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MICHIGAN THE GREAT LAKE STATE

A Proposed Program for Michigan's Coast

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MICHIGAN THE GREAT LAKE STATE

contents

	Page
Introduction	1
Character of the Coast	4
Importance of the Coast - Past and Present	5
Problem and Opportunity Areas	6
What Must be Done?	9
What is Being Done?	11
Defining the Coastal Area	13
Special Areas	17
Goals for Coastal Management	19
Program Roles for Coastal Management	21
What Can I Do and How Can My Input be Used?	25
Program Guidelines	31
Summary	33

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INTRODUCTION

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"A Proposed Program for Michigan's Coast" provides an overview of a two and one-half year effort by planning and development regions, many interested groups and individuals, and the Department of Natural Resources to improve the way in which our Great Lakes coastal resources are managed. This spring, the Department of Natural Resources will sponsor a series of information meetings across the State to discuss this report and receive further public input.

The need for more effective coastal management was officially recognized by the Michigan Legislature and Governor Milliken in 1970 when the Shorelands Protection and Management Act was signed into law. This statute reflected statewide awareness of the importance of Michigan's coast and its value as a natural asset. Major provisions of the act include the mandate to plan for the management of Michigan's Great Lakes high risk erosion areas, flood-risk areas and critical fish and wildlife habitats.

Two years later, passage of the Federal Coastal Zone Management Act marked a nationwide recognition of the multiple values of the nation's coastal area. This Act, for the first time in our nation's history, established a national program to assist coastal states during the development and implementation of coastal management programs. Under this voluntary program, the 30 coastal states may apply for grant monies to work with citizens, local and federal agencies, and other vitally affected interests in the development of such a program. Each state program is mandated to give full consideration to the ecologic, cultural, economic, aesthetic and recreation values of the coast.

The Division of Land Resource Programs, within the Department of Natural Resources, has been assigned responsibility for the preparation and

coordination of Michigan's Coastal Management Program. "A Proposed Program for Michigan's Coast", offered on the following pages for your review, identifies coastal resource use problems and opportunities. It presents a framework through which citizens, federal agencies, state and local governments can work together to solve problems and to fully realize Michigan's coastal resource potential.

Ten supplements to this report have been prepared for individual coastal areas of Michigan by ten planning and development regions, in concern with their representative citizens, under contract with the Michigan Department of Natural Resources. Supplements can be obtained at coastal management information meetings, from individual planning and development region offices or the Department of Natural Resources. Addresses for the planning and development region offices are listed on page

Michigan citizens can benefit from improvements in the way in which their beautiful and productive coastal resources are managed. We hope you will assist in perpetuating and improving Michigan's coastal area and will take time to carefully review "A Proposed Program for Michigan's Coast" and the regional supplement for your area. Michigan's unique coastal resources need your assistance to assure wise management for present and future generations. A response form is provided on the last page of the report for your comments and questions. Your concerns and comments are important in forging the vision of Michigan's Coastal Management Program.

Public hearings on the proposed Coastal Management Program are to be held in Summer, 1977. The draft coastal management program document will then be revised according to public comments and prepared for approval of the Natural Resources Commission and Governor Milliken. The next step will be to forward

Michigan's proposed program to the National Oceanic and Atmospheric Administration, Department of Commerce, Washington, D.C. for federal approval. Upon federal review and approval of Michigan's program by the United States Secretary of Commerce, Michigan will be eligible to receive federal grants annually for up to three years for the implementation of the coastal management program.

The opportunity is present for Michigan's citizens to have a profound influence on the future quality of a unique natural asset. You are invited to participate fully in the development and implementation of a program to assure that the legacy of Michigan's coast is one of which we can all be proud.

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CHARACTER OF THE COAST

Michigan has one of the longest coastlines in the country and the longest freshwater coast in the world. Our share of the Great Lakes covers some 38,000 square miles of Lakes Michigan, Huron, Superior and Erie, and their connecting waterways. These waterways include the Keweenaw Waterway, the St. Marys, St. Clair and Detroit Rivers, and Lake St. Clair. More than 200 islands scattered across Michigan's share of the Great Lakes account for 900 miles of the State's total 3,200 miles of coastline.

Each of our Great Lakes has a unique mix of coastal features. Clay bluffs and sandy beaches, dotted by some of the largest sand dunes in the world, shape the Lake Michigan coast. Towering rocky bluffs, sandstone cliffs and cobble beaches diversify the breathtaking beauty of Lake Superior. The Lake Huron coast is quite different -- being characterized by wetlands, rocky outcrops and narrow beaches. Wetlands and artificial fill along Lake Erie, Lake St. Clair and the Detroit River are distinguishing features of the largely flat and low coastal plain of southeast Michigan.

IMPORTANCE OF THE COAST - PAST AND PRESENT

Throughout history, the Great Lakes and the resources they support have been a key factor in Michigan's development. In the eighteenth century, the fish, furs, fertile land and rich timber resources attracted settlers who built towns along the coast and used the Great Lakes to transport their harvests to other parts of the growing nation. By 1833, there were over 1,500 vessels of all descriptions operating on the Great Lakes, carrying about $60 million worth of cargo per year.

