24, 1977 related to flood plain management. The state will make every effort to effect federal, state and local agency's decisions in order to discourage unwise development in floodplains.

Action Programs in Areas of Natural Hazard to Development

In concert with state policy and the goals of Michigan's Coastal Management Program, following is a description of some action programs which will be conducted to address concerns and issues in coastal areas presenting hazards to development.

- **ACCELERATE DELINEATION AND REGULATION OF FLOOD AND EROSION AREAS.**

This effort will include analysis of aerial photographs to determine rates of bluffline recession in high risk erosion areas and analysis of topographic maps and engineering surveys to determine flood plain boundaries. These tasks will assist in developing structural location requirements, enforced by state permit or zoning in erosion and flood areas. Through local enforcement and management of erosion and flood areas, damages to developments may be significantly decreased.

- **PROVIDE TECHNICAL ASSISTANCE RELATED TO EROSION AND FLOOD CONTROL**

Public information programs, including training programs and informational materials will provide advice to riparian owners on technically sound and feasible alternatives for shore protection. Monitoring of demonstration erosion control sites will assist this technical assistance effort.

- **INVESTIGATE VARIOUS MEANS TO PROVIDE TAX RELIEF OR OTHER FINANCIAL RELIEF TO OWNERS OF PROPERTY DESTROYED OR DAMAGED BY SHORE EROSION.**

The state will assist in the development and implementation of federal programs which expand insurance coverage to

structures damaged by nonstorm related shore erosion and for financial assistance for structural flood-proofing. Technical assistance will be provided to citizens and local governmental units to assist them in qualifying for the federal flood insurance program. In addition, studies may be conducted relative to the feasibility of relocating certain public service facilities in erosion and flood prone areas.

- INVESTIGATE THE FEASIBILITY OF REQUIRING THAT FLOOD HAZARD OR EROSION RISK DECLARATIONS BE RECORDED FOR BUYER PROTECTION.

Such declarations would protect property owners by forewarning potential purchasers of shoreland properties located in flood or erosion areas about development hazards.

- INVESTIGATE FEE TITLE PURCHASE OR LESS THAN FEE SIMPLE PURCHASE OF SPECIFIC COASTAL AREAS WHICH HAVE DAMAGE HISTORY.

Public acquisition of areas prone to flooding or erosion may serve two objectives: (1) assure that development will not occur in certain hazard areas; and (2) provide opportunity for certain recreation uses by acquiring flood or erosion areas with recreation potential.

- PROVIDE TECHNICAL AND FINANCIAL ASSISTANCE TO REGIONAL AND LOCAL UNITS OF GOVERNMENT TO PROMOTE PUBLIC AWARENESS OF EROSION AND FLOOD HAZARDS.

During periods of low Great Lakes water levels, hazards to development may not be readily apparent, but must be accounted for in development activities. Public meetings, publications and brochures should be continued during low water periods to provide a medium for exchange of this information.

- ASSIST IN ADDRESSING AND REDUCING CURRENT HEALTH HAZARDS IN FLOOD PRONE AREAS SUCH AS CONTAMINATED OR UNPROTECTED WATER SUPPLIES, SEWAGE DISPOSAL FAILURES, AND OTHERS.

SENSITIVE AREAS

Michigan's coast has many areas that are sensitive to alteration or disturbance. Types of sensitive areas include: (1) ecologically sensitive areas*; (2) natural areas; (3) sand dunes; and (4) islands.

In making decisions to assure wise management of these sensitive areas, the Coastal Management Program will direct efforts to achieve the following goals:

- Protect and enhance Michigan's coastal ecosystem and its diverse array of plants, fish and wildlife.
- Protect, maintain and enhance the cultural, historic and aesthetic values of the coastal area.
- Ensure the wise use and development of silica resources in the coastal area.
- Promote tourism and provide increased recreation opportunity through management which makes the best use of coastal resources.
- Protect land, water and air resources from detrimental uses and activities for the public health, safety and welfare.

Following is a description of program concerns, policies and action programs relative to Michigan's four types of sensitive coastal areas.

Ecologically Sensitive Areas — Problems and Program Concerns

Many coastal wetland areas which once provided essential breeding, nesting, feeding, resting and predator-escape cover for fish and wildlife are now sites for homes, industries and highways. As such valuable habitats disappear, the urgency for management attention increases. The most critical area for maintenance of a viable fishery extends from inland shallow wetlands to lakeward depths of 120 feet. Shallow waters and nearshore lands and transitional areas are subject to bottomland alteration, changes in water quality and interference from human activities.

Specific concerns of Michigan's Coastal Management Program relative to ecologically sensitive areas include:

- Actions such as navigation dredging, spoil disposal, marine construction, sanitary landfills, construction of recreational facilities, intense urbanization, drainage and other actions have

*Ecologically sensitive areas are coastal areas where waterfowl, marsh birds, shore birds, aquatic mammals, fish and other aquatic animals are concentrated during nesting, spawning, rearing of young, feeding, protection or resting or during migration. Areas containing unique or endangered plant or animal communities are of special interest. Wetlands may be considered the major type of coastal ecologically sensitive area.

resulted in habitat loss in many wetland areas. Continued review and regulation of such actions is necessary to avoid unnecessary and unretrievable losses in ecologically sensitive coastal wetlands.

- The failure to recognize the value of coastal ecosystems for fish and wildlife habitat, life support processes, water quality water storage, flood control and others has resulted in environmental loss. The value of such ecosystems needs to be determined to document the need for protection and wise use of these resources.
- There is little public attention to the life-support functions performed by wetlands and, as a result, wetlands are considered by many to be wastelands. An intensive public agency education effort, detailing the primary productivity, energy flow, nutrient cycle and water purification values of a wetland needs to be undertaken.
- To properly manage coastal wetlands, regulatory programs at the state and local levels, including permitting authorities and zoning ordinances must be thoroughly administered and developed.

Michigan Policy in Ecologically Sensitive Areas

In accord with Act No. 245 of the Public Acts of 1970, as amended, it is policy of the state to provide for the protection and management of undeveloped and unplatted shorelands which, on the basis of studies and surveys, are areas determined to be necessary for the preservation and maintenance of fish and wildlife.

On such areas, designated as environmental areas, it is state policy to regulate filling, grading or other alterations of the soils, activities which may contribute to soil erosion and sedimentation, alteration of natural drainage, not including the reasonable care and maintenance of previously established public drainage improvement works, the cutting and removing of trees and other native vegetation on lands not subject to forest management plans, and the placement of all structures within the area of designation.

For all designated environmental areas, the state prepares management plans, composed of a map, a description of boundaries and regulations necessary for protection of the area. Regulations may be enforced either through local zoning ordinances or by state permit. The state provides technical assistance to local governmental units so that they may effectively administer the environmental area provisions of Act No. 245 of the Public Acts of 1970, as amended, in compliance with state guidelines.

It is state policy that environmental areas, designated under Act 245 of the Public Acts of 1970, as amended, be eligible to be entered into a development rights easement with the state and that, in return for maintaining the land as open space, the

landowner is entitled to certain income or property tax benefits. (Act No. 116 of the Public Acts of 1974).

It is state policy to protect riparian rights and the public trust in navigable inland lakes and streams, including the St. Marys, St. Clair and Detroit rivers; and to require permits for all dredging, placing of spoils or other materials, filling, or operating a marina on bottomland; or erecting, or extending a commercial or industrial pier on bottomland in areas under the authority of Act No. 346 of the Public Acts of 1972.

It is state policy to protect the interest of the general public in all of the unpatented lake bottomlands and unpatented made lands in the Great Lakes, including bays and harbors belonging to the state or held in trust by the state, including those lands which have been artificially filled; to provide for the sale, lease, exchange or disposition of these lands whenever it is determined by the Department of Natural Resources that the private or public use of such lands and waters will not substantially affect the public use thereof; and to control all indiscriminate acts of filling and dredging along the shores of the Great Lakes, including Lake St. Clair to protect the public trust, (Act No. 247 of the Public Acts of 1955).

It is the policy of the State of Michigan to provide for the protection and conservation of the natural resources of the state, (Act No. 17 of the Public Acts of 1921) that by way of Executive direction, statutory and constitutional authority, the Department of Natural Resources shall, by example, by positive programs and by other actions, promote the wise use and reuse of our land resources within its natural capability and in recognition of its relationship to water and air resources; that the Department will not, in any way, abet new uses of land and associated water and air resources which has the potential to cause major irreversible damage to Michigan's environment, (Natural Resources Commission Policy No. 5501).

It is state policy to effectively coordinate review and to eliminate duplication of effort on permit applications made under the River and Harbor Act of 1899 and the Federal Water Pollution Control Act, 1972 amendments, with respect to the United States Army Corps of Engineers, and Act No. 247 of the Public Acts of 1955, as amended, and Act 346 of the Public Acts of 1972, with respect to the State of Michigan by utilizing a joint permit application form for activities falling under the authority of these authorities and by coordinating review of such permit applications, (Memorandum of Understanding, July 28, 1977).

Natural Areas — Problems and Program Concerns

Natural areas along the shores of the Great Lakes provide a variety of opportunities for enrichment, research and solitude. Bottomlands, swamps, bogs, forests and woodlots are examples of the types of biotic communities found in coastal areas. These areas display wilderness, scenic, aesthetic, geologic, historic or scientific qualities. These natural areas are irreplaceable and should be protected from destruction for the enjoyment and cultural heritage of present and future generations.

Specific concerns of the Coastal Management Program relative to coastal natural areas include:

- To provide for the protection, preservation and enhancement of natural coastal areas, there is a need to consider reasonable alternatives to actions causing the deterioration, modification and destruction of coastal areas having cultural, educational and research values relating to unique, outstanding or representative natural areas, scenic vistas, unique land forms, historic and archaeological sites.
- Competing coastal activities cause a continuing loss of land and water habitats harboring rare and endangered species of plants and animals. These areas should be identified and plans made for future use and protection.

Michigan Policy Relative to Natural Areas

It is state policy to authorize the establishment of a system of designated wild, scenic and recreational rivers; to fund necessary studies and comprehensive planning for the establishment of the system; to provide for planning, zoning, and cooperation with local units of government; to authorize local units of government and the Natural Resources Commission to establish zoning districts in which certain uses of rivers and related lands may be encouraged, regulated or prohibited; to provide for limitations on uses of land and their natural resources and on the platting of land; and to provide that assessing officers shall take cognizance of the effect of zoning on true cash value, (Act No. 231 of the Public Acts of 1970).

It is state policy to provide for the conservation, management, enhancement and protection of fish, plant life, and wildlife species endangered or threatened with extinction; and to provide for enforcement authority, (Act No. 203 of the Public Acts of 1974).

It is policy of Michigan to provide for the protection and management of undeveloped and unplatted shorelands which, on the basis of studies and surveys, are areas determined to be necessary for the preservation and maintenance of fish and wildlife, (Act No. 245 of the Public Acts of 1970, as amended).

It is policy of the State of Michigan to create and regulate wilderness areas, wild areas and natural areas based upon recommendations from a wilderness and natural areas advisory board, consisting of seven citizen representatives; that on such designated areas the following activities be prohibited: removing, cutting, picking or otherwise altering vegetation; granting of easement for any purpose; exploration for or extraction of minerals; a commercial enterprise, utility or permanent road; a temporary road, landing of aircraft, use of motor vehicles, motorboats, or other form of mechanical transport, or any structure or installation, except as necessary to meet minimum emergency repairs for administration as a wilderness area, wild area or natural area. Private land or land under the control of other governmental units may be designated in the same way as wilderness, wild and natural areas by the Natural

Resources Commission and administered by the Department of Natural Resources under a cooperative agreement between the owner and the Natural Resources Commission, (Act No. 241 of the Public Acts of 1972).

Activities which cannot satisfy these statutory mandates must be modified or suspended. Moreover, in such natural areas, the state will not issue permits for or engage in, activities where it can be demonstrated that the activity is likely to pollute, impair or destroy identified natural areas or their attributes, consistent with reasonable requirements of the public health, safety and welfare, (Act No. 127 of the Public Acts of 1970).

Sand Dunes — Problems and Program Concerns

Michigan's sand dunes are among the largest and most extensive landforms of this type in the country. Sand dunes along the shores of the Great Lakes are unique natural areas, offering a variety of opportunities. The industrial, aesthetic, scenic, educational and recreational qualities of coastal dunes make them among the most impressive of all land resources. As a sensitive resource, dunes are subject to degradation by sand extraction activities, intensive recreational use and other developments. Removal of vegetation in sand dune areas activates the movement of a once stable dune, creating blowouts and increasing the migration of sand. Man's activities, as well as wave attack, are largely responsible for damage to vegetative cover. Sand dunes are among the most erodible of Michigan's shoreland types; eroding the bluff surface in some locations at rates as high as four feet or more per year.

Specific concerns of the Coastal Management Program pertaining to sand dune areas include:

- Competition for recreational opportunity results in irreversible impacts of fragile dune areas. There is a need to manage dune areas having a low capacity to absorb the impacts of some high density recreation use activities.
- Conflicts between economic and environmental interests are often the result of poor land practices and lack of sequential land use planning. Implementation of sound management practices will help protect the resources and avoid unnecessary conflict.
- There is a need for cooperative and coordinated efforts between the government and private sector in regulating sand dune mining to achieve understanding and apply best management practices. Much of this need can be accomplished in the implementation of the recently enacted Great Lakes Sand Dune Protection and Management Act.

Michigan Policy in Sand Dune Areas

In accord with Act No. 222 of the Public Acts of 1976, it is policy of the State of Michigan to provide for study, protection, management and reclamation of Great Lakes sand dunes; to inventory Great Lakes dunes to determine current and projected sand dune mining practices; amount of sand reserves; areas that would contain sufficient reserves and have properties suitable for use as foundry core and molding sands or other uses of sand; sand dune areas that, for environmental or other reasons, should be protected through purchase; the location of barrier dunes along the shoreline; methods for recycling or reusing sand for industrial and commercial purposes; and recommendations for the protection and management of sand dune areas for uses other than sand mining.

It is state policy that a person or operator shall not engage in sand dune mining within the Great Lakes sand dune areas without first obtaining a permit from the Department of Natural Resources. Prior to receiving a permit, a person or operator shall submit: (1) a permit application; (2) an environmental impact statement; (3) a progressive cell-unit mining and reclamation plan; and (4) a 15-year mining plan. The Department of Natural Resources shall deny a permit if, upon review of the environmental impact statement, it determines that the proposed sand mining operation would have an irreparable harmful effect on the environment.

Islands — Problems and Program Concerns

Michigan's Great Lakes waters contain over 150 islands of 10 acres or larger in size. Two hundred and eighteen islands, some no larger than a city lot, have recently been inventoried by the United States Bureau of Land Management, while over 500 are listed in various almanacs. Many islands are ecologically sensitive or display wilderness or natural characteristics. Some islands may be of considerable historic significance, containing remnants of previous habitation. Recent years have seen a growing interest in islands for wilderness oriented recreational activities. Development pressures are also increasing in some island areas complicating the delivery of public services such as water supply and sewerage system.

Specific concerns of the Coastal Management Program relative to Great Lakes islands include:

- To determine adequate measures for protection and enhancement, and to determine land capability, there is a need for comprehensive inventories of the physical and biological characteristics of Michigan's Great Lakes islands.
- Many islands which have shallow soils and poor drainage often support unique and scarce breeding grounds for fish and wildlife. Attempts to develop these areas need to be carefully considered to reduce environmental loss and economic hardship.

- Access to inhabited islands may be interrupted or halted by disruptions of ferry service due to winter navigation. The effects of winter navigation upon ferry service must be evaluated and corrective measures prescribed.
- To protect the historic and archaeological qualities of many Great Lakes islands, funding sources and technical assistance need to be developed and implemented.
- The quality and quantity of drinking water supply is a concern of some island residents. There is a need to investigate and determine alternative sources of water supplies to provide continuously safe and adequate amounts of drinking water.
- Ecological imbalances resulting from past independent experimentation cause reduced carrying capacity and corresponding resource losses. Mechanisms for assigning responsibility for abandoned ventures and projects should be developed and implemented.
- Many islands have bedrock characteristics that are unsuitable for septic fields and sanitary landfills. Creative solutions to past development problems and alternatives to present future problems must be developed.

Michigan Policy Relative to Great Lakes Islands

Michigan currently has no regulatory policies which specifically address the problems and program concerns on Great Lakes islands. Where applicable, policies stated through this chapter will be implemented on Great Lakes islands. These policies may relate to wetland protection, air and water quality, etc. A detailed description of policies which may be applied to coastal island areas is contained in Appendix C of "State of Michigan Coastal Management Program and Draft Environmental Impact Statement".

Action Programs for Coastal Sensitive Areas

In concert with state policy and goals of the Coastal Management Program, following is a list of action programs that will be conducted to assist in properly managing sensitive coastal areas.

- PROVIDE TECHNICAL AND FINANCIAL ASSISTANCE IN EFFORTS FOR GREAT LAKES SAND DUNE PROTECTION AND SAND RESOURCE UTILIZATION AS AUTHORIZED UNDER THE SAND DUNE PROTECTION AND MANAGEMENT ACT.

This activity will include: (1) economic studies of industrial needs and alternative sources; (2) identification of environmental areas requiring protection by acquisition; (3) priority list of lands for public acquisition; (4) identification of methods for recycling or reuse of sand for industrial or commercial purposes; (5) identification of barrier dunes and their value; and (6) recommendations for protection and management of dune areas for uses other than sand mining.

- EVALUATE METHODS FOR ACQUIRING CERTAIN SENSITIVE COASTAL AREAS HAVING UNIQUE LONG-TERM ENVIRONMENTAL, EDUCATION OR ECONOMIC VALUE.

In some cases, techniques of less than fee simple acquisition, resale or lease back arrangements may be sufficient to achieve accepted public objectives for these areas, including proper management and increased recreation opportunity. Existing and potential sources of funding in federal programs for acquisition of sensitive areas need to be explored.

- ACCELERATE ONGOING REGULATORY AND ASSISTANCE EFFORTS TO PROVIDE FOR THE IDENTIFICATION, APPRECIATION AND WISE MANAGEMENT OF COASTAL WETLANDS AND OTHER NATURAL AREAS.

Efforts need to be directed toward developing a state, local, property owner relationship for the identification and best management of sensitive fish and wildlife habitats along the Great Lakes shorelands.

- DEVELOP AND TEST INNOVATIVE TECHNIQUES FOR RESTORING OVER-USED OR DEGRADED NATURAL OR ECOLOGICALLY SENSITIVE AREAS.

Restoration of these important areas will increase habitat resources and provide additional opportunities for natural areas education/appreciation programs.

- ASSIST IN THE DEVELOPMENT AND TESTING OF INNOVATIVE FISHERIES STOCKING PROJECTS, PARTICULARLY WITH RESPECT TO ESTABLISHING A NATURALLY REPRODUCING LAKE TROUT POPULATION.

This activity will provide additional fishing opportunities as well as restoring the natural ecological predator/prey relationship in the Great Lakes.

- DEVELOP AND TEST INNOVATIVE TECHNIQUES FOR THE PROPER DISPOSAL OF SANITARY AND SOLID WASTES ON ISLANDS WHERE GEOLOGIC CONDITIONS CONSTRAIN DEVELOPMENT.

AREAS FULFILLING RECREATIONAL OR CULTURAL NEEDS

Areas fulfilling recreational or cultural needs are separated into two areas: (1) recreation areas; and (2) historic and archaeological areas. In making decisions to assure wise use and proper management of areas which fulfill recreational or cultural needs, the Coastal Management Program will direct efforts to achieve the following goals.

- Encourage tourism and provide increased recreation opportunity through management which makes the best use of coastal resources.
- Protect the cultural, historic and aesthetic values of the coastal area.

Following is a discussion of the program concerns, policies and action programs for the two types of areas fulfilling recreational or cultural needs.

Recreation Areas — Problems and Program Concerns

The Great Lakes coastal areas have long provided recreational opportunities for both Michigan residents and visitors from other states. Michigan's 3,200 miles of coastline offers a variety of recreational and scenic attractions. People seek out coastal waters for boating, fishing, water skiing, scuba diving and swimming. They go to the shore to view the rock cliffs of Lake Superior; to hunt or observe wildlife and vegetation in the wetlands of Saginaw Bay, Lake St. Clair and Lake Erie; to camp near the majestic sand dunes which tower over Lake Michigan; or to travel back into the well-preserved past of Mackinac Island. The demand for outdoor recreation and increased access* is increasing steadily with population growth, personal income and leisure time. The growth of nonrecreational uses competing for coastal areas also continues; generating concern that timely consideration be given to recreational capabilities of land and water areas before irreversible coastal land use choices are made.

In 1972, some 300,000 Michigan sport fishermen expended over two million angler days participating in their recreation. They creelred over two million trout and salmon. Studies indicate that the value of this fishery in Michigan alone approaches \$30 million annually. The Great Lakes fisheries will continue to prosper and provide recreation and tremendous economic benefits so long as critical management measures are continued. These include control programs for sea lamprey, maintaining effective and direct control over commercial harvest; continued planting of trout and salmon to check populations of alewife; and improving and protecting the quality of the environment.

*In accord with Section 305(b)(7) of the Coastal Zone Management Act, Michigan is developing a planning process for the protection of and access to public beaches and other public coastal areas. Public hearings on this planning process will be conducted in 1978.

Specific concerns of the Coastal Management Program relative to recreation areas along the coast include:

- To avoid environmental loss and degradation, there is a need to determine the capability of fragile coastal lands to absorb the impacts of various types of recreation use.
- As the demand for recreational opportunities increases, the need to improve the accessibility of coastal land and water to the widest range of recreation users, consistent with resource capability, becomes more urgent. Expanded recreation use through various types of acquisition is especially vital in and around Detroit and other urbanized areas of the coast.
- To avoid program duplication and conflict, recreation planning in Michigan's coastal area should be consistent with the provisions of the *Michigan Recreation Plan*, (S.C.O.R.P.).
- To assure that agency decision-making considers all interests of the state, there is a need to encourage the expansion of public and agency identification of potential sites for recreation through the area of particular concern process.
- To provide for economic stability, there is a need to continue and expand promotional efforts related to tourism in the coastal area.

Michigan Policy for Recreation Areas

It is policy of the State of Michigan to provide and develop facilities for outdoor recreation, (Act No. 17 of the Public Acts of 1921); to protect and preserve public right-of-way which lead to frontage on lakes, streams, or the Great Lakes, (Natural Resources Commission Policy No. 3201); that state-owned lands other than state parks and recreation areas shall be managed for purposes for which they are best suited and in a manner which will benefit the general public in the most prudent and accommodating manner, (Natural Resources Commission Policy No. 2604); that state parks and recreation areas shall be managed to afford optimum opportunities to enjoy a variety of recreational pursuits by the general public, (Natural Resources Commission Policy No. 2605); to serve the public interest for recreational trails by expanding, as possible, facilities on state lands and by providing the leadership in planning and coordinating statewide trails systems for each of the major trails sports, (Natural Resources Commission Policy No. 2504); that wildlife management, habitat improvement and public hunting be carried on in all parts of the recreation areas where such operations do not conflict with intensive use areas, (Natural Resources Commission Policy No. 2108); and to provide interpretive services in state parks, (Natural Resources Commission Policy No. 2403).

It is policy of the Natural Resources Commission that the Department of Natural

Resources shall establish priorities for fisheries management on waters of the state primarily on the basis of need, expected public benefits, and the desire for a balanced program. Riparian ownership and the level of public access of any particular water should have a bearing on the management priority decision, but should not transcend the first consideration. (Natural Resources Commission Policy No. 3110).

It is state policy that the commercial harvest of salmon be restricted to contracts issued by the Department of Natural Resources in designated areas to be determined annually and to prohibit an open water commercial fishery on salmon by restricting the commercial harvest to state-owned wiers operated by the Department of Natural Resources (Natural Resources Commission Policy No. 3101); and to propogate and plant hatchery fish, construct, maintain and operate artificial spawning areas; transfer wild fish, introduce nonindigenous species, and authorize certain private plants in order to create and maintain a high quality and productive fishery, (Natural Resources Commission Policy No. 3108).

It is also state policy to provide for the making of reciprocal agreements with adjoining states to cover the taking of fish from inland waters and the Great Lakes that lie on the common boundary and to provide a penalty for the violation of any such reciprocal agreements, (Act No. 158 of the Public Acts of 1949).

It is state policy to create a state recreational land acquisition trust fund to be funded by the sale of oil, gas and mineral leases in the Pigeon River State Forest and in certain other land and from the royalties accruing from the oil, gas and mineral leases sold in the Pigeon River Country State Forest and in certain other land; to create the state recreational land acquisition trust fund board; and to provide for the administration and uses of the fund, (Act No. 204 of the Public Acts of 1976).

It is policy of the State of Michigan to improve the accessibility of state land and water resources to the wildest possible range of socio-economic classes consistent with environmental protection and public safety needs; to respond to changing trends in demand for recreational pursuits while minimizing conflicting use through management policies consistent with carrying capacity principles; to acquire, manage and regulate recreational and cultural areas for preservation of natural beauty; to provide management incentives and regulatory controls for land and water resources of the state to ensure continued recreational use as well as the survival of fish and wildlife populations; to develop protective measures for sites and objects having aesthetic, geologic, archaeologic, natural or scientific values through various state controls; and to increase recreational opportunities through an extension of state programs. (1974 Michigan Recreation Plan).

It is state policy to provide for the registration and regulation of off-road vehicles which are defined as being capable of cross-country travel without benefit of a road or trail on or immediately over land, snow, ice, marsh, swampland, or other natural terrain, (Act No. 319 of the Public Acts of 1975, as amended).

It is Michigan policy to regulate trespass upon any lands, to prohibit the possession of a loaded firearm or discharge of a firearm within the limits of the right-of-way of any public highway adjoining certain lands; prohibit the posting or enclosing of lands except by the owner or leasee of lands or by his authorized agency, (Act No. 323 of the Public Acts of 1976).

It is policy of the State of Michigan to authorize participation by the state and its

subdivisions in programs of federal assistance relating to the planning and development of outdoor recreation resources and facilities; that the Department of Natural Resources be authorized to prepare, maintain and keep up-to-date a comprehensive plan for the development of the outdoor recreation resources of the state, (Act No. 316 of the Public Acts of 1965).

It is state policy that the Michigan Waterways commission provide for the acquisition, construction, and maintenance of harbors and channels; to provide for the regulation and control of boating within the boundaries of this state; and to provide for state participation in certain federal programs, (Act No. 320 of the Public Acts of 1974).

Historic and Archaeologic Areas — Problems and Program Concerns

Michigan's Great Lakes shorelands present a rich chronicle of the historic development of both the state and nation. The Great Lakes shorelands corridor has served as an invaluable transportation system for both historic and prehistoric people, providing impetus for settlement and cultural development. Michigan's Great Lakes coastal areas contain heavy concentrations of records and artifacts of the state's 13,000 year history of human habitation. If properly preserved, these sites could yield valuable information about our past. Unfortunately, the pressures of development which have resulted in the loss or destruction of many such resources continue to threaten many existing sites.

Coastal Management Program specific concerns with respect to historic and archaeological sites include:

- To afford greater opportunities for historical preservation, research and education, there is a need to provide for economic viability and future public use of historic and archaeological sites through acquisition, restoration and preservation.
- To avoid program duplication and conflict, historic planning in Michigan's coastal area should be consistent with provisions of the *Michigan Historic Preservation Plan*.

Michigan Policy Relating to Historic and Archaeologic Areas

It is the policy of the State of Michigan to encourage the establishment of historic districts; to provide for the acquisition of land and structures for historic purposes; to provide for preservation of historic sites and structures; to provide for the creation of historic district commissions; and to provide for the maintenance of publicly owned historic sites and structures by local units, (Act No. 169 of the Public Acts of 1970).

It is state policy to maintain a state register of historic sites which may involve state agencies in environmental review proceedings, (Act No. 10 of the Public Acts of 1955 and Executive Order 1974-4); to designate natural rivers for the purpose of preserving and enhancing its values for water conservation, its free flowing condition

and its fish, wildlife, boating, scenic, aesthetic, flood plain, ecologic, historic and recreational values and uses, (Act No. 231 of the Public Acts of 1970); and to provide for the preservation of farmland and open spaces through agreements or easements with the state or with local governing bodies in which the two parties jointly hold the right to develop the land or in which the owner relinquishes the right to develop the property either in a term of years or in perpetuity. (Included in the definition of open space is "Any undeveloped site included in a national registry of historic places or designated as a historic site pursuant to state or federal law."), (Act No. 116 of the Public Acts of 1974).

The director of the Michigan History Division, Department of State, acts as state historic preservation officer, authorized under the National Historic Preservation Act of 1966, (Public Law 89-665). This statute directs the Secretary of the Interior to establish a National Register of Historic Places. Properties are nominated at the state level by the History Division and evaluated by federal agencies. Section 106 of this Act authorizes procedures which federal agencies must follow in cases where a federally funded or licensed undertaking may affect property listed under the National Register of Historic Places. The Advisory Council on Historic Preservation assesses federally funded or licensed projects which impact cultural resources. Executive Order 11593 of May 13, 1971 directs all federal agencies to inventory historic and archaeological properties under their ownership or control.

It is also state policy that environmental impact statements be prepared for major state activities which may result in the alteration or destruction of a significant element of the human, natural, amenity or historic resources of the state, (Executive Order 1974-4).

Action Programs for Areas Fulfilling Recreational and Cultural Needs

In concert with state policy and the goals of the Coastal Management Program, and in support of the coastal access planning element, following is a list of action programs which will be conducted to assist in properly managing areas fulfilling recreational and cultural needs.

- PROVIDE ASSISTANCE TO PROJECT SUPPLY AND DEMAND FOR RECREATION USE AND IDENTIFY AREAS ACCORDING TO THEIR SUITABILITY AND AVAILABILITY FOR ADDITIONAL COASTAL PUBLIC RECREATION USE.

This activity would include inventories and mapping of coastal areas of: (1) high recreation value; (2) recreation supply; (3) recreation demand; and (4) recreation potential.

- DEVELOP PROGRAMS FOR MEETING PROJECTED DEMANDS AND OBTAINING PUBLIC ACCESS TO HIGH VALUE RECREATION AREAS.

This activity could include: (1) evaluating the feasibility of establishing a state revolving fund for the purchase of scenic

easements; (2) identify funding sources and techniques for acquisition and development of coastal areas suitable for recreation; (3) use of less than fee simple acquisition techniques; (4) use of applicable federal funds and programs to acquire beach areas; and (5) closer local, state and federal coordination on actions which would have detrimental resource or long-range economic and social impacts.

- SUGGEST PRIORITIES FOR USE OF SENSITIVE OR UNIQUE AREAS WHERE THERE IS RECREATION POTENTIAL.

Development of a system of use priorities for areas of recreation potential would help specify those types of recreational activities which should occur or be limited in relation to natural capability or tolerance of sensitive coastal lands.

- PROVIDE TECHNICAL AND FINANCIAL ASSISTANCE TO LOCAL GOVERNMENTS TO ANTICIPATE AND MEET PROJECTED DEMANDS UPON PUBLIC SERVICES AND FACILITIES CAUSED BY INCREASED USE DURING SEASONAL PERIODS, INCLUDING SPECIFICALLY POLICING AND LITTER CONTROL.

Public agencies responsible for maintaining and providing recreation services will benefit from information which addresses problems of overcrowding and conflict during peak recreation use periods. Such assistance will help guard against misuse of facilities and damages to natural features in recreation areas.

- REFINE A PLANNING PROCESS THAT CAN IDENTIFY PUBLIC SHOREFRONT AREAS APPROPRIATE FOR INCREASED ACCESS AND/OR PROTECTION.

This activity will result in providing increased access for citizens to enjoy public shorefront areas.

- PROVIDE FINANCIAL ASSISTANCE TO LOCAL UNITS OF GOVERNMENT FOR CAPITAL IMPROVEMENT PLANNING, PROGRAMMING AND ENGINEERING DESIGN FOR THE PROTECTION OF PUBLIC PROPERTY.

- EXPLORE TAX OR OTHER ECONOMIC INCENTIVES FOR PROTECTION OF HISTORIC AND ARCHAEOLOGIC SITES.

The investigation of means to provide property owners of historic and archaeological sites certain tax incentives contingent upon agreements that incompatible uses will not be permitted. Further, investigate techniques to promote preservation and assist in maintaining such structures or sites as economic assets to the community.

- COOPERATE WITH THE STATE HISTORIC PRESERVATION OFFICER TO EXPLORE AND DOCUMENT EXISTING AND POTENTIAL FEDERAL, STATE OR LOCAL FUNDING SOURCES FOR PRESERVATION AND RESTORATION OF HISTORIC AND ARCHAEOLOGICAL SITES.

The Michigan History Division reports that the current level of funding for historic preservation is inadequate. Potential sources of funding such as state grants; state administered federal grants, revenue sharing funds through local government; community development block grants; special state appropriations; private foundations; local businesses, clubs and community organizations; revolving loan funds; and individual donations should be assessed.

AREAS OF NATURAL ECONOMIC POTENTIAL

Areas of natural economic potential may be separated into four groups: (1) mineral and energy resource areas; (2) agricultural and forest resource areas; (3) prime industrial areas; and (4) water transportation areas.

In making decisions which facilitate orderly and proper management of such areas, the Coastal Management Program will direct efforts to achieve the following goals:

- Ensure the wise use and development of mineral and energy resources in the coastal area.
- Recognize the economic value of agricultural, energy, industry, transportation, mining, tourism and other economic interest in Michigan's coastal areas in regional, national and worldwide commerce.

Following is a description of program concerns, policies and action programs for each of the four types of coastal areas of natural economic potential.

Mineral and Energy Areas — Problems and Program Concerns

Expanding energy and mineral resource supplies to meet increasing domestic and industrial needs will place new demands on the lands and waters along our nation's shores. These coastal areas are highly regarded for environmental, recreational and economic values, and competition for the use of resources is increasing substantially.

Michigan's shorelands have a diversified resource base. Minerals found in counties bordering the Great Lakes include sand, limestone, gypsum, calcite, dolomite, salt, copper, iron, petroleum and natural gas with potential production of uranium, phosphates, coal and others. Large copper reserves are found offshore from the Keweenaw Peninsula. Minerals currently extracted from the bottomlands of the Great Lakes are limited to sand and salt.

Before the end of the century, demand for energy resources is expected to more than triple. National domestic production of energy has not matched consumption and known domestic reserves are being rapidly depleted. Michigan, like the nation, depends mainly on oil, natural gas and coal for its energy. Traditionally, Michigan is a resource-poor state which must import 100% of its coal, 100% of its uranium; about 92% of its oil, and 90% of its natural gas. Meeting future demands will require long-term planning to develop necessary energy and mineral resources in an economically wise and environmentally responsible manner.

Specific concerns of the Coastal Management Program relative to mineral and

energy resource areas* include:

- A statewide energy plan is needed to assure an adequate energy supply which is environmentally acceptable and socially desirable.
- To prevent or reduce social, economic and environmental impacts related to energy development, management guidelines are needed to assess site suitability, and to anticipate and manage impacts.
- To insure environmentally sound development of all energy and mineral resources, there is a need to anticipate and evaluate possible impacts resulting from development of new sources of energy.
- Financial assistance is needed in planning for, and ameliorating, the effects of energy and mineral development to help prepare for consequences of these activities in coastal areas.
- Sequential use guidelines are needed to enhance land subjected to mineral or energy extraction.

