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recreation alternatives for the



# Grand Traverse Islands

michigan wisconsin



**BAY-LAKE REGIONAL PLANNING COMMISSION**

*serving communities within the counties of:*

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John Montgomery, Principal Investigator & Author

Bruce G. Loppnow, Editor

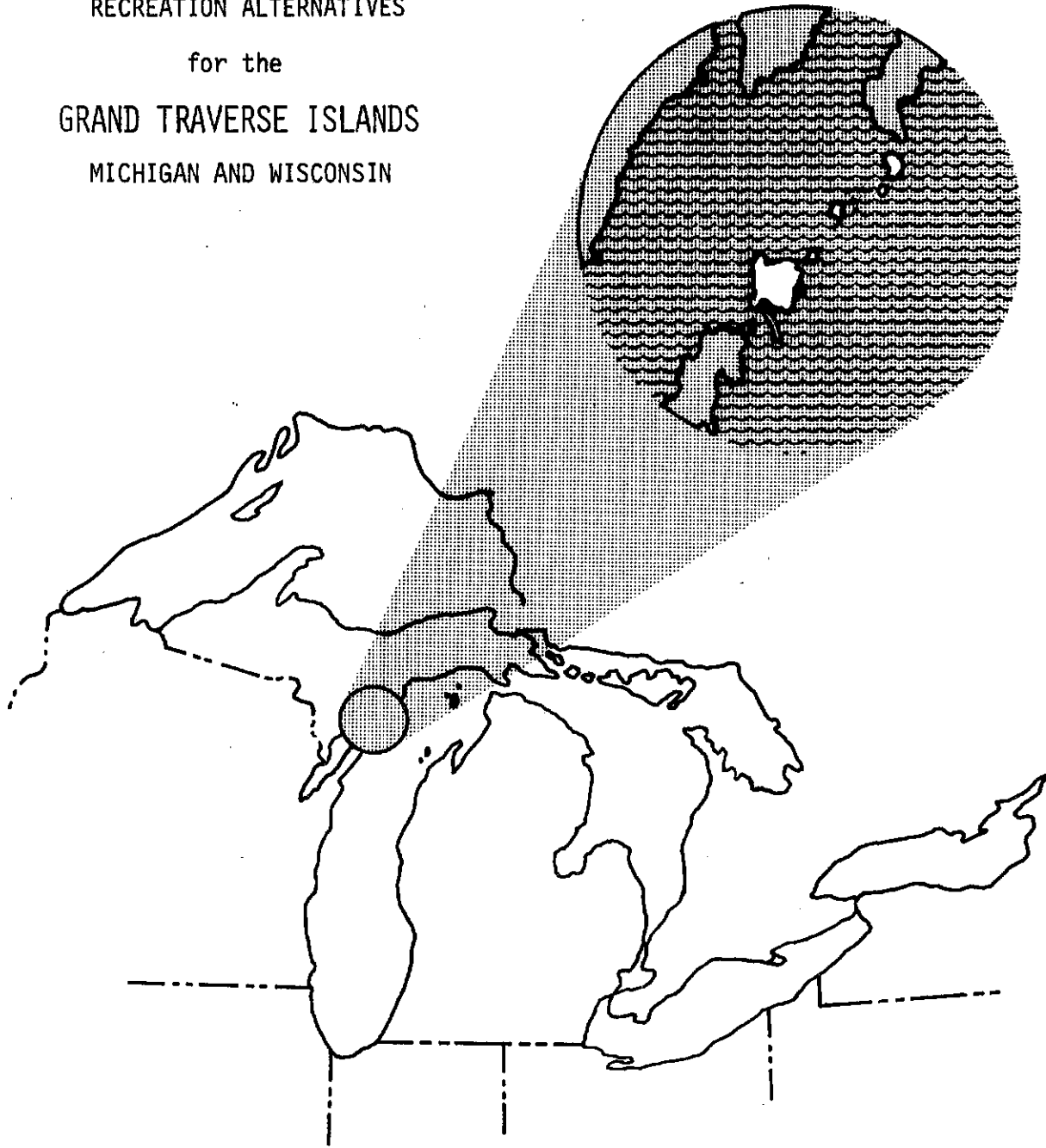
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RECREATION ALTERNATIVES  
for the  
GRAND TRAVERSE ISLANDS  
MICHIGAN AND WISCONSIN



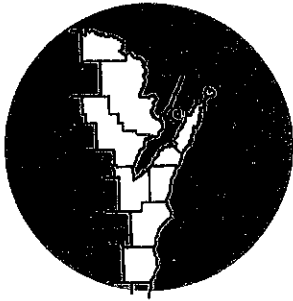
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BAY-LAKE Regional Planning Commission  
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## **BAY-LAKE Regional Planning Commission**

Suite 450, S.E. Bldg., U.W.G.B., Green Bay, Wisconsin 54302  
Ralph M. Bergman, A. I. P., Executive Director - tele: 1 (414) 465-2135

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FLORENCE · MARINETTE · OCONTO · BROWN · DOOR · KEWAUNEE · MANITOWOC · SHEBOYGAN

March 26, 1976

Dear Citizens and Governmental Officials  
of the Bay-Lake Region:

The Bay-Lake Regional Planning Commission has completed a special six-month long study of the potential recreation use of the chain of islands between Door County, Wisconsin and Delta County, Michigan. The Commission undertook this special study in order to provide sufficient basic information for local citizens and elected officials to make informed decisions about the future of the Grand Traverse Islands.

The report consists of two sections. The first part of the report provides background information about the study, and presents a range of information about the islands themselves. The remainder of the report draws upon the basic information to explore several alternative approaches to recreational use of the islands. It is the hope of the Commission that this document will stimulate discussion of the future of the Grand Traverse Islands.

The Bay-Lake Regional Planning Commission extends particular thanks to the Door County Islands Study Committee which worked closely with the Commission staff in preparing this study. Thanks are also extended to the Central Upper Peninsula Planning and Development Commission which provided assistance in obtaining information for the Michigan portion of the islands.

Sincerely,

BAY-LAKE REGIONAL PLANNING COMMISSION

John Kerski, Chairman

JK:ma



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# chapter I



## introduction

Photo by Harmann Studios



## I. - INTRODUCTION

The Grand Traverse Islands have a long and varied history and have witnessed a number of different cultural activities. Indians of the Algonquin group were the original inhabitants, and tribes such as the Menominees, Winnebagos and Potawatomies all played a role in the early history of these islands, until the Menominee Indians ceded the islands and the Door Peninsula to the United States in 1831.

Early European explorers almost certainly touched upon these islands, since the islands comprised a natural route (Grand Traverse) for canoeing fur traders to follow. Nicolet, Radisson, and Grosseillers were all thought to have viewed these islands, and La Salle may have visited Washington Island when it first served as a fur trading center during the latter half of the 17th Century.

Fishermen frequented the islands early in the 19th Century and in the 1830's established villages on some of these islands, including Rock, Washington, and St. Martin. Settlement was continuous only on Washington Island, as settlements on the other islands eventually died out. A number of interesting historical sites remain as evidence of the earlier times. Lighthouses, such as the Potawatomi Lighthouse on Rock Island, illuminated the shoreline for early travellers much as they serve to illuminate some of the history of the area today. The Potawatomi Lighthouse, established in 1836, is the oldest operating light in Wisconsin. Small cemeteries provide evidence of early settlements on Rock and St. Martin Islands. A number of the 19th Century settlers were of Scandinavian descent, and Washington Island has the largest colony of Icelanders to settle as a group in the United States.

Washington Island is the only island in the chain with a permanent population. The island's 1970 population of 446 is substantially below the peak population of 932 residents in 1920. In spite of a decline in permanent population on Washington Island, the chain of islands has continued to hold the interest of substantial numbers of people. Visitation to the islands has steadily increased over past years, and attractions such as the state park on Rock Island have been growing in popularity. Other islands in the chain have also received growing use as boaters increasingly enjoy "island hopping" during the summer. All of this increased activity, plus potential pressure for development on some of the islands has led to concern for the future of the Grand Traverse Islands.

In 1966 President Johnson announced that a nationwide inventory of America's island resources would be conducted. The inventory was assigned to the Department of the Interior, Bureau of Outdoor Recreation (BOR). The BOR inventoried all islands 10 acres or larger and conducted in-depth studies of those islands meeting certain quality criteria. One of the island groups which received intensive investigation was the Grand Traverse Islands (also called the Green Bay Islands). Out of this investigation came a 1968 report entitled "Green Bay Islands Michigan and Wisconsin". The report recommended that all of the Green Bay (Grand Traverse) Islands except Washington Island be publicly protected by preserving them as a limited-use interstate park. However, the report was never made official and thus was never adopted as official policy of the Department of the Interior.

Islands of America, published in 1970, was a product of the BOR's island inventory. This book termed the Green Bay (Grand Traverse) Islands "...an exceptional wilderness island group,"<sup>1</sup> and noted that the Grand Traverse Islands were part of a select few which deserved and received in-depth study.

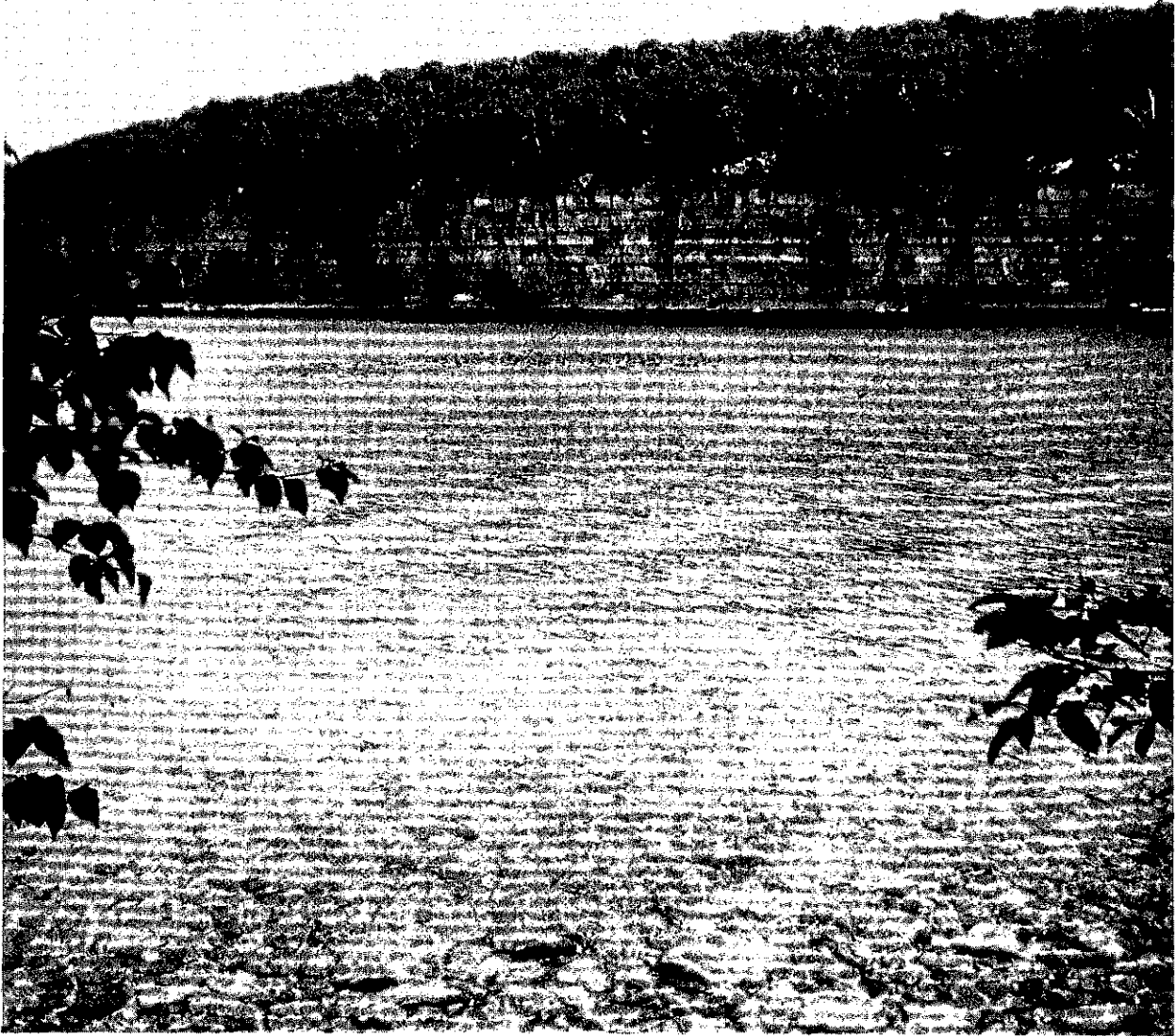
As awareness of the recreational potential of the Grand Traverse Islands increased, a number of activities occurred at both the state and local levels. In the summer of 1974, information about the islands was requested by the governors of Michigan and Wisconsin. After reviewing the available information, Michigan's Governor William Milliken and Wisconsin's Governor Patrick Lucey jointly adopted a resolution expressing support for the concept of an interstate park in this area, and a study committee with representatives from both states was formed to evaluate such a concept.

At the local level, support for a feasibility study focusing on utilizing the islands as a public resource was voiced by the Town Board of Washington and also by the Door County Board of Supervisors in early 1975. The Bay-Lake Regional Planning Commission then applied for and received a grant from the Upper Great Lakes Regional Commission to carry out a study of alternatives for the planning and implementation of a Green Bay Islands recreation area.

In awarding the grant, the Upper Great Lakes Regional Commission saw two objectives which might be realized through the establishment of a park facility. First, there would be a chance to preserve a rather unique and exceptional resource - the islands themselves. Second, as with other projects funded by the Upper Great Lakes Regional Commission, there would potentially be additional economic benefits for the region from the islands, while still preserving their special qualities. This report examines possible uses of the Grand Traverse Islands, being cognizant of the objectives of the Upper Great Lakes Regional Commission, while also recognizing alternative approaches, local interests and needs, and implications for the future.

<sup>1</sup> U.S. Department of the Interior, Bureau of Outdoor Recreation, Islands of America, (Washington, D.C.: Government Printing Office, 1970), p. 31.

# chapter II



## natural features

Photo by John Montgomery





## II - NATURAL FEATURES

### LOCATION

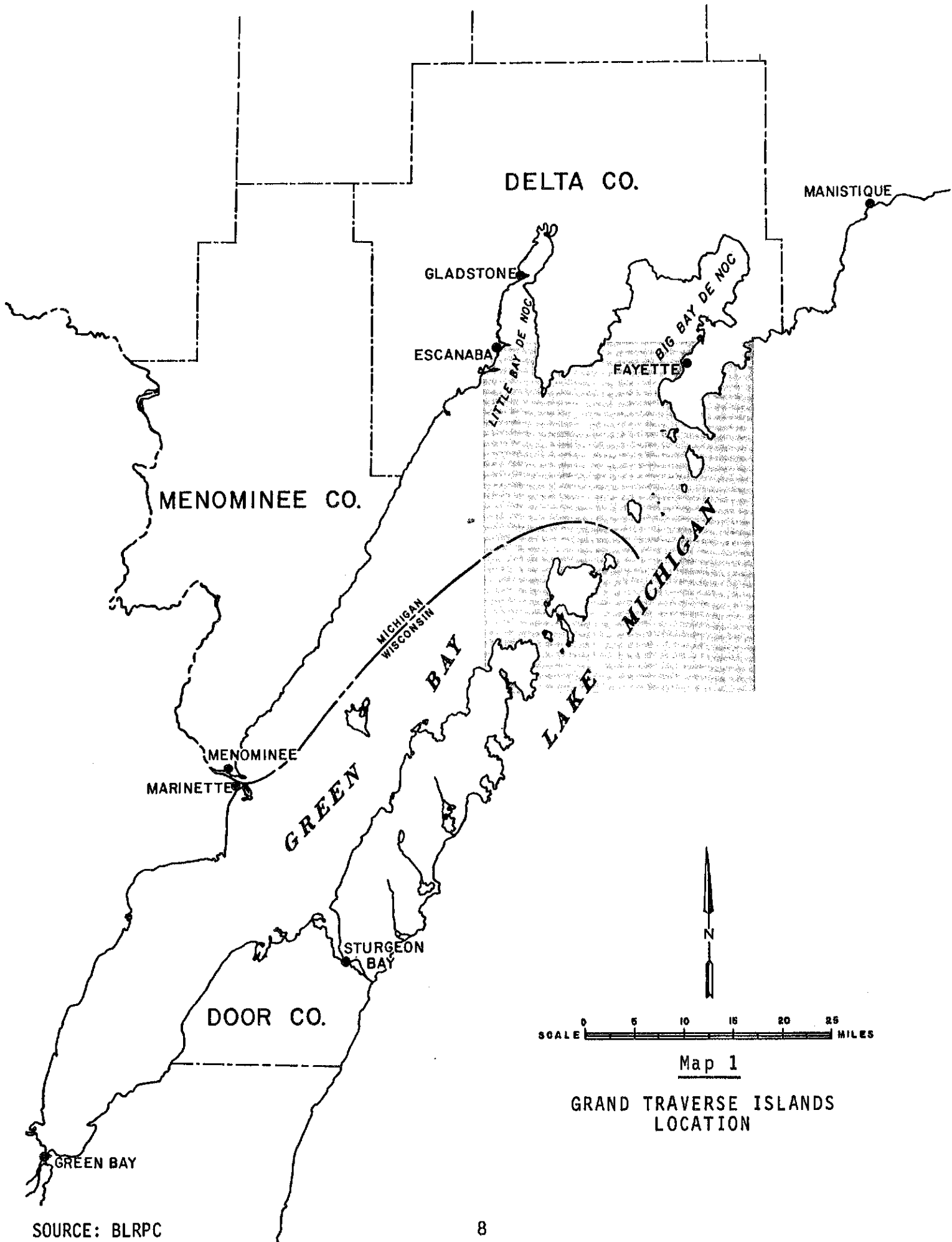
Between the Door Peninsula in Northeast Wisconsin and the Garden Peninsula in the central region of the Upper Peninsula of Michigan, lies a chain of 16 islands scattered over 27 miles of water. These islands, half of which are in Michigan and half in Wisconsin, are collectively known as the Grand Traverse Islands. The islands have been referred to by other names at times, including the Green Bay Islands, the Interstate Islands, and the Chain of Islands, but for simplicity will be referred to as the Grand Traverse Islands throughout this report.<sup>2</sup>

The Grand Traverse Islands span the waters between the mainland peninsulas of Door County, Wisconsin, and Delta County, Michigan as shown on Map 1, and serve as a geologic and geographic dividing line which separates Green Bay on the west from Lake Michigan on the east. Other islands exist to the south in both Green Bay and in Lake Michigan, and to the north in Big Bay de Noc, but the prime concern of this study is the 16 Grand Traverse Islands.

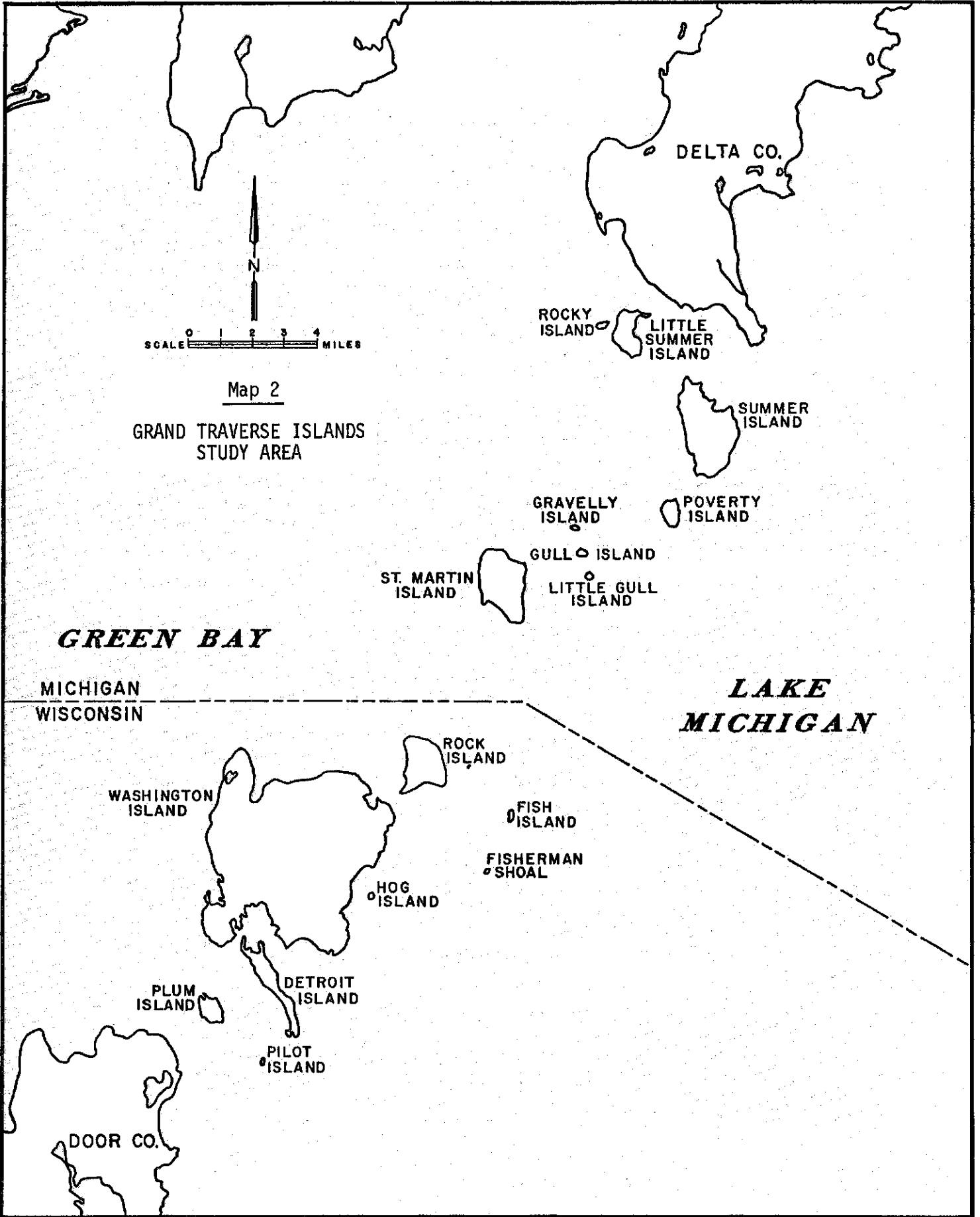
The eight Michigan islands are Rocky, Little Summer, Summer, Poverty, Gravelly, Gull, Little Gull, and St. Martin. The eight Wisconsin islands are Rock, Washington, Hog, Detroit, Plum, Pilot, Fish and Fisherman Shoal (See Map 2).

The political boundary separating the two states passes between St. Martin and Rock Islands. It is also at this point where the water distance between any two of the islands is greatest, almost six miles.

<sup>2</sup> The legal name of this island group is actually the Grand Traverse Islands, a name which appeared on several early maps of this area. Many of these maps were later utilized to settle a boundary dispute between Michigan and Wisconsin in 1925. For some reason the name Grand Traverse Islands has long fallen from popular usage, perhaps because of its more frequent association with Grand Traverse Bay, Michigan, on the eastern shore of Lake Michigan. Green Bay Islands, the name which has achieved the most widespread publicity, is almost too imprecise to be useful, and something of a misnomer, since other islands exist within Green Bay which are also known as the Green Bay Islands. The Wisconsin State Board on Geographic Names is currently researching the matter, and hopefully a geographically acceptable name can be found for this archipelago. This study has utilized the name Grand Traverse because it has some legal status, it recognizes the historical journeys of early explorers, and it assigns a definite term to the collective islands.



SOURCE: BLRPC



## GEOLOGY AND TOPOGRAPHY

The Grand Traverse Islands are composed of bedrock formed during the Silurian Period, over 400 million years ago. This geologic formation, known as the Niagara Escarpment, can easily be traced from Niagara Falls north and westward through Ontario, the Upper Peninsula of Michigan, across the Grand Traverse Islands, and through Door County. It is this relatively hard dolomite rock which forms the prominent ridge separating Lake Michigan from the Green Bay - Lake Winnebago lowland. The readily identifiable ridge is evident on the western shore of Door County, on the northwestern portions of Washington and Rock Islands, and on the western shore of the Garden Peninsula. This feature frequently surfaces as a series of prominent bluffs interspersed with beaches and coves. Eagle Bluff, Ellison Bluff, Boyer Bluff, and Burnt Bluff all provide excellent examples of this formation. The Grand Traverse Islands are a part of this rocky ridge line.

On the east side of the island chain and in both Delta and Door Counties, the land slopes gently to the water's edge where sandy beaches and rocky shorelines alternate. Most of the shoreline of the islands is rocky, but good sand beaches exist in scattered locations, including the southeast portion of Washington Island and at Jackson Harbor on Washington Island; the southern shore of Rock Island; the southern shore of St. Martin Island; and the northeast shore of Summer Island at Summer Harbor.

Ranging in size from one acre to over 14,000 acres, the islands each have a distinct character and noteworthy features. Generally the islands are irregular, with Detroit Island being uniquely linear. The absolute elevation of all the islands above sea level is relatively uniform, but locally the range in relief between the mean lake level, 580 feet<sup>3</sup> and some of the more prominent bluffs is striking. Boyer Bluff on Washington Island and the Potawatomi Lighthouse on Rock Island are both well over 100 feet above the water and are located on sheer bluffs. The smaller islands have lower relief. The highest point on any of the islands is 793 feet above mean sea level at a point in the interior of Rock Island.

### INTERNAL WATER FEATURES OF THE ISLANDS

Internal water features comprise only a very minor portion of the area of the Grand Traverse Islands. There are no rivers or streams on any of the islands, primarily due to the porous nature of the bedrock, the shallow depth of the soils, and the small size of most of the islands. Washington Island is the only island in this group which has significant surface water features:

Little Lake covers 23 acres and has a maximum depth of 5.5 feet. It is located on the northwestern promontory of Washington Island near Boyer Bluff. At present this lake is experiencing some residential development along its shoreline, but public access is not available.

<sup>3</sup> *International Great Lakes Datum (1955).*

Gunnerson Marsh covers 31 acres and has a maximum depth of 2 feet. This area has very limited recreational potential. It does serve some important functions, however, including water recharge, and providing a resting place for waterfowl. Located in the eastern portion of the island, the marsh does not have public access.

Wickman Marsh, also located in the eastern portion of Washington Island, has an area of 14 acres and a maximum depth of 1.5 feet. Though heavily wooded and swampy in places, some open water exists. Public access is not available.

Coffee Swamp has an area of over 100 acres with varying but shallow depths. This feature has a very limited recreational potential. It is quite remote and not accessible to the public.

## SOILS

The soils of the Grand Traverse Islands are in part a product of the glaciation of the limestone and dolomite rock of the Niagara formation. Glacial drift comprised of fragments of dolomite is evident, and in places which were scoured by the glacial ice, soils have accumulated from the weathering of rock and the deposition of organic matter over time. In some areas this organic matter is virtually the only soil in existence, and nearly everywhere the soils are extremely thin (0-3 feet to bedrock). Agriculture is practicable only on Washington Island.

The shallowness of the soils exerts a strong force in restricting the uses to which these islands can be put. Most of the water supply in Door County and in Delta County comes from ground water obtained from wells in the Niagara dolomite formation. As this rock structure is highly fissured, water can travel relatively great distances within the formation, and this poses some definite problems for developmental purposes, a situation discussed later in this report.

## VEGETATION

Although many of the larger islands have been logged in the past, most of the Grand Traverse Islands are today heavily forested. The wooded areas are similar to other north country forests composed primarily of second growth coniferous and mixed hardwood forests. Fish Island and Fisherman Shoal are devoid of vegetation. Gravelly Island has some vegetation but virtually no tree cover, while Gull and Little Gull have some tree cover, though scrubby. Washington Island has lost much of its original forest cover through lumbering, agriculture, and residential development, but the outer portions of the island are still heavily forested. With these exceptions the remaining 10 islands are heavily wooded.

The trees of the islands comprise an excellent example of the northern mesic (middle) forest. Various tree species are present including white birch, balsam, aspen, spruce, beech, maple, hemlock, tamarack, and arborvitae. Locations of the species reflect soil conditions and past cutting practices. The climax forest in this region is comprised of beech and maple.<sup>4</sup> Many of these trees are mature or nearing maturity at present and good stands exist on most of the forested islands.

<sup>4</sup> U.S. Department of the Interior, Bureau of Outdoor Recreation, (preliminary) Green Bay Islands Michigan and Wisconsin, 1968, p. 13.

A variety of plant communities exist on the islands, owing to the differing combinations of soil, geology, and topography. Such features as rock ledges, cliffs, swamps, and beaches foster the growth of many different plant species. In its 1968 unofficial report on the islands, the Bureau of Outdoor Recreation listed some of the more common communities on the islands (See Table 1):

Table 1  
Vegetation Communities

COMMON NAME	FAMILY	GENUS/SPECIES
<u>Beach Communities</u>		
Cinquefoil	Rosaceae	<u>Potentilla</u> spp.
Wormwood	Compositae	<u>Artemisia</u> spp.
Beach rush	Juncaceae	<u>Juncus</u>
Marram grass	Gramineae	<u>Ammophila breviligulata</u>
Rye	Gramineae	<u>Elymus</u>
<u>Lowland Communities</u>		
Yew	Taxaceae	<u>Taxus Canadensis</u>
Cassandra	Ericaceae	<u>Charnaedophne calyculata</u>
Rhododendron	Ericaceae	<u>Rhododendron</u> spp.
Andromeda	Ericaceae	<u>Andromeda glaucophylla</u>
Laurel	Ericaceae	<u>Kalmia polifolia</u>
Cranberry	Ericaceae	<u>Vaccinium</u> spp.
Orchid	Orchidaceae	<u>Habenaria</u> spp.
Bladderwort	Lentibulariaceae	<u>Utricularia</u> spp.
Sundew	Droseraceae	<u>Drosera</u> spp.
Pitcher plant	Sarraceniaceae	<u>Sarracenia</u> spp.

Not all of these species exist on each island, but specific species are found on selected islands within the Grand Traverse Islands group.

Source: Bureau of Outdoor Recreation

## WILDLIFE

The Grand Traverse Islands offer an excellent haven for numerous wildlife species. The wildlife composition of each island tends to reflect such factors as the distance to the mainland, the nature of the vegetative cover, the opportunities for food and shelter, and the degree of disturbances present, such as noise, permanent development, or logging.

All of the islands provide extremely important nesting, feeding, and resting places for migratory birds. The island chain is on a major migration corridor for Dabbling ducks, Canada geese, and Blue and Snow geese. Migrating waterfowl traverse a route which follows the Garden Peninsula across the islands and through the Door Peninsula. Other birds frequenting these islands include Ruffed Grouse, numerous species of gulls, Mourning Doves, Grackle, Red-tailed Hawks, ducks, and woodcocks. Eagles are occasionally sighted.

Mammals are present on the larger islands. St. Martin Island, the most remote island from either mainland, has no deer and few lesser species of mammals. The other major islands have a considerable array of common mammals including white-tailed deer, coyote, red fox, mink, fox squirrel, gray squirrel, and cottontail rabbit. A number of reptile species are also found on the islands, and record size fox snakes and toads have been reported.<sup>5</sup>

Fishing in the area is excellent and numerous species are found including yellow perch, northern pike, rock bass, smallmouth bass, sucker, lake trout, whitefish, smelt, chub, herring and alewife. Shoal areas which exist around the islands serve as important spawning grounds for much of the fish population in this area.

## CLIMATE

The Grand Traverse Islands, with a climate similar to that of Delta and Door Counties, are said to have "natural air conditioning". The islands are known for their ability to provide a cool retreat from the summer heat of inland areas. Due to the mitigating influence of Green Bay and Lake Michigan, the islands have a relatively moderate climate during both the summer and winter months. These two bodies of water exert a pronounced influence on the Grand Traverse Islands, extending summers and prolonging winters when compared to interior areas on the mainland. This is due to the differential rates of heat absorption and heat loss between land areas and water, a process directly proportional to the size of each. The temperature of Lake Michigan itself varies less abruptly than that of Green Bay, which in turn exhibits seasonal temperature changes which are less pronounced than interior sections of land within the region. Selected climatological data for Washington Island, Wisconsin, are listed in Table 2.

<sup>5</sup> *Green Bay Press-Gazette*, October 10, 1975.

CLIMATOLOGICAL DATA - WASHINGTON ISLAND, WISCONSIN  
 1964 - 1974 Average Monthly Temperature and Precipitation

Table 2

Month	J	F	M	A	M	J	J	A	S	O	N	D	Average Annual
Temperature (F°)	19.1	18.7	28.2	39.0	48.4	58.4	66.2	65.2	58.3	48.7	36.5	26.1	42.7
Precipitation (inches)	1.64	.88	1.37	2.50	3.31	3.79	2.75	3.26	3.63	2.43	2.10	2.16	29.82

Average Annual Maximum Temperature: 89.3 Station Location: 45°22'N, 86°, 56'W

Average Annual Minimum Temperature: -12.5 Observer: Marvin Anderson

Average Annual Frost-Free Days (32°): 145

Source: Climatological Data, Wisconsin, 1964 - 1974  
 U.S. Department of Commerce  
 NOAA Environmental Data Service



## SUMMARY OF NATURAL VALUES

The islands provide a considerable array of contrasting sights. Limestone bluffs with caves, ledges, and arches are in juxtaposition with sandy beaches and rocky shorelines. Heavily forested with numerous tree species, the islands offer an interesting atmosphere of solitude. The natural beauty and aesthetic qualities of these islands is highlighted by the lack of human related developments. While many of the islands have been subjected to logging during the past, many presently exhibit fine stands of trees and are an excellent example of the northwoods eco-system. Despite the existence of an occasional Coast Guard lighthouse, old logging trails, and a few widely scattered cabins, most of the islands still possess much of the same primitive qualities which have existed for hundreds of years. Though not of great size, most of the islands are wilderness areas, due to their seclusion, isolation, and lack of human disturbance.

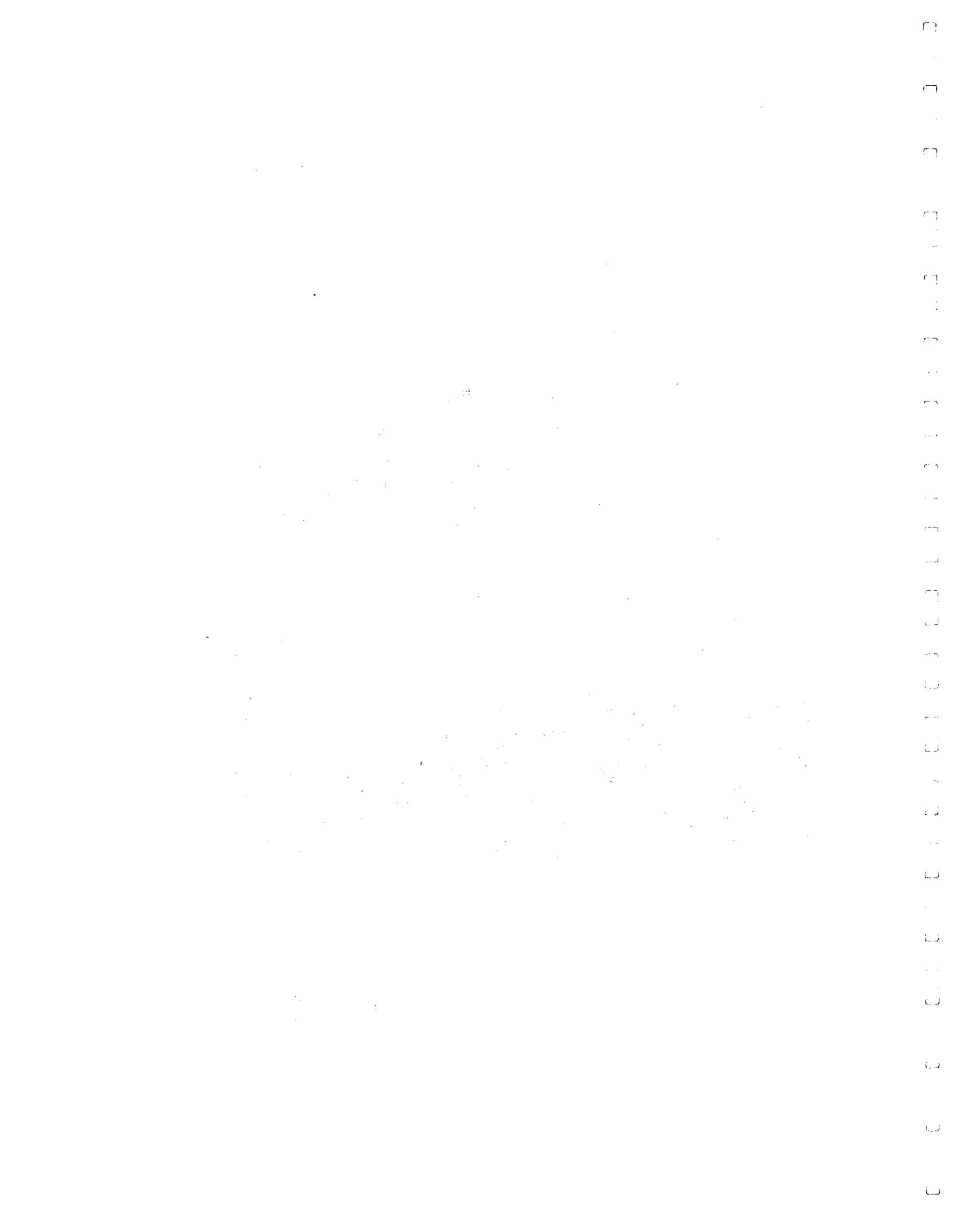
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BUREAU OF AGRICULTURAL ECONOMICS  
WASHINGTON, D. C.

# chapter III



## cultural and social characteristics

Photo by John Montgomery



### III - CULTURAL AND SOCIAL CHARACTERISTICS

#### ECONOMIC STRUCTURE AND GROWTH

Delta County, Michigan, has been diversifying its economy since the early mining and logging days which characterize much of the history of the Upper Peninsula. Never wholly dependent on these natural resources, the county still processes iron ore and timber, but other activities have assumed positions of greater importance within the economy.

Most economic activities focus upon the Escanaba-Gladstone urban complex, (See Map 3) which early became the transportation center of the area and a handler of the Upper Peninsula's basic commodities. Today this area contains over 75% of the population of Delta County and an equally large share of the total employment. Manufacturing, wholesale and retail trade, and service industries, comprise the most important sectors in terms of employment. Employment in agriculture has been declining for many years.

Long a port for shipping iron ore mined from the Menominee, Gogebic, and Marquette iron ranges, Escanaba is still a major Great Lakes port and ranked third in tonnage shipped among all Michigan ports in 1972, handling 10,954,237 tons of freight. Escanaba also serves as a rail center with industrial emphasis on woodworking, light manufacturing, transportation equipment, and concrete. Retail trade has been of increasing importance within the county, with retail sales approaching \$63,000,000 in 1969. Of this total, Central Upper Peninsula Planning and Development (CUPPAD) estimates that 13%, or \$8,000,000, is attributable to tourist expenditures, a figure which is expected to rise.<sup>6</sup> Here too, most of the activity is centered around the Escanaba-Gladstone area.

Relatively poor soils have precluded agriculture from assuming a position of major importance within the economy of Delta County. Agriculture is declining throughout the county, even on the Garden Peninsula, a once moderately successful agricultural area. Small grains and hay are still cultivated and some dairy cows are also present. Fruit production has lost its former importance.

The eight Grand Traverse Islands in Michigan are located within Fairbanks Township. Economic activities in the township are few. The Village of Fayette, located on the Garden Peninsula, emerged as an iron smelting center in 1867 as a result of the proximity of iron ore, limestone, hardwood, and inexpensive water transportation. Two furnances were constructed and Fayette flourished until 1892 when production dropped due to the depletion of hardwoods. The village was later abandoned for many years but was eventually acquired by the Michigan Department of Conservation in 1959 and later designated as a state park. Visitors may inspect the remains of a large variety of buildings, many of which are still intact or being restored. Fairport, near the tip of the Garden Peninsula, is a very small commercial fishing village, but commercial fishing has generally been declining.

The Michigan islands have no commercial developments and no permanent population. Portions of Little Summer and Summer Island are included in the Bay de Noc State Forest, but logging is difficult and not economical due to

<sup>6</sup> Delta County Comprehensive Plan, August, 1974, p. 16.

problems of access so the islands haven't been logged for over 15 years. The forest is the only income producing property on the islands, and the income goes to the State of Michigan.

Real estate taxes are the principal source of revenue that Fairbanks Township receives from the islands, though the islands have virtually no improvements. One source of this revenue comes in the form of payments from the State of Michigan in lieu of taxes on the tax-reverted public forest land. In 1974, the payment was \$499.98.

The economy of Door County, Wisconsin, includes a number of diverse activities. Manufacturing, retail, and service industries are the most important sectors of employment. Shipbuilding, food processing, building industries, electrical equipment, shoes, and tourist services, are major sources of employment. Agriculture is also a major industry.

Economic activity is centered on Sturgeon Bay, the county seat and largest city. Sturgeon Bay is a shipbuilding center located on the Sturgeon Bay Canal. Constructed in 1878, the canal crosses Door County and provides an alternative route between Green Bay and Lake Michigan, bypassing the passages through the Grand Traverse Islands. (See Map 3)

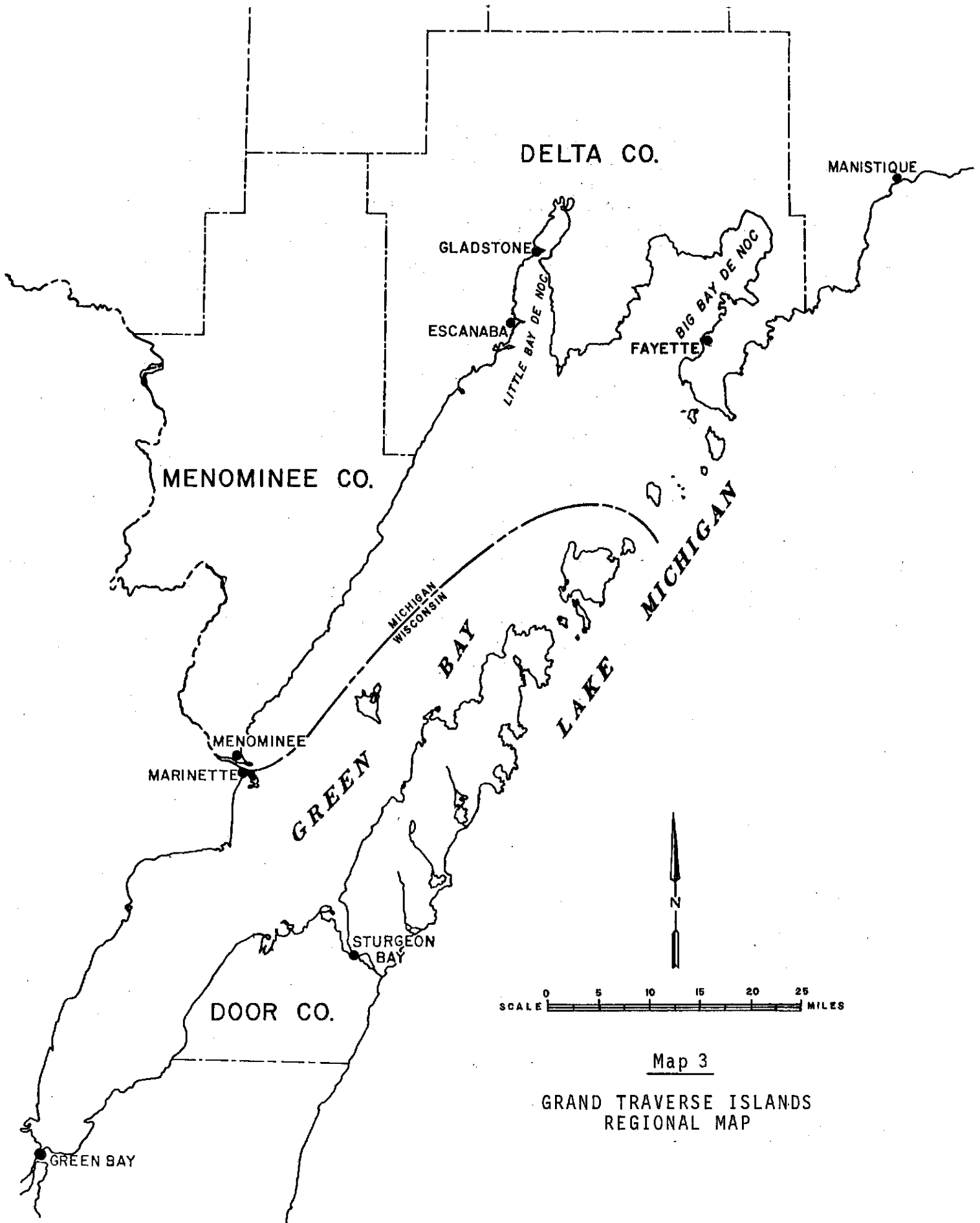
Door County was an early timber producing area, but extensive clear-cutting of the timber, plus a series of disastrous fires in 1871, resulted in a dramatic decline of this industry. Nevertheless, lumber related concerns are still an important economic activity.

Agriculture plays a significant role in the economy of the county. Door County has a reputation for the fruit trees it cultivates, an economic endeavor made possible by the seasonal lag produced by Lake Michigan and Green Bay, which retards potentially killing frosts in the fall and prolongs cold temperatures in the spring. This inhibits early plant growth which guards against a possible plant loss due to a late spring frost. Cherries and apples are important to the local economy. Other crops of even greater importance are corn and hay. Dairying has lost its former significance. Agricultural land in Door County is facing intense competition from commercial and residential developments. Rising land values and taxes have contributed to the declining number of farms in the county and the declining number of acres in production.

Retail sales information for Door County in 1974 indicate that 52% of the total retail sales in the county were attributed to recreational sales, which include sales above that normally generated by residents and other individuals who regularly shop within the county. Of the \$53,197,359 in total retail sales, over \$27,000,000 was generated by recreation-related activities.<sup>7</sup>

Commercial activity in the Town of Washington (Washington, Detroit, and Rock Islands) is limited to Washington Island itself. None of the other Wisconsin islands are devoted to commercial activities and Washington Island is the only island having a permanent population.

<sup>7</sup> Wisconsin Dept. of Administration and Dept. of Natural Resources



DELTA CO.

MANISTIQUE

GLADSTONE

ESCANABA

FAYETTE

MENOMINEE CO.

MICHIGAN  
WISCONSIN

MENOMINEE

MARINETTE

GREEN BAY

STURGEON BAY

DOOR CO.

SCALE 0 5 10 15 20 25 MILES

Map 3

GRAND TRAVERSE ISLANDS  
REGIONAL MAP

Fur trading on Washington Island was a sporadic activity from the late 17th Century to the early part of the 19th Century. Fishing, agriculture, and logging replaced the fur trade in importance and provided the basic resources necessary to sustain a permanent population. Much of the island's interior was cleared for farming, and the small farms remaining today are generally marginal operations which produce grain and hay. The transportation costs incurred in marketing products from the island's cherry orchards and dairy farms pose a serious problem. Existing development on the island is primarily residential including farmsteads, retirement homes, and summer homes.

Existing commercial facilities are principally motels, cottages, gift shops, grocery stores, and gas stations. These businesses serve the local residents and also the tourists, who have become the principal source of income on Washington Island.

Although no categorical breakdown of existing consumer goods establishments or services is given for either township, most shopping needs must be met elsewhere. Neither Fairbanks Township (1970 population-309 persons) nor Washington Island (1970 population-446 persons) have attained a population level which is above the threshold size necessary for the private sector to provide a wide range of goods and services. Currently only the basic goods and services are available such as, groceries, gasoline, and taverns. Washington Island has a summer resident population of over 1,000 persons and this increased population supports some additional goods and services such as real estate agencies, a hardware store, and restaurants. Specialized services such as medical care, dry cleaners, and shoe repair, must be obtained elsewhere.



## TOURISM AND RECREATION

Tourism and recreation have long been significant activities in both Delta and Door Counties. The counties are blessed with natural resources that are highly conducive to many different forms of recreation. As a result of these resources, and others throughout Michigan and Wisconsin, tourism and recreation are economic activities of major importance, annually contributing over three billion dollars to each state.

Owing to the richness of the area's scenic and natural qualities, tourism and recreation is viewed as possessing growth potential for the economy of the entire Upper Great Lakes region, especially the northern portions of three states: Minnesota, Wisconsin, and Michigan.<sup>8</sup> Tourism and recreation related activities have not made equal contributions to all areas of the Upper Great Lakes region, however. While the natural qualities of an area exert a strong force in helping to attract visitors, the facilities, both public and private, which exist to serve visitors also influence the amount of visitation an area receives, and the length and nature of the visit itself.

Since both Delta and Door Counties possess a wide array of natural and historical features, scenery, and recreation opportunities, it is not surprising that many areas in both counties have been set aside for public use and enjoyment by the various levels of government. (See Tables 3 & 4 and Map 4) Numerous parks and recreation areas exist which preserve many natural areas but allow for public access and use. Such areas serve a number of functions in addition to providing certain forms of recreation including wildlife habitat, ground water recharge, scientific and educational study, open space, and resource production. The public lands also serve to attract visitors from outside the immediate region who contribute to the vitality of the local economy. As previously discussed, tourism comprises a major portion of the retail sales in both counties; a portion which is expected to rise in the future. Increasing use of this public land will place further demands upon it, and additional public and private investment and development will be needed to provide the tourist services necessary to support more visitors.

Delta County, Michigan, is heavily forested and much of this forest land is included in the Hiawatha National Forest and Michigan's Bay de Noc State Forest. These two areas provide many recreational opportunities within their boundaries. Fayette (171 acres) is the only state park in the county and it is managed primarily as a historical park, although natural scenery is abundant and 80 campsites are present. There are 674 public campsites in the county at present. While much land exists for recreation purposes within the county, Delta County receives proportionately less of its income from tourism than does Door County, owing in part to fewer public and private recreational developments. Delta County residents presently view the area as a service area for tourists travelling through the county to other recreation areas, rather than as a principal destination.

<sup>8</sup> Checchi et al., *The Potentials of Commercial Tourism in the Upper Great Lakes Region*, (Washington, D.C.: June, 1968).

Door County has long been known as a resort area possessing natural scenery and quaint farms and villages. The county also has five state parks totalling 8,743 acres and numerous local parks. In 1975 there were 710 public campsites and 552 private campsites within the county.<sup>9</sup> Door County is able to attract and keep tourists on the strength of its excellent state parks and scenery, and also, its fine private resorts, motels, and restaurants.

<sup>9</sup> Door County Outdoor Recreation Plan, 1974-1978, Door County Chamber of Commerce.

Table 3  
Recreation Facilities Within Delta County

Location on Map 4	National Areas	Acres
1	Hiawatha National Forest	245,561 <u>245,561</u>
2 3	State Areas Bay de Noc State Forest Fayette State Park Public Access Areas	56,462 171 942 <u>57,575</u>
4 5 6 7 8 9	Local Areas Fish Dam County Park Fuller County Park Pioneer Trail County Park Pulaski County Park Rapid River Falls County Park Sac Bay County Park All Town, City, and Village Park Lands	30 40 98 10 40 30 <u>1,145</u> <u>1,393</u>
	TOTAL	304,529

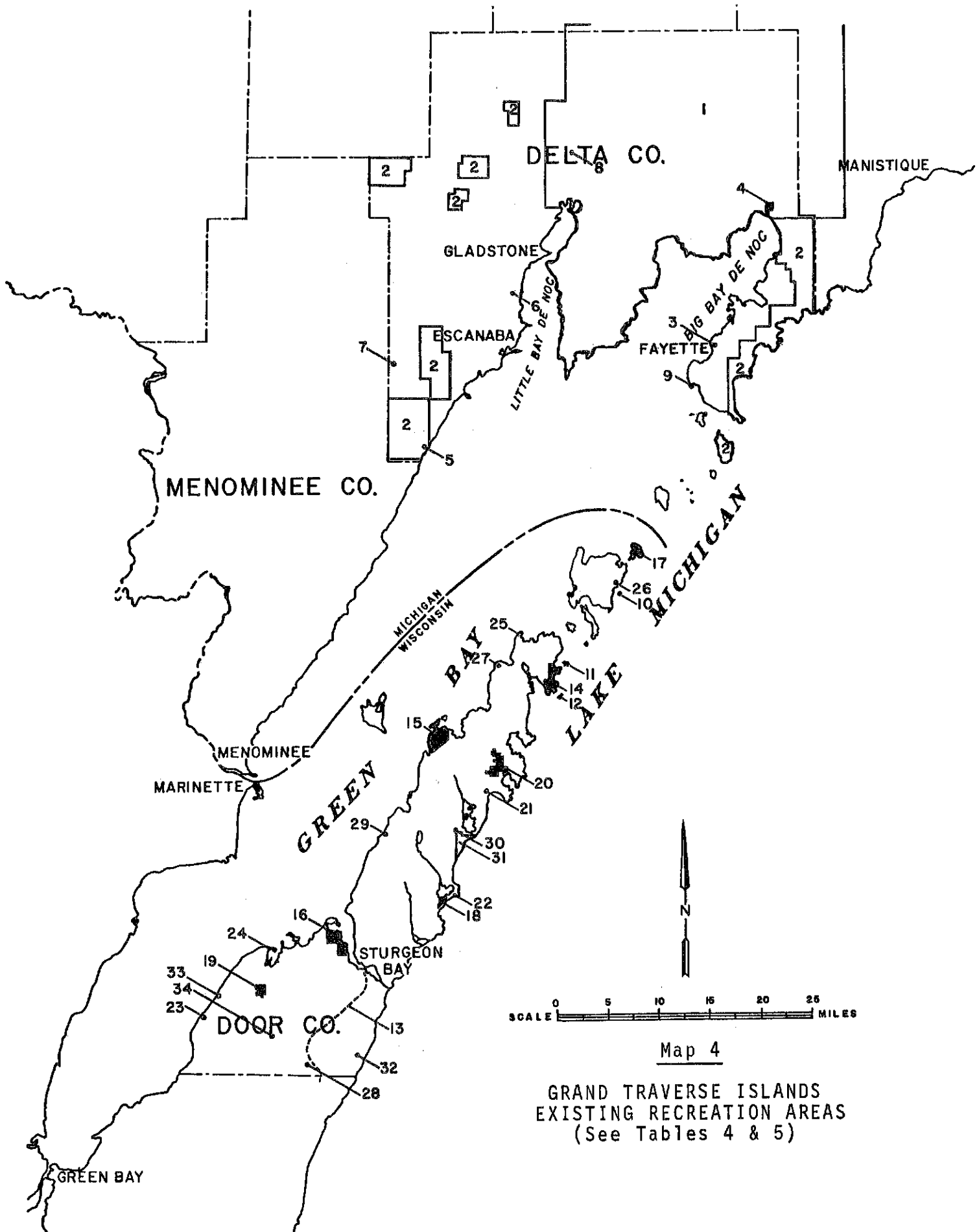
Source: Delta County Comprehensive Plan 1974, Michigan Dept. of Natural Resources and BLRPC

Table 4

Recreation Facilities Within Door County

Location on Map 4		Acres
	<u>National Areas</u>	
10	Hog Island National Wildlife Refuge	2
11	Gravel Island National Wildlife Refuge	14
12	Spider Island National Wildlife Refuge	13
		<u>29</u>
	<u>State Areas</u>	
13	Ahnapee Trail	180
14	Newport State Park	1,991
15	Peninsula State Park	3,767
16	Potawatomi State Park	1,126
17	Rock Island State Park	777
18	Whitefish Dunes State Park	900
19	Gardner Wildlife Area	830
20	Mud Lake Wildlife Area	1,940
	53 Public Access Areas	<u>1,034</u>
		<u>12,545</u>
	<u>Local Areas</u>	
21	Baileys Harbor Ridges County Park	30
22	Cave Point County Park	19
23	Chadoir's Dock County Park	5
24	Clafin Memorial County Park	0
25	Door Bluff Headlands	123
26	Eastside County Park	5
27	Ellison Bluff County Park	88
28	Forestville Dam County Park	79
29	Frank E. Murphy County Park	14
30	Lyle Harter-Matter Sanctuary County Park	40
31	Meridian County Park	92
32	Robert LaSalle County Park	8
33	Sugar Creek County Park	41
34	Tornado Memorial	3
	All Town, City, and Village Park Lands	<u>320</u>
		<u>867</u>
	TOTAL	13,441

Source: Door County Outdoor Recreation Plan 1974-1978, U.S. Fish and Wildlife Service and BLRPC



Map 4  
 GRAND TRAVERSE ISLANDS  
 EXISTING RECREATION AREAS  
 (See Tables 4 & 5)

SOURCE: Delta County Comprehensive Plan 1974; Michigan Dept. of Natural Resources; Door County Outdoor Recreation Plan 1974-1978; U. S. Fish and Wildlife Service; and BLRPC.

POPULATION GROWTH AND CHARACTERISTICS

The population of the region surrounding these islands has tended to reflect the prevailing economic conditions within the region, rising in times of economic growth and prosperity and stabilizing or actually declining during periods of economic stagnation. Thus it can be noted in Table 5 that the decade of the 1960's produced little population growth in either Delta County or Door County, and the population change was negative in many areas.

Table 5

State and County Population Growth

	1950	1960	1970	% Change 1960-70	Projected* Population 1980
Michigan	6,371,766	7,823,194	8,875,083	13.4	9,391,096
Delta County	32,913	34,298	35,924	4.7	37,000
Wisconsin	3,434,575	3,951,777	4,417,731	11.8	4,820,000
Door County	20,870	20,685	20,106	-2.8	24,580

Source: U.S. Bureau of Census, Central Upper Peninsula Planning and Development, Wisconsin Dept. of Administration and BLRPC

\* Projections utilized here are from the Michigan Dept. of State, CUPPAD, and the Wisconsin Dept. of Administration.

Consistent with nationwide trends, rural areas experienced a general out-migration to large urban centers during most of the 20th Century. The two civil townships which contain the Grand Traverse Islands, Fairbanks (Michigan) and Washington (Wisconsin), and the two neighboring townships, are rural in character, and all have experienced a population decline during most of this century, including the last 20 years as shown in Table 6.

Table 6

Population Growth in Area Townships

TOWNSHIP	1920	1940	1950	1960	1970	% Change 1960-70	Projected* Population 1980
Garden, Mich	1,097	982	927	771	713	- 7.7	650
Fairbanks, Mich	551	586	500	319	309	- 3.1	270
Washington, Wis	932	754	776	610	446	-26.0	536 (1975)
Liberty Grove, Wis	1,410	1,358	1,332	1,190	1,174	- 1.3	1,253 (1975)

Source: CUPPAD, Door County Official Directory, 1975-1976 and BLRPC

\* Population projections utilized here are from CUPPAD, and from the Wisconsin Department of Administration. The Wisconsin projections are for 1975.

Population projections for the counties containing the islands indicate that the population should increase during the present decade, though not as fast as the growth forecast for the States of Michigan and Wisconsin. Very recent Upper Great Lakes Regional Commission studies have indicated that rural areas are now growing at a faster rate than are urban areas, a reversal of past trends.<sup>10</sup> The full implications of such a trend are as yet unknown, but such a reversal of former growth patterns can be expected to have profound results. The Wisconsin Towns of Liberty Grove and Washington have already witnessed an increase in population, after decades of population decreases. The Michigan Townships of Garden and Fairbanks have been slow to experience growth, and population forecasts for them indicate continued decreases despite overall growth in Delta County.

The age distribution of an area's population is nearly as important as the total size of the population and its geographic distribution. Table 7 illustrates a number of significant aspects of the population of the study area.

The populations of Michigan and Wisconsin exhibit nearly parallel age distribution characteristics, with Wisconsin having a somewhat higher proportion of persons 65 years of age and over. Delta County and Door County both have five percent fewer persons in the 21-44 years category than their respective states, a category from which these counties must recruit heavily for their productive labor forces. The two counties also have four percent more persons in the 65 and over category than their respective states, indicative of the large numbers of retired people in these areas.

With respect to the townships, all exhibit the following characteristics in comparison to their respective states:

- 1) A smaller proportion of their population is 20 years old or younger.
- 2) A smaller percentage of their population is in the 21-44 years category.
- 3) A larger proportion of their population is in the 45-64 years category.
- 4) A much larger percentage of their population is 65 years of age and over, the Towns of Garden and Washington having 12% and 14% more elderly people than their respective statewide averages.

In summary, care must be taken in drawing definitive conclusions from these figures alone. Nevertheless, it is clear that the townships examined have a low proportion of their population in the productive 21-44 category, probably owing to the lack of job opportunities in certain specialized job categories. This is consistent with long term trends for rural out-migration in the Upper Midwest, a trend that may be changing, as witnessed by the recent population increases for the Towns of Washington and Liberty Grove. The age distribution may also be changing.

<sup>10</sup> *Population Survey of the Wisconsin Upper Great Lakes Regional Commission Area by Counties and Sub-County Jurisdictions, UGLRC, 1975*

Table 7

1970 Population Age Distribution

	0-20	%	21-44	%	45-64	%	+65	%	TOTAL
MICHIGAN	3,727,438	42%	2,640,159	30%	1,754,531	20%	752,955	8%	8,875,083
Delta County	15,182	42%	8,943	25%	7,645	21%	4,154	12%	35,924
Garden Township	256	36%	133	18%	185	26%	143	20%	717
Fairbanks Township	114	37%	65	21%	92	30%	38	12%	309
WISCONSIN	1,824,713	41%	1,239,830	28%	880,333	20%	472,865	11%	4,417,731
Door County	7,556	38%	4,637	23%	4,928	24%	2,985	15%	20,106
Town of Liberty Grove	365	31%	237	20%	317	27%	255	22%	1,174
Town of Washington	130	29%	92	21%	124	28%	100	22%	446

Source: U.S. CENSUS OF POPULATION 1970, Washington Island Community Action Program Office, CUPPAD and BLRPC

## LAND USE PATTERNS

Land use in both counties has tended to reflect natural conditions such as soil depths and types, rock outcrops, or wetlands. Forests predominate in Delta County with agriculture being a distant second. The situation is reversed in Door County with agriculture being the major user of land and forests being the second largest use. There is much open space in both counties with its attendant recreational pressures, especially in Door County. Forty percent of Delta County and four percent of Door County is presently in public ownership, with many potential recreational uses competing for this land. Urban, residential, and transportation uses are all relatively small when compared to the total area of both counties, although their importance goes far beyond their areal extent.

Although current figures are not yet available, it appears that urban, residential, and transportation developments are making major gains at the expense of the forest and agricultural lands, particularly in Door County, a trend which currently is expected to continue. Agricultural land has significantly declined in both counties as fewer farms remain in production. While the average farm size has increased, the total farm acreage in both counties dropped substantially between 1964 and 1969. In both counties the loss was greater than respective statewide averages, as indicated in Table 8. This trend may be slowing with higher prices for agricultural products making farming a more profitable use, but increased taxes caused by residential and commercial development pressure may continue to be a factor influencing agricultural land use.

Table 8

### Agricultural Land Use Changes

	1964	1969	% Change 1964-1969
<u>Michigan</u>			
No. of farms	93,504	77,946	-16.6
Acres in farmland	13,598,500	11,900,689	-12.5
<u>Delta County</u>			
No. of farms	526	373	-29.1
Acres in farmland	117,155	101,542	-13.3
<u>Wisconsin</u>			
No. of farms	118,816	98,973	-16.7
Acres in farmland	20,377,500	18,109,273	-11.1
<u>Door County</u>			
No. of farms	1,705	1,278	-25.0
Acres in farmland	218,565	177,909	-18.6

Source: 1969 U.S. Census of Agriculture and BLRPC

Land use on all the islands except Detroit and Washington has remained virtually constant for many years. Natural cover is the predominant use on all the islands, with eight islands having no development. (See Table 9 and Map 5) Pilot, Plum, St. