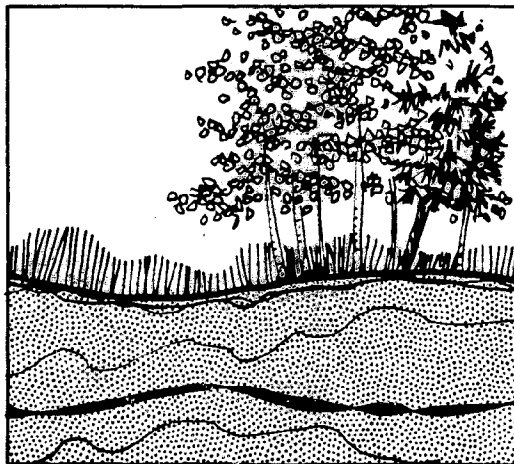
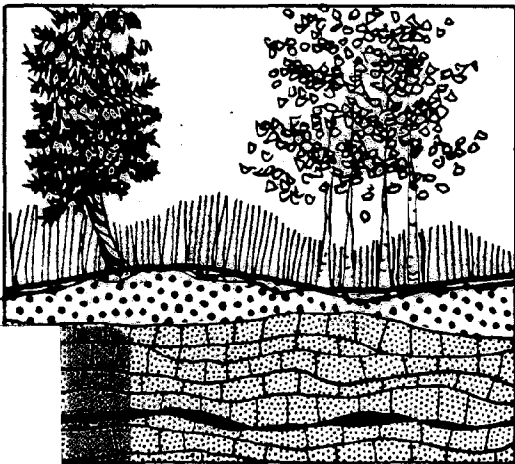
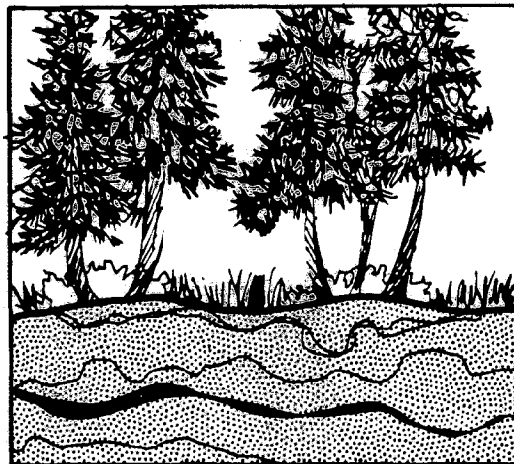
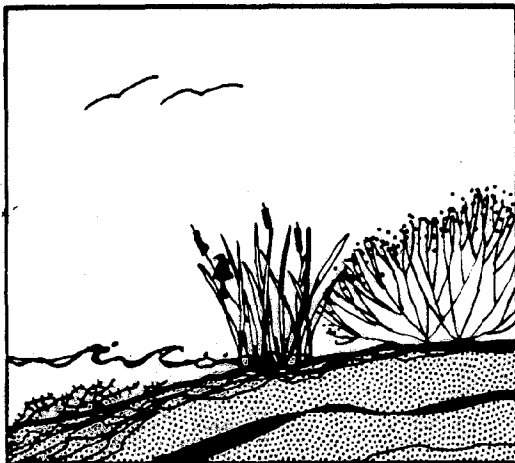


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alpena county coastal land management plan



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Alpena County
Coastal Land Management Plan

August 1982

Prepared for:

Alpena County
Planning Commission

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TABLE OF CONTENTS

<u>SECTION</u>		<u>PAGE</u>
1	MAJOR FINDINGS AND CONCLUSIONS	1-3
2	INTRODUCTION	4
	Purpose	4
	Coastal Area	4
	Planning Process	4
3	COASTAL AREA ANALYSIS	5-36
	Environmental Features	5
	Soils	5
	Geology and Topography	7
	Vegetation	7
	High Risk Erosion, Flood Risk and Environmental Areas	9
	Climatic Factors	10
	Unique Environmental Features	10
	Alpena County Islands	11
	Scenic Areas and Visual Resources	14
	Socio-Economic Factors	15
	Population Trends and Projections	15
	Economic Conditions	19
	Tourism	19
	Recreation	22
	Historical and Archaeological Resources	23
	Land Use	24
	Property Ownership	24
	Shoreline Structures	24
	Vehicular Circulation	28
	Institutional Considerations	28
	Local Zoning, Planning and Policies	29
	State and Federal Legislation	29
	Pertinent Issues in the Coastal Area	29

(Table of Contents continued)

<u>SECTION</u>		<u>PAGE</u>
4	ALPENA COUNTY COASTAL LAND MANAGEMENT PLAN	37-53
	Alpena County Coastal Area Goals and Land Use Policies	37
	Natural Resources	37
	Economics	38
	Recreation	39
	Overall Goals	40
	Coastal Management Options	40
	Coastal Types	40
	Management Options	41
	Coastal Land Use Plan	44
	Management Strategies	46
	Legal Programs	46
	Acquisition Programs	47
	Capital Improvements	48
	Tourism Development Strategies	48
	Recreation and Natural Resource Programs	50
	Jurisdictional Coordination	53
	APPENDIX	

List of Maps and Figures

Map 1	Environmental Considerations
Map 2	Developmental Considerations
Map 3	Coastal Types
Map 4	Coastal Land Use Plan
Figure 1	Soil Classification and Limitation
Figure 2	Population Trends
Figure 3	Population Projections
Figure 4	Number of Housing Units
Figure 5	Population Characteristics
Figure 6	Employment Characteristics - 1981
Figure 7	Labor Force - Unemployment Statistics 1981
Figure 8	Land Use Ownership
Figure 9	Existing Land Use
Figure 10	State Statutes With Direct Applicability
Figure 11	State Statutes With Indirect Applicability
Figure 12	Federal Legislation
Figure 13	Alpena County Islands
Figure 14	Coastal Types
Figure 15	Management Strategies
Figure 16	Management Option Evaluation Matrix

**SECTION I
MAJOR FINDINGS
AND
CONCLUSIONS**

SECTION I

MAJOR FINDINGS AND CONCLUSIONS

- 1) Public access to Lake Huron and Thunder Bay is extremely limited. Alpena County has only one county park situated on Lake Huron.
- 2) Poor soils, high water table and shallow depth to bedrock are common throughout the Alpena Coastal Area and will severely limit intensive development.
- 3) The Alpena Coastal Area has many important wetlands which offer valuable habitat and breeding areas for fish and wildlife. Many of these wetlands have been designated as "Environmental Areas" by the MDNR.
- 4) The Coastal Area offers a unique configuration of limestone shoals, islands and limestone sinkholes. The shallow waters have caused numerous shipwrecks, and the area supports one of the largest concentrations of shipwrecks in all of the Great Lakes.
- 5) Moderate increases in population are projected for the coastal area. The coastal area has a strong industrial base, but recent economic conditions have produced a high unemployment rate.



- 6) Alpena county ranks 29th out of 83 Michigan counties for tourist expenditures. Tourism should be actively promoted to capture a larger share of the tourist market. Steps could include:
 - development of a major recreation resort facility;
 - promotion of the Thunder Bay Underwater Preserve;
 - promotion of cross-country skiing, speedskating, fishing, and etc;
 - development of State and County coastal parks.
- 7) Approximately 58% of the Coastal Area is comprised of privately-owned parcels of more than 40 acres in size.
- 8) State legislation administered by the Michigan Department of Natural Resources will enable regulation of most filling, dredging and major development projects within the coastal area.
- 9) The Coastal Area contains 10 major islands. Many of the islands contain important wetlands and provide habitat for shorebirds. Future development is not recommended for these island areas.
- 10) Alpena County Coastal Area can be classified according to "Coastal Types." Only those land areas capable of supporting development without risk to public health or environment should be proposed for intensive development.
- 11) Coastal townships should adopt more stringent greenbelt zoning provisions and enact a detailed site plan review procedure for coastal development.
- 12) Alpena County should acquire additional coastal lands for their County Parks System. Priority acquisition should be at El Cajon Bay and either at Monaghan Point or Partridge Point.

- 13) The State of Michigan should purchase the out parcel of land near South Point and develop Negwegon State Park according to the adopted master plan.
- 14) The County shall encourage the MDNR to establish a sport fisheries management program for the Thunder Bay area. Sufficient fish plantings should be maintained to insure good recreational fishing for residents and tourists.
- 15) Utility lines along Squaw Bay should be relocated or buried. In addition, the County should provide information signs for motorists on U.S. 23 pointing out coastal features, county parks, etc.
- 16) County and Township government should recognize the importance of the coastal resources. Coordinated planning and management efforts should be promoted between County and Township officials. In addition, coordinated coastal management planning should be established between the City of Alpena and the County.

SECTION 2
INTRODUCTION

SECTION 2 INTRODUCTION

PURPOSE

In 1981, Alpena County sought and received funds from the Michigan Coastal Zone Management Program to prepare a plan for the County's coastal area. The purpose of the Coastal Land Management Plan is to analyze the coastal area resources; identify current issues and problems; propose alternate management options; and recommend a management plan and strategies for the proper use of important coastal resources.

COASTAL AREA

The Alpena County Coastal Area includes the entire Lake Huron shoreline and islands within Alpena County. The inland boundary varies (see Map 1) however it generally extends inland approximately one-half mile. The area includes over forty miles of beaches, wetlands, and limestone shoals along Lake Huron.

PLANNING PROCESS

The development of the plan was conducted in two major phases. The first phase involved the inventory and analysis of background data regarding the coastal area, and the identification of coastal problems and issues. The second phase included the development of alternate management options, selection of a land use plan and preparation of the recommended management plan.

The involvement of the community was actively sought during all phases of the study. A series of public workshops were conducted to gain input and community reaction to various aspects of the plan.

SECTION 3
COASTAL AREA
ANALYSIS

SECTION 3

COASTAL AREA ANALYSIS

ENVIRONMENTAL FEATURES

The environmental features of the Alpena County Coastal Area offer both opportunities and limitations to the type and extent of future development. Certain areas are unsuitable for septic systems which are poorly drained, subject to flooding or susceptible to shoreline erosion. While these factors place restrictions upon development, other natural resource factors present opportunities for development. The scenic and pristine attractiveness of the shoreline and woodland areas offer a unique setting for recreation. It is helpful to examine these natural resource factors in detail to determine both the opportunities and constraints. The examination involves an inventory of resource factors, and a determination of the capability of the natural resource base to support future development.

Soils

In order to minimize construction costs and risks to the environment, it is desirable for future development to be located upon sites with suitable soils. Poor soils present problems such as poor foundation stability and septic field failure. The coastal area soils are divided into four major classifications as developed by the Soil Conservation Service. These classifications and corresponding limitations are summarized in Figure 1.

In general, most soils within the coastal area are not suitable for septic systems. High water table and shallow depth to bedrock are common conditions which will limit development. The Development Considerations Map outlines general areas where soil conditions are suitable for development. It should be noted, however, that on-site soil testing should proceed prior to all actual development.