Michigan Policy in Mineral and Energy Resource Areas

It is policy of the State of Michigan to formulate, recommend and implement energy conservation programs to facilitate better utilization of our limited energy resources; that the State Energy Administration coordinate state agency action relating to energy planning, and serve as the liaison for the state with the federal government, other states and local units of government on such matters. The Energy Administration shall gather and coordinate all information available to the state in dealing with energy policy and planning related problems, and cooperate and assist the Executive Office of the Governor in energy policy and planning matters and in preparing energy, conservation, plans and programs; that the Energy Administration shall be the state office responsible for assisting the federal government in the implementation of the Federal Mandatory Petroleum Allocation Program in Michigan, (Executive Directive of the Governor, 1976-2).

It is also the policy of the state to encourage the conservation of natural resources through the promotion or development of systems to collect, separate, reclaim and recycle metals, glass, paper, and other materials of value from waste for energy

*An energy facility planning process, which will fulfill Section 305(b)(8) of the Coastal Zone Management Act of 1972 (P.L. 92-583) will be developed during 1978. The process will include all energy facilities likely to be located in, or which may significantly affect the coastal area.

Full opportunity will be provided for review of this planning process. It is anticipated that public hearings will be held in late summer or early fall, 1978.

production uses and to provide a coordinated statewide waste management and resource recovery program. (Act No. 366 of the Public Acts of 1974).

It is state policy to provide for a supervisor of wells; and to provide for the prevention of waste and for the control over certain matters, persons and things relating to the conservation of oil and gas, (Act No. 61 of the Public Acts of 1939).

It is state policy that a drilling permit for oil or gas shall be denied when the Supervisor of Wells (Director of Department of Natural Resources) finds that oil and gas operations cannot be conducted without causing or threatening to cause serious or unnecessary damage or destruction of the surface soils, animals, fish or aquatic life or property of the state. If a permit is granted, it shall be the responsibility of the Supervisor of Wells to specify the permit restrictions and conditions under which the oil and gas operation will be conducted, that will result in minimum damage to the land and related natural resources. In reviewing applications, the following factors shall be considered: (1) will the drilling operation cause unnecessary destruction of the surface soils, wildlife, fish or aquatic life; (2) will the drilling operation unreasonably molest, spoil or destroy state-owned lands; and (3) all related activities shall be considered such as improvements or widening of existing roadways, new roads, installation of pipelines and other structures necessary to serve the well, (Natural Resources Commission Policy No. 2303).

It is policy of the state that drilling permits for oil and gas wells shall not be issued in the International boundary waters comprising Lake Huron, the St. Clair River, Lake St. Clair and the Detroit River to its mouth in Lake Erie; that drilling permits for oil and gas wells may be granted on the uplands bordering these waters and upon islands therein, both in the Province of Ontario and the State of Michigan provided that they are not within 350 feet of the water's edge. Permits for wells closer than 350 feet may be granted only after individual inspection and subsequent approval by the Ontario Lieutenant Governor in Council or the Supervisor of Wells of Michigan. Before such permits are to be granted by either the State of Michigan or the Province of Ontario, at least 30 days notice will be given to the other governmental jurisdiction, (Natural Resources Commission Policy No. 2304).

It is the policy of the State of Michigan that the Supervisor of Wells shall be responsible for the prevention and control of all water pollution resulting from oil and gas field operations, including the drilling, operation, maintenance and abandonment of oil and gas wells, and the operation, maintenance and abandonment of all lease collection pipelines, lease crude-oil storage, including central tank facilities, and all handling and disposal of oil-field brines. The Water Resources Commission shall be responsible for the prevention and control of water pollution resulting from the transportation, processing, refining and storage of oil or oil products beyond lease storage, tanks, oil-field operations or refineries including pipelines, truck transportation, vessel transport, railroad transport, and other overland or overwater means. (Act No. 244 of the Public Acts of 1929, as amended; Act 61 of the Public Acts of 1939, as amended; Natural Resources Commission Policy No. 2305).

It is state policy that oil drilling activities on Michigan's Great Lakes bottomlands be forbidden until such time as a national emergency exists, and offshore drilling technology can insure safeguards to prevent environmental degradation, (Natural Resources Commission Policy No. 2310).

It is state policy that any person, firm or corporation, in order to remove mark,

stone, sand, gravel, etc., from or under the beds of any of the Great Lakes and bays and harbors connected therewith within the jurisdiction of the State of Michigan must first obtain a written lease from the Michigan Department of Natural Resources, (Act No. 326 of the Public Acts of 1913, as amended; Natural Resources Commission Policy No. 2301).

It is state policy that there shall be no permits issued to prospect or mine concentrations of manganese nodules in Green Bay which are located in both Wisconsin and Michigan waters. Permission may be granted to sample these deposits by conventional oceanographic techniques provided that anti-pollution laws are not violated. If geologic and economic data reveal that the deposits are of commercial grade and could be mined without degrading the environment, the Michigan and Wisconsin Departments of Natural Resources shall develop a joint recommendation which can be presented to the respective natural resources commissions for a final determination of overall policy, (Natural Resources Commission Policy No. 2302).

It is state policy to provide for the reclamation of lands subjected to the mining of minerals; to control possible adverse environmental effects of mining; to preserve natural resources; to encourage the planning of future land use; and to promote the orderly development of mining, the encouragement of good mining practices, and the recognition and identification of the beneficial aspects of mining, (Act No. 92 of the Public Acts of 1970, as amended).

It is also state policy to provide for the regulation and control of public utilities and other services affected with a public interest within this state; that the Michigan Public Service Commission shall have power and jurisdiction to regulate all public utilities in the state except any municipally owned utility and except as otherwise restricted by law. The Commission is vested power and jurisdiction to regulate all rates, fares, fees, charges, services, rules, conditions of service and all other matters pertaining to the formation, operation or direction of such public utilities. The Public Service Commission is granted the power and jurisdiction to hear and pass upon all matters pertaining to or necessary or incident to such regulation of all public utilities, including electric light and power companies, whether private, corporate, motor carriers and all public transportation and communication agencies other than railroads and railroad companies. The Commission may make reasonable rules and regulations to provide for the protection of the public in the construction and operation of facilities by public utilities rendering gas service and by companies operating a pipeline or lines for the transportation of gas, or any petroleum products that are gases at normal atmospheric temperatures and pressures; provided, however, that such power and jurisdiction shall not extend to field gathering lines in either gas producing fields or gas storage fields except as such lines may cross state trunkline highways or railroads, (Act No. 3 of the Public Acts of 1939). In making rate determinations, the Public Service Commission utilizes information provided by the Mid-American Interpool Network (MAIN) and the East Central Area Reliability Coordination Agreement (ECAR) which assist in energy planning to assure that regional needs are met in energy production. MAIN serves a portion of upper Michigan, Illinois, Missouri, Iowa, Minnesota, and Wisconsin and other minor portions of eight other states. ECAR coordinates energy planning needs for lower Michigan, Indiana, Ohio, Kentucky, West Virginia, Virginia, Maryland and Pennsylvania. ECAR and MAIN function to coordinate

power needs to assure reliability in energy production.

It is also policy of the State of Michigan that, by way of Executive direction, statutory and constitutional authority, the Department shall, by way of example, by positive programs and by other actions, promote the wise use and reuse of our land resources within its natural capability and in recognition of its relationship to water and air resources. Further, the Department of Natural Resources will not, in any way, abet any new use of land and associated water and air resources which has the potential to cause major irreversible damage to Michigan's environment. Public as well as private projects, within the purview of the Department, must meet this test, (Natural Resources Commission Policy No. 5501).

This policy also applies to actions which fail to meet federal standards and criteria with respect to controlling air and water pollution.

In the siting of facilities, including energy related facilities, it is state policy to conserve natural resource values, including fish and wildlife habitat, along the state's inland lakes and streams from harmful, exploitative and unwise development.

The authority does not extend the right to halt waterfront development in general, but rather is limited to those situations where natural resource values are being unduly damaged or destroyed without equal or greater compensation of public benefits. Permits that are issued shall specify conditions that will protect the public interest accordingly. In accord with policies cited elsewhere in this chapter, (Natural Resources Commission Policy No. 4503; Act No. 346 of the Public Acts of 1972).

It is state policy that the Michigan Department of Natural Resources be responsible for certifying that proposed uses of Coastal Energy Impact Program assistance are compatible with the state Coastal Management Program and that the Michigan Energy Administration serve as the agency responsible for allocating Michigan's share of grants and credit assistance among state agencies and local governments within the state and for submitting applications for the CEIP assistance to insure adequate consideration of both environmental and energy concerns. Currently, five oil and gas storage facilities, four nuclear generating units, one oil/gas transportation facility, and six fossil fuel electric generating units are proposed along Michigan's coast.

Agricultural and Forest Resource Areas — Problems and Program Concerns

The portion of land within Michigan's coastal area devoted to agricultural use is small but extremely significant in economic and environmental terms. The prime fruit belt growing areas along the shores of Grand Traverse Bay, the fruit belt extending along the Lake Michigan shore of the Lower Peninsula and other productive parcels of coastal farmland are unique and important to the state's agricultural economy. Preserving our remaining agricultural land will contribute to a sensible balance between open space and high intensity shoreland development, to maintain adequate levels of agricultural production to meet state, national and world food demands, and support the economy, overall character and identity of agricultural regions.

Forests predominate along much of the coast and contribute greatly to its desirability as a place to live, work, and play. Unfortunately, they are often used as a

pool of available land for conversion to more intensive uses. Improving the forest's competitive ability as a land use in these areas will help to maintain the coastal environment. Assistance and incentives to encourage the development of the known natural economic potential of managed forests are needed.

Specific concerns of the Coastal Management Program relative to agricultural and forest resource areas include:

- Michigan's unique and valuable agricultural and forest lands are being irrevocably converted to other uses at an alarming rate. There is a need for a long-range plan for coastal resource management based on scientific soil surveys, local recognition of lands with high potential for agricultural and forestry use and continued research and development to insure future productivity meets increasing population demands.

Michigan Policy in Agricultural and Forest Resource Areas

It is the policy of the State of Michigan to provide for farmland development rights agreements and open space development rights easements to alleviate rapid and premature conversion of land uniquely suited for agricultural and open space to more intensive uses; to use these agreements to ensure that the land remains in a particular use or uses for an agreed upon time period; that, in return for maintaining the land in a particular use, the landowner be entitled to certain income or property tax benefits. (Act No. 116 of the Public Acts of 1974).

Under Act No. 116, two general classes are eligible: (1) farmland — a farm of 40 or more acres, a farm of from five to 40 acres with a minimum per acre income of \$200.00 per year, or a specialty farm with gross annual income of \$2,000.00 or more; and (2) open space land — certain historic, riverfront or shoreland areas or areas which conserve natural or scenic resources, enhance recreation opportunities, preserve historic sites and idle potential farmland of not less than 40 acres.

It is state policy to provide for the conservation of the soil and soil resources of the state and for the control and prevention of soil erosion. Soil Conservation Districts were created as entities of state government to develop and carry out programs to reduce erosion, protect water quality and encourage wise land management, (Act No. 297 of the Public Acts of 1937). It is state policy to establish drainage districts, consolidate drainage districts, construct and maintain drains, sewers, pumping equipment, bridges, culverts, fords and such structures and mechanical devices as will probably purify the flow of such drains; to provide for flood control projects; to provide for water management, water management districts and subdistricts and for flood control and drainage projects within such districts; and to provide for the assessment and collection of taxes, (Act No. 40 of the Public Acts of 1956).

It is state policy to assure proper management of the state forests for the public good, it is the declared policy of the Michigan Department of Natural Resources to manage the state forests to yield that combination of products and services which best meets the recreational, spiritual, and physical needs of all the people now and in the future. In the application of this multiple-use policy, it will be the objective to identify

the management opportunities in each forest area and then manage for that combination of products and services which will be of greatest public benefit. Timber and wildlife are the two major products from the forest requiring intensive land management. Recognizing that the multiple-use objectives of forest management are directed toward the greatest good for all Michigan citizens and that the production of timber products is an important physical need, it will be the Department's goal to use commercial harvests whenever possible to manage the forest growth and by so doing maximize timber and wildlife production on a sustained yield basis.

Prime Industrial Areas — Problems and Program Concerns

To encourage the development and growth of a healthy economy, coastal-dependent industrial development must be anticipated along the coast. Shoreland areas which are suitable for industrial development must be identified to minimize resource conflicts and reduce environmental degradation. Noncoastal dependent industries should consider locations other than coastal sites. Capital improvements for existing shoreland industries can greatly improve the aesthetic and environmental image of these facilities. Structural compatibility with the site can be promoted through engineering design studies for new facilities.

Coastal Management Program specific concerns relative to prime industrial areas include:

- With the increasing demand for various types of coastal uses and developments, it is essential that prime sites for coastally dependent industrial uses be identified to promote a prosperous economy and to guard against environmental loss or degradation.

Michigan Policy Pertaining to Prime Industrial Areas

It is state policy for the establishment of plant rehabilitation districts and industrial development districts in local governmental units, (Act No. 198 of the Public Acts of 1974); and to guard against occupational air contaminants and physical agents, (Act No. 61 of the Public Acts of 1954).

Although Michigan does not have additional policies which apply only to industrial urban areas, policies related to air and water quality, and plans adopted pursuant to the state implementation of the federal Clean Air and Water Acts, resource recovery and authority to enable local zoning and planning are applied uniformly, throughout Michigan's coastal area.

Water Transportation Areas — Problems and Program Concerns

The Great Lakes, their connecting waters, and the St. Lawrence River constitute a 2,340 mile network of Michigan's three deepwater and thirty active commercial harbors with other regions and continents. This vast transportation system has been an important factor in Michigan's economic development and still offers further growth potentials. The traditional nine month navigation season involves some 40 shipping lines having considerable interface with land facilities. Typical cargos include raw materials such as iron ore, coal, chemicals, grain, minerals and petroleum or manufactured goods such as containerized foods and fabricated metal products. However, from 1972 to 1975, annual cargo tonnage more than tripled. Energy and economic conditions indicate that this cargo load will continue its strong increase. To remain competitive under those same conditions, some shipping lines have consolidated and several have begun to build new, larger vessels. As demonstrated by the United States Army Corps of Engineers, these trends have resulted in new demands for public investment in channel maintenance; updated harbor facilities; efficient interface with other transportation systems; extending the navigation season; and in deep draft harbors and ancillary facilities capable of handling deep draft vessels in the 1,000 foot class. Nearly all of these new demands have also aroused controversies over economic and social considerations and over the increased potential for negative environmental impacts.

Specific concerns of the Coastal Management Program relative to coastal water transportation areas include:

- To avoid environmental and economic loss, careful planning and analysis is needed to determine the impacts of future port development.
- To serve the future needs of development in the coastal area, there is a need to establish a comprehensive transportation planning mechanism.
- Recent efforts to extend the navigation season, the trends to larger vessels requiring increased water depths for passage and increased channel and harbor maintenance requirements pose formidable challenges to the state's water transportation system. Comprehensive transportation planning must fully consider all impacts of vessel movement upon the coastal area.

Michigan Policy Relating to Water Transportation Areas

It is state policy to conditionally support the concept of winter navigation on the Great Lakes which includes the participation of state government in the development and operational planning of winter navigation programs; to include state participation in the determination of routes and operational procedures to assure special problems with winter vessel movement are adequately considered. It is Michigan policy that

directly attributable primary and secondary costs, such as ferry operations, shore damages, etc., of winter navigation be included and funded as part of the relevant federal agencies operative budget; that winter navigation programs fully evaluate procedures to assure that social, economic and environmental impacts are monitored on a continuing basis; that a favorable overall benefit to cost ratio be maintained to minimize impacts associated with winter navigation; to participate on a Winter Navigation Board composed of state and federal agencies to assure that the state's interests are represented; and to establish a mechanism to provide for the resolution of claims in an equitable manner to assure that there is a process short of litigation to resolve payment for legitimate damages, (Governor's Policy on Winter Navigation, 1975).

It is policy of the state that political subdivisions be authorized to acquire, establish, construct, maintain, improve and operate harbors, channels and other navigational facilities, (Act No. 86 of the Public Acts of 1952); to find that the public trust in the waters will not be impaired or substantially affected by dredge and fill activities, (Act No. 245 of the Public Acts of 1955); to authorize the dredging and removal of undesirable materials from lakes, (Act No. 345 of the Public Acts of 1966); and to authorize the creation of port districts which have powers to acquire, improve, enlarge, extend, operate, maintain and finance various projects, (Act No. 234 of the Public Acts of 1925).

It is state policy to regulate the disposal of oil and sewage from watercraft and to prohibit the littering of waterways, (Act No. 167 of the Public Acts of 1970); to require persons engaging in removing liquid industrial wastes from the premises of other persons to be licensed and bonded; to provide for the control of disposal of wastes, (Act No. 136 of the Public Acts of 1969); to prohibit the pollution of any waters of the state and the Great Lakes, (Act No. 245 of the Public Acts of 1929); and to regulate dredge disposal and alteration of watercourses, (Act No. 247 of the Public Acts of 1955; Act No. 346 of the Public Acts of 1972).

It is state policy that any person who discharges, dumps, deposits or throws or causes or permits the discharging, depositing or throwing of any garbage, except that which has passed through a disposal unit of a type approved by the United States public health service, or oil or rubbish from a vessel or watercraft of 25 or more feet in length into a river or inland lake within this state, or within three miles of the shoreline of any part of the Great Lakes or connecting waters thereof within this state is guilty of a misdemeanor, (Act No. 132 of the Public Acts of 1964). It is also state policy that a person owning, operating or otherwise concerned in the operation, navigation or management of watercraft having a marine toilet shall not own, use or permit the use of such toilet on the waters of this state unless the toilet is equipped with one of the following pollution control devices: (a) a holding tank of self contained marine toilet which will retain all sewage produced on the watercraft for subsequent disposal at approved dockside or onshore collection and treatment facilities; (b) an incinerating device which will reduce to ash all sewage produced on the watercraft. All marinas operating on the bottomland of the Great Lakes if selling marine fuel or otherwise providing a dockside service center shall provide pump-out facilities approved by the Department of Public Health for marine holding tanks on pleasure craft (Act No. 167 of the Public Acts of 1970).

It is state policy to participate on an inter-agency dredge spoil committee, composed of state and federal agencies to select sites for disposal of dredge polluted material.

Action Programs for Areas of Natural Economic Potential

In concert with state policy and the goals of the Coastal Management Program, following is a list of action programs which will be conducted to assure proper management and wise use of areas of natural economic potential.

- ASSIST THE ENERGY ADMINISTRATION AND OTHER APPROPRIATE AGENCIES IN THE DEVELOPMENT OF A STATEWIDE ENERGY PLAN TO DEVELOP AND MAINTAIN AN ENERGY SUPPLY WHICH IS ADEQUATE, YET ENVIRONMENTALLY ACCEPTABLE AND SOCIALLY DESIRABLE.
- PARTICIPATE ON THE COASTAL ENERGY IMPACT PROGRAM ALLOCATION BOARD TO PROVIDE FINANCIAL ASSISTANCE TO ASSURE THAT COASTAL COMMUNITIES HAVE THE OPPORTUNITY TO ACCOMMODATE ENERGY-RELATED DEVELOPMENT IN A PLANNED AND ENVIRONMENTALLY RESPONSIBLE MANNER.
- FINANCIAL ASSISTANCE TO LOCAL COMMUNITIES FOR THE MANAGEMENT OF ENERGY-RELATED FACILITIES WILL ALLOW LOCAL INTERESTS TO BE INVOLVED IN DECISIONS WHICH MAY AFFECT THEIR COAST, AND TO HELP PREPARE FOR THE CONSEQUENCES OF NEW OR EXPANDED ENERGY ACTIVITY.
Additional financial assistance will be available for public works projects during construction of certain energy facilities to help alleviate social impacts of the projects. Assistance is also available to help prevent, reduce or repair damage to or loss of valuable environmental or recreational resources directly attributable to the development of energy facilities.
- ASSIST THE ENERGY ADMINISTRATION IN DETERMINING POSSIBLE ENVIRONMENTAL IMPACTS WHICH WOULD RESULT FROM DEVELOPMENT OF NEW SOURCES OF ENERGY.
In predicting possible environmental impacts resulting from the development of new energy sources, trade-off factors can be evaluated before damage or possible loss of valuable environmental resources is incurred.
- DEVELOP GUIDELINES TO ASSESS SITE SUITABILITY AND ANTICIPATE AND MANAGE IMPACTS FOR PLANNED ENERGY

FACILITIES.

Site suitability criteria will assist industry, governmental agencies, and local communities in minimizing adverse impacts while planning for energy-related facilities. Anticipating and managing impacts resulting from energy development will assure that essential coastal environments are not destroyed or degraded.

- DEVELOP GUIDELINES FOR SEQUENTIAL USE IN MINERAL AND ENERGY EXTRACTIVE AREAS ALONG THE COAST.

In areas where necessary extraction of mineral or energy resources takes place, sequential use planning can insure that the land will return to a productive use.

- DEVELOP AND TEST INNOVATIVE TECHNIQUES TO MITIGATE ADVERSE ENVIRONMENTAL IMPACTS RESULTING FROM MINERAL EXTRACTION OR ENERGY DEVELOPMENT IN THE COASTAL AREA.

Innovative site design and construction management techniques will minimize adverse impacts and will accelerate the recovery of damaged resource areas.

- ASSIST IN THE DEVELOPMENT OF A COMPREHENSIVE TRANSPORTATION HIGHWAY AND TRANSIT PLANNING MECHANISM TO SERVE THE FUTURE NEEDS OF DEVELOPMENT IN THE COASTAL AREA.

Development of criteria for new or expanded coastal transit systems to aid in locating alternatives to maximize scenic and recreational values of coastal-related transportation.

- INVENTORY AND MONITOR CONVERSION OF UNIQUE AGRICULTURAL LANDS IN COOPERATION WITH LOCAL, STATE AND NATIONAL SOIL CONSERVATION PROGRAMS.

Information will assist in local planning and evaluation efforts. Resulting information will assist state and national decision makers in the continued analysis of the balance of supply and demand including the possible implications relating to world trade.

- PROVIDE FINANCIAL ASSISTANCE TO EXPLORE NEW AND INNOVATIVE PROGRAMS THAT WILL ENCOURAGE CONTINUED INTEREST IN FRUIT AND HORTICULTURAL FARMING AS AN ECONOMIC ENTERPRISE.

Evaluate existing and study new methods of tax incentives to keep people in agricultural production and encourage new interests. Develop programs to assist and encourage farmers to save unique coastal farmlands.

- SUPPORT LOCAL AND STATE EFFORTS TO COMPLETE NEEDED SOIL AND ECOLOGICAL SURVEYS AND LAND RESOURCE INVENTORY.

Provide a resource data base for use by all interests to help in making future decisions and determining management needs for long-range social and economic benefit.

- DEVELOP AND TEST INNOVATIVE LANDSCAPE AND SITE DESIGN TECHNIQUES TO MINIMIZE NEGATIVE AESTHETIC IMPACTS RELATED TO COASTAL INDUSTRIAL FACILITIES.
- ACTIVELY PARTICIPATE ON AND PROVIDE INPUT TO REGIONAL COMMERCIAL NAVIGATION PLANNING EFFORTS, INCLUDING SPECIFICALLY THE WINTER NAVIGATION BOARD.
- PROVIDE TECHNICAL AND FINANCIAL ASSISTANCE TO PORT DISTRICTS AND OTHER LOCAL UNITS OF GOVERNMENT FOR THE PROGRAMMING, PLANNING AND DESIGN OF FACILITIES AND CAPITAL IMPROVEMENTS FOR PORTS AND COMMERCIAL/INDUSTRIAL AREA REHABILITATION OR DEVELOPMENT.
- PROVIDE TECHNICAL FORESTRY PLANNING ASSISTANCE TO REGIONAL AND LOCAL LAND USE AND DEVELOPMENT GROUPS.

Most regional and local planning efforts lack expertise in the area of forest resource management. They are frequently unaware of the economic opportunities available to them. By improving the forest sector capability of such planning efforts, multiple benefits should accrue to the coast.

AREAS OF INTENSIVE OR CONFLICTING USE

Areas of intensive or conflicting use may be separated into two more specific areas: (1) urban areas; and (2) coastal lakes, river mouths and bays.

In making decisions to assure proper management of such areas, the Coastal Management Program will direct efforts to achieve the following goals:

- Recognize the values of Michigan's coastal urban areas and to protect coastal urban resources, coastal lakes, river mouths and bays, including land, water and air resources from detrimental uses and activities, and to enhance or restore overused or degraded urban waterfronts.
- Protect and enhance Michigan's unique coastal ecosystem and its diverse array of plants, fish and wildlife.
- Encourage the management of shoreland properties so as to minimize environmental and property damages resulting from erosion and flooding.

Urban Areas — Problems and Program Concerns

Urban waterfronts are complex areas. Though coastal areas usually support activities found in inland communities, they also support uses that are primarily influenced by or dependent upon the coastal waterfront.

The general economy of most coastal cities is directly related to waterfront port and harbor facilities, tourist attractions or water-related commercial development. Waterfronts are also the focus of recreational activities such as fishing, waterfront festivals, swimming, picnicking or sunbathing. Type and location of waterfront uses are influenced by a variety of factors, such as the community's general economic climate, waterfront property values, air and water quality, and the presence of other high value uses. Maintaining the accessibility and attractiveness of the waterfront for a variety of urban land and water uses while maximizing the full potential of urban coastal areas are complicated endeavors. Many areas have become deteriorated and aesthetically unpleasing. Careful planning is needed to maintain and revitalize highly developed coastal areas.

Specific concerns of the Coastal Management Program pertaining to coastal urban areas include:

- Visual barriers on the lake front, abandoned structures and limited access indicate a need for engineering and feasibility studies to accelerate corrective measures for such problems.
- Water quality problems may be more prevalent in urban areas, indicating the need for continued and expanded water quality management.

- Increasing competition for coastal areas indicates a need to determine the capability and suitability of coastal lands and waters to accommodate various uses in urban areas to resolve conflicts and assist in the implementation of engineering and feasibility studies to encourage provisions for increased recreation opportunity.
- Coastal urban blight and decay indicate a need to identify mechanisms to provide for renovation and restoration.
- The historical heritage of a number of coastal communities has been lost or depreciated due to structural changes. Many of these structures and sites attract important recreational, educational and cultural interest. There is a need to identify such areas and provide for restoration and preservation in order to continue or expand their viable economic use.

Michigan Policy in Urban Areas

It is the policy of the State of Michigan to authorize counties, cities, villages and townships of Michigan to adopt plans for the rehabilitation of blighted areas; to authorize assistance in carrying out such plans by the acquisition of real property and the disposal of real property in such areas, (Act No. 344 of the Public Acts of 1945).

It is state policy to provide for regional planning: the creation, organization, powers and duties of regional planning commissions, (Act No. 281 of the Public Acts of 1945); to provide for city, village and municipal planning: the creation, organization, powers and duties of planning commissions, (Act No. 285 of the Public Acts of 1931); to enable planning commissions of cities and villages, after adoption of a master plan, to certify plats of precise portions thereof to the legislative body, and enabling cities and villages to adopt such certified plats showing the future outside lines of streets, ways, places, parks, playgrounds and other public grounds, and to regulate buildings within such lines, (Act No. 222 of the Public Acts of 1943); to provide for county planning: the creation, organization, powers and duties of county planning commissions, (Act No. 282 of the Public Acts of 1945).

It is state policy to provide for the establishment in portions of counties lying outside the limits of incorporated cities and villages of zoning districts within which the proper use of land and natural resources may be encouraged or regulated by ordinance, and within which districts provisions may also be adopted designating the location of, the size of, the uses that may be made of, the minimum open spaces, sanitary, safety and protective measures that shall be required for, and the maximum number of families that may be housed in dwellings, buildings and structures that may hereafter be erected or altered; to provide for a method for the adoption of ordinances and amendments thereto; to provide for emergency interim ordinances; to provide for the administration of ordinances adoption; to provide for conflicts with other acts, ordinances or regulations to; provide penalties for violations; to provide for the assessment, levy and collection of taxes; and to provide for referenda, appeals and

repeal of acts in conflict therewith, (Act No. 183 of the Public Acts of 1943).

It is state policy to provide for the establishment in the unincorporated portions of organized townships of zoning districts within which the proper use of land and natural resources may be encouraged or regulated by ordinance, (Act No. 184 of the Public Acts of 1943); to provide for township planning commissions and for the regulation and subdivision of land, (Act No. 168 of the Public Acts of 1959).

It is also policy of the State of Michigan to promote the health, safety and welfare of the people by regulating the light and ventilation, sanitation, fire protection, maintenance, alteration and improvement of dwellings, (Act No. 167 of the Public Acts of 1917).

It is state policy to provide for the establishment in cities and villages of districts or zones within which the use of land and structures, the height, the area, the size and location of buildings may be regulated by ordinance, (Act No. 207 of the Public Acts of 1921).

It is state policy to provide for the establishment of condominium and condominium projects; to define apartments and common elements in such projects; to define and provide for the identification and description of condominium apartment for purposes of ownership, mortgaging, taxation, possession, sale and other juridic acts; to provide for review and approval of proposed condominium projects and the sale of apartments therein, (Act No. 229 of the Public Acts of 1963); to regulate the subdivision of land; to promote the public health, safety and general welfare; to further the orderly layout and use of land; to require that the land be suitable for building sites and public improvements and that there be adequate drainage thereof; to provide for proper ingress and egress to lots; to promote proper surveying and monumenting of land subdivided and conveyed by accurate legal descriptions; to provide for the approvals to be obtained by subdividers prior to the recording and filing of plats; to establish the procedure by vacating, correcting and revising plats; to control residential building development within floodplain areas; to provide for reserving easements for utilities in vacated streets and alleys; to provide for the filing of amended plats; to provide for the making of assessors plats, (Act No. 288 of the Public Acts of 1967).

Coastal Lakes, River Mouths and Bays — Problems and Program Concerns

Coastal lakes, river mouths and bays are often subject to intensive and conflicting use. Waters near the shore in coastal lakes, river mouths and bays must support a greater number and variety of uses than open water areas. Such water uses include commercial navigation, recreational boating, waste assimilation, fish and wildlife use, industrial water use, public drinking water supplies and aesthetic appreciation. As focal points for commercial and recreational navigation, these waters link ports and docking facilities and receive concentrations of effluent discharges. Most of these waters are relatively shallow and hydrologically inactive compared to open water areas. Their shallow basins and long retention periods tend to collect nutrients from open waters, onshore activities and tributaries. These same waters are also used by fish and wildlife. Since nearly all Great Lakes fish species utilize shallow water areas

during some phase of their life cycle, embayments and river mouths are especially critical to the Great Lakes fishery. Embayments are equally critical to waterfowl in their life cycles. Multiple demands for water for fishing, recreational boating, port developments, wildlife uses or waste assimilation indicate that coastal lakes, river mouths and bays will likely continue to experience use conflicts.

Specific concerns of the Coastal Management Program which relate to coastal lakes, river mouths and bays include:

- The continuing demand for more economical transportation of bulk cargo has lead to increased vessel size on the Great Lakes resulting in the need to enlarge canals, channels and the expansion of harbor facilities. Conflicts between these activities and other coastal dependent uses need to be anticipated and provisions made for avoiding impacts where possible, and mitigating unavoidable property, recreation and environmental losses.
- Coastal lakes, river mouths and bays provide attractive and needed public access often leading to serious impacts from overcrowding, inadequate uses and conflicting uses, indicating a need for management of these critical areas.

Michigan Policy Relating to Coastal Lakes, River Mouths and Bays

Michigan currently has no enforceable policies which relate only to coastal lakes, river mouths and bays. Authorities relating to air and water quality, resource recovery, flood plain management, regulation of activities on bottomlands and others are enforced statewide, within the area defined by individual statutes, executive orders, etc. As with urban areas, these resources are often subject to more intensive use and will be one focus of efforts by the Coastal Management Program to identify and reduce conflicts relating to overcrowding, water pollution, vessel movement, and the promotion of boating safety, etc.

(For a more complete description of the scope and mandates of enforceable policy relating to coastal lakes, river mouths and bays, refer to Appendix C of "State of Michigan Coastal Management Program and Draft Environmental Impact Statement".)

Action Programs for Areas of Intensive or Conflicting Use

In concert with state policy and the goals of the Coastal Management Program, following is a list of action programs which will be conducted to assist in the management of coastal areas of intensive or conflicting use.

- PROVIDE FINANCIAL ASSISTANCE FOR LOCAL GOVERNMENTS TO EVALUATE DENSITY CONFLICTS IN COASTAL URBAN AREAS, LAKES, RIVER MOUTHS AND BAYS IN ORDER TO IDENTIFY AND EXPLORE MECHANISMS FOR CORRECTIVE ACTION.

Activities have been suggested to: (1) identify areas of waterfront blight problems or redevelopment potential; (2) identify areas through the coastal planning access element where needed public waterfront access could be provided by projects using relatively small land requirements such as boardwalks, footpaths and bulkheads; and (3) identify areas where increased recreational opportunities, such as urban fishing opportunities from the shore or structures could be provided.

- COOPERATE WITH STATE AND FEDERAL AGENCIES SUCH AS THE NATIONAL HERITAGE CONSERVATION AND RECREATION SERVICE TO PROVIDE TECHNICAL AND FINANCIAL ASSISTANCE TO LOCAL UNITS OF GOVERNMENT IN DEVELOPING MUTUALLY DESIRABLE PROJECTS AND PROGRAMS SUCH AS ENGINEERING AND FEASIBILITY STUDIES, PILOT PROGRAMS AND MODEL LOCAL ORDINANCES, (E.G., CITY OF DETROIT, ST. IGNACE, MARQUETTE).
- COOPERATE WITH STATE AND FEDERAL AGENCIES TO PROVIDE TECHNICAL AND FINANCIAL ASSISTANCE TO LOCAL UNITS OF GOVERNMENT IN DEVELOPING MUTUALLY DESIRABLE PROJECTS AND PROGRAMS SUCH AS ENGINEERING AND FEASIBILITY STUDIES, PILOT PROGRAMS AND MODEL LOCAL ORDINANCES.

Local interests have expressed the need for guidelines or model performance standards to: (1) identify coastally dependent use activities; (2) develop model guidelines for new structural developments in terms of their mass, setback and height; (3) encourage multiple use of waterfront parcels; (4) develop management tools such as model guidelines for local open water areas receiving heavy boating use; and (5) increase public access to the shoreline.

- EXPLORE FUNDING SOURCES AND ASSIST IN OBTAINING FUNDS FOR THE ACQUISITION OF OPEN SPACE IN AREAS

IDENTIFIED AS INTENSIVE OR CONFLICTING USE.

Funding should be provided for the purchase of strategic open space lands along the shoreline, in areas where purchases would reduce conflicts while providing waterfront renewal or redevelopment, public access or recreation use.

- PROVIDE FINANCIAL ASSISTANCE TO LOCAL COMMUNITIES FOR ENGINEERING AND FEASIBILITY STUDIES FOR RESTORATION IN AREAS WHICH ARE AESTHETICALLY DEGRADED.
- SUPPORT CONTINUING EFFORTS TO MONITOR AND CONTROL WATER QUALITY PROBLEMS, ESPECIALLY IN AREAS OF CONFLICTING USE WHERE THEY MAY BE MORE SEVERE.