With the rise of the automobile in the twentieth century and the arrival of the "age of travel", workers headed away from the cities to vacation at Great Lakes beaches and resorts. Improved roads and freeways shortened travel time between industrialized cities and the coast making it possible for some to enjoy a seasonal or permanent residence on the shores of the Great Lakes.

Today, we continue to look to the coast for a major portion of our livelihood and recreation. We look to our coastal lands to support industrial complexes, recreation facilities, residential areas, resorts, ports, farms and orchards, energy and mineral production. Our coastal waters support water transportation, fisheries, recreation, and industrial and public water supplies. The Great Lakes coastal area continues today to be one of the state's most valuable natural resources. Current use, development and ownership patterns along Michigan's mainland coast are shown in Figures 1 and 2.

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PROBLEM AND OPPORTUNITY AREAS

Our Michigan coast is beautiful and productive and presents many possibilities for future use. It is, however, faced with mounting problems -- property and resource damage caused by flooding and erosion, development patterns which do not always respect coastal capabilities or tolerances, loss of important wetlands and sand dunes, insufficient public access to coastal waters, and others. Despite coastal problems, numerous recreational and economic opportunities are available along the coast. It is important that we acknowledge the presence of problems, as well as opportunities, and work toward solutions which will optimize our coastal resources.

It is helpful to think in terms of five general categories which classify the types of areas where problems and opportunities are likely to occur in Michigan's coastal area.

1. Areas Hazardous to Development

   Damage from shore erosion and flooding in Michigan reaches into the tens of millions of dollars each year. Department of Natural Resources surveys show that 500 miles of shoreline are subject to critical erosion problems. More than 80 homes have been destroyed in the last four years, while an additional 800 are in immediate danger. Approximately 50,000 acres of Michigan's coastal areas are susceptible to flooding, with the coastal areas of Saginaw Bay, Lake Erie and Lake St. Clair most vulnerable.

2. Sensitive Areas

   Michigan's coastal area is blessed with certain unique natural environments that are of value to all of its citizens. Sensitive coastal wetlands, sand dunes, islands, woodlots and shallow water areas provide

fish and wildlife habitats, scenic sites and nature study areas. Wetlands, although easily damaged by man's activities, are among the most valuable ecosystems in terms of biological productivity. In a sponge-like manner, wetlands absorb rising flood waters, protecting upland areas from inundation. Wetland vegetation also filters sediments and nutrients from inflowing waters, helping to protect Great Lakes water quality. Unfortunately, throughout the 20th century, thousands of acres of sensitive coastal areas have been filled, or devegetated. Remaining areas must compete for survival with home construction, industrial use and commercial developments. Approximately 300 miles of Michigan's coast have been identified as essentail to the preservation of Great Lakes fish and wildlife species by the Department of Natural Resources.

3. Areas Fulfilling Recreational and Cultural Needs

Michigan's coastal area is virtually unsurpassed for recreational opportunities. Recent introduction of salmon and restoration of lake trout have made Michigan's Great Lakes a sport fishing paradise. One-third of the state's boating and fishing activity depends on Great Lakes waters. Fishing, boating, long stretches of sandy beaches, a wealth of historic attractions, and fresh water for swimming have made Michigan's shore among the most popular Midwest tourism and vacation spots. Problems occur when crowded campsites, parks, beaches, and boating and fishing facilities detract from aesthetic and recreational appeal of the coastal area and place high public service costs on coastal communities.

4. Areas of Intensive or Conflicting Use

The most intensively used coastal areas in Michigan are located near the larger coastal cities. Several waterfront stretches in Michigan's

DRAFT for PUBLIC Review 4/77

coastal cities have been identified as needing waterfront planning, rehabilitation or redevelopment due to deteriorating conditions. In addition, many residents of coastal cities have reported a need for more public access to the coast for fishing, boating or swimming.

Other resource use problems are notable where rivers or lakes empty into the Great Lakes. Water quality problems must be alleviated to protect the recreational, aesthetic and ecological values of coastal lakes and river mouths. Maintaining or deepening river mouths for navigation purposes may disrupt habitat for fish and wildlife and cause additional problems in locating proper disposal sites for dredged materials.

5. Areas of Natural Economic Potential

The coast offers a variety of economic opportunities which are enhanced by the availability of Great Lakes ports and harbors. Nearly 500 ships navigate the Lakes, together capable of carrying 5 million tons of cargo per trip. A diversified mineral resource base of limestone, iron ore, gypsum, sand, salt, copper and brines provide important raw materials to industry. The Great Lakes create a unique climate suitable for the production of cherries, blueberries and other fruit crops. Industrial development oocupies 5% of the total coastline and is a vital part of the state's economy. Bright economic opportunities for Michigan will be in part dependent on our ability to recognize coastal opportunities and to promote long term use of these resources.

WHAT MUST BE DONE?

What must be done to solve Michigan's coastal problems and to promote planned use of coastal resources?