Figure I
Alpena County Coastal Area
Soil Classifications and Limitations

Type	Development Limitation	Location
Rubicon Grayling Nearly level to gently sloping, well drained sandy soils	Slight	Alpena Township - Portions of land near Partridge Point and North Point
Roscommon - Tawas - Rubicon Level, poorly to very poorly drained soils on wet sandy plains	Severe	Alpena Township - Portions of land near Squaw Bay
Carbondale - Lupton - Tawas Very poorly drained organic soils on marshland and swamps	Severe	Alpena and Sanborn Twps - Portions of land scattered throughout the coastal area
Summerville - Kiva Well drained, shallow stony soils on limestone plains	Severe	Alpena Township - Portions of land from Rock- port to Alpena

Geology and Topography

The surface geology of the coastal area was formed 10,000 to 20,000 years ago by glaciers which deposited glacial till, an undifferentiated mixture of rocks and soil. Prior to the glacial activity, the area was covered by an ancient sea which receded and left deposits of coral which later became limestone. In some areas the action of groundwater has dissolved limestone and left caverns or sinkholes. Sinkholes are a unique geologic phenomena and two of these sinkholes are located in the coastal area, near El Cajon Bay in Alpena Township.

The topography of the coastal area is relatively flat. Elevations range from 659 feet above mean sea level near Rockport, to 580 feet near the shores of Lake Huron. The average elevation is approximately 600 feet. While most of the coastal area is flat, Lake Huron has left ancient beach ridges in some portions of the county which are a few feet in height. These ridges parallel the shoreline and support interesting vegetative patterns: dry site species are dominant on the high ridges, and wet site species in the low troughs.

Vegetation

The distribution of vegetation is largely determined by soil conditions, depth to bedrock, topography and water levels. Physiographic conditions and corresponding vegetation are outlined in the Alpena County Coastal Types Map (see Section 4).

In the past, wetlands were considered to be useless land and were often filled or drained. Wetlands are now recognized as important fish and wildlife habitats and groundwater recharge and stabilization areas. Wetlands also improve water quality and reduce flood flows.

Two primary types of wetlands found in the coastal area are the emergent marsh and cedar swamp. Emergent marshes are seasonally flooded and have high water tables. Typical vegetation includes phragmites, bulrush, sedges, grasses and alders.

Cedar swamps are also seasonally flooded, and support deciduous and coniferous species such as cedar, aspen, birch and spruce.

Emergent marshes and cedar swamps are inventoried on Map 3. The largest wetland areas are located near Squaw Bay and El Cajon Bay. Other important wetlands are located near Norwegian Creek and on offshore islands.

Limestone plains and sand plains are located throughout the coastal area and support cedar, aspen, birch, spruce and fir. These tree species are especially valuable for wildlife habitat and contribute to the attractiveness of the coastal area.



High Risk Erosion, Flood Risk and Environmental Areas

The Shorelands Management Act, Act 245 P.A. 1970, provides for the regulation of land use and development along the Great Lakes Shoreline in designated high risk erosion, flood risk and environmental areas. The Department of Natural Resources has designated high risk erosion and environmental areas in Alpena County. These areas are included on the Environmental Considerations Map.

High risk erosion areas have been designated in four locations along Alpena's coastline. Two high risk erosion areas are located north of Ossineke, one is located south of the City of Alpena and one is located near Whitefish Point.

Environmental areas are defined as areas necessary for the preservation and maintenance of fish and wildlife. These areas are necessary for nesting, feeding and rearing of young, or for some other critical life process of coastal fish and wildlife species. Alpena County's designated environmental areas include the wetlands mentioned previously, and include lands near Hardwood Point, Norwegian Creek and Misery Bay. Portions of Sulphur Island, Sugar Island and Crooked Island are also designated environmental areas.

Flood risk areas in Alpena County have not been designated by the DNR under Act 245. However, the Federal Insurance Administration has mapped Special Flood Hazard Areas for Alpena Township. This was done under a national program to identify flood risk areas and provide flood insurance to residents in these areas. Virtually the entire shoreline has been classified as a Special Flood Hazard Area under this Federal program. Upon more detailed study by the Federal Government and enactment of local regulations by the Township, Township residents in flood risk areas may be eligible for Federal flood insurance.

Climatic Factors

The annual mean temperature of the coastal area is 44 degrees, which is slightly warmer than inland areas which are removed from the warming effect of the lake. Annual mean precipitation is 28 inches and average annual snowfall is 70-80 inches. Cold winters and moderately warm summers present both limitations and opportunities for tourism, industry and general life in the area. While climatic conditions offer numerous opportunities for winter sports, late fall and early spring periods are often slow for tourism and long winters limit outdoor activity.

Unique Environmental Features

Unique environmental features include plants, wildlife and geologic formations which are not commonly found in Michigan. Threatened and endangered plant and wildlife species have been designated by the State. The threatened and endangered species found in the Alpena County Coastal area are as follows:

Plants

- *Iris lacustris* (Dwarf Lake Iris)
- *Pinguicula vulgaris* (Butterwort)
- *Carex scirpoidea* (Sedge)
- *Tanacetum huronense* (Lake Huron Tansy)
- *Cirsium pitcheri* (Pitcher's thistle)

Fish, Birds and Wildlife

- *Coregonus artedii* (Lake herring)
- *Sterna hirundo* (Common tern)
- *Accipiter cooperii* (Cooper's hawk)
- *Buteo lineatus* (Red-shouldered hawk)
- *Haliaeetus leucocephalus* (Bald eagle)

- *Circus cyaneus* (Marsh hawk)
- *Pandion haliaetus* (Osprey)
- *Hydroprogne caspia* (Caspian tern)
- *Synatomys cooperi* (Southern bog lemming)

In 1981 a detailed inventory of plant and wildlife species was conducted on Grass Lake Island, Potter Point Island, the Misery Bay Islands, and Thunder Bay Island for the Bureau of Land Management by Ecological Research Services Inc. From this survey the following Michigan threatened and endangered species were found on the following islands:

- | | | |
|--------------------|---|----------------------------|
| North Misery Bay | - | Common Tern |
| Thunder Bay Island | - | <i>Iris lacustris</i> |
| | - | <i>Carex scirpoidea</i> |
| | - | <i>Pinguicula vulgaris</i> |
| | - | Common Tern |
| | - | Laspian Tern |

Unique geologic formations include the limestone sinkholes located near El Cajon Bay. The sinkholes are a unique phenomena within the Great Lakes. Interpretive facilities could be developed explaining the characteristics of these sinkholes. Together, the interpretive facility and sinkholes hold the potential of attracting additional tourists to Alpena County.

Alpena County Islands

The Alpena County shoreline is dotted with fifteen islands. The islands are uninhabited and range in size from 200 acres to small shoal areas. Figure 2 lists these islands and inventories various characteristics.

Nearly all of the islands offer important habitat for shorebirds. Many have been designated environmental areas by the MDNR. Because of these characteristics,

Figure 2
Alpena County Islands

Island	Size	Ownership	Characteristics
Middle Island	158 acres	State 22 acres Private 136 acres	Dock, lighthouse and access roads - nominated for area of particular concern.
Misery Bay Islands	30 acres	Bureau of Land Management	Largely undisturbed, shrubby vegetation, excellent shorebird habitat.
Crooked Island	68 acres	Private	Designated environmental area, wetlands and excellent habitat for shorebird.
Gull Island	9 acres	Michigan Nature Assoc.	Designated environmental area, nature sanctuary for shorebirds.
Sugar Island	68 acres	Private	Designated environmental area, shorebird habitat, largely undisturbed.
Thunder Bay Island	161 acres	Bureau of Land Management	Dock, lighthouse, access road, heavy disturbance.
Grass Island	2 acres	Michigan Nature Assoc.	Prime habitat for shorebirds - close proximity to City of Alpena.
Sulphur Island	29 acres	Private	Designated environmental area, flat shrubby vegetation, shorebird habitat.
Scarecrow Island	1 acre	National Wildlife Refuge	Prime shorebird habitat, federal management. Designated wilderness area.
Bird Island	1 acre	Michigan Nature Assoc.	Prime shorebird habitat, low shrubby vegetation.

the islands are fragile environments and cannot support intensive development. It is recommended therefore that use of these islands be carefully planned. Limited use is possible on Middle Island and Thunder Bay Island because of their size, previous disturbance and ability to support moderate use. Other islands are much more fragile. Use of these islands should be restricted.

Scenic Areas and Visual Resources

The visual resources are areas offering exceptional views of the coastal area. Unique and important views usually have these characteristics:

- 1) offer a long view from an elevated vantage point or clearing;
- 2) offer an excellent view of the shoreline or coastal feature; and
- 3) are usually accessible to large numbers of people, (i.e., from a roadway or public access point).

While the Alpena County Coastal Area offers beautiful scenery, the topography is typically flat and the vegetation is dense. These factors limit views and screen areas that offer unique visual resources. In addition, much of the coastal scenery is inaccessible to many people.

Important scenic areas and visual resource areas are denoted on Map 2, Development Considerations. The areas include the following locations:

- South Point and Hardwood Point
- Squaw Bay (from U.S. 23)
- Whitefish Point and North Point
- Misery Bay and El Cajon Bay
- Rockport

These visual resources are an important natural resource and deserve protection and proper management.

SOCIO-ECONOMIC FACTORS

Population and economic characteristics are an important consideration in a detailed analysis of the coastal area. This section will examine these characteristics with regard to future development considerations.

Population Trends and Projections

Since 1960, the population of Alpena County as a whole has experienced steady growth. Population trends are summarized in Figure 3. Of all the minor civil divisions in the County, only the population of the City of Alpena has declined. From 1970 to 1980, the City's population declined 11.5 percent. Alpena Township and Sanborn Township, which with the City of Alpena comprise the coastal communities, have experienced substantial growth. Alpena Township, which is the larger, more populated of the two coastal townships, experienced a 12.8 percent growth from 1970 to 1980, from 9,001 to 10,152 persons. Sanborn Township's population during this same period grew 41.4 percent, from 1,624 to 2,297 persons.

Population projections for 1980 to the year 2000, provided by NEMCOG are summarized in Figure 4 and indicate that population growth is expected to continue. The City of Alpena, which has experienced a population decline in recent years, will grow in the future, though more slowly than other areas. The City's population is expected to increase 8.9% between 1980 and 1990. Alpena Township will grow approximately 17 percent during this same period, while Sanborn Township is expected to grow 17.7 percent. The population of Sanborn Township will grow more slowly in the future than it has in recent years.

Another indication of the rate of development in a county is the number of housing units. From 1970 to 1980, the number of housing units in Alpena County increased 33.5 percent, from 10,468 to 13,977 units. Data for coastal communities are summarized in Figure 5.

Data collected during the 1980 census indicate that 99.4 percent of Alpena County's population is white. Population characteristics are summarized in Figure 6.