Continuous monitoring of water quality will identify problems which can be corrected before they become severe. Efforts to control water quality problems must continue in order to prevent irretrievable loss of resources.

- EXPLORE SOURCES OF FUNDING FOR RESTORATION AND PRESERVATION OF VALUABLE HISTORIC AREAS IN AREAS OF CONFLICTING OR INTENSIVE USE.
- PROVIDE TECHNICAL AND FINANCIAL ASSISTANCE TO PORT AUTHORITIES AND/OR HARBOR COMMISSIONS, AND CONSULT AND COORDINATE WITH AGENCIES WITH SPECIAL EXPERTISE IN THESE AREAS SUCH AS MARITIME ADMINISTRATION AND THE UNITED STATES CORPS OF ENGINEERS TO PLAN AND DESIGN HARBOR FACILITIES TO MINIMIZE CONFLICTS BETWEEN COMMERCIAL NAVIGATION AND RECREATIONAL BOATING.

Chapter IV

Coastal Areas of Particular Concern

One important element of Michigan's Coastal Management Program is the identification of specific lands and waters which experience problems or offer opportunities. These areas — termed Areas of Particular Concern (APC's) — merit special attention in the actions and concerns of citizens and local, state and federal governments. As areas of particular concern are identified, the Coastal Management Program refers the areas and their management recommendations to agencies and groups which have the ability to take responsive actions. A limited number of priority areas of particular concern will be addressed directly through funds provided by the Coastal Management Program. This chapter describes the process Michigan will use to inventory and review areas of particular concern for the purpose of assuring that these areas are considered in decisions affecting our coast.

WHAT ARE APC'S AND WHAT WILL THEY DO?

An Area of Particular Concern (APC) is a statement of interest or concern for a specific coastal site which recommends a course of action to protect or enhance the site's special value or characteristics. The Coastal Management Program uses the area of particular concern process to provide an additional avenue for identifying and addressing coastal areas which need management attention. Program implementation will continue this activity.

TWO SOURCES OF AREAS OF PARTICULAR CONCERN

Areas of Particular Concern originate from two different sources: (1) state legislated areas of particular concern; and (2) nominated areas of particular concern.

Legislated Areas of Particular Concern

Certain state statutes specifically mandate that coastal areas receive special management attention, (in the context of Michigan's Coastal Management Program, the term legislated areas of particular concern may be used interchangeably with the term

"designated" areas of particular concern). Assisting in the implementation of legislated areas of particular concern according to use priorities established by the Michigan Legislature, will be one focus of program implementation efforts. This effort will include accelerating programs which protect essential coastal resources or provide technical and financial assistance to the coastal area. Legislated APC's are identified generically by the Michigan Legislature, (e.g., high risk erosion areas, environmental areas, etc.). The specific site location of these areas are determined by the Department of Natural Resources, based upon criteria described in state statutes through due process provisions (Act No. 306 of the Public Acts of 1969).

The following areas and their priority uses mandated by state statute are recognized as legislated (or designated) areas of particular concern. All areas which are identified by the state under authorities and programs described below are legislated areas of particular concern when located on Michigan's coast.

- *Great Lakes High Risk Erosion, Flood Risk and Environmental Areas:* regulated either by state permit or local zoning to protect future structures from erosion caused damages, protect developments in flood prone areas, and protect areas of critical fish and wildlife habitats, under provisions of the Shorelands Protection and Management Act, (Act No. 245 of the Public Acts of 1970, as amended). In these shoreland areas, uses that conform to statutory requirements, including minimum setback distances, developments located outside of established coastal flood plains, and management plans for environmental areas are considered highest priority. Uses which do not conform to statutory requirements such as new development which is prone to property damage from erosion or flooding or which does not conform to environmental area management plans are considered uses of lowest priority.

Currently there are 197 miles of designated high risk erosion areas and about 100 miles of designated environmental areas.

- *Public Access Sites:* established and managed to satisfy demands for recreational access to public waters under authorities involved in Michigan's Access and Facility Development Program. Uses which support access at such sites are considered of highest priority, while uses which reduce or compromise the quality or quantity of such access opportunities are considered lowest priority.

The state has three public access fishing sites along the coast and 121 coastal recreational harbors and launching sites, (see also, Harbors of Refuge and Mooring Facilities below).

- *State Game and Wildlife Areas:* dedicated and managed for education, conservation or other public purposes under Michigan's Wildlife Habitat Management, Land Acquisition or Wildlife

Research programs. Uses of highest priority in the publicly owned and dedicated portions of such areas are related to administrative or management goals which are articulated in Ten Year Management Plans developed by the Michigan Department of Natural Resources for each area. Lowest priority uses are those which would conflict with those management goals or plans.

To date, there are 19 coastal state game and wildlife areas.

- *State Parks*: established and managed for recreation, education or other purposes under authorities involved in Michigan's Park Management, Interpretive Services and Conservation-Corrections Workcamp programs. Such areas are managed according to a state-developed Master Plan for each area. Uses of highest priority in the publicly owned and dedicated portions of such areas are related to administrative or management goals articulated in those plans, while lowest priority uses are those which would conflict with those goals or plans.

Currently 37 state parks are located along the coast.

- *Harbors of Refuge and Mooring Facilities*: established and managed to supply specialized recreational boating needs under respective provisions of Act No. 320 of the Public Acts of 1947 and Act No. 337 of the Public Acts of 1939. Uses which enhance the quality and quantity of access at such sites will be considered of highest priority, while uses which reduce or compromise such access opportunities will be considered of lowest priority.

- *Port Districts*: established and operated to provide for commercial navigation needs under respective provisions of the Port Districts Act (Act No. 234 of the Public Acts of 1925 and Act No. 251 of the Public Acts of 1966). Highest priority uses in Port Districts are related to administrative and management goals articulated in Comprehensive Port Plans developed under Act 234 for each area. Lowest priority uses are those which would conflict with those management goals or plans.

Currently, there are two port districts: (1) the Detroit Port District, and (2) the Monroe Port District.

- *Historic Districts*: established and regulated to protect against loss or damage to certain valuable historic attributes under provisions of the Historic Districts Act (Act No. 169 of the Public Acts of 1969). Highest priority uses in these areas are those which maintain or enhance attributes of the area identified in historic district ordinances developed by local units of

government under provisions of Act 169. Lowest priority uses are, therefore, activities which would destroy or diminish these attributes.

To date, there are six historic districts along the coast.

- *Certain Farmland or Open Space Areas*: enrolled for a specific time period by voluntary landowners, which legally restrict nonagricultural development under provisions of the Farmland and Open Space Preservation Act (Act No. 116 of the Public Acts of 1974). Highest priority uses are those which comply with Development Rights Easements/Agreements developed under Act 116 for each area. Lowest priority uses are those which would not meet the letter and intent of those documents.

About 50,000 acres have been enrolled under Act No. 116 in coastal counties.

- *State-owned properties dedicated as Wilderness Areas, Wild Areas and Natural Areas*: regulated to preserve outstanding, unique or archetypical areas of natural quality under provisions of the Wilderness and Natural Areas Act (Act No. 241 of the Public Acts of 1972). State administrative or management authority for such tracts is established by state ownership. Highest priority uses relate to administrative and management goals articulated in a state-developed Master Plan for each area, while lowest priority uses are those which would conflict with those goals or plans.

To date, there are three natural areas that border the coast.

- *Natural Rivers Areas*: established to preserve and enhance identified values of areas designated under provisions of the Natural Rivers Act (Act No. 231 of the Public Acts of 1970). River Management Plans are developed cooperatively by state and local interests to identify attributes and values in each designated area. These plans are then used as guidelines in developing local ordinances in each area. Uses of highest priority are those which support these plans and ordinances; uses of lowest priority are those which cannot.

Thus far, four natural rivers have been established in the coastal area.

- *Great Lakes designated Sand Dune Areas*: designated by the state to provide for protection, management and reclamation of Great Lakes sand dunes (Act No. 222 of the Public Acts of 1976). Sand dune mining operators must submit an environmental impact statement, a progressive cell-unit mining and reclamation plan, and a 15-year mining plan as part of the state permit

process. Uses which conform to mining plans and permit conditions are highest priority. Uses which do not conform to plans and permit conditions are lowest priority.

Currently, seven areas have been proposed as designated sand dune areas.

Legislation which requires specific management attention for these areas contains extensive provisions for due process, consistent with Michigan's Administrative Procedures Act, (Act No. 306 of the Public Acts of 1969), prior to implementation on a site specific basis. Hearings, appeals, public meetings, and property owner notification are included in the designated process for many of these areas. (For a more complete description of due process provisions, see Chapter V.)

Other areas may be added by the Michigan Legislature at any time. Legislated APC's differ significantly from publicly nominated APC's in that: (1) management and resulting use priorities are enforceable by state statute; (2) given adequate state appropriations, the management for such areas is assured and (3) some of these areas are owned, operated or directly regulated by state agencies. Maps, showing the location of legislated areas of particular concern are contained in Appendix D of "State of Michigan Coastal Management Program and Draft Environmental Impact Statement".

Nominated Areas of Particular Concern

APC's may be nominated by any individual, group or agency. APC nominations received by the Coastal Management Program identify a variety of public and agency coastal concerns. For example, the Michigan Department of State Highways and Transportation has nominated 23 commercial ports as areas of particular concern. The United States Fish and Wildlife Service also nominated coastal sites as APC's, many of which were identified as critical fish and wildlife habitats. In addition to agencies and interest groups, about 60 percent of the total APC nominators to date have been private individuals. Their concerns range from reducing erosion hazards to protecting ecologically sensitive areas to improving recreation access, etc. Although legislated areas of particular concern are sufficient to meet requirements of the federal Coastal Zone Management Act, a method which provides opportunity for all concerned with management of Michigan's coast to indicate problems and suggest management solutions is also included in this program. The nominated form of APC: (1) provides a new avenue for citizens and agencies to become involved in coastal management; (2) formalizes statements of concern about specific areas from those closest to those concerns; and (3) further identifies areas and issues which may be considered in actions or decisions affecting our coast.

Each area of particular concern nomination includes a specific description of the location and characteristics of a coastal site and a recommendation regarding how the site could best be used or managed. Ownership information, current usage, etc., may also be included, (see Figure IV-A). This information is circulated and reviewed by those who have the ability and interest to address the APC's management

FIG. IV-A
Sample Nomination Form
for Coastal Areas of
Particular Concern

Nominator: _____

Address: _____

COASTAL AREAS OF PARTICULAR CONCERN NOMINATION FORM

Name of area nominated: _____

Location: County _____

Township, City or Village _____

Boundary features (rivers, roads, section lines, etc.) _____

Present ownership: _____

Under which category does this area qualify? (Please check only one)

- | | |
|--|--|
| <input type="checkbox"/> high risk erosion | <input type="checkbox"/> island |
| <input type="checkbox"/> flood hazard | <input type="checkbox"/> coastal lake, rivermouth, bay |
| <input type="checkbox"/> ecologically sensitive | <input type="checkbox"/> urban |
| <input type="checkbox"/> natural area | <input type="checkbox"/> mineral or energy resource |
| <input type="checkbox"/> recreation area | <input type="checkbox"/> agricultural |
| <input type="checkbox"/> historic or archaeological site | <input type="checkbox"/> prime industrial |
| <input type="checkbox"/> sand dune | <input type="checkbox"/> water transportation |

Why is this area of particular concern to you? (physical characteristics, damages, opportunities, present use, problems, etc.) _____

What do you think should be done with the area? (public acquisition, local zoning, preservation, etc.) _____

Other comments: _____

PLEASE RETURN TO:

Citizen Shorelands Advisory Council
Michigan Department of Natural Resources
Stevens T. Mason Building
Lansing, MI 48909

OR:

Michigan Department of Natural Resources
Division of Land Resource Programs
Box 30028
Lansing, MI 48909

recommendations, such as state and federal agencies, local governmental units, planning and development regional agencies, etc. Based upon the degree of support afforded each APC, the objective of this process is to implement the area's management recommendation — either directly by the Coastal Management Program or other sources of technical and financial assistance.

APC nominations and management recommendations may be inventoried and reviewed in groups. As in the preceding policy chapter of this impact statement, areas of particular concern are nominated and may be grouped for program assistance within five resources areas, (see Figure IV-B):

- **AREAS OF NATURAL HAZARD TO DEVELOPMENT**
These include various types of erosion or flood prone areas.
- **AREAS SENSITIVE TO ALTERATION OR DISTURBANCE**
These include ecologically sensitive areas, natural areas, sand dunes and islands.
- **AREAS FULFILLING RECREATIONAL OR CULTURAL NEEDS**
These include areas which are or which should be managed to recognize recreation, historic, archaeological or other cultural values.
- **AREAS OF INTENSIVE OR CONFLICTING USE**
These include coastal lakes, river mouths and bays, and urban areas.
- **AREAS OF NATURAL ECONOMIC POTENTIAL**
These include water transportation areas, mineral and energy resource areas, prime industrial sites, and prime agricultural areas.

A special category of areas of particular concern, which includes areas nominated under any of the five categories listed above, is Areas for Preservation or Restoration. Since areas for preservation or restoration usually necessitate immediate management attention, these areas are high priority for program financial and technical assistance. Management recommendations for these areas may include: (1) revegetation of sand dunes to reduce erosion; (2) planning and engineering designs to improve the aesthetic conditions and facilitate public access in urban coastal areas; (3) preserving tourist or other economic uses of historic sites; (4) wood chip trails and other creative, low-cost construction measures to protect fragile natural and sensitive areas; etc. Many areas for preservation or restoration possess management problems or opportunities which necessitate a cooperative state, regional and/or local effort to achieve the management objective. In many cases, the management objectives transcend the financial or regulatory capabilities of local governmental units. Through Coastal Management Program financial and technical assistance, these areas will be addressed in order to preserve their unique and special characteristics.

FIG. IV-B
Guide to Identifying
Areas of Particular Concern

AREAS OF NATURAL HAZARD

HIGH RISK EROSION AREAS.

- An area exhibiting at least two of the following characteristics is considered a potential high-risk erosion area:
 - A. Vegetation removal (25% or more)
 - B. Narrow beach
 - C. Slumping bank
 - D. Turbidity of adjacent waters
 - E. Damaged erosion control structure
 - F. Damaged land structure
 - G. Protective works present
 - H. Unusual angle of response of the bluff material
- Using historic and recent aerial photography, average annual bluff recession can be measured for those areas identified as potential high risk erosion areas. If it is determined that bluffs are receding at an average rate of at least one foot per year, the area is considered a high risk erosion area.

FLOOD HAZARD AREAS.

- The area is within the 100-year floodplain of the Great Lakes, based on engineering studies conducted by federal and state agencies and local units of government. In general, special flood risk areas should include those areas designated by the Federal Insurance Administrator.

SENSITIVE AREAS

ECOLOGICALLY SENSITIVE AREAS.

- Marshes lakeward or landward of the ordinary high water mark with the following values:
 - A. A production, brood rearing, feeding, resting or migration habitat for waterfowl and/or other migratory birds.
 - B. A traditional waterfowl hunting area.
 - C. A habitat supporting a significant furbearer population.
 - D. Significant fisheries for important sport and/or commercial species or spawning and/or nursery areas for important species.
 - E. Significant fisheries through management or potential as significant spawning and/or nursery areas for important species.
 - F. Support for unusual, threatened or endangered plant species or unusual aggregations of species.
 - G. Function as a breakwater by absorbing wave energy and retaining rising flood waters.
- Areas of the upland along the shoreline that have any or all of the following values:
 - A. A staging or stop over point for migratory birds.
 - B. A gull or tern nesting colony or heron rookery.
 - C. An eagle or osprey nest.
 - D. Valuable habitat for deer, furbearers, hawks, owls, game birds, song birds and/or threatened or endangered animal species.
 - E. Support unusual, threatened or endangered plant species or unusual aggregations of species.
- Open water areas from the water's edge to a depth of 20 fathoms with the following values:
 - A. Traditionally important sport and/or commercial fishing areas where important species concentrate, or known spawning or nursery areas for important fish species.

FIG. IV-B (continued)

- B. Potentially valuable fishing areas where management efforts are currently underway to develop the fishery, or potentially good spawning nursery areas for lake trout or other expanding fish populations.
- C. Valuable fish habitat areas not now providing a sizable fishery and not currently under management, but with significant fishery values for future development.
- D. Submerged aquatic plants important to waterfowl.

NATURAL AREAS.

Guidelines established by the Michigan Wilderness and Natural Areas Advisory Board can be used to identify special natural areas throughout Michigan's coastal area.

- Have retained, have re-established or can readily re-established natural character.
- Possess one or more of the following characteristics:
 - A. Biotic, geological, physiographic or paleontological features of scientific or educational value.
 - B. Outstanding opportunities for scenic pleasures, enjoyable contact with nature or wilderness type of experiences (solitude, exploration and challenge).

In addition, the area should exhibit characteristics listed under one of the following categories:

- **Wilderness Areas:**
 - A. Large size: has 3,000 or more acres of state land or is an island of any size.
 - B. Primitive: generally appears to have been affected primarily by forces of nature with the imprint of man's work substantially unnoticeable.
 - C. Wilderness Recreation: has outstanding opportunities for solitude or a primitive and unconfined type of recreation.
 - D. Notable natural features: contains ecological, geological or other features of scientific, scenic or historical value.
- **Wild Areas:**
 - A. Size: is less than 3,000 acres of land.
 - B. Wilderness or nature observation type of recreation: has outstanding opportunities for (1) personal exploration; (2) challenge; or (3) contact with natural features of the landscape and its biological community.
 - C. Wilderness-like: possess one or more of the characteristics of a wilderness area.
- **Research Natural Areas:**
 - A. Educational or scientific natural area: retained or re-established natural character, or has unusual flora and fauna or biotic, geological, or other similar features of vegetational or scientific value, but it need not be undisturbed.
 - B. Verified by scientists: identified and verified through research and study by qualified observers.
 - C. May be sub-unit: may be coextensive with or part of a wilderness area or wild area.
- **Nature Study Areas:**
 - A. Must have essentially the same characteristics as a research natural area.
 - B. Adaptive to development and use of facilities for conservation, education and nature study or much more intensive use than research natural areas.
- **Managed Natural Areas:**
 - A. Same as for research natural areas.
 - B. An ecosystem that is maintained at a chosen state of development or is brought to a desired stage of development by the use of cultural techniques or controls. These controls are known to favor the maintenance or the development of a particular biological community or may be designed to preserve or restore a desired plant or wildlife species.

FIG. IV-B (continued)

SAND DUNE AREAS.

Sand dune areas are defined as those geomorphic features composed primarily of unconsolidated sand, whether wind blown or of other origin. Sand dunes can be considered special areas when:

- The dune area meets the guidelines for an "ecologically sensitive" or "natural" area.
- The integrity of the dune area is threatened by uncontrolled recreational use.
- The integrity of the dune area is threatened by mining activity.
- The dune area is in need of reclamation due to removal of sand and/or vegetation.

ISLANDS.

Islands can be considered special areas when:

- The entire island and/or littoral area meets the guidelines for an "ecologically sensitive" or "natural" area.

AREAS FULFILLING RECREATIONAL & CULTURAL NEEDS

RECREATION AREAS.

Special recreation areas include:

- Existing shoreland recreation areas and facilities.
- Sites that have been identified for acquisition and development by local, state or federal agencies.
- Other areas with high recreation potential.

HISTORIC AND ARCHAEOLOGICAL SITES.

Guidelines are a combination of those used for identifying National and State Register sites and those established in the Department of Natural Resources "Report on Special Environments". Special historic and archaeological areas are those sites, structures, objects or districts that:

- Are connected with an event resulting in significant contributions to the pattern of history or prehistory.
- Are associated with an important phase of growth or decline of a local society or movement.
- Are associated with lives of historically significant persons.
- Embody distinctive characteristics of type, period or method of construction.
- Represent the work of a master.
- Are part of the Great Lakes bottomland containing shipwrecks.
- Are a grouping of structures which individually are not unique but which taken together represent a certain historic scene or way of life.

AREAS OF INTENSIVE OR CONFLICTING USE

COASTAL LAKES, RIVER MOUTHS AND BAYS.

The special coastal lake, river mouth or bay should be a land/water area experiencing serious conflicts among two or more of the following:

- Valuable fish or wildlife habitat.
- Recreational boating use.
- Recreational use for fishing and/or swimming.
- Supporting or with the potential to support commercial navigation.
- Local water quality impaired by intensive development and/or discharge.

URBAN AREAS.

Special urban areas are those parcels of land which are:

- Vacant and adjacent to the Great Lakes or connecting waterway.
- Occupied by structure in need of rehabilitation or redevelopment.

FIG. IV-B (continued)

- Occupied by structures that no longer contribute significantly to the tax base of the community.

- Occupied by uses that do not require or are not enhanced by a shore location.

And located within or in close proximity to:

1. Urbanized areas (defined by the Bureau of Census as central cities of 50,000 or more and surrounding closely settled territory) adjacent to the Great Lakes or a connecting waterway.
2. Urban areas of 2,500 inhabitants incorporated as cities or villages adjacent to the Great Lakes or a connecting waterway.

AREAS OF NATURAL ECONOMIC POTENTIAL

MINERAL RESOURCE AREAS.

Consideration of the following factors will determine special mineral resource areas:

- Demand for the mineral on a local, state or international level.
- Quality of the deposit.
- Quantity of the deposit.
- Minability.
- Amenability to concentration and processing.
- Availability of water, energy supplies, economical transport and other mineral commodities necessary in processing.

ENERGY RESOURCE AREAS.

Consideration of the following will determine special energy resource areas:

- Local, state, or national need for energy.
- Proximity to load centers.
- Fuel delivery access and mode.
- Site suitability.
- Ability of adjacent land use to absorb impacts.

Facilities for energy resource areas include:

- A. Electric generating facilities (fossil and nuclear).
- B. Coal transfer facilities.
- C. Gas or oil facilities.

AGRICULTURAL AREAS.

Special agricultural areas fall into the categories of prime, unique and critical agricultural lands. Definitions for prime and unique lands have been adopted from Soil Conservation Service, USDA qualitative definitions for these categories.

- Those prime agricultural lands currently used (or available for use) for the production of food and fiber where the moisture, soil characteristics and growing season produce a sustained high yield of crops.
- Those unique agricultural lands combining soil quality, location, growing seasons and moisture supply to produce high quality and high yield specialty crops (i.e. cherries, blueberries, beans, etc.).
- Critical agricultural lands in immediate danger of being placed into other uses. Increasing populations may require that even those agricultural lands which are marginally productive be utilized to meet future demands.

PRIME INDUSTRIAL AREAS.

The following guidelines identify special prime industrial areas.

- Industrial development compatible with existing zoning and land use.
- Easily accessible modes of transportation (water transport in particular).
- Adequate utility systems (i.e., sewer, water) presently available.
- Site of adequate depth to accommodate plant operations such that increasing site size with artificial fill is not necessary.
- Industrial operations and appearance compatible with the coastal environment.

FIG. IV-B (continued)

WATER TRANSPORTATION AREAS.

Special water transportation areas include:

- Ports and related facilities associated with waterborne transportation.
- Docking and mooring areas.
- Loading facilities.
- Ferry routes and landings.
- Shipping channels.
- Other land and water facilities related to waterborne transportation.

AREAS FOR PRESERVATION AND/OR RESTORATION

Areas for Preservation and/or Restoration are the highest priority and most special areas in the above categories. The areas must be of regional or statewide interest, and exhibit the following characteristics:

- High aesthetic, recreational, ecologic or conservation value.
- High quality physical or functional characteristics.
- Unique characteristics which are uncommon and occur in very limited areas of the shoreland.
- Threat of irreversible harm and urgent need for management action.
- Problems or opportunities in the area beyond the financial or regulatory capability of local units of government.

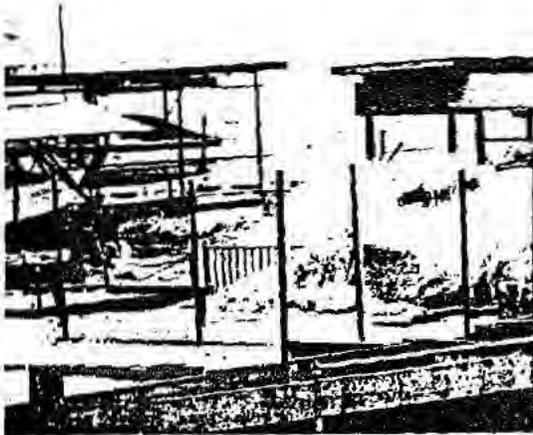
Nominated APC's do not, in themselves, constitute a legal restriction or obligation to private property owners. Owners of property nominated as an area of particular concern are contacted to solicit their participation in the review process. Nominations initiate a formal process to recognize and document support for protecting or enhancing certain coastal sites.

As described in following pages, this process exposes all APC nominations and their management recommendations to coastal decision-makers so that a maximum number of APC's receive consideration through financial and technical assistance, permit reviews, etc. Nominations which receive broad support or those which may be incorporated into ongoing programs increases their potential for implementation. In addition, some nominations will qualify for direct funding assistance from Michigan's Coastal Management Program. APC's which are addressed in the Coastal Management Program budget are termed designated action areas of particular concern.

Since 1976, APC nominations have been actively solicited. As a result, about 800 nominations for areas of particular concern have been received and included in this inventory and review process. The 800 areas have been reviewed by state agencies, regional planning and development agencies and many local governmental units. Some of the areas have already received assistance from Michigan's Coastal Management Program. Designated action areas of particular concern are implemented through contractual agreements between the Coastal Management Program and either state, regional or local agencies and units of government. These agreements are formulated so that actions carried out to address APC management recommendations by local or regional agencies conform to program policies and guidelines. Designated APC's are closely monitored by the Coastal Management Program to assure conformance with program policies and recorded as action program elements in the APC inventory process. Many APC's require various types of technical assistance, such as erosion control, flood control, site design, etc. Federal agencies such as the United States Corps of Engineers, Fish and Wildlife Service, etc., may play an active role by providing technical assistance to local, regional and state agencies to address areas of particular concern on a site specific basis.

An objective of the Coastal Management Program is to address a variety of coastal issues through the area of particular concern process in order to maximize program benefits. There is no assurance, however, that all nominated APC's will be implemented. Inability to implement APC management recommendations may result from inadequate funds, conflicting management recommendations, lack of local support for the proposed action, or management recommendations which are inconsistent with state policies.

FIVE RESOURCE AREAS FOR CATEGORIZING MICHIGAN'S AREAS OF PARTICULAR CONCERN



Areas of Natural Hazard to Development:
Includes various types of erosion or flood prone areas



Areas Sensitive to Alteration or Disturbance:
Includes ecologically sensitive areas, natural areas, sand dunes and islands



Areas Fulfilling Recreational or Cultural Needs:
Includes areas which are or which should be managed to recognize recreational, historic, archaeological or other cultural values



Areas of Intensive or Conflicting Use:
Includes coastal lakes, river mouths and bays, and urban areas



Areas of Natural Economic Potential:
Includes water transportation areas, mineral and energy resource areas, prime industrial sites and prime agricultural areas

THE APC INVENTORY AND REVIEW PROCESS

Following is a description of the process for inventorying and reviewing areas of particular concern.

Sources of APC's

Any person, group or local, state or federal agency or unit of government may nominate APC's by completing the form shown as Figure 4.A. Nomination forms are available from the Department of Natural Resources' Coastal Management Program, coastal planning and development regional agencies, and some other public places. The Coastal Management Program accepts nominations continuously. Completed APC nomination forms may be sent to either participating planning and development regional agencies, the Citizens Shorelands Advisory Council, or the Department of Natural Resources' Coastal Management Program.

State agencies may identify legislated APC's. Legislated APC's may be recognized as statutes are enacted or as agencies provide the Coastal Management Program with the location and management recommendations for coastal sites designated under existing legislation.

Local/Regional Agency Inventory and Review Process

Participating regional agencies or local governments which receive nominations utilize the following steps:

- The agency receives nominations and forwards copies to other affected interests (such as local governments), for review and comment. If the APC involves privately owned lands, affected private property owners are contacted as feasible for their comments and participation in the review process.
- The agency reviews nominations utilizing all indications of support, rejection or modification which may have been received from local units, citizen interest groups, etc. The results of this effort are area descriptions and management recommendations which document the degree of local and regional support. Regional agencies often assign this function to a special review body.
- Based upon these reviews, the agency assembles all related comments to ascertain whether or not the nomination should be formally endorsed. Areas and management recommendations which cannot be modified or endorsed may be sent to the Coastal Management Program indicating insufficient local support. Nominations which receive endorsement may be

prioritized (e.g. low, medium, high priority or preservation, restoration). An attempt is then made to notify nominators and concerned property owners of which action was taken.

Guidelines used by regional/local agencies in determining APC priorities include:

- Does the APC have property owner support?
- Is the APC supported by interest groups and local governments?
- Is the APC's management recommendation consistent with local ordinances, plans and programs?
- Does the APC have all necessary reviews and approvals, (e.g. local governments, advisory bodies, etc.)?
- Are there duplicate, overlapping or conflicting management recommendations for the same area?
- Is it a valuable resource which necessitates an immediate need for action due to the severity of a problem?
- Are matching funds available which are necessary to implement the management recommendation by Michigan's Coastal Management Program?
- Are there adequate local provisions for operations and maintenance?
- Does the APC management recommendation provide greater than local impacts or benefits?

The priority used by local/regional agencies in applying these criteria as well as any additional guidelines which may be used vary according to specific local use problems, physical characteristics, land use trends, etc.

If an APC nominator is dissatisfied with the priority his nomination is assigned at the regional/local agency level, the nominator may also submit the nomination directly to the Michigan Coastal Management Program for consideration.

State Level Inventory and Review Process

At the state level, area of particular concern nominations may be received by either: (1) the Michigan Department of Natural Resources, Michigan Coastal Management Program; or (2) the Citizens Shorelands Advisory Council. APC's may originate from: (1) legislated mandates for specific coastal areas; (2) nominations sent directly to the state; or (3) nominations sent to the state following regional/local agency review.

APC's resulting from legislation are received from agencies as area descriptions and management plans. Nominations which were first screened at the regional/local agency level are received by the state with documentation of support or nonsupport. Nominations which are sent directly to the state by nominators are noted and referred to regional and/or local agencies for their review and action. In this referral, nominations have the opportunity to receive additional local attention and support. Local support enhances the nomination's priority for implementation, but is not a necessary condition to qualify for state consideration.

State level review separates from the entire number of APC's a limited number of areas and management recommendations which will receive attention directly from the Coastal Management Program in the form of financial or technical assistance. These APC's are termed designated action areas of particular concern. Additional high priority APC's are considered for funding through other state or state administered federal funding programs. The process for reviewing and prioritizing APC's is as follows:

- The state receives nominations as described above. Each nomination is recorded by geographic area (region, county and township) and by type of APC (areas of natural hazard, sensitive areas, etc.), with any available documentation of local or state support or, in some cases, a legislative mandate. Coastal Management Program staff locate the area on maps and record any data received.

- Copies of nominations are distributed to the Standing Committee on Shorelands and Water Coordination for state agency review. As described in Chapter VI, this Committee is composed of a number of state agency representatives. Recommendations from this Committee are based upon a number of guidelines:
 - Is the APC within the coastal area boundary?
 - Is the APC management recommendation consistent with state policy?
 - Can the APC be implemented through other sources or funds or by other programs?
 - Has the APC received all necessary reviews at the local/regional level?
 - Does the APC have local and state support?
 - Is the APC eligible for funding per the Coastal Zone Management Act of 1972?
 - Does the APC have potential for greater than local impact or benefit?
 - Is the area in immediate need of preservation or restoration?
 - How much time is needed to implement the management recommendation?

APC's which conform to the above guidelines used by the Standing Committee receive priority for implementation. APC's not conforming to these guidelines receive a lower priority in state implementation efforts. If management recommendations and/or priority uses for APC's are significantly altered by the state, the Coastal Management Program will make a reasonable attempt to notify the APC nominator and secure local endorsement for the modified management recommendation. All APC's are kept on file and are reviewed annually to ascertain priority for action. All APC's are also included in environmental reviews, permit processes, technical assistance programs, funding requests, etc.

Many APC's can be carried out in ongoing local planning and zoning programs without support of state level review. Prior to state designation of an action area of particular concern, the Coastal Management Program will insure that affected landowners and governmental units support the proposed action. For designated action areas of particular concern, an indication of lowest use priority will be made in contractual agreements by the Coastal Management Program using: (1) APC management recommendations; (2) documented local/regional support for management recommendations; and (3) other data relative to land capability, neighboring land uses, etc.

Upon assignment of priority, every APC is filed, mapped and cross-referenced for convenient recall by the Coastal Management Program. This information will be utilized in ongoing permit and environmental review activities. It will also be available for public and local agency use.

SUMMARY

The objective of the APC inventory and review process is to maximize the number of APC's implemented. The Department of Natural Resources and other agencies involved in the process actively refer coastal concerns to agencies having the interest, authority and the means to take positive action on them. Actions may take the form of direct financial assistance from the Coastal Management Program. Funds may be applied either to individual project sites or to issues involving groups of sites. Other programs and agencies will be encouraged to consider and include APC's in their work plans.

Though all APC's and their endorsements will be recorded and recalled, a limited number of designated action APC's will receive priority for Coastal Management Program attention.

Chapter V

Coastal Management Program Organization and Authorities

Approaches in the past for managing Michigan's coast are illustrated by statutes which address either specific resources, activities, and/or impacts. Through integration of statutory responsibilities, the Coastal Management Program improves enforcement of authorities and accelerates technical and financial assistance and intergovernmental coordination to protect coastal resources and solve coastal problems.

Michigan has a remarkable legacy of concern for management of Great Lakes resources, and a substantial existing statutory basis for coastal resource protection. The Michigan Department of Natural Resources either administers directly or plays a formal role in the administration of all significant state coastal programs and authorities which provide for air and water quality control, shorelands management, recreational developments and many others. The objective of the Department's Coastal Management Program implementation effort is to: (1) provide increased assistance at the state and local level for creative solutions to coastal issues and problems; (2) minimize program duplication and conflict; (3) improve enforcement and streamline permit processes; and (4) provide opportunity for citizens and other public and private interests to become involved in coastal management. The following pages describe how such entities as the Department of Natural Resources, Natural Resources Commission, Michigan Environmental Review Board, Standing Committee on Shorelands and Water Coordination, and others provide for coordination and strengthened implementation of authorities and programs in the context of the Coastal Management Program's organization structure to insure proper management and protection of Michigan's magnificent coastal resources.

MICHIGAN'S COASTAL MANAGEMENT PROGRAM IN THE CONTEXT OF STATE GOVERNMENT

The Michigan Department of Natural Resources, Division of Land Resource Programs is the lead agency to administer Michigan's Coastal Management Program. Formal designation was conveyed in a letter dated October 21, 1977 by Governor William G. Milliken, under authority of Article V, Section 2 of the Constitution of the State of Michigan of 1963, which transmitted "State of Michigan Coastal Management Program and Draft Environmental Impact Statement" to the United States Department of Commerce.