Many programs now operating at the state level deal with Michigan's coastal area. Administration of the Shorelands Protection and Management Act is aimed in part towards reducing future damages to structures in identified Great Lakes high risk erosion areas by requiring an established building setback from the bluffline. The Public Access Site and Harbors of Refuge Programs in the Michigan Department of Natural Resources' Waterways Division are designed to provide improved boating access to Great Lakes waters. The Departments' Submerged Lands Program is responsible for protecting the public trust in the state-owned bottomlands of the Great Lakes by regulating dredge and fill activities. The Department of Natural Resources has been charged by legislative action to take a more direct role in the improvement of the coastal area by acquiring specific lands for public purposes.

Other state agencies and several Department of Natural Resources' programs have activities in the coastal area. In addition, 30 federal agencies have interests in Michian's coast, either through statutory responsibility, land ownership, grant programs, or development projects. Although state and federal governments have activities in the coastal area, most programs are single-purpose and deal with individual pieces of the total coastal picture.

The greatest responsibility for planning coastal land development rests with local government and private interests. Forty-one counties, 74 cities and villages and 190 townships on the shoreline influence activity in Michigan's

DRAFT for PUBLIC Review 4/77

coastal area. Local units of government shape the quality of Michigan's coastal area through the placement of utilities, community facilities, and recreation areas. Use of local regulatory measures such as zoning ordinances and subdivision regulations also influence the quality of the coast.

Local, areawide, state and federal interests are drawing together in Michigan to deal with coastal problems and opportunities. A strategy is being developed now to improve the way in which we plan for the wise management of Michian's coastal area. The developing coastal management strategy for Michigan should consider:

-- Overall guidance, direction and coordination of state level programs operating in the coastal area.

-- Adequate funding to solve coastal problems and improve coastal recreational and economic opportunities.

-- Closer coordination with federal agencies to see that their proposed coastal activities consider local and state interests, as well as the national interest.

-- Partnership between state and local units of government, supported by grants and technical assistance, to strengthen planning and innovative resource management techniques at the local level.

WHAT IS BEING DONE?

In July 1974, the State of Michigan received its first grant from the National Oceanic and Atmospheric Administration (NOAA) to develop a program to assist in solving coastal problems. The Department of Natural Resources' Division of Land Resource Programs has been assigned responsibility for the preparation and coordination of the program and has received a three year grant for program development. Tasks undertaken during development of the program include:

1. An inventory of the physical characteristics of the coastal area through aerial photography interpretation.
2. Determination of Great Lakes high-risk erosion areas, critical fish and wildlife habitats,and preparation of appropriate management plans in accordance with Michigan's Shorelands Protection and Management Act.
3. An inventory of the historic and archaeologic resources of the coastal area by the History Division, Michigan Department of State.
4. An inventory of commercial shipping facilities by the Michigan Department of State Highways and Transportation.
5. An inventory of the various state, local and federal programs and regulations applicable to coastal land and water uses.
6. Preparation of two documents to assist communities in promoting wise use of the coast: "Planning Guidelines for Residential and Path Development in Michigan's Sand Dunes and Wetlands" and "Michigan Guide to Performance Controls for Great Lakes Shorelands".
7. Distribution of coastal management information materials, presentations to local officials and citizens, and discussions of the ways in which interested officials and individuals may participate in the program.

DRAFT for PUBLIC Review 4/77

8. Identification of coastal problems and opportunities, analysis of coastal land use trends, and initiation of a public participation process to identify special coastal areas.

Approximately half of Michigan's total coastal management program development grant has been subcontracted to ten planning and development regions in order to involve local government and citizens in the development of the program. Each planning region has provided a description of regional problems, land use trends, goals and special areas. This information is summarized in a series of ten regional supplements to this report.

A group of 15 concerned citizens from around the state have been appointed to the Citizens Shorelands Advisory Council by the Michigan Natural Resources Commission to advise the Department of Natural Resources in the development of a coastal management strategy. Members of the Council are listed on page i

Participation of planning and development regions, the Shorelands Advisory Council, the Division of Land Resource Programs and many local, state and federal agencies has been important in the development of a strategy for carrying out a coastal management program in Michigan. The strategy, presented on the following pages for your review, includes a definition of the coastal area, identification of areas of particular concern, program responsibilities, goals and principles.

DEFINING THE COASTAL AREA

DRAFT for PUBLIC Review 4/77

How far inland from the waters of the Great Lakes do land and water activities have important impacts on Great Lakes waters?

This question must be answered in the definition of Michigan's coastal area. Definition of the coastal area is required of those states receiving federal assistance to develop coastal management programs under the provisions of the federal Coastal Zone Management Act. Michigan's approach to the definition of its coastal area has been to identify a coastal land and water area which is consistent with the existing state definition of the "shorelands" under the Shorelands Protection and Management Act as well as consistent with the intent of the federal Act.

The purpose of defining the extent of Michigan's coastal area is twofold: *(1) to define where land activities have the most direct and significant impacts of Great Lakes waters; and (2) to identify a limited land and water area where Michigan's coastal management program can concentrate future program services and technical assistance.*

Legislative Guidelines. Guidance for the delineation of a coastal area for Michigan is provided by two pieces of legislation. At the federal level, the Coastal Zone Management Act of 1972 (P.L. 92-583) identifies the coastal area as those shorelands and coastal waters strongly influenced by one another. It states that all of Michigan's Great Lakes waters, bottomlands and islands are to be included in Michigan's coastal area.