Figure 3
Population Trends - Alpena County
1960 - 1980

	<u>1960</u>	<u>1970</u>	<u>1980</u>	<u>Percent Change</u> <u>1970 to 1980</u>
Alpena County	28,556	30,708	32,315	5.2
*Alpena City	14,682	13,805	12,214	-11.5
*Alpena Twp.	6,616	9,001	10,152	12.8
Green Twp.	811	863	1,003	15.5
Long Rapids Twp.	886	878	1,006	14.6
Maple Ridge Twp.	907	1,091	1,572	44.1
Ossineke Twp.	1,188	1,353	1,607	18.8
*Sanborn Twp.	1,413	1,624	2,297	41.4
Wellington Twp.	344	269	286	6.3
Wilson Twp.	1,709	1,824	2,098	+15.0

*indicates coastal community

Source: 1980 Census of Housing and Population - Michigan
PHC80-V-24

Figure 4
Population Projections – Alpena County
1980 – 2000

	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>2000</u>
*Alpena City	12,192	12,417	13,299	15,200
*Alpena Township	10,122	11,100	11,888	13,588
Green Twp.	1,080	1,235	1,323	1,512
Long Rapids Twp.	1,008	1,087	1,164	1,331
Maple Ridge Twp.	1,572	1,725	1,847	2,112
Ossineke Twp.	1,604	1,729	1,852	2,117
*Sanborn Twp.	2,302	2,525	2,704	3,091
Wellington Twp.	286	308	329	377
Wilson Twp.	2,072	2,368	2,536	2,899

*coastal community

Source: NEMCOG

Figure 5
Number of Housing Units
Coastal Communities - Alpena County

	<u>1970</u>	<u>1980</u>	<u>% Change</u>
Alpena County	10,468	13,977	33.5
Alpena City	4,484	4,894	8.7
Alpena Township	3,057	4,293	40.4
Sanborn Township	558	971	74.0

* * *

Figure 6
Population Characteristics
Alpena County - 1980

White	32,134
Black	19
American Indian	83
Asian	33
Other	<u>46</u>
Alpena County Total	32,315

Source: 1980 Census of Housing and Population-Michigan PHC80-V-24

Economic Conditions

Alpena County has the most diverse economy of the counties in northeastern Michigan, due in a large part to its abundant natural resources. In 1981, 24.9 percent of all wage and salary jobs in the County were in the manufacturing sector. Although this percentage is lower than the State average, which usually hovers around 32 percent, it is greater than is found in adjacent counties. The Huron Cement Division of the National Gypsum Company is the largest employer in the County. Huron Cement ships limestone and shale to its customers and uses these materials in its own operations as well. This plant is the largest of its kind in the world, and with it Alpena County ranks first in cement, clay and shale in the State. Other large employers in the County include the Abitibi Corporation, which produces decorative hardboard; the Besser Company, which manufactures cement block machines; the Fletcher Paper Co; the Detroit Gasket and Manufacturing Company, which manufactures automobile carpeting; and Thunder Bay Manufacturing, which operates a grey iron foundry and fabricates punch presses.

The non-manufacturing sector comprised 53.4 percent of the County's employment in 1981, while the governmental (Federal, State, County, City, education, health, etc.) sector comprised 21.7 percent. Employment characteristics are summarized in Figure 7. These figures represent the total employment in the County, including both County residents and workers who commute to Alpena from adjacent counties.

Labor force statistics provide information on the workers which reside in Alpena County. Labor force characteristics are summarized in Figure 8. These statistics indicate that unemployment which was at 16.9% in December of 1981, is a serious problem in Alpena County at the present time.

Tourism

Alpena County has only a limited amount of tourism activity at the present time. This is evidenced by the fact that the largest chain motel in the County has only a seven percent difference in business activity between January and July. Overall, Alpena County ranked 29th out of all 83 Michigan Counties in terms of tourist

Figure 7
Alpena County
Employment Characteristics - 1981
(by place of employment)

	<u>Annual Average</u>		<u>Current Data</u> <u>Dec. 1981</u>
	<u>#</u>	<u>%</u>	
Total Employment	10,825	100.0	10,050
Manufacturing Sector	2,700	24.9	2,150
Non-manufacturing Sector	5,775	53.4	5,525
Government	2,350	21.7	2,375

* * *

Figure 8
Alpena County
1981 Labor Force/Unemployment Statistics
(by place of residence)

	<u>Annual</u> <u>Average</u>	<u>Current</u> <u>(December 1981)</u>
Total Civilian Labor Force	16,075	15,200
Employed	13,800	12,625
Unemployed	2,275	2,575
Rate of Unemployment	14.2%	16.9%

Source: Michigan Employment Security Commission

expenditures in a 1975 Michigan Travel Bureau Survey. Alpena County's percent of total employment involved in tourist-related industries is estimated at 2.74%, well below the average percentage for other northeastern Michigan counties.

A number of factors may explain why tourism has failed to capture a significant market within the coastal economy. The factors include:

- poor freeway access and remote location;
- lack of major tourist attractions;
- lack of waterfront access sites;
- lack of widespread local support; and
- lack of promotional efforts.

The lack of a major expressway is often cited as a major reason for lack of tourism, yet northwestern Michigan has similar transportation systems. A more plausible explanation is the lack of major tourist attractions. Alpena County does not have features such as the Porcupine Mountains, Sleeping Bear Sand Dunes, or Tahquamenon Falls. In addition, the area is without a State park and extensive areas of public access to the waterfront.

To some extent all of the above reasons offer explanation for the lack of tourist activity. In addition, tourism has not had widespread local support. For the most part, residents have felt that the clean unspoiled environment should be kept for themselves. However, it is believed that economic conditions may moderate this belief. High unemployment rates, evidence that the major industries in the Alpena area are vulnerable to changing economic conditions and a realization that tourism is a major industry and job-producing activity, have sparked a change in this attitude.

No new steps are now being taken to actively promote tourism on a statewide and local level. The "Say Yes to Michigan" campaign has brought national attention to the state. In addition the East Michigan Travel Association, Alpena Chamber of Commerce and the Alpena Tourist Association are actively promoting the area on the regional level. The Michigan Travel Bureau has determined that promotional

efforts are an effective tool for increasing tourist activity. Promotional efforts include media coverage, promotional brochures and travel/trade shows. Specific strategies for development of tourism within the Alpena Coastal Area are discussed in Section IV of this report, and statistics regarding the tourist industry in Alpena County are provided in the appendix of this report.



Recreation

Given the size of the Alpena County Coastal Area and its resident population, there are relatively few public recreation sites. An inventory of these sites is as follows:

- | | |
|------------------------------------|--|
| Newegon State Park | - Currently undeveloped, not open to camping but used as an unadministered park. |
| Nicholson Hill Road
Boat Access | - Public boat launch facility. |

Sanborn County Park - County administered park with swimming and picknicking facilities. Only County Park in the Coastal Area.

State Forest Campground - Public camping, beach and picnic area located near Ossineke, administered by the MDNR. Only camping area in the Coastal Area.

Perhaps the most popular recreation activity in the Thunder Bay Area is fishing. Numerous fishermen are often seen near Squaw Bay, Misery Bay and Thunder Bay. Brown Trout, Lake Trout, Steelhead and Perch have all been popular and maintained a successful sport fishery. New MDNR Brown Trout fish hatchery facilities are expected to be in operation this year. With these new facilities, larger fish plantings and improved water quality conditions, the overall sport fishery for Thunder Bay is expected to improve.

Historical and Archaeological Resources

The Alpena County Coastal Area was the site of a number of early settlements. These settlements are recognized as important archaeological sites and are inventoried on Map 2. Five sites have been identified and include:

- Devils River prehistoric shrine (Sanborn Township Sec. 12)
 - Devils River burial ground (Sanborn Township Sec. 12)
 - Norwegian Creek settlement (Alpena Township Sec. 17)
 - Morris Bay Stone Fort (Alpena Township Sec. 28)
 - Hooley Creek settlement (Alpena Township Sec. 13)
- (Source: Richard Clute - Alpena Community College)

In addition to these archaeological sites, Alpena County has a rich history that is largely based upon the natural resources of the area. The French fur traders were

the first Europeans to visit Alpena County. After the French and Indian War, the area fell into the hands of the British and eventually into the hands of the United States government. In 1840 the County was surveyed by Douglas Houghton and the first settlers arrived soon after. Alpena County was organized in 1857 just prior to the start of the intensive lumbering era. The first log mark was registered in Alpena County in 1870, and was accompanied by the establishment of major industries. These included the Fletcher Paper Mill, Besser Co., Detroit and Mackinac Railroad, and the Huron Portland Cement Plant.

The lumber, agricultural, mining, and manufacturing industries attracted a wide range of employment opportunities. German, Polish and French immigrants found jobs and homesites within the County and comprise a large percentage of the ethnic population.

Land Use

Information on the existing land use in the coastal area was obtained from aerial photographs, published reports and on-site investigations. Land uses are summarized in Figure 9, and are classified according to the specifications of Act 204, P.A. 1980.

Property Ownership

It is important to note property ownership patterns within the coastal area in order to assess development pressures and trends. Map 2, Development Considerations, denotes current property ownership patterns. A tabulation of these patterns is included in Figure 10.

Shoreline Structures

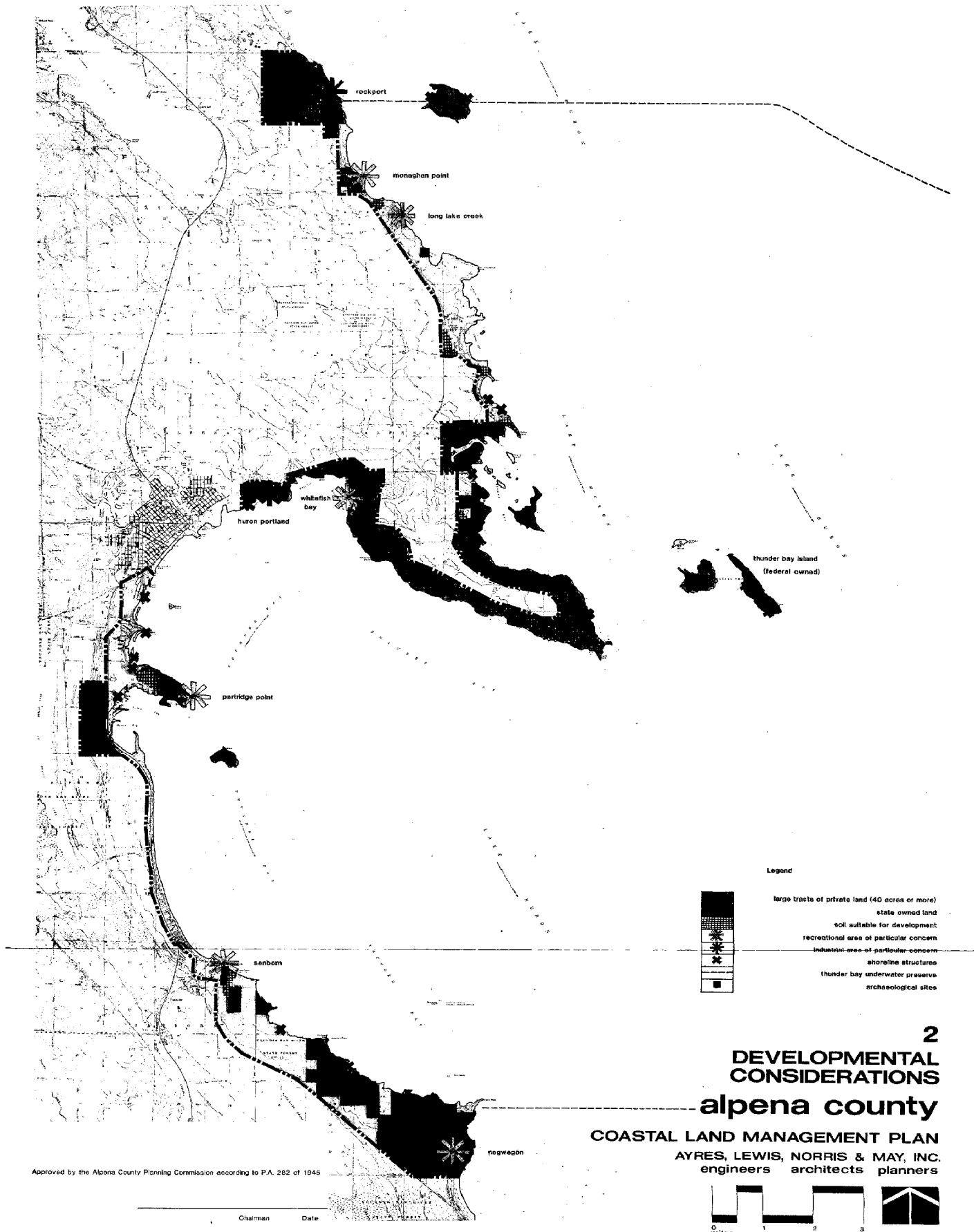
Map 2 also identifies major shoreline structures within the coastal area. The majority of these structures are bulkhead systems which have been backfilled by