The Division of Land Resource Programs administers many important coastal authorities, such as the Shorelands Protection and Management Act, Great Lakes Submerged Lands Act, Inland Lakes and Streams Act and others. The Division is responsible for program administration, continuing consultation with the public and local officials, assuring state agency coordination and conflict resolution, and for administering federal consistency provisions.

The Coastal Management Program Unit, in the Division of Land Resource Programs, Department of Natural Resources, is responsible for coordinating state agency responsibilities and programs to provide for improved enforcement of coastal regulatory authorities and to enhance coastal technical and financial assistance efforts.

Within the context of state government, the Michigan Legislature enacts laws, levies taxes and appropriates funds for state government. The Legislature encompasses two houses: (1) the Senate with 38 members, and (2) the House of Representatives with 110 members. Judicial power of Michigan is vested exclusively in the Michigan Supreme Court and additional lower courts. The Supreme Court has supervisory control over all courts in the state.

The Department of Natural Resources is one of 19 operating state agencies which fall under the purview of the Executive Office of the Governor. Many of these agencies administer programs important to coastal management, which will be a focus of program coordination efforts, (Departments of Natural Resources, Public Health, Agriculture, Highways and Transportation, State, Commerce and Labor primarily). In addition, the Attorney General's Office provides broad services to all state programs. The Attorney General is legal counsel for the Legislature as well as other entities within state government and may intervene in both civil and criminal lawsuits where the public interest is involved. The Environmental Protection and Natural Resources Division of the Department of Attorney General serves Department of Natural Resources programs concerned with water and air quality, resource recovery, etc. The Lands, Lakes and Leases Division serves the Department on matters pertaining to submerged lands, coastal wetlands, etc.

As described in this chapter, Michigan's Coastal Management Program integrates and strengthens state agency coastal responsibilities. Coordination is accomplished through such entities as the Michigan Environmental Review Board, the Michigan Natural Resources Commission, the Governor's system of subcabinets, and other mechanisms.

The Department of Natural Resources, Division of Land Resource Programs, is the lead Coastal Management Program agency and will administer implementation grants authorized under Section 306 of the federal Coastal Zone Management Act. Following is a description of the Department's role in coastal management and a detailed discussion of authorities and program responsibilities which will be coordinated by the Coastal Management Program Unit in the Division of Land Resource Programs.

The Michigan Department of Natural Resources — The Lead Coastal Management Agency

Act No. 17 of the Public Acts of 1921, which created the Department, established that the Department, "... shall protect and conserve the natural resources of the State of Michigan; provide and develop facilities for outdoor recreation ... prevent and guard against the pollution of lakes and streams within the state, and enforce all laws provided for that purpose ..."

The Department is organized into 20 divisions and four offices, (see Figure V-A). Figure V-B illustrates the location of the Department's regional, district and field offices. The Department is managed by a director who is appointed and serves at the pleasure of the Natural Resources Commission.

Natural Resources Commission

A seven member citizen Natural Resources Commission, also established by Act No. 17, is responsible to the Governor and the people of Michigan for meeting mandates of the Act through Department policy formulation and direction. The Commission actively considers all interests in Department programs by providing that any citizen, interest group, private firm, etc., may appear before the Commission to present views on matters pertaining to Department policies, actions, or contested case hearings. The Commission fully considers these contributions in directing the operation of Department programs, (Natural Resources Commission Policy No. 1033).

Issues relating to the environment and natural resources of the state that directly or indirectly involve the Department are addressed by Department policy which is formally endorsed by the Commission. These policies and procedures are widely distributed to insure that Department actions are consistent with Commission policy positions, (Natural Resources Commission Policy No. 1021).

Executive Orders of the Governor 1973-2 and 1973-2a consolidated environmental functions of the state within the Department in order to provide a coordinated response to environmental problems and concerns facing Michigan. These Executive Orders consolidated the Water Resources Commission, Air Pollution Commission, Michigan State Waterways Commission and the Mackinac Island Commission within the Department, (Executive Order authorized under the Executive Organization Act, Act No. 380 of the Public Acts of 1965, by authority of Article V of the 1963 Michigan Constitution).

Roles and responsibilities of these five commissions were established by Executive Order 1976-8 which specifically recognizes that, "... these diverse responsibilities (e.g. the Department's) and continued advances in environmental protection and natural resources management require an organizational structure designed to meet existing and emerging program needs ...". This Executive Order places each of the five commissions in an advisory capacity to the Natural Resources Commission although the Air Pollution Control Commission, Water Resources Commission and Resource Recovery Commission retained authority for independent functions of rule making, issuing permits, licenses and orders for pollution abatement and quasijudicial action, (e.g., contested case hearings).

FIG. V-A
 Organizational Structure of the
 Michigan Department of Natural Resources

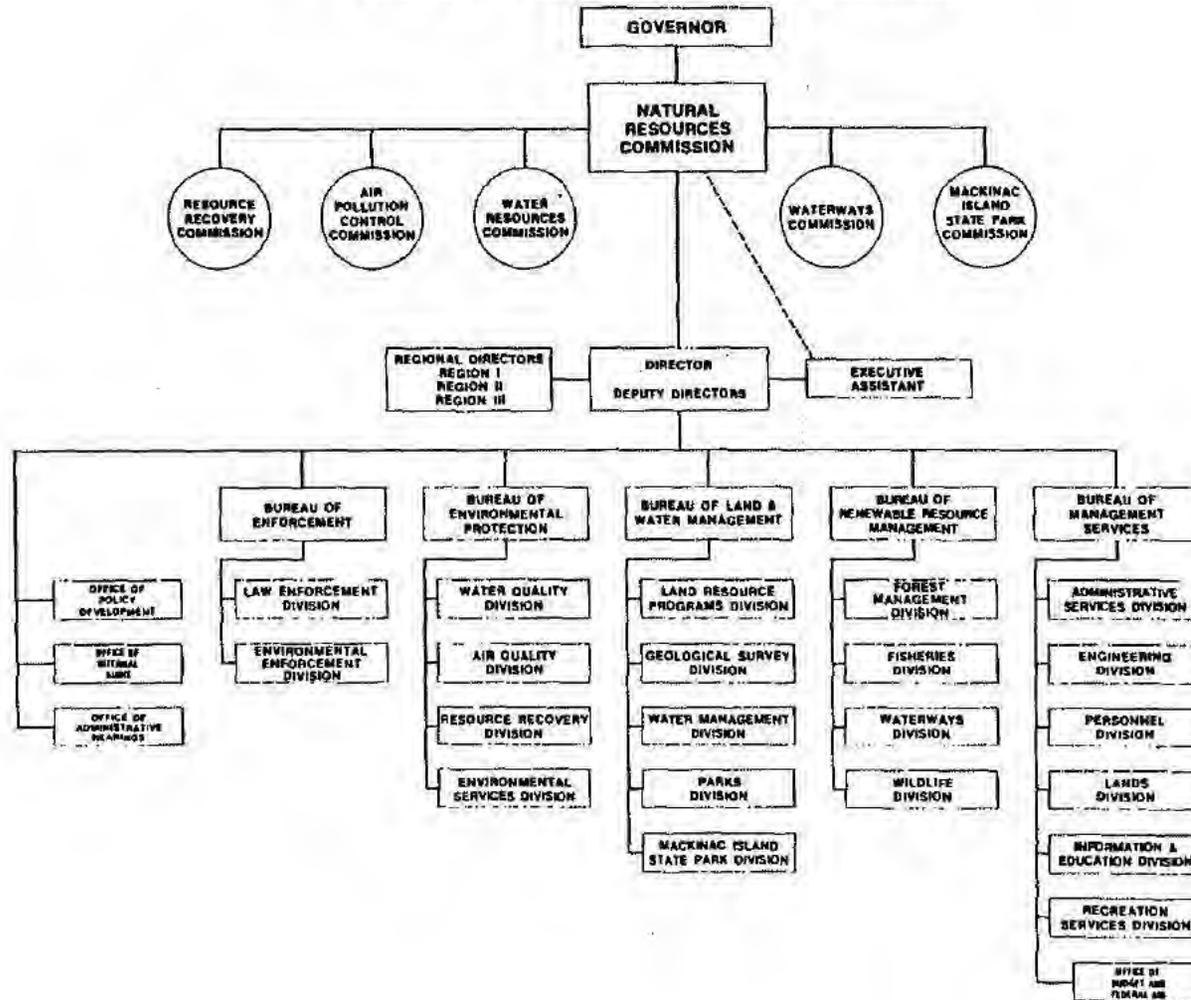


FIG. V-B
 Regional, District and Field Offices
 of the Michigan Department
 of Natural Resources



The consolidation of environmental functions and programs within the Department of Natural Resources strengthens the management authorities and capabilities for implementing Michigan's Coastal Management Program.

Department of Natural Resources provides staff support for the Department commissions. Commission actions including rule making and permit issuance, must be consistent with policies cited in Chapter III, including the process for preparation and review of environmental impact statements, established by Executive Order 1974-4 and the process for public hearings and contested cases, established by Michigan's Administrative Procedures Act. The program policies are based on existing state law, and the commission must comply with these provisions.

The diverse interests represented on the commissions, coupled with their responsibility for establishing Department policy and program direction while providing maximum opportunity for public involvement, provides an important mechanism for coordination and conflict resolution of coastal policies and actions.

As described below, the five commissions are responsible for many Department policies and actions which are involved in coastal management.

- The Water Resources Commission, (established by Act No. 245 of the Public Acts of 1929), is composed of four ex-officio directors of state agencies, including the Department of Natural Resources, and three appointed citizens. The Commission is charged with responsibility to protect and conserve water resources of the state; control pollution over waters of the state; and prohibit pollution of waters held in public trust. These objectives are accomplished largely through permits, surveillance and enforcement. The Commission is also directed to develop adequate wastewater collection and treatment systems.
- The Air Pollution Control Commission, (established by Act No. 348 of the Public Acts of 1965), contains 11 members: three ex-officio directors of state agencies, including the Department of Natural Resources, and eight appointed citizens. The Commission's major role is to prevent new sources of air pollution and to reduce air pollution from existing sources through compliance with air quality standards.
- The Resource Recovery Commission, (established by Act No. 366 of the Public Acts of 1974), is composed of the directors of the Department of Natural Resources and Treasury Department, and nine appointed citizens. The Commission is responsible for disposal control of refuse statewide.
- The State Waterways Commission, (established by Act No. 320 of the Public Acts of 1974), is composed of five citizen members. Its primary function is to acquire, construct and maintain harbors, channels, public access sites and facilities for vessels in navigable waters within the state.

- The Mackinac Island State Park Commission, (established by Act No. 355 of the Public Acts of 1927), has seven citizen members which are appointed by the Governor. Its objectives are to provide for public use and historic preservation of Mackinac Island State Park.

The Coastal Management Program relies upon the authority vested in this organization structure for implementing the Department's coastal policies and programs. The Natural Resources Commission provides leadership to this organization for effective implementation of coastal authorities and programs, and coordination of state and federal activities with the Coastal Management Program. The Natural Resources Commission approval of the provisions of Michigan's Coastal Management Program (Michigan Natural Resources Commission approval, dated October 14, 1977) constitutes formal support for Program implementation to protect valuable coastal resources and solve serious coastal problems.

As described later in this chapter, the commissions also act as a mechanism for resolving conflicts in the event a Department action or ruling is contested. The commissions review such contested Department decisions through a contested case hearing at which time the aggrieved party may appeal directly to affected commission(s). This process provides the opportunity to resolve conflicts resulting from Department actions prior to judicial review in circuit court, as authorized by the Administrative Procedures Act, (Act No. 306 of the Public Acts of 1969) with respect to contested cases.

Department's Role in Controlling Direct and Significant Coastal Impacts

The State of Michigan has a substantial existing statutory basis for controlling direct and significant impacts to coastal lands and waters. These authorities are administered to insure that adverse impacts to the public health, safety and general welfare do not result from various use activities. This represents a performance approach to controlling impacts, rather than zoning or regulation of types of uses per se (e.g., commercial, industrial, residential, etc.). Thus, to identify circumstances where there is potential for a direct and significant impact, criteria statements may be utilized in lieu of the name of use activities. An affirmative response to any of the criteria listed below triggers an individual permit review. As shown below, the Department of Natural Resources either directly administers or plays a major role in the administration of these state regulatory statutes. (For a more complete description of the scope, authority and administrative requirements of statutes cited below, refer to Appendix C of "State of Michigan Coastal Management Program and Draft Environmental Impact Statement".)

NATURAL OR ENVIRONMENTAL SIGNIFICANCE

- Does the activity involve filling, grading or other alterations of the soils, activities which may contribute to soil erosion and sedimentation, alteration of natural drainage (not including the reasonable care and maintenance of previously established public drainage improvements works), the cutting and removing of trees and other native vegetation on lands subject to forest management plans, and the placement of all structures within the area of designation in a designated shoreland environmental area? (Act No. 245 of the Public Acts of 1970) Shorelands Protection and Management Act.

Administered by the Department of Natural Resources, Division of Land Resource Programs.

- Does the activity involve a designated shoreland natural river area? (Act No. 231 of the Public Acts of 1970) Natural Rivers Act.

Administered by the Department of Natural Resources, Division of Land Resource Programs.

- Does the activity impact any fish, plant life or wildlife on the state or federal list of threatened or endangered species? (Act No. 203 of the Public Acts of 1974) Endangered Species Act.

Administered by the Department of Natural Resources, Wildlife Division.

AIR QUALITY

- Does the activity involve the coastal installation, construction, reconstruction or alteration of any process or system which may be a source of air contamination? (Act No. 348 of the Public Acts of 1965) Air Pollution Control Act.

Administered by the Department of Natural Resources, Air Quality Division.

WASTE DISPOSAL

- Does the activity involve coastal facilities which collect, transfer, process or otherwise dispose of recycled solid refuse materials? (Act No. 87 of the Public Acts of 1965) Solid Waste Management Act.

Administered by the Department of Natural Resources, Resource Recovery Division.

- Does the activity involve the coastal hauling of liquid, industrial or domestic wastes? (Act No. 136 of the Public Acts of 1969) Liquid Industrial Haulers Act; and (Act No. 243 of the Public Acts of 1951) Domestic Waste Haulers Act.

Administered by the Department of Natural Resources, Water Quality Division.

- Does the activity involve the use of Great Lakes or other waters of the state for discharge of industrial or commercial waste waters? (Act No. 245 of the Public Acts of 1929) Water Resources Commission Act.

Administered by the Department of Natural Resources, Water Quality Division.

- Does the activity involve the collection, conveyance, transport, treatment or other handling of domestic or industrial liquid wastes by municipal sewer systems or by municipal treatment facilities? (Act No. 98 of the Public Acts of 1913) Control of Waterworks and Sewage Treatment Systems Act.

Administered by the Michigan Department of Public Health and the Department of Natural Resources, Water Quality Division.

- Does the activity involve waste from mineral (including test, storage, disposal and brine) wells in the coastal area? (Act No. 315 of the Public Acts of 1969) Mineral Wells Act. ✓

Administered by the Department of Natural Resources, Geological Survey Division.

LAND USE

- Does the use activity involve new development in a designated shoreland high risk erosion area? (Act No. 245 of the Public Acts of 1970, as amended) Shorelands Protection and Management Act. ✓

Administered by the Department of Natural Resources, Division of Land Resource Programs.

- Does the activity involve coastal earth changes which are located within 500 feet of a water course or which alter more than one acre of land? (Act No. 347 of the Public Acts of 1972) Soil Erosion and Sedimentation Control Act. ✓

Administered by the Department of Natural Resources, Division of Land Resource Programs.

- Does the use activity involve or otherwise make permanent use of public trust lands or made lands (including the waters over them) of the Great Lakes or their bays and harbors? (Act No. 247 of the Public Acts of 1955) Great Lakes Submerged Lands Act. ✓
 Administered by the Department of Natural Resources, Division of Land Resource Programs.
- Does the use activity create, alter or otherwise make permanent use of bottomlands or made lands (including the waters over them) in inland lakes and streams or in connecting waters of the Great Lakes? (Act No. 346 of the Public Acts of 1972) Inland Lakes and Streams Act. ✓
 Administered by the Department of Natural Resources, Division of Land Resource Programs.
- Does the activity involve new construction in designated shoreland flood risk areas? (Act No. 245 of the Public Acts of 1970, as amended) Shorelands Protection and Management Act. ✓
 Administered by the Department of Natural Resources, Division of Land Resource Programs.
- Does the use activity involve the alteration, occupation or obstruction of floodways and watercourses (including the Great Lakes connecting waters) which have two or more acres of drainage area? (Act No. 167 of the Public Acts of 1968) Floodway Encroachment Act. ✓
 Administered by the Department of Natural Resources, Water Management Division.
- Does the activity involve the subdivision of coastal lands into five or more parcels, each of which is ten acres or less in size? (Act No. 288 of the Public Acts of 1967) Subdivision Control Act. ✓
 Administered by the Department of Treasury; provisions for flood plains or riparian platted lands administered by the Michigan Department of Natural Resources, Water Management Division.
- Does the activity involve new coastal condominium development? (Act No. 299 of the Public Acts of 1963) Horizontal Real Property Act.
 Administered by the Michigan Department of Commerce, Corporations Security Bureau, flood hazard and sewerage provisions administered by the Michigan Department of Natural Resources, Water Quality Division and Water Management Division.

- Does the use activity involve new coastal mobile home park development? (Act No. 243 of the Public Acts of 1959) Mobile Home Park Act.

Administered by the Michigan Department of Public Health, Community and Environmental Health Division; Michigan Department of Natural Resources assists in review of activities relative to flood plains and sewerage or wastewater systems.

- Does the use activity involve new coastal campground development? (Act No. 171 of the Public Acts of 1970) Campground Development Act.

Administered by the Michigan Department of Public Health, Community and Environmental Health Division; Michigan Department of Natural Resources assists in review of activities relative to flood plains and sewerage or wastewater systems.

- Does the activity involve the coastal area in planning, operating, abandoning or reclaiming of mineral mining (including coal, gypsum, stone, metallic ores or similar substances) excavated from natural deposits by open pit methods? (Act No. 92 of the Public Acts of 1970) Mine Reclamation Act.

Administered by the Michigan Department of Natural Resources, Geological Survey Division.

- Does the activity involve the coastal exploration, extraction or storage of oil and gas resources? (Act No. 61 of the Public Acts of 1939) Oil and Gas Wells Act. ✓

Administered by the Department of Natural Resources, Geological Survey Division.

- Does the activity involve commercial, industrial or other extraction of sand from designated Great Lakes Sand Dune Areas? (Act No. 222 of the Public Acts of 1976) Sand Dunes Protection and Management Act.

Administered by the Michigan Department of Natural Resources, Geological Survey Division.

WATER SUPPLY

- Does the activity involve coastal systems which supply or purify water intended for public or household use? (Act No. 98 of the Public Acts of 1913) Waterworks and Sewage Treatment Systems Act.

Administered by the Michigan Department of Public Health and the Michigan Department of Natural Resources, Water Quality Division.

- Does the activity involve the coastal storing, handling or use of oils, salts, or other materials listed in the Water Resources Commission's Critical Materials Register? (Act No. 245 of the Public Acts of 1929, Part 5 Rule Amendments) Oil and Hazardous Materials Amendments of the Water Resources Commission Act.

Administered by the Michigan Department of Natural Resources, Water Quality Division.

- Does the activity involve the coastal control, diversion or other use of waters of the state in operating a low grade iron-ore mine? (Act No. 143 of the Public Acts of 1959) Mine Water Diversion Act.

Administered by the Michigan Department of Natural Resources, Water Quality Division.

- Could the activity result in pollution, impairment, or destruction of the air, water and other natural resources of the public trust where a feasible and prudent alternative exists? (Act No. 127 of the Public Acts of 1970) Michigan Environmental Protection Act. ✓

The Michigan Environmental Protection Act, (Act No. 127 of the Public Acts of 1970) provides that any party, including the Department of Natural Resources, may seek a judicial review of actions conducted or planned by any other party if the action may result in pollution, destruction or impairment of natural resources. Thus, Act No. 127 may be utilized to protect the natural resources of the state consistent with directives of Article 4 of the Constitution of the State of Michigan of 1963 which declared that the conservation and development of the natural resources of the state are of paramount public concern in the interest of the health, safety and general welfare of the people.

NOTE: In accord with Section 307 3(f), provisions of the federal Water Pollution Control Act as amended; and the federal Clean Air Act, as amended, are incorporated into the Coastal Management Program and administered by the Department of Natural Resources' Water Quality Division and Air Quality Division, respectively. The state has authority to invoke more stringent standards for air and water quality where minimum requirements are insufficient to protect the resource. Authority to invoke more stringent standards is provided by Act No. 245 of the Public Acts of 1929, as amended, and Act No. 348 of the Public Acts of 1965 for water and air quality, respectively. ✓

Recognizing that certain impacts or benefits are larger than local in nature, the Michigan Legislature has enacted several statutes which limit local land regulatory authority. The following section describes how the states implement these authorities to consider uses of regional benefit.

State Considerations for Uses of Regional Benefit

In the context of the federal Coastal Zone Management Act, uses which serve or impact upon more than local areas are termed uses of regional benefit. Following is a discussion of state considerations for coastal uses of regional benefit.

The concept that local ordinances are not enforceable against state-owned lands is well established in legal text authorities, (see 2 Anderson, *American Law of Zoning*, Sec. 9.06) and Michigan law, (see *State Highway Commissioner v. Redford Township*, 4 Mich App 223, 1966). Thus, such state-owned lands as the 37 coastal state parks, the 19 coastal state game and wildlife areas, and state owned access sites are unaffected by local ordinances and are managed for uses of larger than regional benefit in accord with state statutes, administered by state agencies — primarily the Department of Natural Resources.

The County Rural Zoning Enabling Act, (Act No. 183 of the Public Acts of 1943, as amended) provides that county zoning ordinances and amendments be submitted to the state for approval before becoming effective. The Department of Natural Resources, Division of Land Resource Programs approves only those county ordinances or amendments which are legal in content and comply with state zoning enabling statutes and court decisions.

Executive Order of the Governor 1973-12 transferred state responsibility for review and approval of county zoning ordinances to the Department of Natural Resources. The Executive Order specifically recognized that: "... the focus and importance of zoning has broadened since the inception of the County Zoning Act for achieving effective land use objectives extending to all aspects of a community's development ... and ... the importance of centralizing responsibility to strengthen the state's capability in planning and efficient land use development ..."

The Shorelands Protection and Management Act, (Act No. 245 of the Public Acts of 1970, as amended) provides that any affected local governmental unit (e.g., county, township, city or village) may develop and administer zoning ordinances which conform to regulations of Act No. 245.

If local ordinances do not comply with Act No. 245's provisions in high risk erosion areas, environmental areas or flood risk areas, the state regulates the areas by permit.

Similarly, the Natural Rivers Act (Act No. 231 of the Public Acts of 1970) provides that local units (e.g., county and township) must develop zoning ordinances which comply with provisions of Act No. 231 in designated natural river areas. If local zoning does not comply with measures of Act No. 231, the state may develop and enforce restrictions to protect designated natural rivers.

The Soil Erosion and Sedimentation Control Act also provides for local agency administration in compliance with state-approved guidelines. Administrative rules for the Soil Erosion and Sedimentation Control Act and proposed rules for the Shorelands Protection and Management Act* enable the state to insure effective local agency

*Rules currently proposed by the state for the Shorelands Protection and Management Act would provide for monitoring of locally-delegated enforcement programs to insure consistent with state requirements in high risk erosion, environmental and flood risk areas. Proposed rules would provide for performance evaluation and decertification by the state of a local government's authority to administer provisions of Act No. 245 if it could be demonstrated that the local unit had failed to fully enforce the statute, consistent with state requirements.

enforcement through review of any proposed amendments or alterations to zoning ordinances or plans and annual evaluations of permits issued and applications for permits acted upon by a local administering agency.

The Mobile Home Commission Act (Act No. 419 of the Public Acts of 1976) provides that the state Mobile Home Commission shall determine the sufficiency of local mobile home ordinances which are designed to provide local governments with superintending control over mobile home business use, according to rules established by the Michigan Department of Public Health in accord with Act No. 419 and Act No. 243 of the Public Acts of 1959.

Other facilities reviewed by the state, according to a number of state enabling statutes, with larger than local impact include: hospitals, correctional facilities, schools, sewage treatment plants, water storage and retrieval systems, public utilities, drainage facilities, road improvements, historic sites, and air pollution facilities.

For example, review of plans and ordinances for local historic districts are reviewed by the Michigan Historical Commission (Act No. 169 of the Public Acts of 1970). Act No. 40 of the Public Acts of 1956 enables the state to review local drainage facilities. Similarly, Act No. 348 of the Public Acts of 1965 enables the state to review local air pollution control facilities.

With respect to energy developments, oil and gas well drilling, completion or operation may not be regulated by zoning ordinances of counties or townships pursuant to Act No. 183 of the Public Acts of 1943 and Act No. 184 of the Public Acts of 1943, respectively. Authority for implementing this authority resides with the Supervisor of Wells who is the Director of the Department of Natural Resources.

In agreement with a recent Michigan Supreme Court decision, local ordinances may not be arbitrarily, capriciously or unreasonably exclusionary, (see Kropf v. Sterling Heights, 391 Mich 139). This court decision set forth that, "... on its face, an ordinance which totally excludes from a municipality a use recognized by the constitution or other laws of this state as legitimate also carries with it a strong taint of unlawful discrimination and a denial of equal protection of the law as to the excluded use ..."

The court ruled in Kropf v. City of Sterling Heights that ordinances were subject to judicial review: "One who purchases with knowledge of zoning restrictions may nonetheless be heard to challenge the restrictions' constitutionality; an otherwise unconstitutional ordinance does not lose this character and immunize itself from attack simply by the transfer of property from one owner to another." The court also set forth that: "Determination to grant or deny a change in zoning by a local legislative body on individual grounds is administrative, not legislative; it is quasijudicial and affects the private rights and is subject to direct review by the courts; the merits, the reasonableness of the proposed use — the standard in fact generally followed by a local legislative body when granting or refusing a change — is, under the Michigan Constitution, subject to judicial review and the question on review is whether the grant or denial is supported by competent material and substantial evidence on the whole record." This decision, which provides for judicial review of ordinances (e.g., standing) was later confirmed by findings in Kirk v. Tyrone Township, December 21, 1976.

Thus, the state assures recognition of uses of regional benefit through the following means: (1) no local ordinance is enforceable against state-owned lands; (2)

state review of county ordinances to assure compliance with state zoning enabling statutes and court decisions; (3) state permit or other regulation in lieu of local zoning which does not comply with state statutes; (4) state review of certain local facilities and operations; and (5) the Supreme Court ruling that local ordinances may not be arbitrarily, capriciously or unreasonably exclusionary.

Department Procedures for Administering Authorities

The preceding sections demonstrate that the lead Coastal Management Program agency — the Department of Natural Resources — is responsible for administering the majority of statutes which regulate or control direct and significant impacts to coastal lands or waters. In addition to enforceability relative to actions of private parties and local units of government, regulatory authorities administered by the Michigan Department of Natural Resources are enforced for Department actions as well as actions of other state agencies.

In administering these authorities, the Administrative Procedures Act establishes the process for the "... effect, processing, promulgation of state agency rules; state agency administrative procedures and contested cases and appeals in licensing and other matters; and declaratory judgements as to rules." Figure V-C illustrates the procedures, authorized by Act No. 306 which are used by the Department to promulgate administrative rules for state statutes. As shown, this process provides opportunity for public review and legislative deliberations.

Figure V-D illustrates how the provisions of the Administrative Procedures Act may be utilized by a party aggrieved by a decision to deny a permit under the authority of the Shorelands Protection and Management Act, (Act No. 245 of the Public Acts of 1970). The figure shows that an aggrieved party may first appeal the decision to the agency through a hearing and, if the results of the hearing and Natural Resources Commission's findings do not satisfy the aggrieved party, judicial review of the permit decision may be granted by circuit court.

Figure V-D also shows the general process utilized by the Department in making orders, designations or licensing and permitting decisions in accord with state statutes or Department policies, including the provisions of contested case hearings. Contested cases result when a party is aggrieved by an agency rate-making, licensing, permitting or other activity in which the agency makes a determination of the legal rights, duties or privileges of the affected party prior to judicial review in circuit court. The Natural Resources Commission and the five other Department commissions make final agency rules for the Department on contested case hearings based upon views provided by the Department and an aggrieved party.

Act No. 306 establishes that, when an individual has exhausted all administrative remedies within an agency (i.e. Commission finding), and is aggrieved by the agency decision or order in a contested case, the decision or order is subject to review by the circuit court. A petition of judicial review of a final agency decision is filed in the circuit court of the county where the petitioner resides or his principal place of business or in the circuit court for Ingham County, Michigan.

In making their ruling, the court holds unlawful and sets aside a decision or order of an agency if substantial rights of the petitioner have been prejudiced if the order is:

FIG. V-C
Promulgation of Administrative Rules

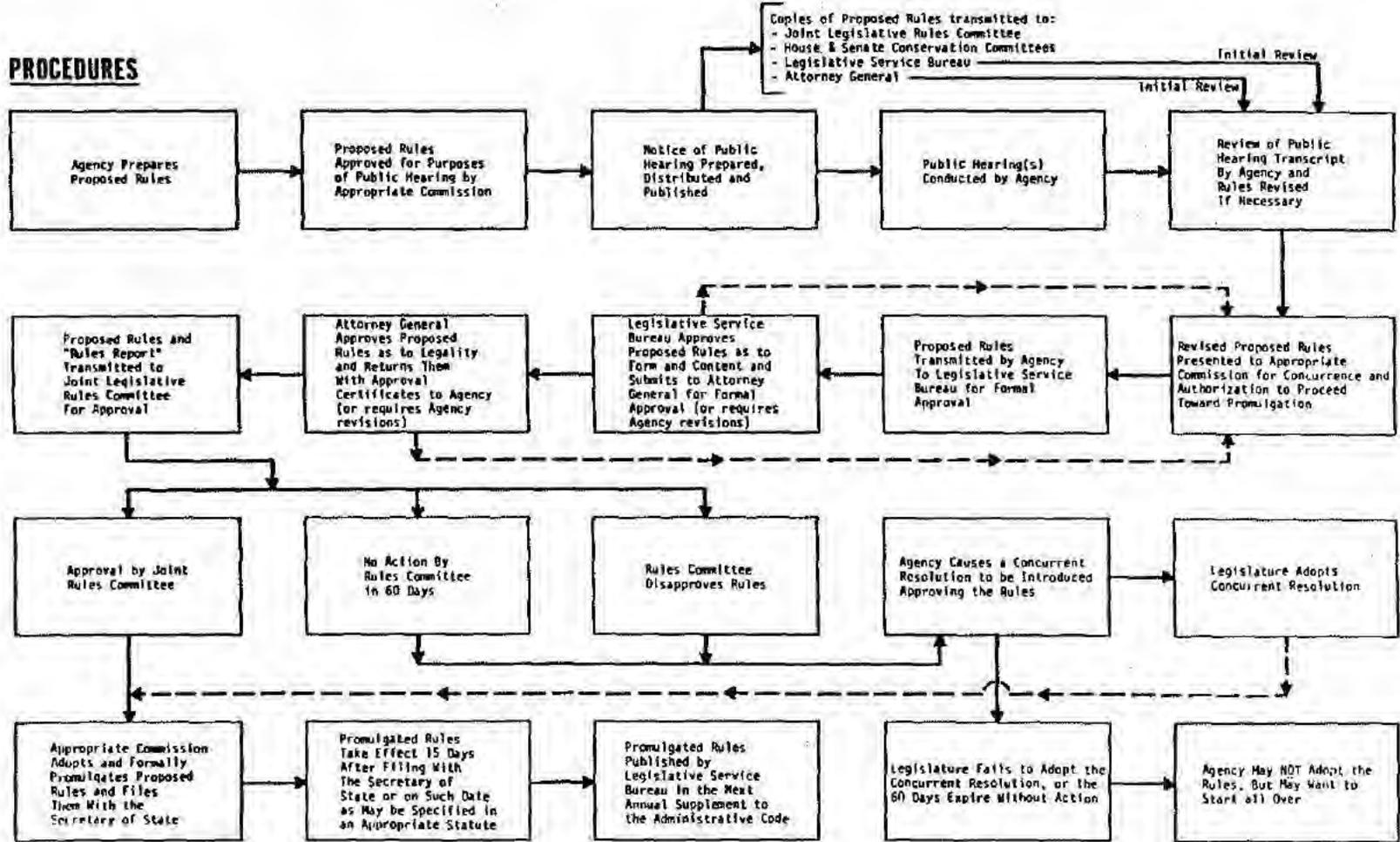
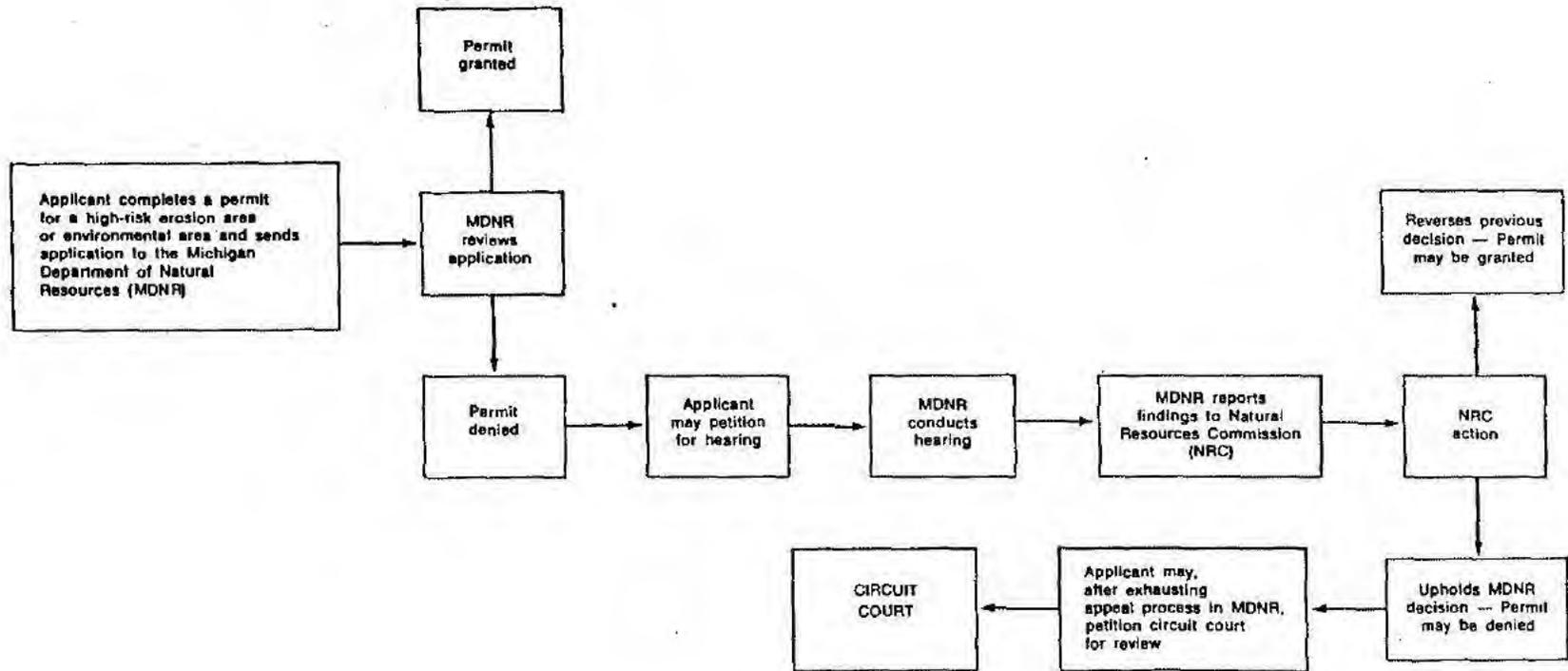


FIG. V-D
 Due Process Provisions — Permitting Authority



(1) in violation of the constitution or statute; (2) in excess of the statutory authority or jurisdiction of the administrative agency; (3) made upon unlawful procedure resulting in material prejudice to a party; (4) not supported by competent material and substantial evidence on the whole record; (5) arbitrary, capricious or clearly an abuse or unwarranted exercise of discretion; and (6) affected by other substantial and material error of law.