At the state level, the Shorelands Protection and Management Act (Act 245, P.A. of 1970, as amended) defines "shorelands" as those areas within 1,000

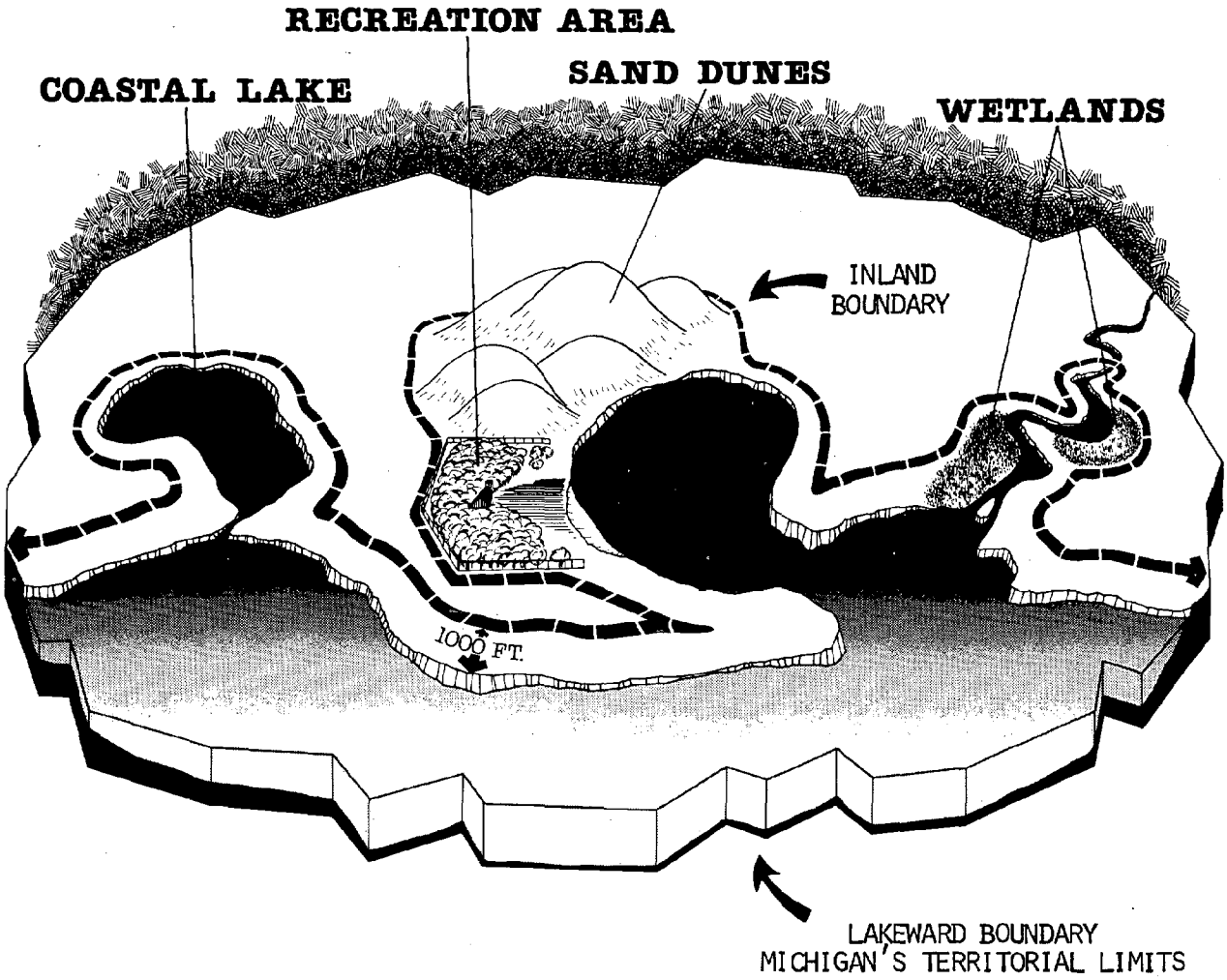
feet landward of the ordinary high-water mark of the Great Lakes or its connecting waterways and those areas bordering or adjacent to waters affected by levels of the Great Lakes. Definition of "shorelands" is expanded for flood-risk areas to include the 100-year flood plain of the Great Lakes and its connecting waters.

Michigan State University Boundary Study. In 1975, the Resource Development Department of Michigan State University began a three-month study of a wide range of alternative coastal boundary definitions. The study recommended that an area extending 1,000 feet from the ordinary high-water mark of the Great Lakes would be most appropriate to encompass those uses of the land having direct and significant impacts on coastal waters. This corresponds with the 1,000 foot boundary established by Michigan's Shorelands Protection and Management Act. In some instances, however, the report recommended that the boundary extend further inland in special areas. These extensions or "bulges" in the 1,000 foot boundary were necessary to include those areas where uses or character of coastal lands are strongly influenced by the Great Lakes (i.e. sand dunes, coastal river mouths and lakes, floodplains, recreation and natural areas, islands and wetlands). Including these special areas in the coastal area corresponds with the intent of the federal Act.

Recommended Definition of Michigan's Coastal Area.

The coastal area extends lakeward to include all submerged lands, waters and islands of the Great Lakes and connecting waterways (Keweenaw Waterway, St. Marys River, Lake St. Clair, St. Clair River and Detroit River) up to the state or international boundary in the middle of the lakes. Landward, the coastal area is recommended to extend 1,000 feet

Coastal Management Boundary



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from the ordinary high-water mark of the Great Lakes or connecting waterways.

Where waters are directly affected by levels of the Great Lakes or where inland lakes lie within 1,000 feet of the Great Lakes or connecting waterways, the coastal area is recommended to extend 1,000 feet landward around these waters. The coastal area is also recommended to extend landward to include the following types of areas in their entirety:

--Wetlands adjacent to waters directly affected by levels of the Great Lakes or connecting waterways;

--Publicly owned park, recreation or other natural areas adjacent to the Great Lakes or connecting waterways which have been designated by a public agency and administered for the preservation of natural characteristics;

--Sand dune formations adjacent to the Great Lakes or connecting waterways;

--Areas falling within the 100-year flood plain of the Great Lakes or connecting waterways.

Modification of Boundary. In limited special cases, the recommended boundary definition may not provide a meaningful approximation of the coastal area. Two such special cases are: (1) highly urbanized areas, where cultural rather than natural features are dominant (i.e. metropolitan Detroit); and (2) flat, low lying coastal areas where the ordinary high-water mark is not easily discernible, or where influences of the Great Lakes water levels may extend great distances inland (i.e. river mouths). Determining the inland extent of the coastal area in this case would be difficult without engineering surveys. In these two special cases, the coastal area may be approximated by the first major roadway inland from the Great Lakes or connecting waterways.

SPECIAL AREAS

Within the boundaries of Michigan's coastal area are some very special sites. These sites are referred to in Michigan's coastal management program as "areas of particular concern".

A special sand dune area in Laketon Township, Allegan County, is used by colleges and groups for nature study. The undisturbed 270-acre tract is one of the finest natural dune areas remaining in the Lower Peninsula of Michigan. The St. Ignace waterfront is another special area. The city has recognized the need to revitalize its waterfront and has proposed three projects to enhance visual appeal and recreational opportunity along Lake Huron. These are only two examples of the many coastal areas of particular concern suggested to receive special consideration in coastal management efforts.

Through the coastal management program, a process has been developed for identifying special coastal areas. This process has been developed to (1) provide a new avenue for local input into state decision-making processes (2) for formalizing statements of local concern about particular areas; and (3) for identifying special areas which might be considered in future actions by the Michigan Legislature or in ongoing programs.

The coastal management program has involved citizens, local, regional, state and federal agencies and interested groups in the identification of special coastal areas. Planning and development regions have been given primary responsibility to coordinate the identification process.

DRAFT for PUBLIC Review 4/77

Hundreds of brochures, requesting interested parties to identify special coastal areas, were distributed by planning and development region staff and the Department of Natural Resources. Approximately 650 responses have been received, identifying special areas, the location and special characteristics of the area, and offering suggestions for proper management. Areas have been identified in the categories shown in Table 1.

All special areas identified through this process have been referred to regional planning commissions for regional/local review. The commissions, have refined and screened descriptions and management recommendations upon consultation with local officials and citizens. The commissions themselves have also identified special areas. A listing of special areas has been submitted by each of the ten regional planning commissions for inclusion in Michigan's coastal management effort. The listing of special areas of particular concern for the ten regions is contained in the regional supplements to this report.

TABLE 1

14 Categories: Areas of Particular Concern

1. High Risk Erosion Areas
2. Flood Hazard Areas
3. Ecologically Sensitive Areas
4. Natural Areas
5. Recreation Areas
6. Historic and Archeologic Sites
7. Sand Dunes
8. Islands
9. Coastal Lakes, Rivermouths, Bays
10. Urban Areas
11. Mineral Resource Areas
12. Agricultural
13. Prime Industrial Sites
14. Water Transportation Areas

GOALS FOR COASTAL MANAGEMENT

The following proposed goals have been developed for Michigan's coastal management program through the assistance of the Citizen's Shorelands Advisory Council.

Goal: To protect coastal land, water and air resources from activities detrimental to the public health, safety and welfare.

Goal: To promote citizen awareness of the value and sensitivity of the Great Lakes coastal area.

Goal: To recognize the economic value of Michigan's Great Lakes coast in regional, national and worldwide commerce.

Goal: To protect the plants and animals dependent upon Michigan's coastal ecosystem.

Goal: To minimize damage to shoreland properties that results from flooding and erosion.

Goal: To provide recreation opportunity through management which makes the best use of coastal resources.

Goal: To protect the cultural, historic, and aesthetic values of the coastal area.

Goal: To assure the wise use and development of mineral and energy resources in the coastal area.

DRAFT for PUBLIC Review 4/77

Goal: To coordinate the operation of federal, state, regional and local programs that influence activity in Michigan's coastal area.

Goal: To encourage and support local units of government to carry out coastal management responsibilities in an effective and efficient manner.

PROGRAM ROLES FOR COASTAL MANAGEMENT

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The management of Michigan's coastal area must be a shared responsibility between citizens and local, state and federal governments.

Local Role. Historically, Michigan has relied on local government to assume responsibility for planning, zoning and administration of specific state statutes. This same principle will be followed in identifying local responsibilities in Michigan's coastal management program.

1. Specific state statutes offer local governments the opportunity to assume certain state statutory authorities. Local units may enact and enforce regulations consistent with state guidelines in high risk erosion, flood risk and environmental areas designated under authority of the Shorelands Protection and Management Act (Act 245, P.A. 1970, as amended). A primary purpose of Act 245 is to provide a county, township, city or village with the specific authority to enact shoreland zoning for hazardous and sensitive areas. Encouraging local units to assume responsibility under Act 245 and other state statutes that can be locally administered will be one focus of the coastal management program.

2. Local units of government have the responsibility and opportunity to shape the planning of those aspects of coastal land use which are essentially local in character. Local planning bodies should be permitted to exercise freedom in selecting methods of planning local matters so that local plans reflect local objectives. Local governments can play a major role in the coastal management program by

developing resource management techniques to protect the Great Lakes coastal area.

State Role

1. Protection of Michigan's valuable coastal resources is assured by legislative mandates such as:

   Great Lakes Submerged Lands Act (Act 247, P.A. of 1955)

   Subdivision Control Act (Act 288, P.A. of 1967)

   Floodway Encroachment Act (Act 167, P.A. of 1969)

   Mine Reclamation Act (Act 92, P.A. of 1970)

   Shorelands Protection and Management Act (Act 245, P.A. 1970)

   Soil Erosion and Sedimentation Control Act (Act 347, P.A. of 1972)

   Inland Lakes and Streams Act (Act 346, P.A. of 1972)

   Sand Dune Protection and Management Act (Act 222, P.A. of 1976)

   Passage of these statutory directives has signalled an increased state-wide recognition for the need to protect the coastal area from adverse impacts of improper land and water uses. In general, the state is responsible to exercise its inherent and statutory management authorities to assure protection of essential coastal resources of concern to all Michigan citizens and to resolve issues of more than local significance.

2. Planning and programming efforts of state agencies which affect the coastal area must be effectively coordinated to avoid costly duplication and conflict.

3. Administration and coordination of the coastal management program is the responsibility of the Michigan Department of Natural Resources, Division of Land Resource Programs. Responsibilities include administering coastal management implementation grants; providing formal recognition of citizen concerns to government agencies operating in the coastal area; serving as staff to the Citizens Shorelands Advisory Council; encouraging local interest in coastal resource management and assisting in the development of local resource management techniques.

Federal Role. The federal Coastal Zone Management Act establishes guidelines for the preparation and implementation of Michigan's Coastal Management Program. Federal review of coastal management programs assures that Michigan considers the full range of coastal interests in the development of its program, including the national interest in the siting of certain facilities in the coastal area.

1. The Office of Coastal Zone Management in the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce, is responsible for review of Michigan's program to assure that it meets requirements of the federal Act. NOAA will, upon approval of Michigan's Coastal Management Program, provide assistance in the form of grants and technical assistance for program implementation.

2. Upon federal approval of Michigan's Coastal Management Program, federal agencies supporting activities, or carrying out development projects or activities in the coastal area, shall insure consistency with Michigan's Coastal Management Program to the maximum extent practicable.

DRAFT for PUBLIC Review 4/77

3. Any applicant for a federal license or permit to conduct an activity in the coastal area must certify that the proposed activity is consistent with the accepted state coastal management program. This is an important incentive to develop a federally approved management program for Michigan's coastal area.

WHAT CAN I DO AND HOW CAN MY INPUT BE USED?

What can each of us do to be included in coastal management efforts?

There is much to be done during both current program development and next year's expected implementation phases of the program. You can express your interest in this effort by contacting your local or regional planning and development agency, the Michigan Citizen's Shorelands Advisory Council, or the Division of Land Resource Programs in the Department of Natural Resources. We are depending heavily on this communication; your input will make a difference.

The best method for individuals, coastal interest groups and government agencies to have input to the coastal management program is to attend information meetings, public hearings, or contact the groups mentioned above. These vehicles have been put in place to insure your concerns are heard, and will continue to be heard. But another, perhaps more precise way to register concerns about specific coastal lands and waters -- either because they have special problems or because they have some special value -- is to nominate those specific coastal areas as areas of particular concern. A process for you to recommend management attention and nominate such areas has begun and will continue. Ask us for forms.

As your inputs are received, they will be considered in all levels of the program development effort. Once the program receives federal approval, they will provide a formal, documented indication of Michigan's coastal concerns and ways to act on them. Each type of input -- especially the areas of particular concern -- will be brought to the attention of persons responsible for programs which have the ability and authority to

DRAFT for PUBLIC Review 4/77

take responsive action. The process of developing and approving this program (among other things) maps out how a number of policies, authorities and organizational structures are available to provide such action. This program accordingly provides assurances that recommendations from individuals, citizen groups, and government will be fully considered in all levels of coastal decision making. (As an example, federal agencies are required to fully consider coastal problems, goals, objectives and Areas of Particular Concern documented as part of approved coastal management programs to conduct their activities to the maximum extent practicable in consistency with them.) Therefore, where the coastal management program, itself, cannot carry out helpful action, it can at the least provide the opportunity and the support for priority consideration in local, state, federal agency or other programs with the ability to address coastal management needs and issues.

Management recommendations may be carried out by local, state or federal programs providing certain services, incentives and/or regulations. Available management tools include funding, property acquisition, technical assistance or services, tax incentives, coordination agreements, and permits. As an example, the following chart shows several existing state programs which can be applied to coastal problems or opportunities.

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A TABLE TO SHOW EXISTING STATE AGENCY PROGRAMS WHICH CAN BE USED TO FOCUS ON COASTAL LAND & WATER MANAGEMENT	CATEGORIES OF COASTAL CONCERN S				
STATE PROGRAMS FOR LAND & WATER MANAGEMENT (by management activity & department of state government)	AREAS OF NATURAL HAZARD TO DEVELOPMENT	AREAS SENSITIVE TO ALTERATION/DISTURBANCE	RECREATION OR CULTURAL AREAS	AREAS OF INTENSIVE OR CONFLICTING USE	AREAS OF NATURAL ECONOMIC POTENTIAL
NATURAL OR ENVIRONMENTAL SIGNIFICANCE					
NATURAL RESOURCES:					
Environmental Services				X	X
Natural Rivers	X	X	X	X	
Shorelands Protection and Management	X	X	X	X	
Land Acquisition	X	X	X	X	X
Artificial Marshes and Ponds		X	X	X	
Fisheries Research		X	X	X	X
Fish Passage Barriers		X		X	
Habitat Protection	X	X	X		
Hatchery and Production		X	X		
Forest Fire Production		X	X		
Forest Pest Control		X	X		
Endangered Species Program	X	X	X	X	
Farmland Urban Wildlife			X	X	X
Forest Wildlife		X	X		
Research		X	X		
Waterfowl Management	X	X	X	X	
Wildlife Services			X		
PUBLIC HEALTH:					
Insect and Rodent Control			X		X
HISTORIC OR CULTURAL SIGNIFICANCE					
COMMERCE DEPARTMENT:					
Travel			X		X
NATURAL RESOURCES:					
Salvage	X	X	X		
Mackinac Island	X	X	X	X	X
Parks		X	X		
Recreation			X		
Inventory and Assessment			X		
Regulations			X		
Forest Recreation		X	X		
STATE: History and Research			X	X	X
AIR QUALITY					
NATURAL RESOURCES:					
Preservation of Air Resources		X		X	X
PUBLIC HEALTH:					
Radiological Health				X	X

A TABLE TO SHOW EXISTING STATE AGENCY PROGRAMS WHICH CAN BE USED TO FOCUS ON COASTAL LAND & WATER MANAGEMENT

STATE PROGRAMS FOR LAND & WATER MANAGEMENT (by management activity & department of state government)	CATEGORIES OF COASTAL CONCERN S				
	AREAS OF NATURAL HAZARD TO DEVELOPMENT	AREAS SENSITIVE TO ALTERATION/DISTURBANCE	RECREATION OR CULTURAL AREAS	AREAS OF INTENSIVE OR CONFLICTING USE	AREAS OF NATURAL ECONOMIC POTENTIAL
WASTE DISPOSAL					
NATURAL RESOURCES:					
Marina Sanitation			X	X	X
Solid Waste		X		X	X
Oil and Gas		X		X	X
Liquid Industrial Waste Haulers		X		X	X
Domestic Waste Haulers		X		X	X
Water Resources Commission		X		X	X
Mineral Well Drilling		X		X	X
LAND USE					
COMMERCE DEPARTMENT:					
Condominium	X			X	X
Energy Administration		X		X	X
HIGHWAYS AND TRANSPORTATION:					
Port Development		X		X	X
Public Transportation				X	X
Highways	X	X	X	X	X
Railroad	X	X	X	X	X
Airport	X	X	X	X	X
LABOR DEPARTMENT:					
Building	X	X	X	X	X
Electrical	X	X	X	X	X
Mechanical	X	X	X	X	X
Plan Review	X	X	X	X	X
Plumbing	X	X	X	X	X
NATURAL RESOURCES:					
Mining and Environmental Geology					X
Farmland and Open Space		X	X	X	X
Zoning Ordinance Review	X	X	X	X	X
Minerals and Leasing		X	X	X	X
Tax Land	X			X	X
Flood Insurance	X			X	X
Floodway Control	X			X	X
Subdivision Control	X			X	X
Submerged Great Lakes Bottomlands	X			X	
Docks	X	X	X	X	X
Harbors of Refuge	X	X	X	X	X
Public Access Site	X	X	X	X	X
Access and Facility Development	X	X	X	X	X
Forest Management	X			X	
Inland Lakes and Streams	X	X		X	X

A TABLE TO SHOW EXISTING STATE AGENCY PROGRAMS WHICH CAN BE USED TO FOCUS ON COASTAL LAND & WATER MANAGEMENT

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Shoreland Protection & Management - Erosion	X	X		X	X
Soil Erosion and Sedimentation	X	X		X	X
Federal Water Pollution Control	X	X	X	X	X
Mine Reclamation	X	X		X	X
Sand Dune Protection and Management	X	X	X	X	X
Shoreland Protection & Management - Flood Risk	X	X		X	X
PUBLIC HEALTH:					
Land Subdivision and Planning	X	X		X	X
Mobile Home Park	X	X		X	
Campground Development	X	X	X	X	
WATER SUPPLY AND WATER QUALITY					
AGRICULTURE:					
Drains	X			X	X
Soil Conservation	X	X	X	X	X
COMMERCE:					
Industrial Plant Location	X			X	X
NATURAL RESOURCES:					
Environmental Services			X	X	X
Municipal Facilities and Planning				X	X
Water Quality Enforcement		X	X	X	X
Demonstration Erosion Control	X	X		X	X
Local Watershed Management	X	X	X	X	X
Hydrologic Engineering	X		X	X	X
Irrigation Management				X	X
Waterworks and Sewage System		X	X	X	X
Oil and Hazardous Materials		X		X	X
Mining Water Diversion		X		X	X
PUBLIC HEALTH:					
Groundwater Quality Control		X	X	X	X
Public Swimming Pool			X	X	
Public Water Supply			X	X	X
OTHER					
AGRICULTURE:					
Laboratory				X	X
Weather Service	X		X	X	X

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COMMERCE:					
Public Service Commission			X	X	X
NATURAL RESOURCES:					
Marine Safety		X	X	X	X
Policy Development	X	X	X	X	X
Environmental Review Permits	X	X	X	X	X
General Services	X	X	X	X	X
Information and Education	X	X	X	X	X
Surveys and Statistical Services			X		
PUBLIC HEALTH:					
Microbiological Services		X	X	X	

PROGRAM GUIDELINES

The following principles for the operation of state land resource programs have been reviewed by the Natural Resources Commission, Governor Milliken, various legislators and public and private institutions. They are presented here as the guideposts for the development and implementation of a Coastal Management Program for Michigan.

1. Private property rights must be recognized and respected.

2. The resolution of conflicts and the performance of regulatory functions should occur at the level of government closest and most responsive to all the people affected.

3. The coastal management program should provide for the economic and social well-being of the people--in other words, for the orderly growth and development of the state--as well as for the physical well-being of both man and his environment.

4. Skills and experience of all existing levels of government and the private sector should be employed in a partnership approach in developing and implementing the Michigan Coastal Management Program.

5. Existing or new mechanisms for obtaining public participation in the governmental decision-making processes should be utilized ensuring that a balanced range of options is heard and considered.

6. Uniform procedures should be established so that all levels of governments abide by the same rules to reach common objectives.

DRAFT for PUBLIC Review 4/77

7. Innovative and creative programs affecting coastal uses in general and especially geographic areas of particular concern should be encouraged through efforts of the private sector and all governmental entities.

8. There should be provision for periodic review of Michigan's Coastal Management Program.

9. The Coastal Management Program should respect our coast as a resource, not as a commodity.

10. The Coastal Management Program should combine planning and management at all levels for effective implementation.

11. The Department must maintain a visible and accountable coastal management process and program.

SUMMARY

To be effective, local, state and federal interests must work together to protect and enhance Michigan's coastal area.

Over the past two years, development of Michigan's coastal management program has fostered a stronger working relationship between citizens and agencies. Hundreds of citizens and many local officials have had the opportunity to shape future coastal management decisions by identifying goals, problems and special coastal areas. Continued development of a state-local partnership is critical to the success of the coastal management program.

Upon approval, Michigan will become eligible for federal monies from the National Oceanic and Atmospheric Administration to implement the provisions of its coastal management program. Funding will be aimed towards improving delivery of state and local program services in order to:
local program services in order to:

(1) minimize future damages to coastal resources and personal property from flooding and erosion hazards;

(2) maintain important Great Lakes fish and wildlife habitat to the benefit of sportsmen, wildlife observers, and future generations;

(3) preserve the rich cultural heritage of the coastal area and increase coastal recreation opportunity;

DRAFT for PUBLIC Review 4/77

(4) assure that all coastal concerns are considered in decisions involving areas of intensive or conflicting use;

(5) promote the long term use of areas of natural economic potential such as mineral resources, agricultural lands, water transportation facilities and industrial sites.

Public meetings, public hearings, and involvement with citizens, local, regional, state, and federal agencies will assist the Division of Land Resource Programs in determining which activities are most suitable and will best address coastal problems and opportunities. As an appendix to this report, a list of potential "Action Programs for Coastal Management" has been developed. This list provides an indication of the type and scope of projects and activities which might be pursued during program implementation. Public and agency comments and suggestions on "Action Programs" will be fully considered in developing and implementing coastal program actions. Copies of "Action Programs" will be available at public information meetings, development region offices and the Michigan Department of Natural Resources.

In summary, Michigan's Coastal Management Program, once having received citizen support, will provide a forum -- for agencies and citizens alike -- to deal with complex coastal issues and to reconcile views as to how our valuable resources should be used.

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