Figure 9
Alpena County Coastal Area
Existing Land Use

<u>Land Use Classification</u>	<u>Approximate Acreage</u>	<u>% of Total</u>
1. URBAN BUILT UP		
11 Residential	3,200	22%
12 Commercial Services	200	1%
14 Transportation, Communication, Utilities	400	3%
171 Extractive (open pit)	800	5%
193 Outdoor Recreation	20	--
4. FOREST LAND		
43 Mixed Broadleaf and Coniferous	3,100	20%
5. WATER		
51 Streams and Waterways	200	1%
6. WETLANDS		
62 Emergent Wetlands	2,560	16%
64 Shrub Wetlands	1,280	8%
65 Forrested Wetlands	<u>3,600</u>	<u>24%</u>
Totals	15,360	100%

Figure 10
Property Ownership Patterns
Alpena County Coastal Area

<u>Type of Ownership</u>	<u>Acreage</u>	<u>% of Total</u>
Small holdings (private ownership of less than 40-acre parcel)	4,292	28%
Large holdings (private ownership of more than 40-acre parcels)	8,960	58%
State holdings	2,048	13%
County holdings	20	---
Federal holdings	<u>40</u>	<u>---</u>
	15,360	100%



dredging operations and are used to facilitate the docking of ships and boats. It should be noted that construction of shoreline structures which require dredging or filling below the ordinary high water mark is regulated by State law.

Vehicular Circulation

The major road servicing the coastal area is U.S. 23. In past years, plans were announced to study relocation and improvement of U.S. 23 as a four lane limited access freeway. The new freeway would be located west of the existing U.S. 23 corridor. The Michigan Department of Transportation has abandoned consideration of this freeway in light of budget cutbacks and traffic data which indicates that the existing two lane facility is capable of handling present traffic loads.

Secondary roads servicing the coastal area include:

- Partridge Point Road (paved asphalt)
- North Point Road (gravel)
- Indian Road (gravel)
- El Cajon Bay Road (gravel)
- Monaghan Point Road (gravel)
- Rockport Road (gravel)

These roads are maintained by the County and provide access to numerous private roads and drives throughout the coastal area. In addition to these roads, Baarlear private airport is located within the coastal area.

INSTITUTIONAL CONSIDERATIONS

Prior to development of specific management plans, a review of institutional and planning issues is important. Institutional considerations include legal concerns, policies, plans and programs already enacted by local or state governments. In addition, a number of pertinent issues are reviewed which will have an impact on future development in the coastal area.

Local Zoning, Planning and Policies

Both Alpena Township and Sanborn Township have enacted comprehensive plans and zoning ordinances to manage future growth. Existing plans and ordinances regulate the type of use and function of use within coastal areas. For the most part each township has designated the coastal areas as low density residential or forest reserve. In addition the Township Master Plans have noted the poor soil conditions, scenic quality, and natural constraints to development. Development policies and objectives call for the protection of the natural environment and the promotion of development which is compatible with the coastal area resources.

State and Federal Legislation

A number of State and Federal statutes govern activities in Alpena County's coastal zone. These statutes are summarized in Figures 11 through 13. The statute which perhaps most directly influences developmental activities in the coastal zone is Act 245, P.A. 1970 as amended, The Shorelands Protection and Management Act. Under the Act, new construction in designated high risk-erosion, high risk flood and environmental areas is regulated by MDNR. The designated area extends from the Ordinary High Water Mark (OHWM) to a maximum of 1000 feet inland. In Alpena County, high risk erosion and environmental areas have been designated and protected.

The State of Michigan holds the title to the bottomlands of the Great Lakes. Act 247, P.A. 1955, as amended regulates dredging, filling and construction in Great Lakes bottomlands. Permits must be obtained from the MDNR in order to undertake any such activity. Leases to operate marinas in the Great Lakes are also conveyed under this Act. Federal programs are summarized in Figure 13.

Pertinent Issues in the Coastal Area

It is helpful to examine current issues which can affect future development within the coastal area.

Figure 11
State Statutes With Direct Applicability
to Activities in Alpena County's Coastal Zone

<u>Statute</u>	<u>Type of Jurisdiction</u>
Act 245, P.A. 1970, as amended Shorelands Protection and Management Act	Local zoning or MDNR permit process regulates new construction in designated environmental, high risk erosion and high risk flood areas. (Note: high risk erosion and environmental areas have been designated in Alpena County.)
Act 247, P.A. 1955, as amended Great Lakes Submerged Lands Act	Permit from MDNR required to modify or construct in Great Lakes bottomlands. Marina leases also issued under this Act.
Act 184, P.A., 1980 Great Lakes Bottomland Preserve	Provides for designation and protection of Thunder Bay Great Lakes bottomlands preserve. Recovery, alteration, or destruction of abandoned property in this area is not permitted without a joint permit from MDNR and Michigan Department of State – History Division.
Act 346, P.A. 1972 Inland Lakes and Streams Act	Permit from MDNR required to dredge, fill or construct in inland lakes or streams.
Act 347, P.A. 1970 Soil Erosion & Sedimentation Control Act	Permit from local enforcement agency required if a proposed project would disturb one or more acres of land or move earth within 500 feet of a lake or stream.
Act 203, P.A. 1980 Wetlands Protection Act	Permit from MDNR required to dredge, fill, construct, or drain any wetland contiguous to inland lakes and streams, or the Great Lakes.

Figure 12
State Statutes With Indirect Applicability
to Alpena County's Coastal Zone

<u>Statute</u>	<u>Type of Program</u>
Act 231, P.A. 1970 Natural River Act	Regulation of land use along designated rivers by zoning. Thunder Bay River is proposed for study for designation.
Act 241, P.A. 1972 Wilderness and Natural Areas Act	Protection of designated natural areas. Northern portion of Negwegon State Park has been proposed for study for designation.
Act 641, P.A. 1978 Solid Waste Management Act	Counties must prepare solid waste management plans. Solid waste facilities must be located, constructed and operated in accordance with this Act. MDNR reviews plans, issues permits and licenses.
Act 64, P.A. 1978 Hazardous Waste Management Act	MDNR regulates transport of hazardous wastes and construction/operation of disposal facilities through licenses and permits.
Act 127, P.A. 1970 Michigan Environmental Protection Act	Provides legal standing for agencies or citizens to challenge environmentally destructive actions in court.
Act 203, P.A. 1974 Endangered Species Act	Protection of listed endangered or threatened species.

Figure 13
Federal Legislation Related to Alpena County's Coastal Zone

Land and Water Management

Coastal Zone Management	(16 USC 1452)
National Flood Insurance	
Flood Disaster Protection Act	
Federal Land Policy and Management Act	
Wilderness Preservation Act	
Marine Protection, Research and Sanctuaries Act of 1972	

Environmental Protection

Rivers and Harbors Act of 1899 Section 10	(Administered in conjunction with Section 404 permit program)
PL 95-217 Clean Water Act Section 401 – Water Quality Certification	(Administered by MDNR. Certification that project is in compliance with State water quality standards)
Section 404 – Dredge and Fill Permits	(ACOE permit program jointly administered with State Acts 346 and 247)
PL 85-624	Fish and Wildlife Coordination
PL 93-205	Endangered Species Act
PL 89-655	National Historic Preservation Act
National Environmental Protection Act of 1969	(42 USC 4321)
Estuary Protection Act	(16 USC 1244)

Oil and Gas Drilling

The Niagaran Reef trend is an oil and gas bearing geologic formation which runs across Northern Michigan roughly from Oceana County to Presque Isle County. There is considerable uncertainty about the boundaries of the formation, but on the basis of available information, it does not appear to enter Alpena County to a great extent. The trend is narrower in the east and produces less oil and gas.

To date, a total of sixteen wells have been drilled in Alpena County for the purpose of hydrocarbon exploration. One well (located in Alpena Township) produced gas but was abandoned in 1978. The remaining wells were dry holes. There has been no drilling in Alpena County since the mid-1970s, which indicates a disinterest in exploration in this area. Drilling in the Great Lakes has been prohibited by a policy of the Natural Resource Commission since 1960. This policy is outlined in the MDNR's policy manual Policies and Procedures - Commission Policy 2310 Minerals - Oil and Gas Leases on State-Owned Bottomlands of the Great Lakes, pursuant to Act 326 P.A. 1913, as amended by Act 278 P.A. 1957.)

The Policy was reaffirmed in 1976. Several bills are in the State Legislature at the present time which would prohibit drilling the Great Lakes by statute.

Coastal Power Plants

Several years ago, Consumers Power Company was considering construction of a new fossil or nuclear plant. Nine sites were under consideration, including one near Rockport in Alpena's Coastal Area. The nine sites include:

Rockport	Alpena Co.
National City	Iosco County
Karn-Weadock	Bay Co. (existing plant expansion)
Quanicassee	Bay Co.
Whiting	Monroe Co. (existing plant expansion)

Erie	Monroe Co.
Campbell	Ottawa Co. (existing plant expansion)
Muskegon Co. Wastewater System	Muskegon Co.
Palisades	Van Buren Co. (existing plant expansion)

Since that time, nuclear power has been ruled out due to regulatory problems and resulting delays in the completion of the Midland nuclear plant. The Quanicassee and Palisades sites, both of which were "nuclear only" options, are thus no longer under consideration.

The search for a new site will begin after a completion date and size of plant are determined. Any of these sites could be reconsidered, but a number of unnamed sites may also be studied. At the present time, it is impossible to determine exactly when a new plant will be needed or to predict what criteria will be used to evaluate the sites. However, it is important to emphasize that Rockport is only one of a number of sites under consideration, and even if it were developed at some as yet undetermined time, a fossil fuel plant (i.e., coal) would probably be constructed.

Negwegon State Park

Negwegon State Park has been designated as a State Park since 1962 but it was not until 1974 that the Natural Resources Commission approved the Negwegon State Park Master Plan. The plan calls for twenty-five rustic campsites, beach, picnic area, trails and service facilities. It is believed to be a compromise between the intense development interests and preservation interests.

There has been no development to date. The area is administered by MDNR's Park Division, and is infrequently used at the present time. It is open to hunting and hiking. No camping is permitted and no facilities are available.

The Parks Division makes a request for funding for park development to the State Legislature each year. Fiscal priorities for the next five years indicate that funding for major developments at Negwegon State Park are proposed for 1984, 1985, and 1986. However, development could be further delayed by State budgetary constraints.

It should be pointed out that Alpena County is one of the few Northern Michigan counties without an administered State Park. The presence of a park would attract tourists and aid the overall development of tourism within Alpena County.

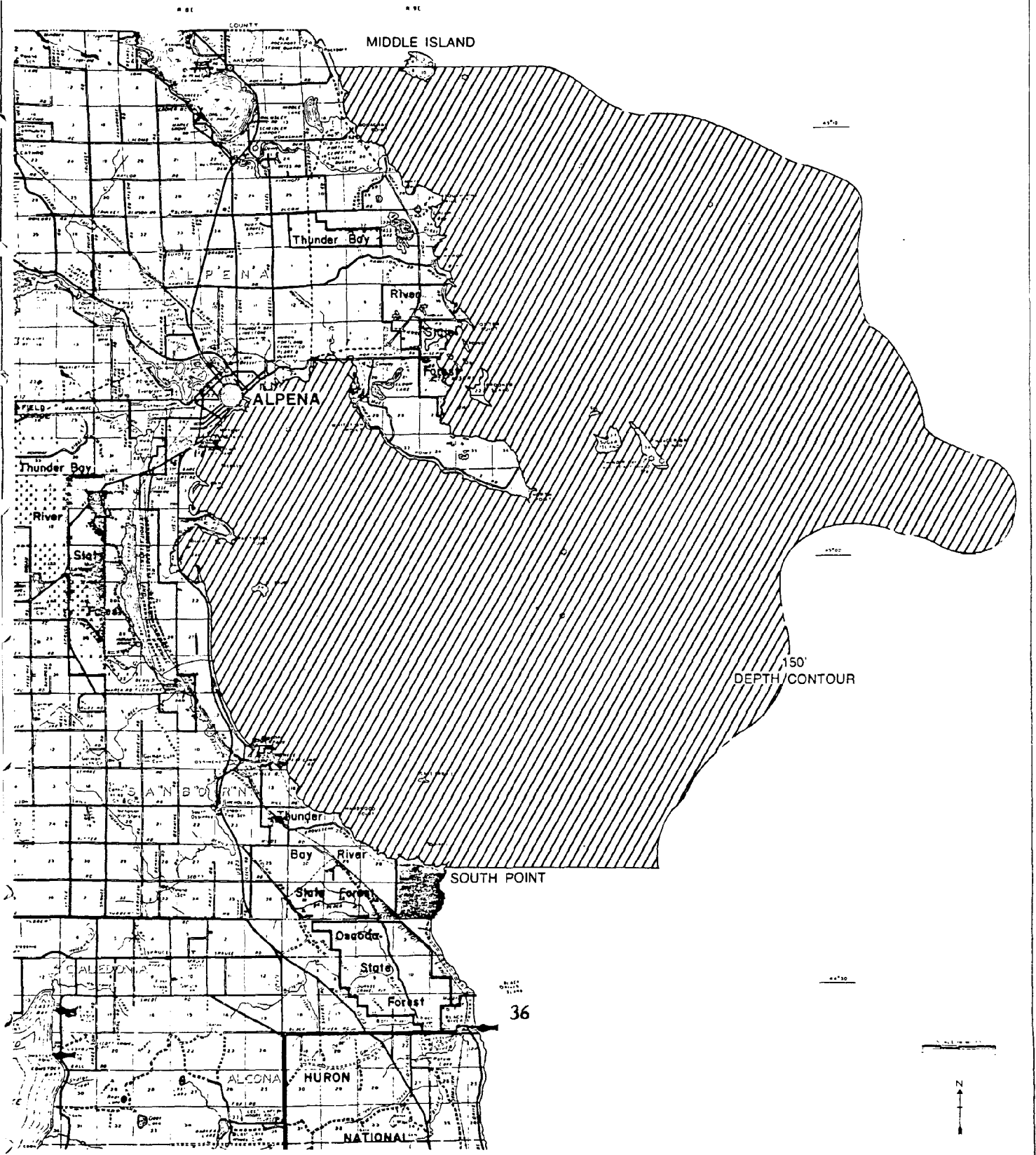
Thunder Bay Underwater Preserve

Act 184, P.A. 1980 established Great Lakes bottomland preserves that have historical or recreational value. The Act requires divers and salvagers to obtain permits prior to removing artifacts from shipwrecks resting on the bottom of Michigan's Great Lakes.

The Act created the Thunder Bay Underwater Preserve, an area encompassing all of Thunder Bay as well as offshore areas of Alpena County to a depth of 150 feet. The limestone shoals and shallow waters of the Thunder Bay area have produced one of the richest shipwreck areas in all of the Great Lakes. There are more than 80 known shipwrecks in this area. A map of the Preserve is included in the following page.

With this unique resource, the Thunder Bay area has the potential of becoming an attraction for divers and tourists. A similar underwater park in Tobermory, Canada attracts over 15,000 visitors a year and over 5,000 divers. It is estimated that expenditures from divers alone amount to nearly a million dollars for the local economy each year. The only other underwater preserve in Michigan is located in Alger County and contains approximately twelve to twenty-four shipwrecks.

THUNDER BAY BOTTOMLAND PRESERVE



**SECTION 4
ALPENA COUNTY
COASTAL LAND
MANAGEMENT PLAN**

SECTION 4

ALPENA COUNTY COASTAL LAND MANAGEMENT PLAN

The Alpena County Coastal Land Management Plan is designed to provide direction for the future development and management of the County's Coastal Areas. The recommended plan consists of four elements: Coastal Area Goals and Land Use Policies; Coastal Management Options; Land Use Plan; and Management Strategies.

ALPENA COUNTY COASTAL AREA GOALS AND LAND USE POLICIES

A key element in the preparation of the coastal area management plan is the identification of community goals and policies which reflect the County's desires regarding the development of the coastal area. The goals and policies, combined with the technical studies conducted in conjunction with this plan, serve as the foundation upon which the management plan is built. Further, the goals and policies are broad statements which reflect general sentiment within the county. Specific strategies which outline implementation of these goals are noted in later sections of this plan.

The following goals and policies were identified by the Alpena County Planning Commission:

Natural Resources

1. The high water quality of Lake Huron, Thunder Bay, and adjoining inland lakes and stream should be maintained and improved. Recommendations proposed in the "Water Quality of the Thunder Bay Watershed" management plan should be implemented in order to provide quality habitat for wildlife and improve recreation opportunities for tourists and residents of Alpena County.

2. Wherever possible, greenbelts and development setbacks should be provided between water bodies and developed areas. These strategies will help insure that the scenic quality of the shoreline is preserved and that the water quality is maintained.
3. High risk erosion areas as designated by the Department of Natural Resources should be earmarked for special consideration by the Townships. Minimum and recommended setbacks should be required to insure protection of life and property.
4. Floodprone areas as designated by State and Federal agencies should be recognized by local government. Development restrictions should be applied to these floodprone areas.
5. Unique wildlife habitat areas and environmental areas designated by the DNR and other public agencies should be protected from development.
6. Wherever possible, the public should acquire important environmental and recreational sites within the coastal area.
7. Air quality should be improved to minimize the negative impacts of poor air quality on human activities in the coastal zone.
8. The significance of cultural and historical resources in the coastal zone should be recognized and such resources should be maintained for the benefit of the community.

Economic

1. Tourism should be promoted in Alpena County as an important facet of the local economy.

2. Existing industrial uses should be maintained and recognized as an important component in the local economy. New industries, especially those utilizing the lumber and limestone resources, should be attracted and located in areas with the least potential for impacting the surrounding environment.
3. Existing recreational opportunities should be promoted and new recreational facilities developed.
4. U.S. 23 should be maintained as a safe and efficient transportation corridor for access within the coastal zone.
5. While recognizing the importance of oil, gas and power generating facilities, such facilities should be carefully planned so that impacts to surrounding areas are minimized.

Recreation

1. Existing public access sites and private marinas on Lake Huron and Thunder Bay should be substantially improved. Wherever possible, additional public access sites should be developed.
2. Scenic views of Thunder Bay and Lake Huron should be improved and maintained. Wherever possible, additional viewing areas should be developed within the U.S. 23 corridor.
3. Existing beaches should be kept in an orderly condition. Management strategies should place special importance on periodic cleaning of the beach areas.
4. The County should promote the development and management of the Underwater Preserve.
5. The County should promote development of a sport fishery within the Alpena Coastal Area.

Overall Goals

1. Management strategies within the coastal area should be consistent with the overall objectives of the State coastal management program.
2. Proposed management strategies should be consistent with local control and implementing procedures. Zoning controls and regulations pertaining to sensitive or unique areas should be implemented.
3. Intergovernmental cooperation between township and County agencies should be promoted.

COASTAL MANAGEMENT OPTIONS

The natural resource and cultural data presented in Section I of this plan provides a basis for development of management strategies and planning options. However, prior to development of specific recommendations, the data must be organized into a meaningful system. This section classifies coastal types and presents management options and strategies for future development.

Coastal Types

The importance of natural features as indicators of the development capability of land was discussed in Section III. The Alpena County Coastal Area can be divided into coastal types on the basis of natural features (such as soils, water table, geologic conditions and vegetation) and man-altered conditions. Coastal types were developed from data gathered from existing maps, published reports, high altitude infrared aerial photography and on-site investigation, and include:

- Emergent Marsh
- Cedar Swamp
- Limestone Plain
- Sand Plain
- Man-Altered Area

Figure 14 summarizes the general physiographic conditions and development capability of each coastal type. For example, the Emergent Marsh coastal type is characterized by shallow water and shrubby vegetation. These areas are important for fish and wildlife habitat. The Emergent Marsh is incapable of being developed because of the high water table and the potential threat to fish and wildlife habitat.

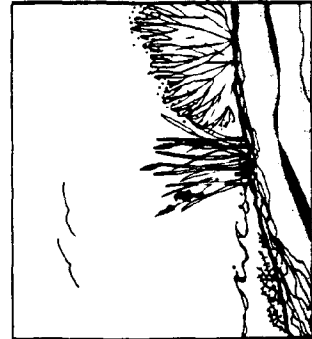
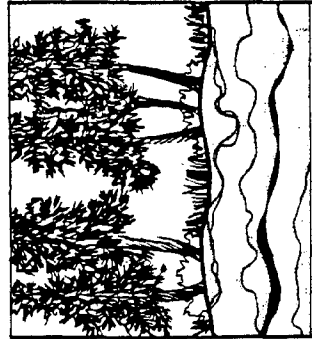
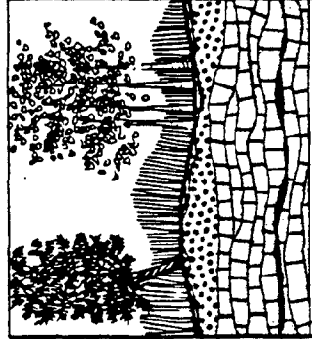
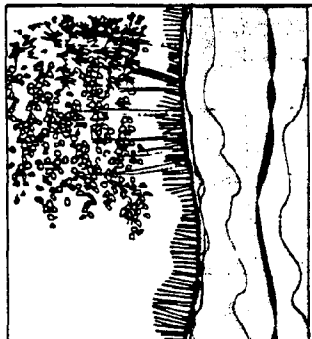
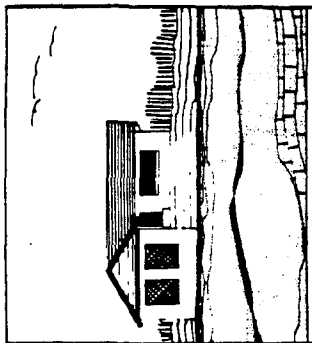
Map 3 outlines the boundaries of the various coastal types. It should be noted that the boundaries are approximate. Small areas, less than a few acres in size are not inventoried. The map is accurate as a generalized guide, but further on-site investigation of specific areas will be necessary prior to development to determine the coastal type and associated development capability.

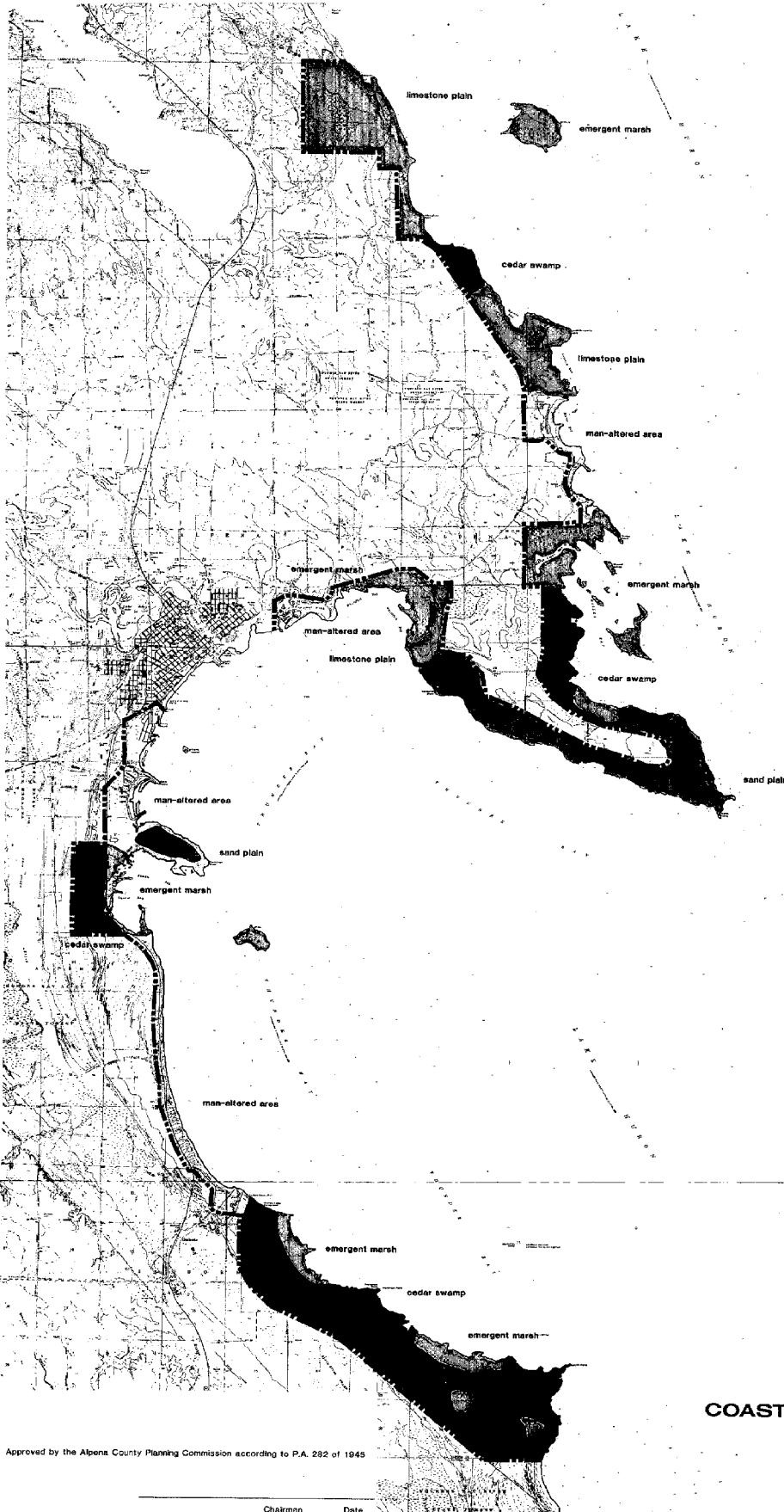
Management Options

Management options and appropriate land uses can be suggested for each coastal type which are suited to the characteristics of the coastal area. Figure 15 outlines the management strategies for the Alpena County Coastal Area. The proposed management options for the coastal lands include:

- Conservation
 - Limited Recreation
 - Recreation
 - Low Density Residential
 - Forestry
 - Residential
 - Commercial
 - Industrial
 - Extractive
- Degree of
Land Use
Intensity

Figure 14

	Emergent Marsh Physiographic Conditions Shallow waters and shrubby wetlands provide habitat for fish and wildlife. Development Capability The areas are incapable of supporting development because of high water tables.
	Cedar Swamp Physiographic Conditions Mature cedar forests are located on ancient beach ridges. Seasonal flooding is not unusual. Development Capability The areas are generally incapable of supporting development because of high water table. However, a few upland sites may support low density residential or limited recreation activities.
	Limestone Plain Physiographic Conditions Shallow stony soils are located on fractured limestone bedrock. Swales and old beach ridges provide a mixture of habitats for Aspen, Birch, and Cedar. Development Capability Shallow depth to bedrock places severe restrictions on septic fields. Development capability is limited.
	Sand Plain Physiographic Conditions Well drained and wet sandy soils support a mixture of Aspen, Birch and coniferous species. Development Capability High water tables in some areas place limitations on development. Well drained areas with suitable potable water are most suited for development.
	Man-Altered Area Physiographic Conditions Man-altered areas show evidence of grading, clearing, or structural development. Development Capability Lands are already impacted by development. Capability of supporting additional development is variable.



Legend



emergent marsh
cedar swamp
limestone plain
sand plain
man-altered area

3

COASTAL
TYPES

alpena county

COASTAL LAND MANAGEMENT PLAN

AYRES, LEWIS, NORRIS & MAY, INC.
engineers architects planners

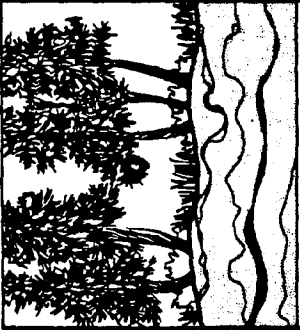
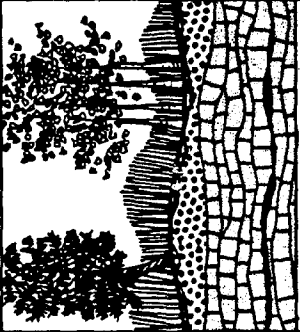
Approved by the Alpena County Planning Commission according to P.A. 282 of 1945

Chairman Date



ALPENA COUNTY / MANAGEMENT STRATEGIES

Figure 15

	Emergent Marsh Management Options - Conservation Management Strategy <u>Enforcement of State Legislation</u> - P.A. 245 of 1970 (Environmental Area Permit) - P.A. 247 of 1955 (Dredge & Fill Permits) - P.A. 346 of 1972 (Inland Lakes & Streams) - P.A. 203 of 1980 (Wetlands Permits) <u>Enactment of Local Zoning</u> - Greenbelt zoning - Performance controls - High risk erosion setbacks - Flood hazard regulations <u>Miscellaneous Strategies</u> - Scenic easements - Purchase of development rights - Purchase and use by county for park - Purchase and use by state for park - Purchase and dedication to nature association
	Cedar Swamp Management Options - Conservation - Limited Recreation - Low Density Residential Management Strategy <u>Enforcement of State Legislation</u> - Same as Emergent Marsh <u>Enforcement of County & State Health Department Regulations</u> - Septic fields - Wells <u>Enactment of Local Zoning</u> - Site plan review - Greenbelt zoning - Performance controls - High risk erosion setbacks - Area, setback, height regulations - Use regulations - Flood hazard regulations <u>Miscellaneous Strategies</u> - Scenic easements - Purchase of development rights - Purchase and use for county park - Purchase and use for state park - Purchase and dedication to nature association
	Limestone Plain Management Options - Conservation - Recreation - Low Density Residential - Extractive & Forestry - Industry Management Strategy <u>Enforcement of State Legislation</u> - Same as Emergent Marsh <u>Enforcement of County & State Health Department Regulations</u> - Septic fields - Wells <u>Enactment of Local Zoning</u> - Site plan review - Greenbelt zoning - Landscape buffer strips - Performance controls (dust, noise, odors, buffer zones, etc.) - High risk erosion setbacks - Area, setback, height regulations - Use regulations - Flood hazard regulations - Mining, lumbering regs. <u>Miscellaneous Strategies</u> - Scenic easements - Purchase of dev. rights to nature association
	Sand Plain Management Options - Recreation - Residential - Forestry - Industry Management Strategy <u>Enforcement of State Legislation</u> - Same as Emergent Marsh <u>Enforcement of County & State Health Department Regulations</u> - Septic fields - Wells <u>Enactment of Local Zoning</u> - Site plan review - Greenbelt zoning - Landscape buffer strips - Performance controls (dust, noise, odors, buffer zones, etc.) - High risk erosion setbacks - Area, setback, height regulations - Use regulations - Flood hazard regulations - Extractive, lumbering restrictions <u>Miscellaneous Strategies</u> - Scenic easements - Purchase of development rights
	Man-Altered Area Management Options - Recreation - Residential - Extractive & Forestry - Industry Management Strategy <u>Enforcement of State Legislation</u> - Same as Emergent Marsh <u>Enforcement of County & State Health Department Regulations</u> - Septic fields - Wells <u>Enactment of Local Zoning</u> - Site plan review - Greenbelt zoning - Landscape buffer strips - Performance controls (dust, noise, odors, buffer zones, etc.) - High risk erosion setbacks - Area, setback, height regulations - Use regulations - Flood hazard regulations <u>Miscellaneous Strategies</u> - Scenic easements - Purchase of development rights

The options above are listed according to degree of land use intensity. The compatibility of each management option and coastal type is indicated in Figure 15. For example, very few development options are available for Emergent Marsh areas, while Sand Plain areas are not as sensitive to development and can support recreational, residential and industrial uses.

Prior to the selection of a preferred land use plan, each land use option can be evaluated in terms of environmental, economic and social benefits. Figure 16 provides a summary of the relative benefits of each land use option. For example, the increased environmental benefits of a conservation land use option may be offset by the decreased economic benefits. On the other hand, decreased environmental benefits may be associated with industrial and commercial uses. This summary matrix is not necessarily intended to show preference for one type of land use over another. Instead, the matrix graphically portrays the relative benefits and concerns which should be considered by local officials in the land planning process.

Coastal Land Use Plan

The Land Use Plan depicted in Map 4 serves to translate the general goals, development policies and coastal resource analysis, into a narrative and graphic illustration. It is based largely upon existing land use patterns, development capability and adequacy of community facilities and services.

The Land Use Plan is not intended to serve as a zoning map nor dictate the use of individual parcels of property. Rather, it is a generalized guide to the development and management of the Alpena Coastal Area.

The following location standards for each major type of land use were used:

Conservation users are planned for all environmentally sensitive areas. This category includes all offshore islands, wetlands and lands designated by the MDNR under Act 245, P.A. of 1970. Also included is the El Cajon Bay area.

Alpena County Planning Commission

ALPENA COUNTY COURT HOUSE

ALPENA, MICHIGAN - 49707

ALPENA COUNTY COASTAL LAND MANAGEMENT PLAN

SUPPLEMENT NO. 1

CORRECTION -- Map 4

T. 31N. - R.9E Section 27
T. 30N. - R.8E Sections 10 and 11

Designated Environmental Areas (PA 245) exist in these three sections. They are acknowledged on Map 1, Environmental Considerations. These are the only Environmental Areas (EAs) in Alpena County that were not included in areas recommended for "Conservation" on reproductions of Map 4.

It is our intention that these EAs identified on Map 1 be utilized only for conservation purposes, as per the narrative on page 44. Map 4 is hereby corrected to reflect a recommendation of "Conservation" for areas in the above referenced Sections which are identified as EAs on Map 1.

Adopted: November 3, 1982

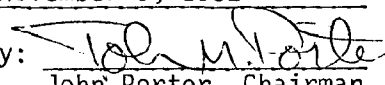
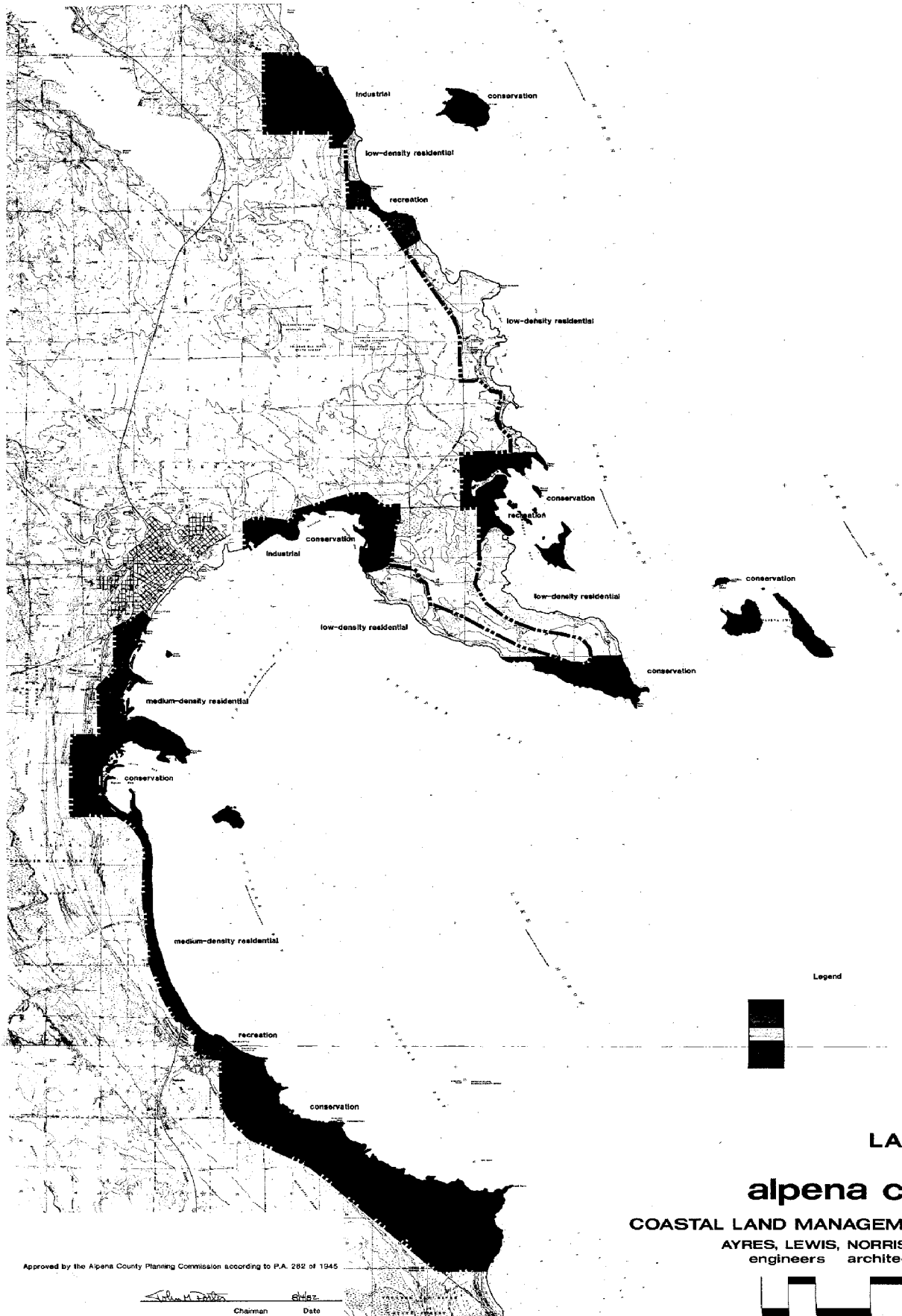
Attested by: 
John Porter, Chairman

Figure 16
Management Option Evaluation Matrix
Alpena County Coastal Area

Alpena County Coastal Area										
		Significant Benefits ■		Moderate Benefits ■		Limited Benefits ■				
		Conservation	Limited Recreation	Recreation	Low Density Residential	Forestry	Residential	Commercial	Industrial	Extractive
Environmental Benefits	Protection of Air Quality	■	■	■	■	■	■	■	■	■
	Protection of Water Quality	■	■	■	■	■	■	■	■	■
	Protection of Fish Habitat	■	■	■	■	■	■	■	■	■
	Protection of Wildlife Habitat	■	■	■	■	■	■	■	■	■
	Preservation of Wetland Values	■	■	■	■	■	■	■	■	■
	Protection of Terrestrial and Aquatic Vegetation	■	■	■	■	■	■	■	■	■
	Preservation of Geologic Uniqueness	■	■	■	■	■	■	■	■	■
Economic Benefits	Reduced Flood Damage and Shoreline Erosion	■	■	■	■	■	■	■	■	■
	Reduced Costs of Sewage and Water Services	■	■	■	■	■	■	■	■	■
	Increased Tourism	■	■	■	■	■	■	■	■	■
	Increased Employment	■	■	■	■	■	■	■	■	■
	Increased Tax Base	■	■	■	■	■	■	■	■	■
	Reduced Land Acquisition Costs	■	■	■	■	■	■	■	■	■
	Reduced Public Service Costs	■	■	■	■	■	■	■	■	■
Social Benefits	Protection of Public Health	■	■	■	■	■	■	■	■	■
	Preservation of Recreation Opportunities	■	■	■	■	■	■	■	■	■
	Preservation of Unique Resources	■	■	■	■	■	■	■	■	■
	Improved Availability of Goods and Services	■	■	■	■	■	■	■	■	■
	Improved Housing	■	■	■	■	■	■	■	■	■



Legend

conservation
recreation
low-density residential
medium-density residential
industrial

4 LAND USE PLAN

alameda county

COASTAL LAND MANAGEMENT PLAN

AYRES, LEWIS, NORRIS & MAY, INC
engineers architects planners

Approved by the Alameda County Planning Commission according to P.A. 282 of 1945

Chairman *Date*



Limited Recreation and Recreation uses are planned for areas within Negwegon State Park, Partridge Point, Monaghan Point and Rockport.

Low Density Residential areas include parcels less than a few acres in size (approximately 300 feet of frontage). These low density areas are proposed in areas north and south of Misery Bay. Medium density areas are proposed for existing residential areas north of Ossineke (approximately 200 feet of frontage). High density uses are not currently proposed (approximately 100 feet of frontage).

Industrial uses are proposed near the existing Huron Portland Cement Plant.

Forestry uses are not now proposed within the coastal area. However, under proper management and special use procedures, forestry operations may be permitted.

MANAGEMENT STRATEGIES

Five primary management strategies are available for implementation of the Alpena Coastal Management Plan. These strategies include legal programs, land acquisition, capital improvements, tourism development, recreation and natural resource programs, and jurisdictional coordination. A summary of each technique is provided.

Legal Programs

Figure 15 summarizes management techniques for each land use option. State and Federal Legislation pertinent to the coastal area is also reviewed in Figures 11 through 13. It should be emphasized that nearly all activities which involve filling, dredging, earthmoving and major construction within the coastal area will require a MDNR permit. This permitting process is designed to protect the valuable resources of the coastal area. State and local officials and concerned citizens should monitor and enforce activities within the coastal area.

On the local level, the three most common techniques for regulating development in the coastal area are:

- site plan review,
- zoning ordinance (setback, height, use regulations), and
- health department regulations

Site plan review procedures could take a more active role in controlling development. Both Alpena and Sanborn Townships could enact a more stringent review of proposed development through the use of site plan review procedures. In addition, greenbelt zoning could be enacted for coastal areas. These greenbelts would provide a vegetative buffer between developed areas and less intensive coastal land uses.