The court may affirm, reverse or modify the decision or order or remand the case for further proceedings.

Thus, the provisions of the Administrative Procedures Act provides for contested cases and judicial review of actions by state agencies relative to orders or rules resulting from licensing, permitting and other activities.

This section demonstrates the Department of Natural Resources significant role in administering and coordinating programs and authorities which are important to program coordination needs to improve coastal regulations and enhance technical and financial assistance efforts. Following is a discussion of the coordination responsibilities and other functions of the lead Coastal Management Program division within the Department of Natural Resources — the Division of Land Resource Programs.

PRINCIPAL COASTAL MANAGEMENT PROGRAM DIVISION

Within the Department of Natural Resources, the principal Coastal Management staff unit is located in the Division of Land Resource Programs.

Great Lake Shorelands Section

The Great Lakes Shorelands Section of the Division is solely concerned with coastal management activities. This Section's objectives are tailored to confront a range of issues and interests along Michigan's 3,200 mile shore. The Section's Coastal Management Program Unit is responsible for development and implementation of the Coastal Management Program including: (1) intergovernmental coordination; (2) federal consistency determinations; (3) grant administration; (4) liaison responsibilities including financial and technical assistance, with regional agencies and local governments; (5) formulating public participation strategies; (6) developing planning processes for shore erosion, energy facility siting, and beach access; and (7) inventorying and reviewing areas of particular concern; (8) monitoring of state agency actions to ensure consistency with the program.

In addition to the Coastal Management Program, the Great Lakes Shorelands Section also administers the Shorelands Protection and Management Act, (Act No. 245 of the Public Acts of 1970, as amended), and the Great Lakes Submerged Lands Act, (Act No. 247 of the Public Acts of 1955). Through funds provided by the Coastal Management Program, many environmental areas and high risk erosion areas have been identified and protected along the coast as mandated by Act No. 245. Act No. 247 protects the public trust in Great Lakes bottomlands through regulation of dredge and fill activities and placement of shore protection structures.

The Land Resource Programs Division administers many significant coastal authorities. In addition to the Shorelands Protection and Management Act and the Submerged Lands Act, the Division of Land Resource Programs also administers the following statutes:

- Natural Rivers Act (Act No. 231 of the Public Acts of 1970)
- Wilderness and Natural Areas Act (Act No. 241 of the Public Acts of 1972)
- Inland Lakes and Streams Act (Act No. 346 of the Public Acts of 1972)
- Soil Erosion and Sedimentation Control Act (Act No. 347 of the Public Acts of 1972)
- Farmland and Open Space Preservation Act (Act No. 116 of the Public Acts of 1974)

Division Permit Review Procedures

In accord with statutes cited above, the Division of Land Resource Programs has established procedures for review of permit applications for major coastal authorities administered by the Division. Figure V-E illustrates the permitting procedure utilized by the Division of Land Resource Programs for activities proposed under the authority of Act No. 247 of the Public Acts of 1955, as amended, the Great Lakes Submerged Lands Act.

As described in Chapter VI of this impact statement, the Division of Land Resource Programs will assure that federal consistency determinations are made for all state programs but, with the exception of statutes directly administered by the Division, will not be directly responsible for the specific review of all federal actions for compliance with all state authorities. Thus, in many cases, either other Department of Natural Resources divisions or other state agencies will make initial federal consistency findings, with the Division of Land Resource Programs serving to confirm and review state agency determinations and assure that complete consistency determinations have been executed.

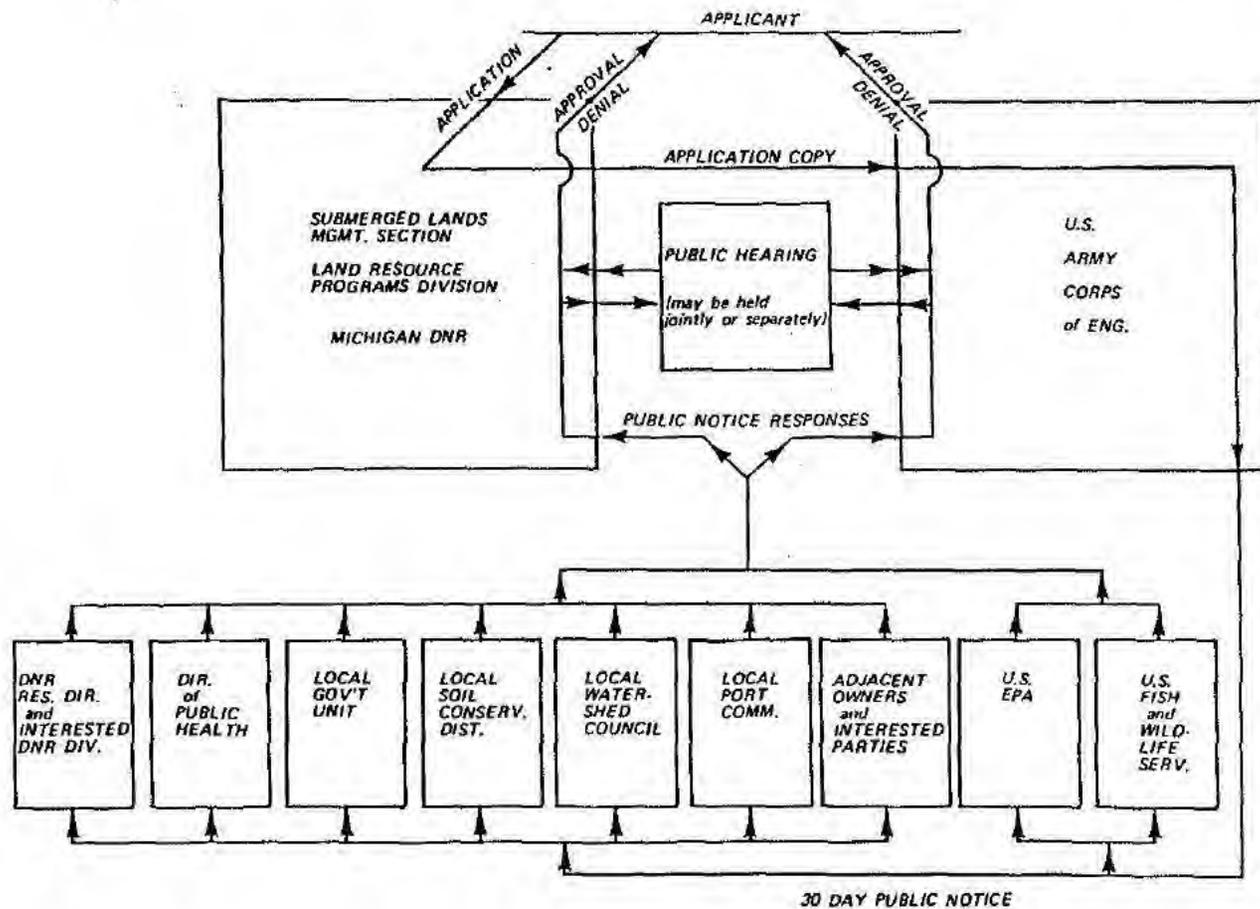
Coastal Coordination and Conflict Resolution Mechanisms

Citizen Advisory Body

On November 19, 1973, the Natural Resources Commission appointed a citizen advisory body to the Coastal Management Program Unit. Creation of the Citizens Shorelands Advisory Council was a recommendation of Michigan's *Shorelands Plan* and is consistent with Natural Resources Commission policy of maximum citizen participation in Department programs. The Council advises the Natural Resources Commission on such matters as erosion control, protection of fish and wildlife, estuarine sanctuaries, shorelands development and other issues. In advising the Commission, the Council is directed to consider all interests, including the national interest, and local governments. The Council is also directed to promote education and encourage public response to the Coastal Management Program through: (1) local and regional meetings; (2) inter- and intra-state liaison; and (3) formal public presentations. The Council reviews Department of Natural Resources programs and policies pertaining to coastal management, and reviews and makes recommendations on legislation. Council subcommittees include: the *Executive Committee*, which identifies project priority and formulates meeting agendas; the *Legislation Committee*, which reviews and sponsors coastal-related legislation; the *Committee on Conflicting and Intensive Uses*, which directs its efforts toward addressing coastal problems and issues in urban areas, coastal lakes, river mouths and bays; the *Committee on Economic Importance*, which makes recommendations on projects and issues relative to mineral and energy resources, agriculture, industry and water transportation; and *Committee on Hazards to Development and Sensitive Areas*, which examines erosion, flooding, sand dunes, islands, natural and ecological areas.

An important role of this Council is to actively solicit public involvement in the Coastal Management Program and to provide for public appearances before the

FIG. V-E
Application for Construction Permit



Council to assist in the analysis of local, state and national issues related to coastal management. The results of this involvement may be summarized before the Natural Resources Commission for their consideration in decisions regarding Department policy and actions in the coastal area.

Another important Council function includes reviewing special projects to be funded by the Coastal Management Program. The Council reviews proposed actions for consistency with factors such as: (1) program goals and objectives; (2) the overall state management program; and (3) the public interest in general. This review process provides the Coastal Management Program with information on priorities for funding under the Coastal Zone Management Act.

State Agency Coordination Body

To further coordinate coastal activities and achieve state agency consistency with this program, a Standing Committee on Shorelands and Water was organized in 1974 by the Department of Natural Resources. This Committee is comprised of members from Department of Natural Resources divisions and offices and eight other state agencies, and serves in an advisory capacity to the Coastal Management Program Unit. Committee responsibilities include:

- Identification and recommendation on priority projects and activities for Coastal Management Program consideration. This function includes screening proposed program activities to assure their consistency with state policy. The Committee also assists in developing project proposals and project priorities for funding consideration by the Coastal Management Program. Incorporated in this procedure is a review of management recommendations for Action Areas of Particular Concern. The Committee reviews area of particular concern nominations to identify where other sources of funding could be utilized to address coastal problems and opportunities.
- Evaluating state agency activities for consistency with Coastal Management Program goals, objectives, principles, policies, and Legislated Areas of Particular Concern: Consistency evaluations involve state agency review of coastal projects and activities through Committee participation and environmental review procedures described later in this text. The Committee actively considers the national interest through coordination of programs managed with federal funds with the Coastal Management Program such as the state's "208 program", authorized under the federal Water Pollution Control Act Amendments and the state's air quality program, which is administered to incorporate requirements of the federal Clean Air Act. The Committee structure provides a forum for conflict identification and mediation in the event of nonconsistent state

agency program actions within the coastal area. Formal procedures for conflict resolution are provided in established environmental review procedures.

- Coordination on federal permit reviews and projects: Federal agency activities in the coastal area are evaluated for consistency with the Coastal Management Program. In particular, on projects or developments of major significance, the Committee provides a forum for discussion and deliberation prior to formal action to determine federal agency consistency, (see also Chapter VII).

The Committee on Shorelands and Water Coordination is divided into Intra-departmental (only Department of Natural Resources) and inter-departmental subcommittees. As noted, most programs which are a focus of coordination by the Coastal Management Program are administered by the Department of Natural Resources. In particular, two Department units provide substantial intra-departmental coordination functions:

- The Environmental Enforcement Division (formerly the Office of Program Review and Project Clearance) is concerned with expediting the review and decision-making process for projects requiring a number of Department approvals or permits, such as environmental impact statements developed in accord with Executive Order 1974-4. This division is generally concerned with projects of large scale, or those projects which may have significant impacts or are highly controversial. The division provides for review and recommendations on large scale projects and developments having potentially significant impacts in the coastal area. Through Committee participation, this division facilitates multi-division discussion, recommendations, and conflict resolution of major coastal projects requiring multi-division review prior to formal environmental review procedures.
- The Office of Policy Development evaluates Department policy and the interrelationships of policies. This office drafts new or revised policies for consideration by the Executive Office of the Department of Natural Resources and the Natural Resources Commission. The Office of Policy Development provides recommendations on coastal-related policies and examines new or revised Departmental policies for consistency with all Department programs, including the Coastal Management Program.

The inter-departmental Subcommittee on Shorelands and Water Coordination includes representatives from nine state agencies: Participating agencies include: (1) Public Health, (2) State Highways and Transportation, (3) Agriculture, (4) Labor, (5) State, (6) Commerce, (7) Treasury, (8) Management and Budget, and (9) Natural Resources.

Programs vested under the authority of these agencies, which comprise the interdepartmental committee include intergovernmental relations, A-95 Review coordination, soil and water management, port development, plat review, historic preservation, campground inspection and others. As with the Intra-departmental Subcommittee, the Inter-departmental Subcommittee facilitates discussion and conflict resolution and develops recommendations on coastal resource projects or activities which require multi-agency review, prior to formal environmental review procedures. The Subcommittee provides a forum for determining state agency consistency of projects and plans with the Coastal Management Program.

Executive Office

The Governor is responsible for supervising all state agencies in the Executive Branch, except as otherwise provided for in the State Constitution. With the advice and consent of the Senate, the Governor appoints directors of most state agencies not headed by elected officials, as well as various boards and commissions, including the Department of Natural Resources' Natural Resources Commission. The Governor also has the authority to make changes in the organization of the Executive Branch or in the assignment of functions among its units which he considers necessary for efficient administration.

As authorized under Article V of the Constitution of the State of Michigan of 1963, the Governor may initiate court proceedings in the name of the state to enforce compliance with any constitutional or legislative mandate, or to restrain violations of any constitutional or legislative power, duty or right by any officer, department or agency of the state or any of its political subdivisions. Thus, the Governor has authority to intervene through judicial review to resolve major conflicts involving state agencies and political subdivisions.

Authority conveyed to the Governor by the 1963 Michigan Constitution as well as the Governor's role in: (1) coordinating state policy through the system of subcabinets and directly with department heads; and (2) making decisions on major state activities with significant environmental impact through the review of environmental impact statements, strengthens the Governor's role as an essential point of conflict resolution for the Coastal Management Program.

Governor's Cabinet Committee on Environment and Land Use

To provide for ongoing communication and coordination of state agency program policies, the Governor has established five subcabinets, composed of directors of Michigan state agencies and the Governor. The Governor's Cabinet Committee on Environment and Land Use is composed of representatives from the following

Michigan agencies: Natural Resources, Public Health, Commerce, Agriculture, State Highways and Transportation, and Management and Budget. The objectives of the committees are to review ongoing program operations and to identify emerging problems in the implementation of Executive Office policies in order to: (1) coordinate review of implementation of executive policies; (2) provide for regular involvement of appropriate agency directors in the development of Executive Office program policies; (3) resolve interdepartmental policy and communication differences within established gubernatorial policy; and (4) coordinate the development and implementation of Executive Office legislative recommendations in cooperation with department directors, (Executive Directive of the Governor, October 1, 1975).

Thus, the Cabinet Committee on Environment and Land Use provides an important forum for policy coordination and conflict resolution among state agencies and the Executive Office as well as an important policy relationship with other agencies for the Coastal Management Program.

Michigan Environmental Review Board

The Michigan Environmental Review Board serves as a formal mechanism, through review of state and federal environmental impact statements, to encourage coordination, consistency and conflict resolution of state agency projects and activities.

The Michigan Environmental Review Board, (MERB), was created by Executive Order 1974-4. Implementation of this Executive Order requires that all major activities of each state agency having a potentially significant impact on the environmental or human life be the subject of a formal environmental impact statement, to be reviewed by MERB with the aid of the Inter-Departmental Environmental Review Committee, (INTERCOM). Executive Order 1974-4 requires MERB to recommend to the Governor those actions of state agencies that should be suspended or modified because of a significant implication for the quality of the state's environmental or human life. Use of public involvement procedures and public hearings is encouraged as part of the MERB decision-making process. Environmental impact statements (EIS) are available prior to public hearings. MERB may also make policy recommendations on specific issues (e.g. energy development, commercial navigation, etc.), for the Governor's consideration.

EIS's are prepared for major state activities when: (1) requested by the Governor; (2) the director of an agency determines that a proposed policy or administrative action may result in or create significant environmental effects; (3) an activity raises general public concern or controversy; (4) MERB recommends such action upon review of a negative declaration EIS; or (5) it is specifically requested by MERB.

MERB also maintains a list of interested citizens, citizen groups, governmental agencies and public media to which a monthly environmental impact statement status list and Board agenda is distributed.

Since MERB is composed of 10 members of the general public appointed by the Governor, one of which is selected Chairman, and seven members from state agencies, including the Department of Natural Resources, it provides an

important forum for resolving coastal conflicts and making policy recommendations to the Governor by reviewing environmental impact statements and providing maximum opportunity for all interests to be heard and considered. MERB reviewed "State of Michigan Coastal Management Program and Draft Environmental Impact Statement", and formally advised Governor Milliken that the Board did not wish to delay approval of the Program by the United States Department of Commerce, and indicates a desire to continue to work with the Department during program implementation.

Figure V-F illustrates the process used by state agencies in the formulation and review of environmental impact statements.

Executive Order 1974-4 establishes that environmental impact statements be a major part of decision-making in each state agency. This is based upon the premise that environmental protection will be best provided when environmental and economic impacts are balanced in decision-making processes.

Department of Natural Resources' procedure for preparing and processing environmental impact statements is set forth in Department Procedure #1036.6, January 1, 1977. This procedure establishes: (1) three categories of actions that can require environmental impact statements; (2) who will prepare environmental impact statements; and (3) types of projects or programs requiring an environmental impact statement. A procedure is established for review and action on Departmental environmental impact statements: (1) within the Department; (2) by the Michigan Environmental Review Board and the Governor; and (3) procedures for review and action on environmental impact statements by other agencies at both state and federal levels. From the perspective of the Coastal Management Program, integration of public or private interests', local, areawide and state governments' review of environmental impact statements which impact coastal resources is an important coordination forum. Thus, Michigan's environmental review procedure provides a full opportunity for review and input on environmental impact statements, and a formal mechanism through Department of Natural Resources representation on MERB and INTERCOM to promote program consistency and conflict resolution. Executive Order 1974-4 also assists the state in accomplishing objectives of the Michigan Environmental Protection Act as described below.

Michigan Environmental Protection Act

The Environmental Protection Act (Act 127 of the Public Acts of 1970) represents a comprehensive effort on the part of the Michigan Legislature to preserve, protect and enhance the natural resources of Michigan. The Act is designed to accomplish two results: (1) to provide a procedural cause of action for protection of Michigan's natural resources; and (2) to prescribe the substantive environmental rights, duties and functions of subject entities. (see Highway Comm. v. Vanderkloot, 392 Mich 159).

The Act provides that the Attorney General, any political subdivision of the state, any instrumentality or agency of the state, or a political subdivision, any person, partnership, corporation, association, organization or other legal entity

FIG. V-F
Five Basic Steps in the Review
of EIS's* and NDEIS's**

STEP 1

AGENCY PREPARES EIS OR NDEIS:

Prepared usually by divisions proposing the action

STEP 2

MICHIGAN ENVIRONMENTAL REVIEW BOARD (MERB)

Receives EIS or NDEIS from agency
and refers the EIS to the Interdepartmental
Environmental Review Committee (INTERCOM).

STEP 3

INTERDEPARTMENTAL ENVIRONMENTAL REVIEW COMMITTEE:

Makes recommendations to MERB.

If INTERCOM finds EIS inadequate, the EIS
is referred back to the submitting agency
(preceding steps are then repeated).

If INTERCOM finds EIS sufficient, it will
recommend to MERB that the EIS be approved.

STEP 4

MICHIGAN ENVIRONMENTAL REVIEW BOARD:

Determines if EIS is sufficient and if
proposed action should proceed.
If activity is environmentally unacceptable,
MERB may recommend to the Governor that the
proposed activity be halted or modified.

STEP 5

GOVERNOR:

May request that the agency not proceed
with the proposed action or modify it
so as to reduce or remove the
environmental hazards.

***ENVIRONMENTAL IMPACT STATEMENT (EIS)**

A written analysis of the environmental aspects of any proposed policy, project or program that by virtue of its scope or complexity could cause a sizable or serious impact on or alteration of the human and natural environment or could cause a significant alteration in the quality of human life.

****NEGATIVE DECLARATION EIS (NDEIS)**

A short EIS on a major project or program with very little or no negative impact.

may maintain an action in circuit court having jurisdiction where the alleged violation occurred or is likely to occur for declaratory and equitable relief against any other party for the protection of the air, water and other natural resources and the public trust from pollution, impairment or destruction.

Of major significance is the decision rendered in Highway Comm. v. Vanderkloot (392 Mich 159) which stated that, "... while the constitutional provision concerning protection of Michigan's Natural Resources creates a mandatory legislative duty to act to protect Michigan's natural resources, the Legislature has acted to fulfill the duty and the substantive environmental duties placed on the Michigan State Highway Commission by the Environmental Protection Act are relevant to judicial review in that failure by the Commission to reasonably comply with those duties may be the basis for a finding of fraud or abuse of discretion..." In Highway Comm. v. Vanderkloot, the court affirmed Governor Milliken's actions with respect to requirements for preparing environmental impact statements "... The Governor's Executive Order (Executive Order 1974-4) required all state agencies to review all major activities with respect to their impact on the environment and particularly to review; evaluation of alternatives to the proposed action that might avoid some or all of the environmental effects ... and ... the possible modification to the project which would eliminate or minimize adverse environmental effects... it usefully illustrates... a proper executive interpretation of the Michigan Constitution of 1963, Article 4 and, more particularly, the no feasible and prudent alternative provision of the Michigan Environmental Protection Act.

Thus, the Michigan Environmental Protection Act provides for resolution of conflicts involving coastal resources through judicial review of actions or proposed actions by any part in the state.

PROGRAM IMPLEMENTATION ROLES

The Coastal Zone Management Act requires citizen involvement in the development and implementation of coastal management programs. Special efforts, integrated into the development of Michigan's Coastal Management Program, assure continued involvement of citizens, local units of government, and areawide agencies. As described in the following, local and areawide participation will continue to be a key element during implementation of the Coastal Management Program. State policies, described in Chapter III, demonstrate strong commitments toward strengthening state-local partnerships in conducting governmental responsibilities. Extensive efforts were made during program development to minimize conflicts between the Coastal Management Program and existing plans and programs of local units of government. A program objective is to accelerate and provide support for well conceived local and areawide programs operating in the coastal area.

During program implementation, five program levels will operate to insure maximum input and equitable distribution of program benefits:

- Level I — Citizens, Agencies and Groups
- Level II — Local Governmental Units
- Level III — Areawide Agencies
- Level IV — State Agencies
- Level V — Federal Agencies

Program Level I

As conveyed throughout this program description, a variety of citizen, agency and group contributions are utilized in formulating Coastal Management Program strategies. During program implementation, participants at this level will continue to contribute by:

- Participating in the area of particular concern process: Any individual, group or agency may nominate specific coastal locations for special management attention. Nominations may be made either to the Citizens Shorelands Advisory Council, Michigan Department of Natural Resources or to participating coastal planning and development regional agencies. This process provides the opportunity to identify problems, issues and conflicts at the local level, and to initiate or accelerate action programs at the local, regional or state level to address management needs.
- Assisting in formulating local goals for coastal management: Advisory assistance may be provided by program level I participants and, in many cases requested by local, regional or state agencies. Formulation of comprehensive goals and objectives which represent a wide variety of interests will provide direction for future funding decisions as well as providing one basis for performance evaluations.
- Serving on coastal management advisory bodies: Where local, regional or state agencies have organized advisory bodies to direct program efforts, program level I participants may serve and appear before such bodies. For example, at the state level, the Citizens Shorelands Advisory Council, a group of 15 concerned citizens from around the state, advises the Michigan Natural Resources Commission on coastal related policies and Department of Natural Resources actions.
- Review of documents and reports relating to coastal management: Any participant at program level I may review and provide recommendations on program documents or progress. This

action provides local, regional and state agencies with information necessary to make decisions which reflect the public interest.

Information derived from program level I will be useful in developing action proposals for funding consideration, formulating ongoing coastal management work programs, and identifying both short- and long-term coastal management related priorities. For example, by participating in the area of particular concern process, program level I participants convey coastal related concerns to local, regional or state agencies, providing one important basis for decision-making on coastal matters.

Program Level II

Program level II consists of county, township, city or village units of government. Traditionally, under statutory provisions or general police power authorities, local governments are relied upon in Michigan to carry out public work projects, resource planning and zoning and the administration of certain state-delegated authorities. Local government officials are readily accessible and directly accountable to their constituents and are best equipped to identify the needs of coastal residents for use of coastal resources. Utilization of existing resource planning and zoning at the local level assists the state in avoiding duplication of effort and also reduces administrative burdens upon the state. Throughout the development of the Coastal Management Program, and especially during program public hearings and meetings, representatives of local governmental units expressed a strong desire to continue and expand their role during program implementation. The Coastal Management Program is committed to this objective.

Program level II roles will include such tasks as: (1) formulating and periodically evaluating local goals and objectives for coastal management; (2) identifying, screening and prioritizing area of particular concern nominations for management consideration; (3) establishing citizens and agency coastal advisory bodies; (4) developing annual work programs to address identified coastal problems and opportunities; and (5) submitting project proposals to the Michigan Coastal Management Program for funding consideration; and (6) administer certain state-delegated authorities at the local level, such as provisions of the Shorelands Protection and Management Act.

With respect to Section 306(c)(B) of the Coastal Zone Management Act, a procedure for state notice, consultation and coordination with local governments and others is provided in provisions of the state's Administrative Procedures Act. The Act provides for full public notice on major agency actions such as rule making and for public hearings and contested case hearings in the event an agency decision is contested. Beyond the formal statutory requirement, the Coastal Management Program is committed to consulting with local units regarding program decisions in order to minimize conflicts in coastal decision-making.

Program Level III

Program level III consists of agencies established to coordinate and address areawide concerns. Such agencies consist primarily of coastal planning and development regional agencies, although such agencies as Resource Conservation and Development, Watershed Steering Committees, intergovernmental compacts, etc., are also included.

A variety of local and areawide involvement functions are performed under subcontract from the Michigan Department of Natural Resources by 10 coastal planning and development regions. The regions, established in 1968 by Executive Order, serve as areawide coordinators of programs and plans affecting member local units within the regional boundary. Major functions include:

- Identification of land use trends, goals and objectives, and problems and issues in each of the 10 coastal regions.
- Identification of priority areas of particular concern for management assistance from hundreds of public and agency nominations.
- Participating with coastal management training and information sessions.
- Assisting local units with resource management techniques.
- Assisting in the development of and coordination of the Coastal Management Program and the state's "208" program.

Accordingly, planning and development regional agencies have developed and provided information relating to local coastal resource issues and needs as well as existing land use trends, policies and controls. This information is used in Program efforts to minimize conflicts in planning and to stimulate local activities which best address problems and opportunities.

To avoid conflicts, a necessary requirement of such agencies is that project proposals be submitted to the Coastal Management Program for funding consideration formulated with input from program levels I and II participants. These agencies may establish areawide goals and objectives in concert with local needs; formulate local citizen and agency advisory bodies on coastal management; participate in the area of particular concern process by identifying, screening and prioritizing nominations; and submit project proposals to the Michigan Coastal Management Program for funding consideration on behalf of local governmental agencies or regional agencies. Copies of project proposals submitted by local governmental units will be distributed to affected planning and development regional agencies for their review and information. It is anticipated that, in many instances, this review will enhance the likelihood of funding local governmental unit proposals.

Coastal planning and development regional agencies also play a vital program

role as clearinghouses for review of A-95 notices and state and federal environmental impact statements. Through this review process, the program is better able to make decisions regarding federal agency consistency with Michigan's Coastal Management Program.

Planning and development regions provide technical services and training to member local governmental units on such matters as zoning ordinances and resource planning and management. Through this function, these agencies assist local governmental units in developing plans and ordinances which assure effective local action in response to local coastal issues.*

Project Proposals

Any established local governmental unit (county, township, city or village governments), or areawide agency may submit project proposals to the Michigan Coastal Management Program for technical assistance and/or funding consideration. To be considered for funding, agencies must demonstrate capability to: (1) formulate coastal management action priorities; (2) participate in the identification, screening and prioritizing of areas of particular concern; (3) develop work programs for coastal management which recognize local support and priority coastal management needs; (4) deliver performance and financial reports on projects to the Michigan Coastal Management Program; and (5) provide for required local matching effort.

These requirements assure that local governments and areawide agencies establish priority recommendations for addressing pressing coastal issues. By participating in the area of particular concern process, each local government or areawide entity submitting project proposals for Coastal Management Program consideration may be able to determine the levels of support and nonsupport for the proposed activity. For example, a project proposal should indicate: (1) how the proposed action relates to coastal management priorities; (2) its relationship to area of particular concern management recommendations; and (3) degree of local support. Through this process, local governments may identify and seek to resolve resource conflicts at the local level — prior to formal project proposal submission.

To be considered for program funding, project proposals must meet eligibility requirements established under the authority of the federal Coastal Zone Management Act of 1972. Project proposals must be submitted to the Coastal Management Program Unit within a specified time to allow for review and contractual refinements. As previously stated, all funded special projects will be subject to review both during the project phase and at the conclusion of the project. This review will include both written performance and financial reports, to be compiled by the submitting agency and on-site assessments, to be conducted by the Michigan Department of Natural Resources.

*For example, any local governmental unit may provide for restrictions in zoning ordinances, in compliance with state guidelines, to administer the provisions of the Shorelands Protection and Management Act (Act 245 of the Public Acts of 1970, as amended). In lieu of such local zoning, the state will enforce restrictions regarding identified high risk erosion and environmental areas through permit, Appeal and permit procedures for other state authorities is more fully described in the Direct and Significant Authorities section of this text.

To solicit project proposals, the Coastal Management Program Unit will contact each local governmental unit and areawide agencies annually to provide the following information: (1) format for project proposal submittal; (2) schedule for project proposal submittal; and (3) eligibility requirements for funding, established under the authority of the Coastal Zone Management Act. It is expected that a three-to-four month period will be available for local units to develop and submit project proposals to the Michigan Department of Natural Resources.

Types of Projects to be Considered

Criteria for determining project eligibility will be communicated with the annual notice for proposals. Present federal regulations provide for activities described in Chapter III of this impact statement under the heading "Action Programs". In general, tasks relating to feasibility and engineering studies to address priority areas of particular concern, such as recreational boat launching facilities, establishing local regulations in conformance with state guidelines for local unit administration of certain state delegated authorities, commercial port and harbor studies, and others will be eligible.

Project proposals submitted to the Coastal Management Program, which are either ineligible or of low priority for funding will be circulated to state agencies with other sources of funding, using the Standing Committee on Shorelands and Water Coordination as a medium of exchange.

Program Level IV

Participants at this program level include all state agencies, with the major focus being the Michigan Department of Natural Resources' Coastal Management Program, the Standing Committee on Shorelands and Water Coordination and the Citizens Shorelands Advisory Council.

The Michigan Coastal Management Program receives all project proposals for program funding consideration. The Coastal Management Program Unit initially screens project proposals to identify funding eligibility, prepares federal grant applications and allocates implementation funds to local units and state agencies, evaluates project performance and financial reports, conducts on-site investigations of projects, and consults actively with all previously mentioned program level participants to minimize and resolve conflicts concerning coastal activities.

The Standing Committee on Shorelands and Water Coordination serves three roles: (1) review of project proposals to assure consistency with state policy; (2) submits project proposals to the Coastal Management Program for funding consideration; and (3) reviews federal and state actions to determine consistency with the Coastal Management Program.

As a part of the overall screening process for project proposals, each representative of the Standing Committee on Shorelands and Water Coordination is provided copies of screened project proposals and provides information to the Coastal Management Program regarding the proposed projects' consistency with state policy

and programs.

In addition, state agencies may submit project proposals to the Coastal Management Program for funding consideration. These projects, in general, propose actions which have larger than local coastal impact. For example, a state agency may submit a proposal which provides for more effective administration of state statutes in order to improve the delivery of public services in the coastal area. For project proposals which impact specific resources or locations, the submitting agency must document the degree of local support or nonsupport for the activity, using such means as the area of particular concern process and direct contact with local and regional agencies. State agency project proposals must follow the same time and eligibility requirements established by the Coastal Management Program Unit for project proposals emanating from local or areawide agencies.

In addition, the Standing Committee will review area of particular concern nominations and project proposals which are either ineligible or low priority for Coastal Management Program funds, and to ascertain whether or not other funding sources may be utilized to address identified management needs.

The Citizens Shorelands Advisory Council, a group of 15 concerned citizens from around the state, review annual Coastal Management Program grant applications and evaluate consistency of the elements of the grant application with program goals and objectives. The Council may identify areas where there is either strong public support for or conflict with a proposed activity, which may, in some instances, necessitate grant revisions or more detailed review prior to submittal of grant applications to the federal Office of Coastal Zone Management.

Program Level V

A major participant in this level is the federal Office of Coastal Zone Management. This agency receives and reviews each grant application from the Department of Natural Resources which requests funding under the Coastal Zone Management Act. The agency reviews all contractual agreements and provides guidance on project eligibility. The Office provides technical assistance to various coastal states and their advisory bodies. The Secretary of Commerce acts as the first level appeal officer in cases of federal inconsistency with approved state programs.

Other federal agencies may provide financial and technical assistance in the implementation of management recommendations, and must notify the Coastal Management Program Unit of any projects, programs or permits which may significantly affect the coastal zone so that a federal consistency determination can be made by the state.

Federal agency program roles are more completely described in the next chapter.

SUMMARY

Michigan's Coastal Management Program will utilize regulatory authorities existing at the state and local levels, technical and financial assistance and intergovernmental coordination and cooperation to implement the program. The program will focus these management techniques toward protecting essential coastal resources and assuring wise use and management.

These management techniques and capabilities — which reside primarily with the Department of Natural Resources — will be coordinated by the Coastal Management Program utilizing such forums as the Natural Resources Commission, the Governor's system of cabinet committees, the Michigan Environmental Review Board and the Standing Committee on Shorelands and Water Coordination.

Provisions of the Administrative Procedures Act and the Michigan Environmental Protection Act serve to resolve conflicts through contested case hearings and judicial review. The Natural Resources Commission and the Michigan Environmental Review Board also act to resolve conflicts through consideration of all interests in agency decision-making and in making recommendations on environmental impact statements.

Coordination at the local level is achieved through the Citizens Shorelands Advisory Council, participating regional agencies, and through program allocations of technical and financial assistance.

Michigan's approach for integrating program roles and responsibilities into a comprehensive Coastal Management Program will provide benefits for the citizens of the state, including:

- Technical and financial assistance to local governments, regional agencies and state agencies to solve coastal problems and issues.
- Improved management of Michigan's coast through streamlined permit procedures and financial assistance for state and local regulatory programs.
- The opportunity for maximum public involvement in identifying priority areas for program attention.
- Technical assistance for property owners and local governments to assure wise management and proper development in coastal hazardous areas.
- Increased awareness and appreciation for the importance of coastal resources.
- The opportunity to test and evaluate new and innovative management techniques relating to waterfront developments, erosion and flood control, wetland management, historic preservation and restoration and others.

Michigan is well organized and has the necessary authorities to implement an effective Coastal Management Program to protect coastal resources and solve coastal problems. Numerous mechanisms are in place to provide for state agency coordination, conflict resolution and, where necessary, judicial review.

The program will use financial assistance provided by the United States Department of Commerce to improve its management capabilities for coastal resource management to insure Michigan's legacy of concern for the Great Lakes is continued and improved, so that future generations may enjoy the magnificent coastal resources of the State of Michigan, the Great Lake State.

Chapter VI

Federal Agency Program Roles and Consideration of the National Interest

One objective of Michigan's Coastal Management Program is to strengthen coordination and cooperation among federal, as well as local and state agencies and interests. This chapter focuses on: (1) forums utilized for continued federal coordination and consultation; (2) the process for evaluating and assuring federal agency consistency with program provisions; and (3) mechanisms which provide for consideration of the national interest in Michigan's coastal area.

FEDERAL AGENCY CONSULTATION AND COORDINATION

Michigan's experience demonstrates that federal-state coordination can assist in achieving mutually desirable goals for coastal management. Examples include the coordination of off-road vehicle regulations on state and federal lands; coordination of permit processes between the United States Army Corps of Engineers and the state relative to activities on Great Lakes bottomlands; and state-federal efforts to protect scarce breeding habitats of certain rare and endangered species.

The Coastal Management Program will strive to strengthen this coordination effort. During program development, over 500 contacts were made with federal agencies to request comments, solicit statements of national interest, and answer questions. A total of 20 public meetings and 13 public hearings were conducted to provide program information and receive comments on program documents. Many federal agencies were present at these sessions to discuss their program concerns. Michigan actively participates on the Great Lakes Basin Commission's Coastal Zone Standing Committee which provides a forum for state-federal interaction. As described in the following, these and other efforts will be continued during program implementation to insure federal-state consultation and coordination, and to facilitate federal consistency determinations and consideration of the national interest.

Federal Agency Program Participation

To assure that federal agency programs and interests were recognized in the Coastal Management Program, federal agencies were contacted in early 1975 to ascertain various federal program responsibilities and authorities and to solicit comments on the developing program through review of documents which describe various program elements. Contacts with at least 30 federal agencies have been established on a formal and/or working basis. Several of these federal agencies coordinate programs and responsibilities with one or more state agencies, (e.g. Environmental Protection Agency). Following is a list of federal agencies consulted by the Coastal Management Program.

COUNCIL ON ENVIRONMENTAL QUALITY

DEPARTMENT OF AGRICULTURE

- Forest Service
- Soil Conservation Service

DEPARTMENT OF COMMERCE

- Economic Development Administration
- Great Lakes Environmental Research Laboratory
- Maritime Administration
- National Marine Fisheries Service
- National Oceanic and Atmospheric Administration

DEPARTMENT OF DEFENSE

- Michigan Air National Guard
- U.S. Air Force
- U.S. Army
- U.S. Army — Corps of Engineers
- U.S. Navy

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

DEPARTMENT OF INTERIOR

- Bureau of Indian Affairs
- Bureau of Land Management
- Bureau of Mines
- Heritage Conservation and Recreation Service

- Fish and Wildlife Service
- Geological Survey
- National Park Service

DEPARTMENT OF JUSTICE

DEPARTMENT OF STATE

- Office of Environmental Affairs

DEPARTMENT OF TRANSPORTATION

- U.S. Coast Guard
- Federal Aviation Administration
- Federal Highway Administration
- Federal Railroad Administration
- St. Lawrence Seaway Development Corporation

DEPARTMENT OF TREASURY

ENVIRONMENTAL PROTECTION AGENCY

ENERGY RESEARCH AND DEVELOPMENT
ADMINISTRATION

GENERAL SERVICES ADMINISTRATION

FEDERAL ENERGY ADMINISTRATION

FEDERAL ENERGY REGULATORY COMMISSION

FEDERAL POWER COMMISSION

NUCLEAR REGULATORY COMMISSION

Each of these agencies received copies of program documents, including "A Proposed Program for Michigan's Coast" and "State of Michigan Coastal Management Program and Draft Environmental Impact Statement". The federal agencies also receive "The Shorelands Watch", a monthly program newsletter, area of particular concern nomination forms and other materials. Ongoing state-federal agency consultation and coordination is facilitated by federal agency nominations for areas of particular concern and by collaborating jointly with the state on technical and financial assistance programs relative to erosion protection, wetlands management, location of sites for polluted dredged materials, and others. Specific requests were made to federal agencies to provide the Coastal Management Program with descriptions of federally owned lands along the coast, (see also Chapter II). Michigan's Coastal Management Program efforts to identify federal agency responsibilities, program

concerns and interests is summarized in Appendix A of "State of Michigan Coastal Management Program and Draft Environmental Impact Statement". All substantive federal agency comments and area of particular concern nominations will continue to be considered in the Coastal Management Program and integrated wherever possible.

State-Federal Interagency Agreements

To achieve mutually desirable objectives in resource management, state and federal agencies have formulated a number of interagency agreements which complement the goals of the Coastal Management Program and assure close state-federal coordination. For example, a memorandum of understanding between the Department of Natural Resources and the United States Army Corps of Engineers establishes a joint process for reviewing applications for permits and conducting public hearings with respect to actions proposed under the federal River and Harbor Act of 1899, the federal Water Pollution Control Act amendments of 1972, and state Act No. 247 of the Public Acts of 1955 and state Act No. 346 of the Public Acts of 1972.

Another interagency agreement exists between the National Park Service and the state to insure coordination on wildlife management relative to Sleeping Bear National Lakeshore.

Administration of Federal Programs

The Department of Natural Resources administers some 41 programs through federal funds, authorized by federal legislation. Examples include water pollution control programs, administered by the Department's Water Quality Division in conjunction with the Environmental Protection Agency and Public Law 84-666 and Public Law 95-200, and programs which provide for outdoor recreation areas and facilities, administered by the Department's Recreation Services Division in conjunction with the National Heritage Conservation and Recreation Service and the Land and Water Conservation Fund.

Through funds provided by federal agencies, the state is able to administer programs to achieve both state and national goals in resource management.

Great Lakes Basin Commission

As previously noted, Michigan actively participates on the Great Lakes Basin Commission's Standing Committee on Coastal Zone Management. The purpose of this committee is to assist Great Lakes states in achieving beneficial interstate and federal agency coordination in coastal management programs. Many representatives of federal agencies regularly attend committee meetings to discuss and resolve conflicts concerning such topics as transportation of hazardous and toxic materials, winter navigation, pollution abatement, etc. Through committee participation, the Coastal Management Program actively consults with federal agencies to identify and consider concerns and program recommendations.

Fish and Wildlife Coordination Act

Since 1934, the Department of Natural Resources has complied with provisions of the Fish and Wildlife Coordination Act of 1934, as amended, which states that, "... any department or agency of the United States, or any public or private agency operating under federal permit or license, proposes to impound, divert, channel or otherwise control or modify a stream or body of water for any purpose shall consult with the United States Fish and Wildlife Service, Department of the Interior, and with the head of the agency exercising administration over the (fish and) wildlife resources of the particular state wherein the proposed activity is to be constructed with a view to the conservation of fish and wildlife resources by preventing loss of and damage to such resources, as well as providing for the development and improvement thereof in connecting with water resource development."

The Act provides for cost allocation and cooperative funding arrangements to carry on mitigation, land acquisition and necessary investigations. It also requires that any report submitted to Congress supporting a recommendation for authorization of any new project for the control or use of water must include an estimation of fish and wildlife benefits or losses to be derived. Each report identifies those benefits to be derived from measures recommended specifically for the development and improvement of fish and wildlife resources. The Fish and Wildlife Coordination Act does not apply to impoundments of less than 10 acres, or to activities for or in connection with programs primarily for land management and use carried out by federal agencies with respect to federal lands under their jurisdiction. In addition to the Fish and Wildlife Service, Michigan consults with the National Marine Fisheries Service on matters relating to compliance with mandates of the Act.

Review of Environmental Impact Statements

The National Environmental Policy Act of 1969 (NEPA) requires that federal agencies diligently assess the environmental impacts of any "major" actions. The Act requires the preparation of an environmental impact statement (EIS) for any "major federal action significantly affecting the quality of the human environment." These provisions have been liberally interpreted by the courts to cover a wide range of federal actions including private projects that require federal permits, federal assistance and direct federal projects or programs.

Michigan's authority for preparation and review of environmental impact statements is established by Executive Order 1974-4, (see also, Chapter V). Executive Order 1974-4 satisfies NEPA mandates by requiring that all major activities of each state agency having a potentially significant impact on the environment or human life be the subject of a formal environmental impact statement, to be reviewed by the Michigan Environmental Review Board (MERB) and the Interdepartmental Environmental Review Committee (INTERCOM). Through review of state and federal agency environmental impact statements, MERB and INTERCOM serve as a formal mechanism for coordination and resolution of conflicts among state and federal activities, consistent with the spirit and intent of the National Environmental Policy Act of 1969.

As established by Executive Order 1974-4, the Department of Natural Resources

is a permanent member of both the Michigan Environmental Review Board and the Interdepartmental Environmental Review Committee. As described in Chapter V, Executive Order 1974-4 requires each state agency to forward to the attention of the Governor, an environmental impact statement on each proposed major action that may have significant impact on the environment or human life. Impact statements which are required by regulation of state or federal agencies comply with the requirements of the Executive Order.

The Michigan Environmental Review Board, also established by the Executive Order, receives environmental impact statements and forwards copies to INTERCOM within five days. INTERCOM has 40 days to review and recommend a course of action to MERB. MERB considers these recommendations in reviewing the environmental impact statement and may recommend to the Governor actions of state agencies that should be suspended or modified if such actions should seriously threaten the quality of the environment or human life.

In making recommendations to the Governor on federal or state agency environmental impact statements, the Board considers all interests and views as may be presented formally to the Board. Thus, private citizens, groups, state or federal agencies, etc., may appear before the Board and offer recommendations on environmental impact statements. This process provides for coordination and integration of these interests in Board recommendations to the Governor. As described later in this chapter, the provisions of Executive Order 1974-4 provide an important forum for considering the national interest in Michigan's coastal area.

A-95 Review Procedures

A-95 review process is provided for in Title IV, Section 403 of the Intergovernmental Cooperation Act of 1968. This title establishes the broad policy base of Office of Management and Budget Circular A-95. A-95 provides for a network of state and areawide clearinghouses for the purpose of reviewing and commenting on all notices of intent to apply for federal assistance in Michigan. The purpose of the review process is to provide federal cooperation with state and local governments in the evaluation, review and coordination of federal and federally assisted programs and projects.

The A-95 review process requires that any agency or individual who applies for federal assistance for a project or a direct federal development be required to notify both state and areawide clearinghouses in whose jurisdiction the project is to be located. If the activity is statewide (or broader in nature), the areawide clearinghouse may not receive notification. Federally recognized Indian tribes are excluded from the A-95 review unless they voluntarily choose to participate.

Since eight of Michigan's ten coastal planning and development regional agencies are designated as A-95 areawide clearinghouses, Michigan will continue to rely heavily upon the A-95 review process to maintain federal-state-local consistency with the Coastal Management Program.

Michigan's state clearinghouse is within the Department of Management and Budget's Federal Aid Management and Coordination Division. The functions of this division were established by Executive Directive 1972-2 and Executive Order 1974-1.

Functions of the state clearinghouse include: (1) evaluate the significance of proposed federal or federally assisted projects to state programs; (2) receive and disseminate project notifications to appropriate state and multi-state agencies; (3) provide liaison between state agencies and the applicant or federal project agency; (4) assure that projects affecting the coastal area are referred to authorized agencies to review the project for consistency; (5) assure that agencies authorized to develop and enforce environmental standards are informed and provided opportunity to review and comment on federal projects; (6) provide agencies enforcing civil rights laws with the opportunity to review and comment on the civil rights aspects of the project; and (7) provide liaison between federal and local agencies and between the applicant and the commenting agency.

Within 30 days after receipt of a notice of intent, the state clearinghouse must indicate to the applicant, the nature and substance of comments received regarding the proposal. In Michigan, the first five to seven days of the period is used by the clearinghouse in assembling and distributing a weekly list of "notices of intent".

Distribution is presently made to approximately 90 departments, agencies and quasi-governmental groups. The agencies have 14 days in which to comment to the state clearinghouse on projects of concern. Comments may take three forms: (1) the agency may request more information such as the exact location of the project; (2) the commenting agency may request to review the complete grant application; or (3) the state agency may request a meeting with the applicant or project agency. The state clearinghouse acts as a liaison to schedule and chair the meeting.

If no comments or requests for additional review are received by the clearinghouse within 14 days of distribution, a response is made to the applicant. If requested, a complete application will be provided with an additional 30 days to complete the agency review. If a meeting is scheduled to negotiate issues, the time span for application review will be adjusted accordingly.

The applicant must include all comments and recommendations received from the clearinghouse as part of a completed application. If no comments are received, the applicant provides a statement indicating that review procedures were followed. Grant applications lacking evidence of clearinghouse review are returned to the applicant.

To keep the clearinghouse aware of events subsequent to their comments, federal agencies notify concerned clearinghouses within seven working days of any major action taken concerning the application which may include: grant awards; rejections, amendments, deferrals and withdrawals of the application. If federal action is contrary to the clearinghouse recommendations, the funding agency is required to provide an explanation of its action along with a notice of major action taken.

Thus, the A-95 review process provides a forum for state and local coordination on federal projects or funding efforts. A description of the A-95 review process as it relates to program federal consistency determinations is contained later in this chapter.

Forums described thus far demonstrate Michigan's commitment to strengthen state-federal relationships through ongoing consultation and coordination. Following sections of this chapter describe: (1) the process which will be used to assure federal consistency with the Coastal Management Program; and (2) forums which provide for consideration of the national interest in Michigan's coast.

FEDERAL CONSISTENCY

The federal Coastal Zone Management Act requires federal agency actions to be consistent with approved state coastal management programs. This requirement applies to activities requiring federal licenses or permits and federal assistance programs to local or state governments. Federal activities and development projects must be consistent to the maximum extent practicable with the approved state program.

The Division of Land Resource Programs, Michigan Department of Natural Resources will be responsible for federal consistency review. The division's Coastal Management Program Unit will be responsible for coordination of consistency review and time scheduling. As cited in Chapter V, substantive requirements of programs administered by the division relative to controlling soil erosion and sedimentation, natural rivers, inland lakes and streams, natural areas, Great Lakes submerged lands, shoreland erosion and flooding and shorelands wetland protection will be utilized for consistency reviews conducted directly by the division. Permit reviews conducted by other department divisions (e.g., air and water quality) and by other state agencies and participating local agencies and governments will be coordinated for coastal consistency by the Coastal Management Program Unit. The unit will also be responsible for direct review of A-95 notices of intent to apply for federal assistance. The Environmental Enforcement Division will work in conjunction with the Coastal Management Program Unit on coordinating review of federal environmental impact statements among Department of Natural Resources divisions and by the Michigan Environmental Review Board, (see also, Chapter V).

Criteria for Determining Federal Consistency

Chapters III and V of this impact statement describe policies which are included in Michigan's Coastal Management Program. Policy statements are derived from state statutes and rules, Executive Orders of the Governor, formal policies of the Natural Resources Commission and certain federal laws, regulations and inter-agency agreements (e.g., Public Law 92-500). Enforceable policies included in this program require federal consistency. Significant policies described in Chapter III and also listed in Chapter V are the principal authorities Michigan will utilize to control direct and significant impacts to coastal waters and determine federal consistency. An affirmative response to any of the direct and significant criteria statements in Chapter V triggers an individual permit process for the cited statutory authority. Other enforceable policies which necessitate federal consistency include Natural Resources Commission Policy Numbers 3301 and 3108 which pertain to Great Lakes fisheries management (as described in Chapter III).

Chapter III of this impact statement also describes nonenforceable policies which pertain to technical and financial assistance, coordination, etc. While federal agencies will not be required to be consistent with nonenforceable policies, they should be considered by federal agencies as part of the consistency process. It is anticipated that many of those policy statements will provide one basis for enhanced state-federal agency cooperation on mutually desirable projects affecting Michigan's coast,

including wetlands management, erosion protection, flood plain management, selection of sites for polluted dredged materials and others.

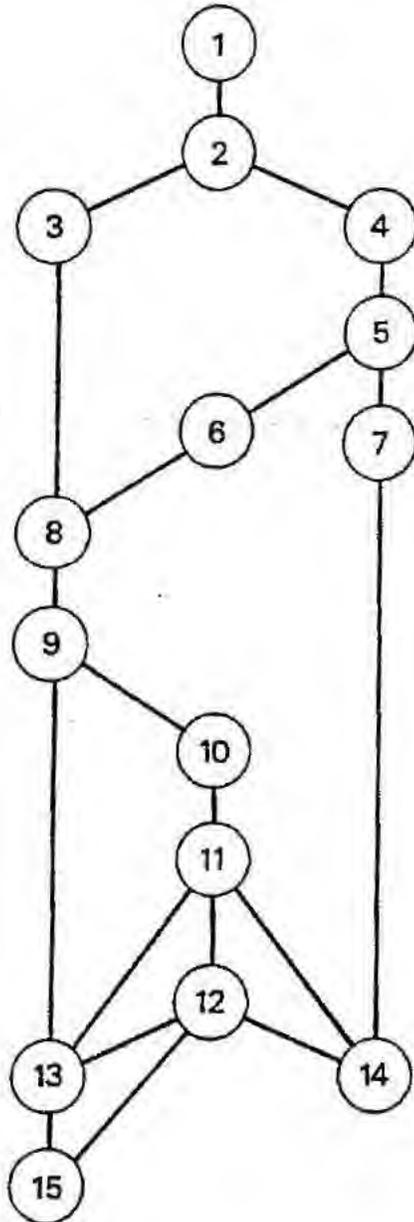
FEDERAL CONSISTENCY — FEDERAL CONDUCTED OR SUPPORTED ACTIVITIES

A consistency determination will be required for ongoing federal activities other than development projects initiated prior to program approval which are governed by statutory authority under which the federal agency retains discretion to reassess and modify the activity. In these cases, the consistency determination must be made by the federal agency at the earliest practicable time following management program approval, and the Michigan Coastal Management Program must be provided with a consistency determination no later than 120 days after program approval for ongoing federal activities affecting Michigan's coastal area.

Procedures

Figure VI-A illustrates the process for determining federal consistency for federally conducted or supported activities. These activities may include property acquisition or disposition, design, construction, alteration or maintenance of federal facilities, etc. within the coastal boundary or which may have a significant impact on the coastal zone. Federal agencies are responsible for notifying the Division of Land Resource Programs of its proposed action and making a determination that the activity is consistent to the maximum extent practicable with the Coastal Management Program. For major federal agency activities which may significantly impact the coast, environmental impact statement review procedures, established by the Governor's Executive Order 1974-4 will be used to satisfy both state and federal requirements, (e.g., National Environmental Policy Act), and will serve as an important process for reviewing federal agency actions to determine consistency with Michigan's Coastal Management Program. This review process will be facilitated by the Michigan Environmental Review Board where the Department of Natural Resources is a permanent representative, and also satisfies National Environmental Policy Act requirements. Upon notification of a federal activity or development project, the Division of Land Resource Programs will notify local participating agencies. A 45-day review period will ensue which may be extended to 60 days upon request. The Division of Land Resource Programs will then act on its own behalf and on behalf of local/regional and state agency program participants using one of three options: (1) concur with the federal agency determination; (2) allow 45 days to pass, thereby enabling the federal agency to presume concurrence (except where the state requests review extensions); or (3) disagree with the federal agency determination. In the event of the latter (option 3), the Division of Land Resource Programs will negotiate with the federal agency, on its own behalf and behalf of local/regional and state agency participants, to achieve consistency. Upon failure to achieve consistency, either party — state or federal — may appeal to the Secretary of the United States Department of Commerce for mediation. If mediation is not used or is unsuccessful, the state may seek resolution in court action.

Process for Review of Federally Conducted or Supported Activities



- 1) Federal agency initiates a federal development project, plans to acquire or dispose of land or proposes a change in rules and regulations.
- 2) Federal agency evaluates effect of proposal on the coastal area.
- 3) Proposal determined to have no significant effect on coastal area.
- 4) Proposal determined to have significant effect on coastal area.
- 5) Federal agency evaluates proposal, for consistency, with Michigan's Coastal Program.
- 6) Proposal determined to be consistent to the maximum extent practicable with Michigan's Coastal Program.
- 7) Proposal determined to be inconsistent with Michigan's Coastal Program.
- 8) Michigan Coastal Program notified of federal determination.
- 9) Review by state and local/regional program participants.
- 10) Michigan Coastal Program disagrees with federal determination and gives justification.
- 11) Negotiations between Michigan Coastal Program and federal agency.
- 12) Disagreement; Michigan Coastal Program and federal agency begin mediation and conflict resolution.
- 13) Michigan Coastal Program concurs with determination.
- 14) Proposed activity discontinued or modified to be consistent with or have no direct effect on the coastal area.
- 15) Federal agency proceeds with activity.

FEDERAL CONSISTENCY — FEDERAL GRANTS AND FINANCIAL ASSISTANCE

Procedure

In an attempt to avoid creating a new forum for review of federal programs providing grants and financial assistance that directly affect or result in a direct effect on Michigan's coastal area, existing state and regional clearinghouses (OMB Circular A-95) will be utilized as the process for determining federal consistency. Only those grant and loan applications to federal agencies started after the program's approval by the Secretary of Commerce are subject to the federal consistency requirements.

Eight of the ten regional planning and development agencies that participate in Michigan's Coastal Management Program are designated by the state clearinghouse as areawide clearinghouses for the A-95 review process. Through the A-95 review process, the state and areawide clearinghouses notify state, regional and local officials of an applicant's intent to request federal assistance for the initiation of a program or project. These officials may then comment on the proposal, (see also the first section of this chapter). Figure VI-B illustrates the process to be used for determining federal consistency of federal grants and financial assistance.

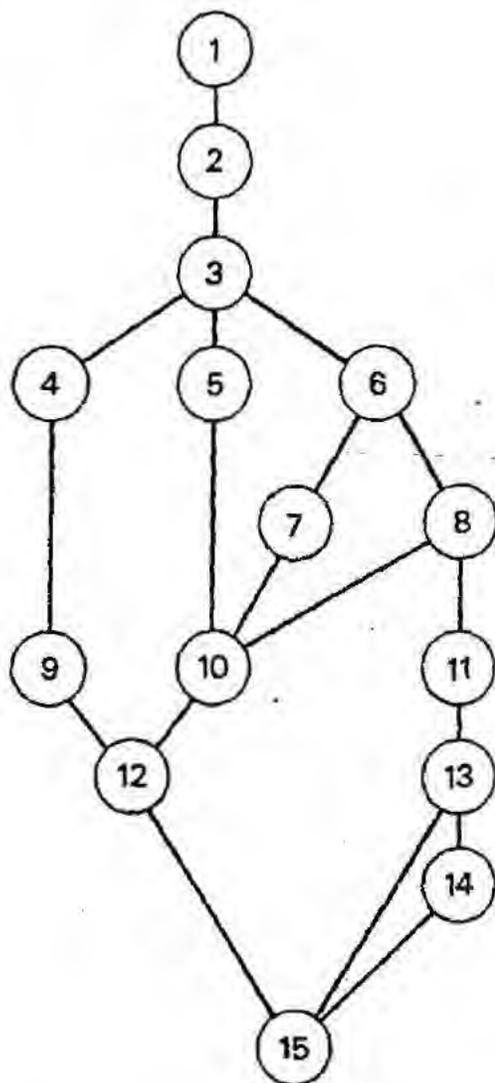
Many federal grants have received Coastal Management Program attention to date due to their potential for coastal impact (refer also to Appendix A of "State of Michigan Coastal Management Program and Draft Environmental Impact Statement".) The Coastal Management Program will continue to review proposed federal grants and financial assistance for consistency during program implementation. It should be recognized that a development project which receives approval for federal funding must still be approved through the normal municipal or state permit procedures.

FEDERAL CONSISTENCY — ISSUING LICENSES AND PERMITS

Consistency review for federal permits employs the substantive requirements of state permitting authorities and authorities in certain state approved local enforcement programs, (See Chapters III and V). The key to assuring the consistency of federal permits is the requirement that permits from the state and approved local programs be granted prior to issuance of the federal permit. Only those license and permit issuing and amendment activities and federal assistance applications initiated after the date of approval of Michigan's Coastal Management Program are subject to federal consistency requirements.

An applicant for a federal permit will be required to demonstrate to the federal agency that he has received the necessary local and/or state approvals. To accomplish this the Coastal Management Program will provide guidance to applicants concerning the permit procedures and requirements to be satisfied, (see also Chapter V). When satisfied that the proposed activity meets federal consistency requirements of the Coastal Management Program, all applicants for federal licenses or permits subject to consistency review shall provide in the

FIG. VI-B
 Process for Review
 of Federal Domestic Assistance Grants



- 1) Applicant agency applies to federal agency for assistance.
- 2) Applicant agency provides application to regional "A-95" clearinghouse; application is routed to state "A-95" clearinghouse, to Michigan's Coastal Program and to participating local/regional entities.
- 3) Review.
- 4) State agency comments to state clearinghouse.
- 5) Substate and municipal entities comment to regional clearinghouse.
- 6) Local/regional entities or state agency objects, notifies Michigan Coastal Program, applicant and/or affected federal agency.
- 7) Michigan Coastal Program determines that application is either consistent or has no effect on the coastal area.
- 8) Michigan Coastal Program determines that application is inconsistent.
- 9) State clearinghouse signs off with comments.
- 10) Regional clearinghouse signs off with comments.
- 11) OCZM and federal agency notified of inconsistency.
- 12) Applicant receives sign-offs and comments; forwards to federal agency.
- 13) Negotiations among Michigan Coastal Program, applicant, and federal agency.
- 14) Application inconsistent; application either modified to be consistent or funding is denied by federal agency.
- 15) Application consistent.

applications to the federal licensing or permitting agency a certification that the proposed activity complies with and will be conducted in a manner consistent with Michigan's Coastal Management Program. At the same time, the applicants shall furnish the Michigan Coastal Management Program Unit a copy of the certification. This consistency determination will be especially facilitated where state and federal agencies have coordinated permit processes, such as the process for coordinated review of permits issued under Act No. 247 of the Public Acts of 1955 and Section 404 of the Federal Water Pollution Control Act.

In cases where state permits are not required of applicants for activities requiring federal licenses or permits, the applicant is responsible for certifying in its application to the federal agency that the proposed action is consistent with the Coastal Management Program. The applicant must also furnish the state with a copy of the consistency certification. Federal agencies may deny a permit or license pursuant to their statutory responsibilities notwithstanding state concurrence.

The list below indicates what federal permits have received program attention to date due to their regulation of important coastal resources, uses or impacts. Michigan proposes to review proposals submitted through these permit programs for consistency during program implementation. Other permits may, of course, be added as further needs are indicated.

A maximum six month time period will exist for acting on a federal license or permit consistency certification after which time consistency will be conclusively presumed. Alterations in permit and licensing criteria will be effectuated through federal agency consultation and approval by the United States Department of Commerce.

Department of Agriculture

43 USC 1716

Permits for water easements on National U.S. Forest Service lands (Forest Service)
Use and occupancy of land for hotels, resorts, summer homes, stores and facilities for industrial, commercial, educational or public use

16 USC 497

Use and occupancy of land for hotels, resorts, summer homes, stores and facilities for industrial, commercial, educational or public use.

17 USC 661-667

Fish and Wildlife Coordination Act

Department of Interior

16 USC 3

Construction of visitor facilities on National Park Service lands (NPS)

16 USC 5

Rights-of-way for electrical transmission lines on National Park Service land (NPS)

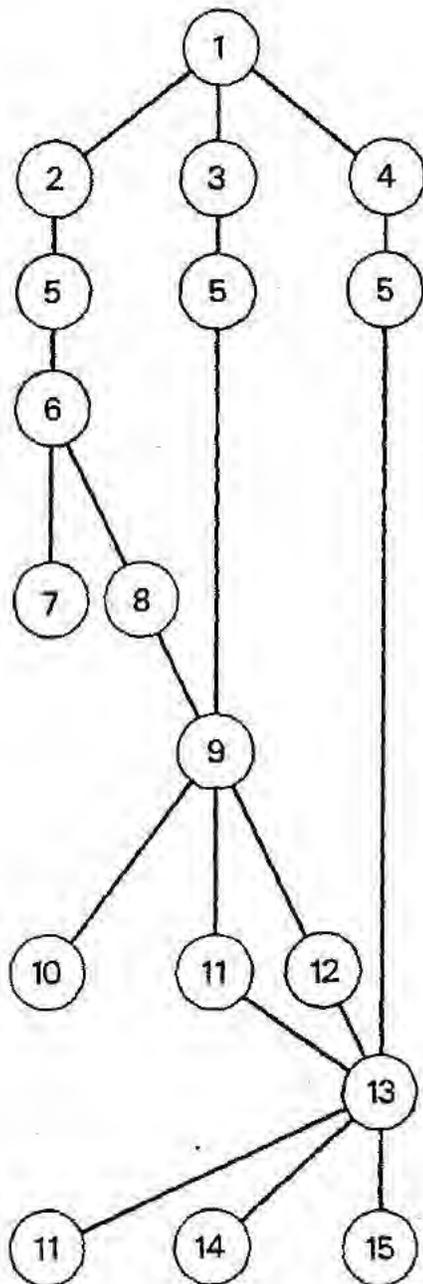
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Reclamation permits at dam sites and recreation areas

Environmental Protection Agency	
33 USC 1251	Water pollution control (state permit required)
33 USC 1857	Clean air (state permit required)
Department of Housing and Urban Development	
----	Flood insurance permits (state permits required)
---	Interstate land sales registration (state permit may be required)
Nuclear Regulatory Commission	
----	Licenses for nuclear generating stations, fuel storage and processing centers
----	Siting and operation of nuclear power plants (state permits required)
Federal Energy Regulatory Commission	
16 USC 797(e)	Licenses required for nonfederal hydroelectric projects and associated transmission lines
15 USC 717(f)(c)	Certificates required for the construction and operation of natural gas pipeline facilities, defined to include both interstate pipeline and terminal facilities
15 USC 717(f)(b)	Permission and approval required for the abandonment of natural gas pipeline facilities
Department of Defense — Army Corps of Engineers	
33 USC 401-403	Excavation and fill permits, construction in navigable waters (state permit also required)
33 USC 1344	Discharge of dredge and fill material
33 USC 419	Hazardous substances and materials (state permit required)
Department of Transportation	
33 USC 401	Construction and modification of bridges, causeways in navigable waters (US Coast Guard) (state permit also required)
----	Construction of airports (state permits may be required)

Figure VI-C illustrates the process used to review these permits for consistency.

FIG. VI-C
 Process for Determining
 Consistency of Federal Licenses and Permits



- 1) Applicant inquires at federal, state or local office about permit requirements. Applicant directed to appropriate federal, state and local offices.
- 2) Applicant applies for local permit if appropriate.
- 3) Applicant applies for state consistency review and for state permit if required.
- 4) Applicant applies for federal permit.
- 5) Public notice and review; hearings if appropriate. Federal, state and local agencies may perform this function individually or jointly as appropriate.
- 6) Local agency acts on application.
- 7) Application does not meet local requirements — applicant must re-apply.
- 8) Application meets local requirements, local permit granted.
- 9) State acts on application and/or consistency with state program.
- 10) Application does not meet state requirements — applicant must re-apply.
- 11) Application inconsistent with state program — applicant must re-apply.
- 12) Application meets state requirements and is consistent with state program — state permit granted.
- 13) Federal agency acts on application.
- 14) Application does not meet federal agency requirements — applicant must re-apply.
- 15) Application meets federal agency requirements and is consistent with state program — federal permit granted.

CONSIDERATION OF THE NATIONAL INTEREST

Recognizing the distinct and irreplaceable nature of the nation's coast, the United States Congress, in enacting the Coastal Zone Management Act of 1972, found that, "... there is a national interest in the effective management, beneficial use, protection, and development of the coastal zone." The Michigan Coastal Management Program clearly provides forums and policy statements which reflect the national interest in coastal management in Michigan. Specifically, Section 306(c)(8) of the Coastal Zone Management Act requires state coastal management programs to provide for, "... adequate consideration of the national interest involved in planning for, and in the siting of facilities (including energy facilities in, or which significantly affect such state's coastal zone) which are necessary to meet requirements which are other than local in nature."

Michigan fully recognizes that coastal issues and concerns reflect a national interest for energy development, wetlands management, protection of rare and endangered species and other facility siting and resource protection issues. Many national interests are mutually shared by Michigan and are illustrated in policy statements and action programs, cited in Chapter III of this impact statement, as well as state-federal interagency agreements.

Previous sections of this chapter describe Michigan's extensive effort to actively consult with federal agencies on their missions relative to the national interest. In addition to comments received from federal agencies, the Michigan Coastal Management Program evaluated, and will continue to evaluate, the following sources for policies and information to adequately consider the national interest in planning and management responsibilities:

- Federal laws and regulations.
- Policy statements or Executive Orders from the President of the United States (e.g., National Energy Plan).
- Special reports, studies and comments from federal and state agencies.
- Testimony received at public hearings and meetings on the Michigan Coastal Management Program.
- Certificates, policy statements and solicited opinions issued on specific projects by federal regulatory agencies.
- Statements of national interest issued by federal agencies.

Balancing National Interests

Michigan does not specifically exclude national interests relative to facilities or coastal resources. Through policy statements, as described in Chapters III and V, national interests are balanced in the Coastal Management Program through site specific determinations involving permit procedures, review of environmental impact statements, and lease arrangements, to assure that activities conform to resource carrying capacities and afford protection of coastal resources as mandated by state authorities. Thus, Michigan does not exclude any national interests so long as they conform to substantive requirements of state authorities. This represents a performance approach for assuring proper resource protection and management.

The discussion below summarizes the three major forums which provide for on-going consideration of the national interest relative to facilities and resources: (1) the Michigan Natural Resources Commission; (2) the Michigan Environmental Review Board; and (3) the Michigan Department of Natural Resources. These formally established bodies are directed by state policies to consider all interests in making decisions relative to resource protection and management. The remaining section of this chapter describes more specific national interests with respect to individual resources and facilities and includes a discussion of how the national interest is adequately considered in Michigan's Coastal Management Program.

FORMAL MECHANISMS FOR CONSIDERATION OF THE NATIONAL INTEREST

Michigan Natural Resources Commission

The Natural Resources Commission was established by Act No. 17 of the Public Acts of 1921 to provide policy formulation and program direction for the Department of Natural Resources. Since, as noted earlier, the department is responsible for the significant coastal authorities and programs, the commission's responsibility for making department policy decisions based upon all interests provides for active consideration of the national interest in the Coastal Management Program.

Natural Resources Commission Policy Number 1033 requires that "Openness in government is essential to our democratic institution, and is not subject to question . . . Citizen participation and interest in the activities of the department shall be encouraged in all ways possible. . . Citizen advisory committees shall be used in all cases where programs and activities are particularly sensitive to public opinion or impinge on citizen activities and philosophies in such a way as to cause a substantial response, or an unusually high level of interest." This policy commitment exemplifies the commission's attitude toward encouraging the participation and consideration of all interests in department programs, including the Coastal Management Program.

Several commission actions provide clear evidence of their commitment to considering interests and impacts which transcend Michigan's boundaries and are important to coastal management.

For example, Natural Resources Commission Policy Number 2310 specifically recognizes national energy needs: "Until such time as further developments require a change in policy, or until there is imminent danger of drainage of petroleum from state-owned bottomlands in the Great Lakes, or a *condition of national emergency* requiring greatly increased production efforts, state-owned submerged lands in the Great Lakes will not be available for lease for the exploration, development and production of petroleum. . . Continued attention shall be given by the department to advances in technology of drilling and production of offshore areas, to new knowledge of geological conditions in the petroleum industry. Continued study will be given to the need for an oil and gas lease form, and to possible rules and regulations pertaining to oil and gas leases for the Great Lakes bottomlands, so that the department will be prepared to act if and when it becomes appropriate to do so." (emphasis added)

With respect to the national interest in proper conservation and development of energy resources, Natural Resources Commission Policy Number 1026 recognizes that, "The era of inexpensive energy and seemingly unlimited energy resources is over. For instance, much of the oil and some of the gas supplies upon which the *economy and prosperity of Michigan and the United States* is based, is produced in other nations which can control both prices and production, affecting life styles and values. According to energy experts, coal, nuclear or other sources of energy cannot be expected to replace oil or gas in the near future. The department should be a leader in the wise use of energy and also encourage its employees to be energy conscious in their habits and decisions." (emphasis added)

An even stronger recognition of the department's consideration of national interests is reflected in an environmental impact statement, prepared by the department for potential hydrocarbon development on the Pigeon River Country State Forest. (December 15, 1975)

As conclusively demonstrated from the following excerpt of that impact statement, the Michigan Department of Natural Resources clearly recognizes larger-than-state issues and impacts.

On a national scale, new, large domestic hydrocarbon resources are often found in environmentally sensitive areas subject to extreme natural hazards such as in the North Slope of Alaska or in the Pacific, Gulf and Atlantic coastal waters. At any rate, extraction of oil or gas from Canada or Alaska and not Michigan only displaces the total environmental impact.

Without a specific national plan for energy conservation, it is very difficult to perceive what Michigan's role should be. Even under existing conservation measures, Michigan's high energy consuming products and processes are seriously affected as reflected in our state's high rate of unemployment.

Under any national energy conservation plan, the known hydrocarbon resources on relatively accessible land sites near industrial centers might be exploited first. The energy cost of extracting the hydrocarbons, and

energy cost of transporting it to where it will be used, puts oil and gas resources that are accessible high on the nation's priority list.

Oil from other states is available at a price. The environmental risks in extracting oil from other sources in the United States, especially offshore, are in many cases greater than in the Pigeon River Country State Forest. New large natural gas supplies are not generally available in Michigan at any price, and severe shortages are expected. Natural gas from the Pigeon River Country State Forest cannot be replaced by other gas even if Michigan wished to displace the environmental impact of extraction to other places. With national price controls of interstate natural gas prices, the incentive for exploration and production is missing. Canadian policies regarding exports of hydrocarbons can change at any time.

It is national policy to reduce our dependency on foreign oil. This in turn increases demand on domestic supplies. Through federal controls and pricing schemes, the alternative of foreign oil supply is becoming less available.

In addition, as described in Chapter V, the commission, (as well as the five other department commissions), considers all interests in making decisions relative to contested department decisions or orders (e.g. licensing and permitting, etc.). In accord with the Administrative Procedures Act, a party which is aggrieved by a commission finding relative to a contested case may seek judicial review of the findings in circuit court.

Thus, as described, the Michigan Natural Resources Commission guides Department of Natural Resources policies and actions and has a long-standing commitment to recognize and consider all issues and interest, including the national interest, in their decision making process.

Michigan Environmental Review Board

As described in Chapter V, the Michigan Environmental Review Board (MERB) was established by Executive Order 1974-4 to provide policy recommendations to the Governor on environmental issues and to assist the Governor in the review and formulation of recommendations on federal and state environmental impact statements. Environmental impact statements are required for major state actions that may have a significant impact on the environment or human life. Any interested party, including local governments and citizens may request to MERB to be placed on a mailing list to receive notification of available environmental impact statements for their review. Mailing lists are normally compiled and distributed at least once every month. In making recommendations to the Governor, MERB actively considers all interests. Individuals or groups may make recommendations directly to MERB for their consideration. Specifically, MERB adopted a policy on public participation on October 27, 1975 which states that:

"All public comments, including those considered by INTERCOM, will be forwarded to the Environmental Review Board before it takes final action on an EIS. However, written comments received after the comment deadline may not be distributed to Environmental Review Board members in sufficient time for their consideration. Those who wish to appear before

the Board on an EIS scheduled for Board action may make a brief verbal presentation. Submission of a written copy of the verbal presentation is encouraged, however."

Thus, the Michigan Environmental Review Board provides an open process for considering all interests relative to state or federal environmental impact statements.

Michigan Department of Natural Resources

The Michigan Coastal Management Program, through Department of Natural Resources recommendations to the Natural Resources Commission and department representation on the Michigan Environmental Review Board, as well as close coordination with federal agencies throughout program implementation, will insure that national interests in coastal management are adequately considered. Specifically, Dr. Howard A. Tanner, as chief administrator of the department of Natural Resources has insured that the Department of Natural Resources will continue its consideration of the national interest in facility siting and resource protection in the administration of the department's regulatory and resource management responsibilities. This commitment was formalized by Director's Letter No. 17, dated May 8, 1978 (see Appendix B). The Director's personal involvement with the Natural Resources Commission and the Director's representation on the Michigan Environmental Review Board provide direct access for the department to the primary forums Michigan will use to insure adequate consideration of the national interest.

Powers and duties of the Director, as chief executive of the Department of Natural Resources, are established by Act No. 192 of the Public Acts of 1929. The act requires the Director to provide for the enforcement of all laws and regulations of the state. Administrative Order No. 1976-1 provides that the exercise of a delegated power, duty, or function by the department shall at all times be subject to the general superintendance and supervision of the Director and that the Director shall prescribe and adopt internal procedures stating the course and method of Department operations, (approved November 5, 1976, reviewed and approved by the state Attorney General).

SPECIFIC NATIONAL INTEREST IN MICHIGAN'S COAST

Figure VI-D summarizes resources and facilities in which there is a national interest in planning, siting and other activities relative to coastal management in Michigan. The following discussion summarizes how Michigan's Coastal Management Program, both during program development and as a continuing process during implementation, considers facilities and resources which may be in the national interest.

FIG. VI-D
Michigan's Coastal National Interest Concerns

Category	Examples of Resources and Related Facilities
National Defense and Aerospace	Military bases and installations, defense manufacturing facilities; aerospace facilities
Recreation	Wildlife management areas, national lakeshores, state and national parks, wild and scenic rivers, etc.
Transportation	Commercial ports and harbors, interstate highways, railroads, airports, aids to navigation, coast guard facilities.
Air and Water Quality	Air and water pollution discharges, regional waste treatment plants.
Wetlands	Sensitive habitats critical to fish and wildlife, endangered species habitats
Hazard Areas	Shoreline erosion areas, areas of earth change and sedimentation, flood risk areas
Historic and Archeologic Sites	National and State register of historic sites
Energy	Coastal energy resource areas including energy facility sites, oil and gas rigs, storage distribution and transmission facilities, power plants, and coal facilities

National Defense and Aerospace

Michigan's Coastal Management Program recognizes the importance of national defense and that, such facilities may require uses or impacts on coastal resources. In the event that new or expanded defense facilities are proposed, the Coastal Management Program will not question the need for national security but will strive to evaluate the alternative sites in accord with statutes cited in Chapters III and V of this impact statement, including review of environmental impact statements in accordance with Executive Order of the Governor 1974-4, which created the Michigan Environmental Review Board and the process for distributing and coordinating environmental impact statement review responsibilities.

Recreation

The Michigan coast is a resource of unique beauty which affords numerous opportunities for recreational use. Out-of-state tourism is a major coastal economic consideration.

Recognizing national responsibilities in coastal recreation, the sources consulted by the Coastal Management Program include:

- The nationwide Outdoor Recreation Plan
- State and local recreation programs (e.g., Michigan's Statewide Comprehensive Outdoor Recreation Plan)
- State-federal interagency agreements
- Federal agency nominations for recreational areas of particular concern

Major objectives of the national interest in recreation are: 1) to provide high quality recreational opportunities to all people; 2) increase public recreation in high density areas; 3) improve coordination and management of recreation areas, protect existing recreation areas from adverse contiguous uses; and 4) accelerate the identification of transfer of surplus under-utilized federal property.

Michigan's Coastal Management Program incorporates the national interest in recreation through state consistency with the National Outdoor Recreation Plan, adopted in 1973 (the state's Comprehensive Outdoor Recreation Plan). The Michigan Recreation Plan will continue to be used as the planning process for adequately considering the national interest in recreation.

Other elements incorporated in Michigan's Coastal Management Program include state-federal interagency agreements, such as the agreement between the state and the National Park Service for coordinated wildlife management on Sleeping Bear National Lakeshore.

In addition, Act No. 316 of the Public Acts of 1965, enables the state to: 1) participate in programs of federal assistance relating to outdoor recreation; and 2)

keep an up-to-date comprehensive plan for development of outdoor recreation resources. Thus, the state actively pursues federal financial assistance provisions for outdoor recreation, such as those provided by the Land and Water Conservation Fund. For example, the Department of Natural Resources is currently collaborating with the National Heritage Conservation and Recreation Service to provide increased coastal urban recreation along the Detroit waterfront.

As cited in Chapter III, it is also state policy to improve the accessibility of state land and water resources to the widest range of socio-economic classes consistent with environmental protection and public safety needs, (Michigan Recreation Plan). This policy clearly reflects the national interest in recreation and is enhanced by proposed Coastal Management Program action programs to assist in projecting supply and demand of recreation use, develop programs for meeting projected recreational demands and implementing the coastal access planning element. (Refer also to program concerns, policies and action programs listed under the heading recreation areas.)

Transportation

There is a national interest in maintaining and enhancing the level of commercial navigation on the Great Lakes and in improving the efficiency of the present Great Lakes navigation system. There is also a national interest in providing a safe and efficient land transportation system.

To determine the national interest in transportation, sources consulted by the Coastal Management Program include:

- Federal agency area of particular concern nominations for transportation areas (all 23 commercial ports have been nominated)
- Railway Safety Act of 1970
- Environmental Impact Statements on the extended commercial navigation season and state participation on the Winter Navigation Board
- Activities and development projects conducted by the Department of Commerce's Maritime Administration
- Department of Transportation Act
- Coast Guard, Primary Duties
- Technical studies sponsored by the U.S. Army Corps of Engineers
- National Transportation Plan

The major objectives of the national interest in transportation are: 1) develop national transportation policies and programs conducive to the provisions of fast, safe, efficient and convenient transportation at the lowest cost; 2) to facilitate waterborne activity in support of national, economic, scientific, defense and social needs; 3) to maintain and improve the quality of the water environment; 4) to develop the full potential of the Great Lakes-St. Lawrence Seaway Navigation system, including season extension and maintenance and development of adequate port facilities; 5) to maintain adequate depth of waterways and channels to accommodate vessels active in domestic and international commerce.

Michigan's Coastal Management Program addresses national interests in transportation through: 1) the Governor's conditional support of the extended Great Lakes commercial navigation season; 2) by enabling the creation of port districts; and 3) by providing for enforcement of the substantive requirements of authorities relative to water quality, dredge and fill activities, etc. The Department of Natural Resources coordinates the identification of sites for dredged polluted material through a dredge spoil committee, composed of state as well as federal agency representatives. Other policies and program concerns relative to coastal transportation are contained in Chapter III of this impact statement.

With respect to commercial ports, the Coastal Management Program provided financial assistance to the Michigan Department of State Highways and Transportation to identify land cover and land use for Michigan's ports to facilitate future planning and development of port areas.

Specific concerns of the Coastal Management Program which reflect the national interest in transportation include: 1) to avoid environmental and economic loss, careful planning and analysis is needed to determine the impacts of future port development; and 2) to serve the future needs of development in the coastal area, there is a need to establish a comprehensive transportation planning mechanism.

Air and Water Quality

Protection of air and water quality is necessary to maintain the integrity of Michigan's fragile coastal environment.

Sources consulted by the Coastal Management Program in determining the national interest in air and water quality include:

- Federal Water Pollution Control Act of 1972 and recent amendments.
- Clear Air Act of 1970 and amendments.
- Federal Refuse Act.
- National Solid Waste Act.

- Working agreements between Michigan and the United States Environmental Protection Agency, including specifically the state's "208" program, solid waste, air and water quality programs.
- Area of particular concern nominations relating to air and water quality.

Objectives of the national interest with respect to air and water quality include: 1) provide adequate funds for sewage treatment facilities so that the pollution of our nation's waters can be abated; 2) to control and abate pollution systematically by proper integration of a variety of research, monitoring, standard setting and enforcement activities.

The Michigan Coastal Management Program fully incorporates the national interests in air and water quality, and the requirements of the federal Water Pollution Control Act and Clean Air Act are made part of the Michigan program, including nonpoint sources of water pollution and air pollution. Thus, the water and air national interest will be met during program implementation through the process of issuing state and federal air emission and waste water discharge permits and by incorporating SIPS and 208 plans developed pursuant to the Federal Clean Air and Water Acts.

Wetlands

Michigan's coastal wetlands support many habitats critical to fish and wildlife which are often threatened by development activities. Wetlands also play vital roles as water quality purifiers and retain flood waters.

Sources consulted by the Coastal Management Program to discern national wetlands interests include:

- The Endangered Species Act of 1972.
- President's Executive Order on Wetlands (May 24, 1977).
- Area of particular concern nominations for wetlands, such as those nominations received from the U.S. Fish and Wildlife Service.
- Fish and Wildlife Coordination Act.
- Draft environmental impact statement comments from U.S. National Marine Fisheries Service.

Objectives of the national interest in wetlands include: (1) to avoid to the extent possible the long- and short-term adverse impacts associated with the distribution or modification of wetlands and to avoid direct or indirect support of new construction in wetlands whenever there is a reasonable and prudent alternative; (2) provide means whereby ecosystems upon which endangered and threatened species depend may be preserved; and (3) to provide a program for the conservation of endangered and threatened species.

Through funds provided by the Coastal Management Program, a wetlands value study was conducted to ascertain the values derived from proper wetlands management. As cited in Chapter III, a significant program concern with respect to wetlands is that: actions such as navigation dredging, spoil disposal, marine construction, sanitary landfills, construction of recreational facilities, intense urbanization, drainage and other actions have resulted in habitat loss in many wetland areas. Continued review and regulation of such actions is necessary to avoid unnecessary and unretrievable losses in ecologically sensitive coastal wetlands.

Under authority of Act No. 245 of the Public Acts of 1970, as amended, the Shorelands Protection and Management Act, environmental areas critical to fish and wildlife are identified and regulated by management plan. The Michigan Environmental Protection Act may also be employed to protect wetlands. Through this authority, coastal wetlands may be properly managed, consistent with the national interest. The state is currently seeking wetlands legislation which would provide comprehensive wetlands management.

Hazard Areas

Shoreland erosion and flooding annually results in excessive damage costs to structures and property. Soil by volume is our greatest pollutant.

In discerning the national interest in such hazard areas, sources consulted by the Coastal Management Program include:

- Flood Disaster Protection Act
- National Flood Insurance Act of 1968 and 1973 amendments
- Water Resources Development Planning Act of 1974
- The President's Executive Order on Flood Plain Management (May 24, 1977)
- Erosion and flood hazard areas of particular concern.

Objectives of the national interest in hazard areas include: (1) to avoid long- and short-term adverse impacts associated with the occupancy and modification of floodplains; (2) to develop and carry out a national soil and water conserva-

tion program; and (3) to designate areas eligible for floodplain insurance, including the erosion aspects of 1973 amendments.

Michigan addresses these national interests in implementing provisions of Act No. 245 of the Public Acts of 1970 which provides for the designation and regulation of flood and erosion areas along the coast. Act 347 of the Public Acts of 1972 provides for control of soil erosion and sedimentation resulting from earth change activities. A goal of the Coastal Management Program which complements national interest concerns includes: encourage the management of properties so as to minimize environmental and property damage resulting from natural and man-induced erosion and flooding. In addition, the Department of Natural Resources is currently working with the Department of Housing and Urban Development to identify erosion hazard areas for federal agency use in determining acceptable insurance premiums. Department of Natural Resources is frequently consulted by federal agencies such as the Flood Insurance Administration on matters relative to delineating and regulating hazard areas.

Archaeological and Historic Sites

Michigan's coast is a rich chronicle of the state's development. Heavy concentrations of records and artifacts of the state's 13,000 year history are located along the Great Lakes coast.

In determining the national interest in archaeological and historic areas, sources consulted by the Coastal Management Program include:

- The Antiquities Act of 1906
- Historic Sites Act of 1935
- Archaeological and Historic Preservation Act of 1974
- National Historic Preservation Act of 1974
- National Environmental Policy Act of 1969
- Federal agency nominations for historic and archaeological areas of particular concern
- Executive Order 11593

Major objectives of the national interest in historic and archaeological sites are: 1) to afford protection for designated historic and archaeological sites from adverse impacts; and 2) to consider cultural resources in assessing the environmental impacts of proposed activities.

Elements of Michigan's Coastal Management Program which apply to the national interest include provisions of Act No. 169 of the Public Acts of 1970 which

encourages the establishment of historic districts and provides for: 1) acquisition of land and structures for historic purposes; 2) preservation of historic sites and structures; 3) creation of historic district commissions; and 4) maintenance of publicly owned historic sites and structures by local governmental units.

It is also state policy to maintain a state register of historic sites which may involve state agencies in environmental review procedures, (Act No. 10 of the Public Acts of 1955 and Executive Order of the Governor 1974-4). The Director of the Michigan History Division, Department of State, acts as State Historic Preservation Officer, authorized under the National Historic Preservation Act of 1966. Michigan's State Historic Preservation Officer has formally indicated approval of program policies related to historic and archaeological areas, (February 24, 1978 Appendix C). (See also Chapter III under the heading historic and archaeological areas.)

The Coastal Management Program has also provided grant funds to the Michigan History Division, Department of State, to conduct studies which clearly reflect the national interest. For example, the two reports entitled: "The Distribution and Abundance of Archaeological Sites in the Coastal Zone of Michigan", and "Coastal Zone Management Program Historic Properties" assisted the state in identifying historic and archaeological resources for their protection and maintenance.

A specific concern of the Coastal Management Program which reflects the national interest is: To avoid program duplication and conflict, historic planning in Michigan's coastal areas should be consistent with provisions of the *Michigan Historic Preservation Plan*.

Energy Resource Areas

Expanding energy resource supplies to meet increasing domestic and industrial needs will place new demands on the lands and waters along the nation's shores.

To determine the national interest in energy resources, sources consulted by the Coastal Management Program include:

- The National Energy Plan
- Federal Power Act
- Natural Gas Act
- Data supplied by the U.S. Geological Survey
- Data supplied by the East Central Area Reliability Commission
- Area of particular concern nominations for energy resource areas

The National Energy Plan sets forth three energy objectives for the United States: 1) as an immediate objective that will become even more important in the future, to reduce dependence on foreign oil and vulnerability to supply interruptions; 2) in the medium term, to keep U.S. imports sufficiently low to weather the period when world oil production approaches its capacity limitations; and 3) in the long-term, to have renewable and essential inexhaustible sources of energy for sustained economic growth, (Plan Overview p. ix). Significant features of the National Energy Plan are: 1) conservation and fuel efficiency; 2) national pricing and production policies; 3) reasonable certainty and stability in government policies; 4) substitution of abundant energy resources for those in short supply; and 5) development of non-conventional technologies for the future. (Plan Overview p. ix-x).

As documented in earlier portions of this section, Michigan has demonstrated its consideration of the national interest in energy, particularly through formal policy statements of the Natural Resources Commission and authorities and programs administered by the Michigan Department of Natural Resources. Specific concerns, policies and action programs, described in this impact statement in Chapter III, provide additional indication of Michigan's commitment to recognize larger-than-Michigan issues relative to energy conservation and development.

With specific reference to planning for the siting of energy facilities, Michigan is actively engaged in meeting the requirements of Section 305(b)(8) of the Coastal Zone Management Act. The Coastal Management Program is currently working to document supplies, demands and plans related to energy and their impacts on the coastal area. This planning effort is coordinated among several state agencies, such as the Department of Commerce's Energy Administration and federal interests, public and private groups involved with development and/or conservation of energy, and will specifically examine the national interest in energy in executive policies, federal laws and regulations, plans, programs and policies, and federal agency statements of national energy interest in Michigan's coast.

SUMMARY

Michigan's effort to coordinate and consult with federal agencies and other national interests will continue during program implementation. During program development, the coordination effort strengthened Michigan's Coastal Management Program through recognition of federal agency program concerns and missions and area of particular concern nominations. Through local, state and federal involvement, Michigan's Coastal Management Program can assist in developing and conserving Michigan's unique 3,200 mile shore, consistent with the health, safety and welfare of present and future generations.

Conclusion

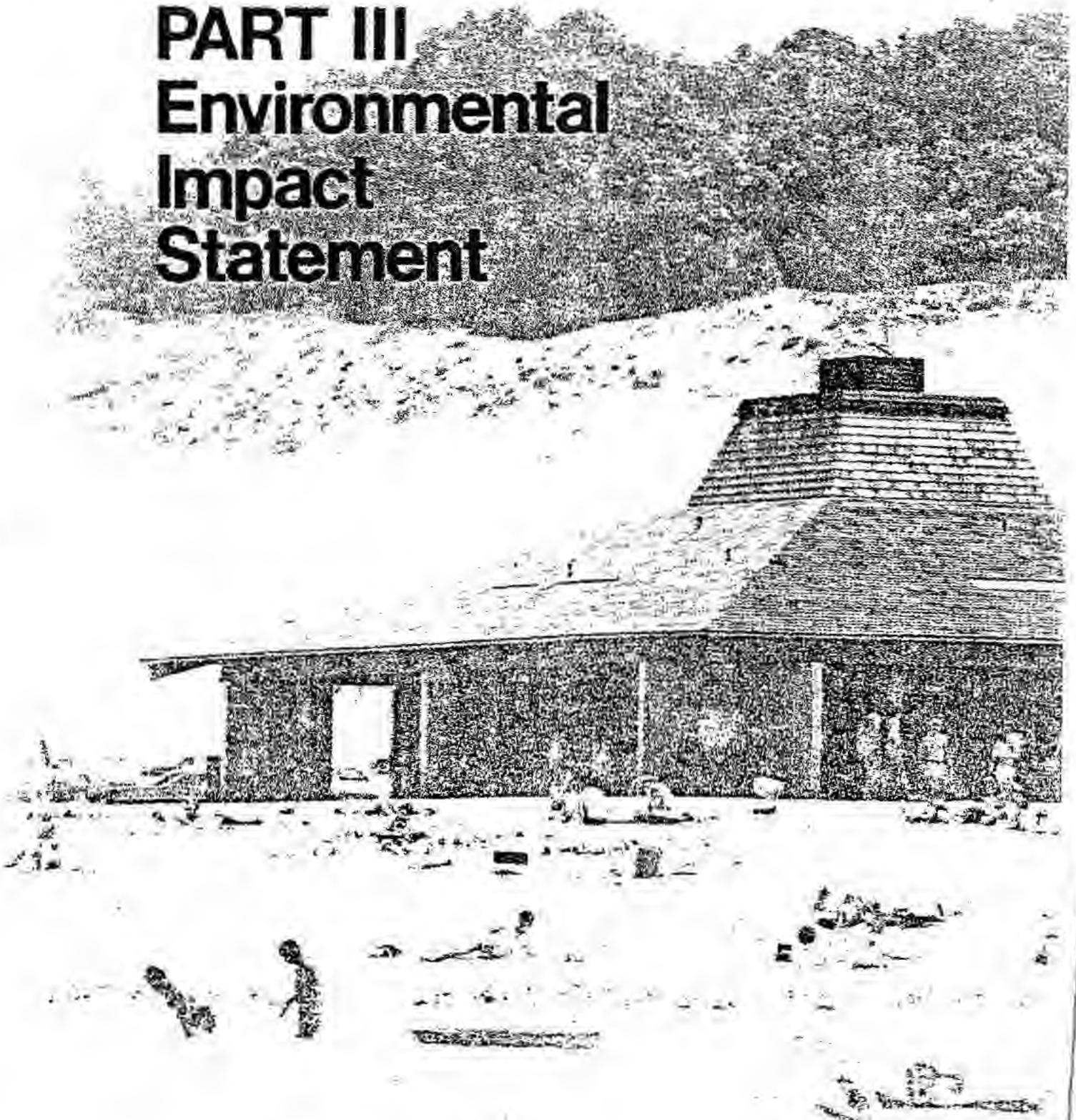
This document is the culmination of a three year effort by the Michigan Department of Natural Resources, the Citizens Shorelands Advisory Council, coastal planning and development regional agencies, local governments and citizens to develop a Coastal Management Program for the people of Michigan.

Benefits of this program will continue to be illustrated by improved administration of coastal statutes, more effective technical assistance, increased financial assistance and beneficial local, state and federal coordination efforts. In accomplishing these benefits, the major program objective will be to protect essential coastal resources and increase the capabilities of local governments to properly manage their coastal areas.

In anticipation of federal approval of this program, the Michigan Coastal Management Program has requested proposals for funding consideration under Section 306 of the Coastal Zone Management Act from all coastal local governmental units, planning and development regional agencies and state agencies. To date, about 130 proposals from local and regional entities have been submitted, requesting more than \$3.5 million. Thirty-two proposals have been received from state agencies, requesting about \$2.1 million. The Standing Committee on Shorelands and Water Coordination, the Citizens Shorelands Advisory Council and participating regional agencies have begun to review project proposals to assist in identifying technical and financial assistance priorities. Some federal agencies, such as the U.S. Corps of Engineers and the U.S. Fish and Wildlife Service have been consulted and provided information on proposed projects relating to shore protection, wetlands inventories and others.

Thus the Michigan Coastal Management Program is taking active steps to insure that program implementation is a successful and meaningful endeavor. In closing, we would like to recognize the contributions of the Division of Land Resource Programs — particularly the Great Lakes Shorelands Section — and members of the Standing Committee on Shorelands and Water Coordination and the Citizens Shorelands Advisory Council. Special thanks to Janet Griffin who afforded hours of patience and hard work in collaborating in the development of this impact statement and the program as a whole.

PART III Environmental Impact Statement



Chapter VII

Environmental Impact Statement

A. DESCRIPTION OF PROPOSED ACTION

This entire document is both a final environmental impact statement (FEIS) and the Michigan Coastal Management Program (the Program). The Office of Coastal Zone Management (OCZM) proposes that the Program meets the requirements of the Coastal Zone Management Act of 1972, as amended. Federal approval of the Program will enable the State of Michigan to receive Federal grant-in-aid assistance for program implementation and also will require that Federal actions in or affecting the Michigan coastal zone must be consistent with the Program. The Program is described in Part II of this document. Part III completes the requirements of the National Environmental Policy Act.

A brief summary of the proposed action and a table cross-referencing NEPA requirements and this document are provided in Part I.

B. DESCRIPTION OF THE ENVIRONMENT AFFECTED

Michigan has the longest freshwater coast in the world. More than 39,000 square miles of the Great Lakes and 3,200 miles of Great Lakes coastline are within Michigan's coastal boundaries.

Part II, Chapter II of this document describes the environment affected. Michigan's coastal land ownership, use, and geomorphic shore types are addressed here as are the major physical, cultural, economic and political characteristics of the ten coastal regions.

The State's inland boundary includes (1) lands abutting the ordinary high water mark of the Great Lakes and their connecting waterways; (2) lands abutting other water bodies which are directly affected by the Great Lakes water such as flood-plain or inland lakes; (3) transitional areas landward of the ordinary high water mark such as sand dunes, wetlands, etc., and (4) other lands which are sensitive to intensive use pressure related to coastal water such as recreation areas and urban areas. The lakeward coastal area in Michigan includes all submerged lands, waters, and islands of the Great Lakes and connecting waterways to the State or international boundary in

the middle of the lakes. The lakeward boundary is the jurisdictional border that Michigan shares with the Province of Ontario and the states of Minnesota, Wisconsin, Illinois, Indiana and Ohio.

C. THE RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS, POLICIES AND CONTROLS FOR THE AREA

Some of Michigan's coastal communities have developed, or are in the process of developing, land use plans. About 50 percent of the communities along the coast have enacted some form of zoning under provisions of State planning and zoning enabling statutes. County zoning ordinances are subject to review by the State's Department of Natural Resources, Division of Land Resource Programs. Michigan laws provide safeguards against exclusionary zoning and close cooperation during planning and zoning development helps to avoid conflict. Also, local governments are able to implement some of the State authorities that are part of the Program, including the erosion and flood hazard provisions of the Shorelands Management Act, and the Soil Erosion and Sedimentation Control Act.

Through agreements with regional planning and development commissions, local governmental units and their constituents have been involved in inventorying the coastal resources, identifying problems and opportunities, and recommending solutions. These activities have been carried out with regard for local plans and ordinances and with access to information about State and Federal agency plans and programs.

D. PROBABLE IMPACTS OF FEDERAL APPROVAL OF THE MICHIGAN COASTAL MANAGEMENT PROGRAM

1. Introduction

The Program is based upon existing laws, policies, and regulations. Federal approval will enhance the State's financial ability to carry out 27 existing management programs in accordance with the Program's policies.

The impact of Federal approval will be the acceleration of the State's on-going efforts to finance, regulate, enforce and monitor land and water uses to preserve, protect, restore and develop shoreland resources.

The impacts discussed herein are the impacts of Federal approval and Program implementation. Because the proposed action is the approval of a program and not the implementation of a project in a specific site, it is not practical to quantify net effects of the Program in terms of unit changes in incomes, taxes, acres, et.al. It is practical, however, to determine the direction and the duration of change that will result from the implementation of the Program. In this statement, the direction of change will be described as positive, negative or neutral with respect to particular affected parties.

The duration will be described as either short-term or long-term.

The impacts of the Federal approval will be discussed in terms of the Federal funds, Federal consistency, the National interest, and the environmental, socio-economic and institutional effects of the Program's implementation.

2. The Impacts of Federal Funds, Federal consistency and the National Interest.

Federal Funds.

Federal approval will permit the Office of Coastal Zone Management to award program administration grants as provided for under Section 306 of the Federal Coastal Zone Management Act (CZMA) to the State of Michigan. It will also maintain Michigan's continued eligibility for financial assistance under the coastal energy impact program and other CZMA authorizations for interstate coordination, beach access, island preservation, and research and training. The administrative grant will provide approximately \$1.5 million in Federal funds to the State per year. Upon Federal approval, Michigan will be eligible to receive approximately \$4.5 to \$5 million in Federal funds for program administration through fiscal year 1980. These administrative funds will allow the State to:

- Maintain a Coastal Unit staff within the Division of Land Resources Programs, Michigan Department of Natural Resources to administer the Program and coordinate permit, budget, Federal consistency and national interest matters affecting Michigan's coastal area.
- Increase the number of Division personnel in the Department's Central Office to accelerate the implementation of the Shorelands Protection and Management Act, the Sand Dune Protection and Management Act, the Great Lakes Submerged Lands Act and the Inland Lakes and Streams Act.
- Increase the number of Division personnel in the Department's District Offices to improve the Department's regulatory, monitoring and technical assistance capabilities in the coastal area.
- Complete and maintain a computerized information system designed to reduce permit processing time and coordinate information pertinent to permit review and decision making.
- Implement an energy facility planning process for the coastal area.
- Implement a shorefront access planning process for the coastal area.

- Implement an erosion/mitigation planning process for the coastal area.
- Provide financial assistance to regional agencies and local governments developing coastal management plans and ordinances to regulate uses, control development and resolve conflicts.
- Provide financial assistance to local governments to administer and enforce shoreland ordinances.
- Provide financial assistance to State and local governments and regional agencies to foster port development, waterfront renewal, major water dependent industrial and utility facility siting, public access for recreation, natural area and historic site preservation and restoration.
- Provide technical assistance to Federal, State and local government agencies, regional agencies, corporations, and private individuals conducting activities in the coastal area.

Positive fiscal impacts will result at the state level, and in local jurisdictions where Program funds are transferred to develop plans and ordinances, administer area management projects, and regulate, monitor and enforce pursuant to Program policies.

Federal Consistency

The approval of the Program will mean that all Federal agencies must follow the provisions of sections 307(c) and (d) of the CZMA. The provisions and the manner in which Michigan intends to implement these sections of the Act are described in Part II.

The Program has evolved with the considerable assistance and input of numerous Federal agencies with responsibility for activities in or affecting the coastal area. No activities of relevant Federal agencies are excluded from locating in the coastal area although these activities will have to meet environmentally protective policies to obtain coastal sites and/or be located outside the coastal zone if adverse environmental effects cannot be sufficiently mitigated.

When Federal agencies are undertaking activities including development projects directly affecting the State's coastal area, they must notify the State of the proposed action. The parties will then have an opportunity to consult with one another in order to ensure that the proposed action not only meets Federal requirements but is also consistent, to the maximum extent practicable, with the State's management program. In the event of a serious disagreement between the State and a Federal agency, either party may seek Secretarial mediation to assist in resolving the disagreement. These procedures will provide all parties with an opportunity to balance environmental concerns along with other national, State and local interest.

In cases where Michigan determines that applications for Federal licenses, permits, grants or loans are inconsistent with the State's coastal program, Federal agencies are required to deny the approval of the applications. State objections must be based upon the substantive requirements of the Program such as the protection of air and water quality, the prevention of shoreline erosion and flooding damages and the protection of valuable wetlands. State objections may cause Federally regulated and assisted projects to locate in alternative sites where development is encouraged because of favorable physical features, adequate local public works and services, and sufficient regional transportation, communication and financial networks.

The consistency requirements do place new legal requirements upon Federal agencies. To the extent that new procedural requirements to comply with the Federal consistency provisions cost time and money, applicants and Federal agencies will be impacted negatively. The long-term effect of the consistency procedures will be positive to the extent that they minimize the adverse impacts of Federal actions on the State's coastal environment.

National Interest

Federal approval of the Program is dependent in part on a finding that the State provides for adequate consideration of the national interest involved in the planning for and in the siting of facilities necessary to meet requirements which are other than local in nature. National interest considerations include but are not limited to national defense and aerospace, energy, recreation, water transportation, air and water quality, wetlands, hazard areas, and prime agricultural lands. The consideration of the national interest is discussed in detail in Part II.

The national interest requirement is intended to assure that national concerns over facility siting are expressed and dealt with in the development in implementation of State coastal management programs. The requirements should not be construed as compelling the states to propose a program which accommodates certain types of facilities, but rather to assure that national concerns are adequately considered in State decisions involving the use of coastal areas.

The national interest provision will insure that national interest considerations are brought forward and weighed in management decisions affecting coastal resources. In the long-term, the provision will effect a balancing of national interest in facilities development and resource protection. In the short-term it will cause increased consultation in decisions on facility siting in Michigan's Great Lakes shorelands.

An example of the interaction between the consideration of national interest and Federal consistency is the proposed siting of an energy related facility in the Michigan coastal region. The Program recognizes that the construction of coastal dependent energy facilities is in the national interest and in reviewing permit applications for facility siting, the State 306 agency will consider national energy plans, the East central Area Reliability Coordination Agreement, the comments of the State's Oil and Gas Advisory Board and additional new information on the national interest in energy facility siting as it becomes available. It will balance these energy related national interest statements with other national and State interests in coastal resource preservation, protection and development. Procedures for public meetings and

hearings, environmental impact statements, and the review of the National Resources Commission and the Michigan Environmental Review Board will insure open and informed decision-making. Michigan's Federal consistency provisions will be used to implement the State's decision to approve, condition, or deny the siting of the energy facility. If a disagreement develops between the State and one or more Federal agencies over the State decision to approve, condition or deny, the decision may be mediated by the U.S. Secretary of Commerce and/or reviewed by the courts.

3. The Environmental and Socio-Economic Impact

The environmental and socio-economic impacts are discussed here in relation to the Program policies described in Chapter III, i.e., overall Program policy, and policy for five areas (1) areas of natural hazard to development — including erosion and flood prone areas, (2) areas sensitive to alteration or disturbance — including wetlands, natural areas, sand dunes, and island; (3) areas fulfilling recreational or cultural needs — which include areas managed to recognize recreational, historic or archaeological values; (4) areas of natural economic potential — including water transportation, mineral and energy, prime industrial and agricultural areas; and (5) areas of intensive or conflicting use — which include coastal lakes, river mouths, bays and urban areas.

Environmental Impacts

The overriding policy in the Program is to protect coastal air, water and other natural resources from pollution, impairment and destruction. The Program will not permit coastal land and water uses or activities that are harmful to the environment, as long as a feasible and prudent alternative consistent with reasonable requirements of the public health, safety and welfare exists. Because of this overriding policy direction, the Program's long-term environmental impacts will be positive.

The State standards and criteria that will be used in regulatory decisions controlling coastal uses and activities emphasize considerations of direct, significant and cumulative impact, land capability, protection of public trust resources, the presence of geographic areas of particular concern and of sensitive areas, consistency with ongoing plans and programs, and compatibility with coastal related programs. The application of these State standards and criteria may have short-term positive and negative effects on the environment, depending upon the individual case circumstance.

Turning to the impacts of the management of the types of areas addressed by the Program, the hazard area management will result in positive long and short-term environmental impacts to the extent that this activity reduces the destruction of nutrient transport, water quality and wetland habitat. Indirect, negative short- and long-term environmental impacts may result from this activity when and where structural protection measures are employed.

The management of sensitive areas will have positive long- and short-term impacts to the extent that it results in improved fish and wildlife habitat, increased productivity and nutrient cycling, water purification, the preservation of rare and

endangered species and the protection of ground water recharge areas and sand dunes. Negative environmental impacts are not expected to result from this activity.

Positive short-term environmental impacts will result from recreational and cultural area management to the extent that coastal resources are preserved, protected and restored. Negative short-term environmental impacts may result where development activities cause some impairment (e.g., the construction of a marina causing shoaling and turbidity in a water channel), even though the activity is conducted in compliance with State standards and criteria. The long-term environmental impacts of recreational and cultural area management will be positive to the extent that recreation demands are satisfied by acquisition, construction and area management activities which minimize conflicts and environmental degradation.

The net long-term environmental impact of the management of areas of natural economic potential and areas of intensive or conflicting use will be positive due to the Program's policies, standards and criteria minimizing environmental damage. Individual activities may have long and short-term negative environmental impacts, however, even though they are conducted in compliance with state standards and criteria. For instance, some coastal resource degradation will occur (e.g., removal of vegetation, sedimentation, water quality degradation, loss of habitat) in areas where mineral and energy exploration and development, agriculture, industry, and water transportation activities are encouraged.

The impacts of the action program described in Chapter III will have positive long- and short-term environmental impacts to the extent that additional research, improved information systems, enhanced local government management capability and increased public awareness reduce the stresses on the coastal ecosystem. On the other hand, capital improvement projects planned for and assisted through the Coastal Management Program, the energy facility siting planning process, the shoreline erosion planning process, and the shorefront access planning process, may cause negative long- and short-term environmental impacts.

Socio-Economic Impacts

Hazard area management will bring about positive socio-economic impacts by reducing property damage and loss of investment in new development and shore protection. The Program will accelerate the delineation and regulation of flood and erosion areas, provide technical assistance to riparian owners, and promote financial relief for owners of destroyed property. Hazard area management may result in decreased property values and/or the voluntary relocation of existing structures. Thus, there are potential negative short- and long-term socio-economic impacts for some property owners.

Sensitive area management may result in decreased market values. Consequently, the potential for short-term negative socio-economic impacts for some property owners exists. On the other hand, properties adjacent to properly managed sensitive areas may increase in value and result in long-term benefits for individual property owners. The protection and development of the State's fish and wildlife and cultural heritage areas will result in long-term socio-economic benefits for present and future generations. Also, indirect short-term socio-economic benefits may result in the

form of increased revenues and profits from hunting, fishing, boating and tourism.

Sand dune management will cause negative short-term impacts for individual commercial and industrial operators to the extent that government regulation results in increased costs for doing business. The long-term socio-economic impact of sand dune management will be positive to the extent that the State's Great Lake sand dune areas are conserved and developed for mining and other uses in a manner which minimizes waste and damage.

Positive socio-economic impacts will result from the management of the Great Lakes islands to the extent that the preservation of historic and archaeological qualities, the control of water and solid waste and the provision of safe drinking water improves the quality of island life. Negative short-term socio-economic impacts may be experienced by individual property owners incurring increased costs for pollution control.

Recreational and cultural areas management may cause indirect negative short-term socio-economic impacts for local governments and individuals. Examples of such indirect impacts include a loss in a local tax base due to land acquisition, or an increase in local public services expenditures due to induced rapid growth and/or seasonal tourism. These negative impacts would be partially offset by State payments in lieu of taxes in the case of acquisition and by increases in property values and sales revenues in the instances of induced growth and tourism. Also, the balancing of interests in the Program will minimize negative socio-economic impacts. The socio-economic benefits of increased revenues and enjoyment will be generated by the Program's recreational and cultural area management activities. Hotel, motel, campground, marina, and fast food operators, and retailers of mobile homes, autos, boats, motors, sails, oil and gas are among the business interests likely to benefit financially. Social benefits will also accrue for the public at large.

The management of areas of natural economic potential will foster orderly economic development in Michigan's coastal area. The Program will identify coastal areas to accommodate the demand for new or expanded energy and coastal dependent industrial facilities. Also, it will promote the development of coastal agriculture and Great Lakes ports. To the extent that Program management activities result in indirect positive or negative socio-economic impacts for some private concerns and local jurisdictions.

Program management activities in areas of conflicting and intensive use will result in positive socio-economic impacts to the extent that they reduce conflicts, energy wastes, and costs associated with administrative delay. Individuals may experience indirect positive and negative socio-economic impacts from Program activities where financial or technical assistance to local governments for enforcement, zoning, waterfront development, public access site planning and maintenance, alters the potential market value of certain properties.

4. The Institutional Impacts

The institutional impacts are discussed in the categories of intergovernmental, State, local and regional, and the public.

Intergovernmental

The Program will support activities to develop, analyze and distribute information; to consult with affected government agencies on relevant Program actions; and to monitor and comment on proposed legislation, rule and regulation, and administrative procedures affecting the management of the shoreland of the Great Lakes. These activities should result in better intergovernmental coordination and improved decision-making in the State, the Great Lakes Region, and the nation. The governmental agencies involved in these kinds of Program activities include local, regional, State and Federal agencies, the Great Lakes Commission, the Great Lakes Basin Commission, and the International Joint Commission.

State

State level institutional impacts include the acceleration of State programs, the initiation of special projects, and the improvement of existing review procedures.

State programs: The main regulatory programs that will be accelerated by the Program are:

- Act No. 245 of the Public Acts of 1970, as amended, the Shorelands Protection and Management Act: The Program will provide funds to the Shorelands Management Unit to implement Act No. 245. It is expected that, in the 1978-79 fiscal year, about 75-100 miles of high risk erosion areas on Lake Huron will be designated with a minimum building setback. In anticipation of passage of the proposed rules in June 1978, it is expected that 30-50 miles will be designated as environmental areas on Lake St. Clair and regulated by management plan. In addition, the Coastal Management Program will provide funds to implement an inter-agency agreement between the Michigan Department of Labor which provides for coordinated review of applications for permit under Act No. 245 with those issued by local construction code enforcement agencies. It is anticipated that this inter-agency agreement will significantly enhance the Department's monitoring and permitting procedures in areas regulated by Act No. 245. In future years, additional high risk areas and environmental areas will be designated along the Lake Michigan and Lake Superior shorelines of the Upper Peninsula.
- Act No. 247 of the Public Acts of 1955, the Great Lakes Submerged Lands Act: The Coastal Management Program will provide financial assistance to: (1) reduce the time delay in reviewing applications for Great Lakes bottomlands leases by about 50 percent; and (2) computerize permit information to provide for greater consistency in permit decisions regulating activities on Great Lakes bottomlands. The time involved in

issuing the joint Department of Natural Resources-Corps of Engineers permits for dredge and fill activities in Great Lakes bottomlands should be 2-3 months, rather than 4-6 months before the joint permit processing and computerized review were instituted. Funds also will be provided to expedite processing the backlog of Great Lakes bottomlands leases, both for fills and marina operations.

- Act No. 222 of the Public Acts of 1976, the Sand Dune Protection and Management Act: The Coastal Management Program will provide funds to the Geological Survey Division to: (1) determine and designate sand dune areas; (2) review and evaluate sand mining permit applications, including mining and reclamation plans, environmental impact statements, 15-year mining plans and bonding requirements; (3) formulate administrative rules necessary to administer the program; and (4) monitor sand mining operations. This financial assistance has accelerated the implementation of this Act, and will continue to support its effective administration in the future.
- Zoning enforcement: Certain local governments along the coast will be provided funds by the Coastal Management Program to administer and enforce shorelands ordinances, in conformity with requirements of Act No. 245 of the Public Acts of 1970, as amended.

State Projects

The Program will be funded annually and funds will be used to provide technical and financial assistance to local governments and individual citizens. Michigan is planning on soliciting project requests from state, regional, local, and private agencies once a year. Examples of the kinds of projects that the Program may sponsor follow:

- Act No. 116 of the Public Acts of 1974, the Farmland and Open Space Preservation Act: Funds may be provided to survey coastal property owners in certain areas to determine reasons for non-participation in the Farmland and Open Space Program (e.g., Allegan, Berrien and Leelanau counties) and to determine measures for increasing enrollment. Funds may also be provided to determine development rights value and determine the feasibility of purchase of development rights in key agricultural coastal locations.
- State Parks: funds may be provided for low cost construction activities to preserve or restore certain areas in coastal state

parcs, including sand dune revegetation, wetlands protection, and interpretive centers.

- Metro Urban Recreation Programs: Funds may be provided to conduct engineering design and feasibility studies for urban waterfront recreation in the City of Detroit to provide increased access and recreation opportunities.
- Coastal Transportation: Fund may be provided to define critical and sensitive resources impacted by transportation facilities, including commercial ports, within the coastal boundary.
- Special Assessment District for Erosion Control: A technical study will be conducted to identify procedures and costs associated with utilizing Act No. 148 of the Public Acts of 1976 which provides for the installation of certain public improvements by townships, including the construction, maintenance, repair, or improvement of erosion control structures or dikes. The Act provides that payment for such works can be made by issuance of bonds and by levying taxes to be assessed against the whole or a part of the public cost against the property benefitted.
- Mapping of Fish Spawning Sites: Funds will be provided to collect information relative to past spawning areas of fish in Michigan's coastal waters to assist in maintenance of sport and commercial fisheries.
- Historic Restoration: Funds will be provided for feasibility studies, site design and low-cost construction to restore certain historic sites such as the Beverhead Lighthouse, Grindstone City, and the Schoolcraft House.

State Review Procedures

The Program will use a number of review procedures to continually consult with other government agencies. For example, the Program will:

- Insure that State and Federal agency activities affecting Michigan's Great Lakes resources are consistent with the State's coastal management policies through the (i) Permit review procedures of the Division of Land Resources Program, Department of Natural Resources; (ii) Citizens Shoreland Advisory Council review of projects proposed for funding by the Coastal Management Program; (iii) Standing Committee on

Shorelands and Water review of proposed projects and geographic area of particular concern nominations for purposes of identifying sources of funds and establishing budget priorities; (iv) Standing Committee on Shorelands and Water evaluation of Federal and State activities for consistency with Program policies; (v) The Environmental Enforcement Division's review of large scale projects having potentially significant impacts on Michigan's coastal area; (vi) the Office of Policy Development's review of new and revised Departmental policy for consistency with the Coastal Management Program.

- Insure that the national interest is adequately considered in the siting of facilities that are greater than local in nature. In addition to the procedures and processes described above which allow for the consideration of national interest in large-scale facility siting provisions, the Chair of the Standing Committee on Shorelands and Water Coordination will request information on the national interest from relevant state agencies and cause the Committee to consider this information in making recommendations to the Department of Natural Resources Director, the Natural Resources Commission and the Michigan Environmental Review Board. Michigan specifically sees three types of facilities and four types of resources as being important to the State's responsibility to consider the national interest. These facility and resource types, the State agencies that will be asked to comment on the national interest, and the sources of information the agencies will be asked to consult are shown in the Table VI-D, Consideration of the National Interest in the Siting of Facilities than are greater than local in nature.

- Annually solicit proposals from regional planning commissions and local governments for projects in the coastal area.

- Incorporate the comments of regional commissions and local governments in making decisions on activities affecting the coastal area. Procedures that will be used to gather their comments include: (i) The OMB-Circular A-95 process; (ii) The Environmental Impact Statement process; (iii) The annual proposal solicitation process; (iv) The geographic area of particular concern nomination process; (v) The Division of Land Resource Programs Permit review process; (vi) Public meetings and public hearings attended by Division personnel.

Local and Regional

Local units of government, i.e., counties, townships, cities and villages will both impact on and be impacted by the State programs, projects and processes described immediately above. The Program will increase the level of interaction among local and state agencies with regard to coastal resource management. The Program will carry out monitoring, regulating and enforcement activities in all local units of government consistent with the appropriate State statutes and implementing regulations and procedures. The Program will provide financial and technical assistance to local units of government in accordance with the units' particular coastal resource management needs, adherence to Program policies, and overall participation and cooperation with the Program.

Regional agencies include the 10 coastal planning and development regions and agencies like the Watershed Steering Committees, Resource Conservation and Development, and intergovernmental compacts. Cooperation of the 10 coastal planning and development regions is anticipated during Program implementation. Like local units of government, these regional agencies will both impact on and be impacted by the Program. Their participation will include review and comment on environmental impact statements and A-95 projects in or affecting the coastal area, and the articulation of regional coastal goals, objectives, plans and project priorities. Also, they are eligible to be the recipients of financial and technical assistance.

Public

Public institutional impacts will result from the Program's providing full opportunity for public input and participation during implementation. Any individual or group may nominate an area of particular concern, assist in formulating local coastal management goals, serve on coastal management advisory bodies, review and comment on Program documents, attend public hearings, or bring suit.

Also, the Program is aided by the citizens Shorelands Advisory Council, a group of fifteen citizens from around the State. This Council reviews the Program's annual grant application before it is submitted to the Federal Office of Coastal Zone Management.

E. ALTERNATIVES TO THE PROPOSED ACTION.

Introduction

The alternatives to the proposed approval of the program are to delay or deny approval. In order to delay or deny approval, the Assistant Administrator must find that the Program fails to meet a requirement of the CZMA. Conversely, he must find that the Program satisfies all of the CZMA requirements before he approves the Program.

During the development of the Program, potential deficiencies were identified by the OCZM. These include (1) the failure of the Program to develop comprehensive policies; (2) the failure of the Program to develop specific policies (3) the failure of the

Program to demonstrate sufficient organizational arrangements and authorities to enforce policy and resolve conflicts; (4) the failure of the Program to assure that local land and water use regulations do not unreasonably restrict or exclude land and water uses or regional benefit; (5) the failure of the program to designate properly geographic areas of particular concern.

These five potential deficiencies were discussed in the Alternatives to the Proposed Action in the Draft Environmental Impact Statement (DEIS). DEIS reviewers commented primarily on numbers 2, 3 and 5 of the above and on 3 additional potential deficiencies: (1) the failure of the Program to have a firmly delineated boundary, (2) the failure of the Program to adequately consider the national interest, (3) the failure of the program to adequately describe the way in which Federal consistency will operate.

All of the potential deficiencies have now been addressed by Michigan and the Assistant Administrator's assessment is that Michigan meets all of the CZMA requirements for approval. In order to elicit public and agency comment and to assure that the Assistant Administrator's assessment is correct, this section identifies the remaining Program areas where DEIS reviewers thought that there may be deficiencies, and considers alternatives of delay or denial based upon each. Before examining the alternatives, the generalized impacts that would result from delay or denial are summarized.

The general impacts of delay or denial of approval of the Program, regardless of the basis, are:

LOSS OF FEDERAL FUNDS TO ADMINISTER THE PROGRAM. Under section 306, Michigan will receive approximately \$1.5 million annually. The State will use these funds to administer existing shoreland resource management program; to implement an energy facility siting planning process, a shorefront access planning process, and an erosion/mitigation planning process for the State's Great Lakes shoreland; to provide technical and financial assistance to regional commissions, local governments and private citizens.

LOSS OF FEDERAL CONSISTENCY. The Program policies are developed from State statutes and rules, Executive Orders of the governor and formal policies of the Natural Resources Commission. The delay or denial of approval will mean that activities requiring Federal licenses or permits and Federal grants and loans need not be conducted in a manner consistent with these Program policies.

LOSS OF ADEQUATE CONSIDERATION OF THE NATIONAL INTEREST IN THE SITING OF FACILITIES WHICH ARE OTHER THAN LOCAL IN NATURE. If approval is delayed or denied, the state is under no obligation to give adequate consideration to coastal resources and facilities that are of national interest. This would result in an overall public benefit loss to this and future generations.

Federal Alternatives

ALTERNATIVE 1 — THE ASSISTANT ADMINISTRATOR COULD DELAY OR DENY APPROVAL BECAUSE THE POLICIES ARE NOT SPECIFIC ENOUGH TO DIRECT STATE AGENCIES MANAGING USES, AREAS AND ACTIVITIES IN THE COASTAL ZONE.

CZMA requirements call for Program policies which are specific in terms of what uses, areas, and activities are being managed, and the purpose for which they are being managed. In essence, the Program must provide direction to persons responsible for taking action(s) in the coastal area.

Michigan has derived the Program policies from its existing statutes, rules, executive orders, and Natural Resources Commission Statements. It presents general policies for activities being conducted in the coastal zone and specific policies for activities being conducted in the particular areas of:

- areas of natural hazard to development,
- sensitive areas,
- areas fulfilling recreational and cultural needs,
- areas of natural economic potential,
- areas of intensive or conflicting use.

The overall policies and the policies for specific areas are presented in Chapter III of Part II. They are presented in the context of Program goals, problems and concerns so that the reasons for the policies are recorded. Also, they are presented with program action programs so that the way to implement the Program policies is made clear.

Additional information on how the Program policies will be implemented is provided in Chapter V, Coastal Management Program Organization and Authorities, Part II. The organization structure and operating procedures of the Michigan Department of Natural Resources, (DNR), which are extremely important to the implementation of Program policies are described in this Chapter. The criteria that will trigger a Program permit review also are described here. Appendix C of "State of Michigan Coastal Management Program and Draft Environmental Impact Statement" provides a description of the scope, authority and administrative requirements of Michigan statutes authorizing the Program permit reviews.

The Assistant Administrator believes that the combination of the Program policies in Chapter III and the criteria triggering a Program review and the Program permit review procedures described in Chapter V provides sufficient information to find that the Program policies are specific and approvable. If the Assistant Administrator did not find the policies specific and approvable, the State would have these options:

- Accept the decision and do nothing to remedy the deficiency(s);
- Accept the decision and develop specific policy to remedy deficiencies through administrative rule-making;
- Accept the decision and develop specific policy to remedy the deficiencies through new legislation;
- Reject the decision and seek administrative or judicial review of the Assistant Administrator's decision.

Under the first and fourth options, the general impacts of delay or denial would result. Under the second and third options the State could receive Federal funds under Sections 305 and 305(d) of the CZMA.

Under the second option, the Program implementation would be delayed for one year at a minimum, and most of the state and local projects submitted to the DNR for funding in 1978 would be denied. The new administrative rules would provide more detailed information to DNR personnel and to citizens in written form. In addition, Federal agencies and persons interested in assuring that the Program adequately considers the national interest would have more specific Program administrative rules from which to evaluate consistency and national interest considerations.

Under the third option, the Program implementation would be delayed for two years at a minimum and most of the State and local projects submitted for funding in 1978 would be denied. If the State legislation passed and if the Congress re-authorized the CZMA, the option would result in more specific policies for DNR personnel making Program decisions, and the Federal agencies, local governments, persons concerned with the Program's consideration of the national interest, and private citizens in general sometime after 1980.

ALTERNATIVE II — THE ASSISTANT ADMINISTRATOR COULD DELAY OR DENY APPROVAL BECAUSE THE ORGANIZATIONAL ARRANGEMENTS AND AUTHORITIES OF THE PROGRAM ARE NOT SUFFICIENT TO ENFORCE POLICY AND RESOLVE CONFLICTS.

A number of DEIS reviewers commented on what they perceived to be potential deficiencies in this area. Reviewers questioned (1) the authority of the Governor to designate a lead agency, to empower the lead agency to resolve conflicts and to require adequate consideration of the national interest; (2) the authority of the Michigan Environmental Review Board (MERB) to coordinate and resolve conflicts among State agencies; (3) the fact that the Program was not adopted in accordance with the Michigan Administrative Procedures Act as a "rule"; (4) the fact that the Program will not result in a change in State law and regulation as proposed for Federal approval; (5) the adequacy of the Program description of the organization structure and conflict resolution technique.

This last point has been addressed directly in Part II, Chapter V. The Natural Resources Commission formally adopted the Program. This Commission is the policymaking body of the DNR which administers directly or in conjunction with one or

more State agencies all twenty-seven regulatory programs that are incorporated as part of the Program. The DNR is represented on the Michigan Environmental Review Board, the Interdepartmental Review Committee and the Standing Committee on Shorelands and Water and is able to achieve State agency compliance with Program policies.

Concerning the fourth point, the organization structure provides a mechanism to focus State agency programs on coastal resource problems and to resolve conflicts where they arise. The Michigan legislature has enacted laws which address the significant problems and issues in the Michigan coastal area, including the Shoreland Management and Protection Act, the Floodway Encroachment Act, the Great Lakes Submerged Lands Act, the Soil Erosion and Sedimentation Act, the Sand Dunes Protection and Management Act, and others. Program implementation will enable Michigan to focus these regulatory programs and technical and financial assistance programs on the State's Great Lakes coastal resources.

There is no requirement to adopt the Program in accordance with the Administrative Procedures Act of Michigan as implied in the third point. The Program relies upon existing Statutory law and regulations adopted pursuant to that law for enforcement authority.

Concerning the authority of the MERB, this Board can coordinate and resolve conflicts in a manner consistent with its intended function in the Program as affirmed in the Executive Order creating MERB and MERB's own rules. This authority is confirmed in the Michigan Supreme Court's ruling, Highway Commission v. Vanderkloot, 392 Mich. 159 (1974).

The first point goes to the authority of the Governor in Michigan. The Governor's authority is provided in Article V Section 2 of the Michigan constitution and the Michigan Statutes. His designation of a lead agency by transmittal letter is pursuant to his broad constitutional and statutory authority and is normal State practice. His designation of the DNR as the lead agency also recognized that agency's lead authority to resolve conflicts as outlined in Part II, Chapter V.

The Assistant Administrator believes that the organizational arrangements and authorities of the Program described in Part II and in the DEIS Appendices are sufficient to enforce policy and resolve conflicts. If he did not find this so, the State would have these options:

- Accept the decision and do nothing to remedy the deficiency(s)
- Accept the decision and seek legislation to remedy the deficiency(s)
- Accept the decision and obtain an Executive Order to remedy the deficiency(s)
- Accept the decision and conduct administrative rule making to remedy the deficiency(s)

- Reject the decision and seek administrative or judicial review of the Assistant Administrator's decision.

Under the first and fourth options the general impact of delay or denial would result. Under the remaining option, 305 or 305(d) funds would be available to the State.

Under the second option, the Program would be delayed for two years at a minimum and most of the State and local projects submitted for funding in 1978 would be denied. If the State legislation passed and if the Congress reauthorized the CZMA the option could result in comprehensive legislative authority to resolve conflicts, consider the national interest, control wetlands and site energy facilities, in addition to the Program authority which exists already.

Under option three, the Program would be delayed for a minimum of one year and most of the 1978 proposed projects would be denied funding. The Executive Order could direct all State agencies to cooperate with the DNR as lead agency; adopt the Program as official State policy and direct all State agencies to comply; and direct the State agencies to consider the national interest, in addition to the Executive direction and delegation of authority which exists currently.

Under the fourth option, the 1978 proposed projects would not be funded at the anticipated \$1.5 million level and implementation would be postponed for one year, at a minimum. New administrative rule making conducted pursuant to the Michigan Administrative Procedures Act could complete the revision of the Shoreland regulation to include developed and platted areas; adopt all coastal policies as regulation; and establish criteria for the review of county rural zoning ordinances so as to preclude arbitrary or unreasonable restrictions or exclusions of uses of regional benefit.

ALTERNATIVE III — THE ASSISTANT ADMINISTRATOR COULD DELAY OR DENY APPROVAL BECAUSE THE PROGRAM DOES NOT DESIGNATE PROPERLY GEOGRAPHIC AREAS OF PARTICULAR CONCERN.

In the DEIS comments, some questions were raised concerning what areas had actually been designated; who may nominate; and how private property rights are protected in this procedure?

The requirement for geographic areas of particular concern is that areas be inventoried and designated; that the nature of concern in the designated areas be described; that the Program contain a description on how it (the Program) addresses the management concerns in designated areas; and that the Program provide guidelines on priorities of uses in designated areas, including guidelines on uses of lowest priority.

The Assistant Administrator finds that the Program satisfies these requirements in Part II, Chapter IV. In response to the questions of DEIS reviewers, Chapter IV states that legislative areas of particular concern are *designated*, and that any individual, group or agency may *nominate*. With respect to private property rights, the expressed agreement of landowners is required in the public nomination process of areas of particular concern. In the legislative areas of particular concern, the normal legal requirement of public notice, public hearings and judicial review will be used.

If the Assistant Administrator did not find the area of particular concern requirement to be complete, the State could pursue these options:

- Accept the decision, and do nothing to remedy the deficiency(s)
- Accept the decision and designate nominated areas as areas of particular concern
- Reject the decision and seek administrative or judicial review of the Assistant Administrator's decision.

Under options one and three, the general impacts of delay or denial would result. Section 305 or 305(d) funds would be available to the State under option two. Under this second option, a 9-month minimum delay in Program implementation and a 1978 Program budget reduction would result. The Program would have designated geographic areas of particular concern that came up through the public nomination process in addition to the legislative geographic areas of particular concern designated already.

ALTERNATIVE IV — THE ASSISTANT ADMINISTRATOR COULD DELAY OR DENY APPROVAL BECAUSE THE PROGRAM DOES NOT SATISFACTORILY DELINEATE AN INLAND BOUNDARY.

Some DEIS reviewers commented that the inland boundary should have been completed for inclusion and review in the DEIS, and that maps should be included in the FEIS. The inland boundary requirement is that said boundary is described in a manner which is clear and exact. The boundary may either be mapped or described in narrative form. The boundary requirement is met if the State can advise interested parties within 30 days concerning inquiries as to the placement of the inland boundary. In response to DEIS comments, a new single schematic boundary illustration and directions on how to purchase or inspect boundary maps have been added to Part II, Chapter II. The boundary criteria also have been clarified. Maps are not included in this FEIS because of the difficulty involved in mapping 3200 miles of shoreline at a consistently large enough scale and of the expense involved in reproducing same.

If the Assistant Administrator found the inland boundary description to be insufficient, the options left to the State would be:

- Accept the decision and do nothing to remedy the deficiency(s)
- Accept the decision and map and reproduce for distribution the entire inland boundary at scale of 1 inch equals 200 feet or the metric equivalent.
- Reject the decision and seek administrative or judicial review of the Assistant Administrator's decision.

The first and third option would result in the general impact of delay or denial. Under the second option, 305 and 305(d) funds would remain available to the State.

Option two would result in a 9-month delay at a minimum and some 1978 project requests would be denied. Large scale maps of the entire coast would be available to all for a price in 1979 in addition to the maps, technical assistance and 30-day response time for inquiries that exist presently through the DNR and the 10 coastal regional planning and development agencies.

ALTERNATIVE V — THE ASSISTANT ADMINISTRATOR COULD DELAY OR DENY APPROVAL BECAUSE THE PROGRAM FAILS TO ADEQUATELY CONSIDER THE NATIONAL INTEREST.

The Program staff consulted with other State agencies, Federal agencies, public utility companies and the private sector concerning the national interest requirement during program development and the Program policies and action programs in Chapter III Part II incorporate national interest considerations. The specific national interest categories in the Program are National Defense and Aerospace, Recreation, Transportation, Air and Water Quality, Wetlands, Hazard Areas, Historic and Archeological Sites and Energy. The national interest in each of these areas and how it will continue to be considered is provided in Chapter VI.

It was over the requirement for a process to ensure continued adequate consideration of the national interest that the Assistant Administrator deliberated most intensively with the State. Michigan will meet this requirement through the established administrative procedures of the Natural Resources Commission and the Environmental Review Board. Both of these policy bodies have responsibilities requiring their broad review and consideration of all interests affected by the Program. In addition, the DNR Director has issued Director's Letter #17 Effective May 8, 1978 (Appendix B) directing the Department to continue the consideration of the national interest in facility siting and resource protection during Program administration in its participation on the Standing Committee on Shorelands and Water Coordination, the Interdepartmental Review Committee and the Michigan Environmental Review Board. (See Appendix I).

If the Assistant Administrator did not find the existing administrative procedures combined with the Director's Letter #17 to be sufficient, the options available to the State would be:

- Accept the decision and do nothing to remedy the deficiency;
- Accept the decision and take legislative action to assure adequate consideration of the national interest;
- Accept the decision and conduct rule making in the State agencies to assure adequate consideration of the national interest.
- Reject the decision and seek administrative or judicial review of the Assistant Administrator's decision.

Options one and four result in the general impacts of delay or denial. Under option two and three, 305 or 305(d) funds would be available to the State.

Option two would result in a two-year delay at a minimum and the majority of State and local projects submitted to the DNR for funding in 1978 would be denied. If the State passed legislation and if the Congress re-authorized the CZMA, the Program would have a statutory base to assure the adequate consideration of the national interest in addition to the administrative procedures which already exist.

Option three would result in a one-year delay at a minimum, and the majority of 1978 project requests would be denied. If the rule-making procedure was properly administered by the separate State agencies and approved by legislative committee, the Program could be approved in FY 79 and receive 306 funding in FY 79 and 80 under the existing CZMA. Under this option, the State would have rules and regulations to assure the adequate consideration of the national interest in addition to the administrative procedures which already exist.

ALTERNATIVE VI — THE ASSISTANT ADMINISTRATOR COULD DELAY OR DENY APPROVAL BECAUSE THE PROGRAM FAILS TO INCLUDE FEDERAL CONSISTENCY PROCEDURES.

Some DEIS reviewers thought that the Program did not adequately describe the Federal consistency procedures and raised in particular, questions on (1) the responsible agency; (2) the consistency criteria; (3) the flow diagrams in the Program.

The Assistant Administrator believes that Part II Chapter VI adequately describes the Federal consistency procedures. In response to DEIS reviewers, the diagrams have been revised, the consistency criteria clarified, and the responsibility of the Coastal Management Unit in the DNR vis-a-vis consistency certification is described in greater detail. (See Part II, Chapter VI).

If the Assistant Administrator did not find the Federal consistency requirement to be met, the State's options would be:

- Accept the decision and do nothing to correct the deficiency(s);
- Accept the decision and conduct rule-making to establish the Federal consistency procedures;
- Reject the decision and seek administrative or judicial review of the Assistant Administrator's decision.

Options one and three would result in the general impacts of delay or denial. Under option two, 305 or 305(d) funds would be available to the State.

Option two would result in a one-year delay, at a minimum. Also, the majority of State and local projects submitted for funding in 1978 would be denied. New administrative rules conducted pursuant to the Michigan Administrative Procedures Act and reviewed by legislative committee could clarify and perhaps simplify in written form the review criteria and procedures which the DNR uses currently to enforce the 27 regulatory programs which are part of the Program. While the Federal

agencies and applicants for Federal assistance may consult with and receive guidelines from the DNR and the ten coastal regional planning and development agencies concerning consistency certification, the new rules would provide additional guidance and certainty.

F. PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

The Program contains conflict resolution procedures to reconcile, to the greatest possible degree, the competing demands for environmental protection and economic development. Long- and short-term negative impacts may occur from the implementation of policies controlling hazard areas, recreation areas, economic development areas, and areas of intensive or conflicting use. Some coastal development which require siting in the coastal area and/or are determined to be in the national interest may lead to long- and short-term negative impacts on aquatic and terrestrial ecosystems and detract from the visual appeal of the shoreline.

G. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The Program is not designed to induce short-term uses of the environment at the expense of long-term productivity. Its purpose is to enhance and maintain the long-term productivity of the coastal environment while meeting the current and future needs of the residents of Michigan, the Great Lakes Region, and the nation.

Some short-term uses will be prohibited or conditioned in hazard and sensitive areas. On the other hand, some short-term uses will be encouraged in economic development areas, recreational areas, and areas of intensive or conflicting use.

Complementing the Program is the work on the air and water quality in Michigan's coastal area. The Program incorporates the requirements of these two important statewide resource protection programs.

H. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

The Program will allow the use of shoreline for economic development including mineral, energy, agricultural, prime industrial, and transportation development. Some of these will probably involve irreversible negative impacts on coastal resources. The basic rationale for allowing such resource commitments is economic necessity. However, irreversible commitments will be minimized by imposing conditions on development permits.

Financial and human resources also will be committed should the proposed action be implemented. Federal, State and local tax dollars and person power will be consumed by the Program.

I. CONSULTATION AND COORDINATION

Part II, Chapters V and VI, describe in part the coordination and consultation involved in developing the proposed action. Chapter VI also describes the Program's procedures for continued consultation and coordination. Appendices A, B, and E of the DEIS document government agency consultation and public comment. Appendix D and Attachment 1 of the FEIS documents further consideration of government agency and public comment in developing the proposed action.