Acquisition Programs

Other than Sanborn County Park, Alpena County owns no land for public access to Lake Huron. It is strongly recommended that additional lands be purchased for County residents and tourists. Acquisition priorities for County recreation use are as follows:

- a) El Cajon Bay Area (in conjunction with previous efforts through the State Land Trust Program).
- b) Acquisition and development of an additional County park on Lake Huron. Facilities would include swimming and boat launch. Possible sites include Monaghan Point or Partridge Point.
- c) State acquisition of the private parcel near South Point in Negwegon State Park.
- d) Purchase of scenic easements or development rights at important sites along the shorelines. This option is generally less expensive than outright purchase. Possible sites for scenic easements include: Long Lake Creek, Whitefish Bay, Squaw Bay and North Point.

Capital Improvements

Specific capital improvement programs are recommended for the Alpena County Coastal Area. These improvements include:

- a) Purchase and development of an additional County park located on Lake Huron.
- b) Relocation of utilities on U.S. 23 within Squaw Bay. Direct burial of power and telephone lines would improve scenic quality.
- c) Improvement of auto access from U.S. 23 to the coastal area. North Point Road and Monaghan Point Road could be upgraded.
- d) Improvement of the public information system of coastal areas. Signs should inform motorists along U.S. 23 of coastal features, County parks, etc.
- e) A public water supply system should be planned and constructed for residential properties between Squaw Bay and Ossineke.

Tourism Development Strategies

Specific strategies for development of tourism within the Alpena Coastal Areas are as follows:

- a) Determine the tourist development objectives, e.g., new jobs, attraction of outside income, development of additional recreational facilities, etc.).
- b) Determine the available tourist market (desires, origin of travel, etc).
- c) Adopt tourist development policies which will not detract from the scenic and environmental attractiveness of the coastal area nor inconvenience residents of the Alpena area.

- d) Encourage investment in new and upgraded tourist facilities. The facilities will require large amounts of capital investment and local financial institutions should be sensitive to these needs.
- e) Recognize the Lake Huron shoreline and the Alpena Coastal Area as a primary drawing card for tourism. While scenic and environmental quality must be protected, waterfront access and waterfront facilities should be developed which utilize the attractiveness of the shoreline.
- f) Encourage development of a major resort complex containing lodging, restaurant, conference facilities, and recreation such as golf, swimming, cross-country skiing, etc.
- g) Promote development of a tour train. The Detroit and Mackinac Railroad should be considered for seasonal tours. The tours could run from Tawas to the City of Alpena. Passengers could enjoy the views of the Lake Huron shorelines as well as other coastal features.
- h) Promote development of the Thunder Bay Underwater Preserve. Development should include.
 - information brochure
 - visitor center
 - charter boat facilities
 - interpretive facilities
- i) The "Bay Queen" restaurant passenger ship operating out of Charlevoix, Michigan is a successful tourist operation. It is feasible that a similar ship could operate from the Alpena area and tour Thunder Bay as well as the Thunder Bay Islands. In addition, the numerous shipwrecks could be pointed out to passengers.

- j) Promote recreational activities which utilize the scenic and natural resources of the Alpena Coastal Area. Activities include:
 - cross-country skiing
 - backpacking/hiking/nature interpretation (e.g., sinkholes)
 - fishing
 - snowmobiling
- k) The Alpena area is becoming Northern Michigan's center for speedskating and hockey. Efforts should continue to establish a strong program and facilities which can attract national competitions.
- l) The County Parks and Recreation Program should intensify development of facilities within the coastal area. An improved system of information should inform motorists on U.S. 23 of the recreation facilities in the coastal area as well as county-wide parks. For example signs should be installed directing visitors to Sanborn County Park from U.S. 23.

Recreation and Natural Resource Programs

The following recreation and resource programs should be implemented. Specific programs include:

- o National Marine Sanctuary designation should be sought to promote management of the coastal zone's underwater biological, geological and historical resources.
- o A local Thunder Bay Underwater Preserve Committee should be established to coordinate activities related to the Coastal Area's underwater resources.
- o Activities and projects promoting non-consumptive use of the Underwater Preserve's resources should be encouraged.

- o Cooperative relationships between the local Underwater Preserve Committee and similar groups in Munising and at Fathom Five Provincial Park should be encouraged.
- o The MDNR should implement the adopted 1974 Master Plan for Negwegon State Park as quickly as possible. Recommended strategies for phased development of the Negwegon State Park are as follows:
 - 1) Designation of the Park on State Highway Maps, tourist brochures, etc.
 - 2) Installation of signs, barriers and enforcement programs to prevent off-road vehicle use of the beaches.
 - 3) Formally commit park development funds from the 1984, 1985 and 1986 MDNR budgets for Negwegon State Park or secure funds from other sources for park development as quickly as possible.
 - 4) If funds are not immediately available for complete development according to the 1974 Master Plan, the MDNR should develop park in phases. Initial phases should at least include access road, and day use facilities to be constructed in the near future.
 - 5) The MDNR should acquire privately held parcels within Park boundaries.
- o Existing and proposed public beaches should be maintained and managed in a safe and orderly fashion. Off-road vehicles should be restricted and beach areas should be policed and maintained. Wherever possible easement should be acquired from private land owners for public beach.
- o The County should encourage the MDNR to establish a fish management

program for the Thunder Bay area. The program should monitor fish populations and stock fish species in sufficient numbers to insure excellent recreation fishing for tourists and residents.

- o Local effects should promote recreation fishing in the Thunder Bay area and develop new boat launch access sites near Misery Bay, North Point and South Point. Existing boat launch facilities near Devil's River and Nicholson Hill Road should also be improved to accommodate larger boat traffic.
- o County and city recreation and coastal management programs should be coordinated. County programs should be consistent with proposed development schemes outlined in the Alpena City Coastal Land Use and Design Plan.

Jurisdictional Coordination

County, state and township officials should coordinate efforts within the coastal area. Specific programs could include:

- a) Invitations from County and Township planning commissions to MDNR officials to speak on coastal programs and permitting procedures.
- b) Presentation of the Alpena County Coastal Management Plan to the township boards, planning commissions, and building inspectors.
- c) Formulation of a permanent county-wide Coastal Zone Planning Committee to monitor and coordinate development and activities within coastal areas.
- d) County programs should be consistent with management strategies outlined in the Alpena City Coastal Land Use and Design Plan.



APPENDIX

TOURISM IMPACT RANKING - NORTHEAST MICHIGAN COUNTIES 1975

County	Travel Expenditures	Per Capita Expenditures	Travel Generated Personal Income	% of Total Personal Income	Travel Generated Employment	Percent of Total Employment	Tourism Impact Ranking
Alcona	\$ 3,702,702	\$ 436	\$1,023,427	3.21%	125	5.05%	27
Alpena	15,147,419	458	4,186,747	2.72	512	4.26	29
Arenac	4,375,921	329	1,209,505	2.10	148	2.74	40
Cheboygan	32,987,711	1,709	9,117,803	11.39	1,115	15.17	9
Clare	19,859,949	932	5,489,290	7.51	671	9.65	14
Crawford	19,859,949	2,452	5,489,290	18.13	671	18.26	6
Gladwin	3,702,702	223	1,023,427	1.60	125	2.99	44
Iosco	15,820,637	549	4,372,824	3.22	535	7.06	23
Montmorency	3,702,702	537	1,023,427	4.01	125	5.43	24
Ogemaw	3,702,702	250	1,023,427	1.91	125	2.49	45
Oscoda	3,366,093	552	930,388	4.66	114	6.42	21
Otsego	27,601,963	2,060	7,629,183	13.37	933	19.04	7
Presque Isle	13,127,763	931	3,628,514	6.65	444	11.10	14
Roscommon	19,186,730	1,332	5,303,212	9.93	649	16.75	10

Source: Michigan Travel Bureau, An Evaluation of Major Tourism Industry Development Opportunities in Northeast Michigan.

NORTHEAST MICHIGAN TRAVEL ACTIVITY CHARACTERISTICS IN COMPARISON WITH OTHER MICHIGAN REGIONS

<u>Category</u>	<u>Northeast</u>	<u>Northwest</u>	<u>East U.P.</u>	<u>West U.P.</u>	<u>South</u>
<u>Seasonal Share Of Travel Activity</u>					
Jan-Mar	12.8%	14.8%	5.7%	10.2%	19.5%
Apr-June	23.6	21.8	25.9	22.2	27.0
July-Sept	47.1	44.9	55.5	46.9	32.1
Oct-Dec	16.5	18.6	12.9	20.7	21.4
<u>Type of Customer</u>					
Business	11.7	10.6	8.5	13.0	42.6
Group/Convention	1.7	16.3	4.2	8.0	22.0
Tourist	86.6	73.1	87.3	78.9	35.2
<u>Length of Stay</u>					
1-Night	42.3	28.7	33.6	38.9	41.5
2-Nights	34.7	28.9	37.2	28.9	29.9
3-6-Nights	6.5	31.9	10.1	13.2	12.0
1 week or more	16.5	10.4	19.1	18.8	16.3

Source: Michigan Travel Bureau

ESTIMATES OF POPULATION POTENTIAL BY MONTH, ALPENA COUNTY

	<u>HOUSING QUARTERS</u>	<u>MOTELS HOTELS</u>	<u>CABINS COTTAGES</u>	<u>PRIVATE CAMPS</u>	<u>PUBLIC CAMPS</u>	<u>TOTAL</u>
JANUARY	33000	7177	1064	120	0	41361
FEBRUARY	33000	6799	894	108	0	40801
MARCH	33000	5777	817	111	0	39705
APRIL	33000	4698	420	128	0	38246
MAY	33000	7826	1467	1202	0	43495
JUNE	31659	8904	2912	3202	0	46676
JULY	31659	11,376	4670	4794	0	52499
AUGUST	31659	11,680	4670	4489	0	52498
SEPTEMBER	33000	6651	1246	1173	0	42070
OCTOBER	33000	7930	620	219	0	41769
NOVEMBER	33000	6246	585	150	0	39981
DECEMBER	33000	6639	541	137	0	40316

Source: Michigan Travel Bureau

Alpena County Planning Commission

ALPENa COUNTY COURT HOUSE

ALPENa, MICHIGAN - 49707

RESOLUTION ACCEPTING

THE ALPENa COUNTY COASTAL LAND MANAGEMENT PLAN

WHEREAS The Preliminary Draft Alpena County Coastal Land Management Plan and four accompanying maps have been reviewed and accepted; and,

WHEREAS This acceptance followed a public hearing which was duly advertised;

THEREFORE BE IT RESOLVED, that the Alpena County Planning Commission accept the Preliminary Draft Alpena County Coastal Land Management Plan including four maps, as revised, as the Alpena County Coastal Zone Management Plan and as the first portion of the Alpena County Master Plan as per PA 282 of 1945 and Alpena County Ordinance No. 1 of 1978.

The above resolution passed at the September 1, 1982 meeting of the Alpena County Planning Commission by a vote of:

9 Ayes

0 Nays

Attested by:


John Porter, Chairman

US Department of Commerce
NOAA Coastal Services Center Library
2234 South Hobson Avenue
Charleston, SC 29405-2413

NOAA COASTAL SERVICES CENTER LIBRARY



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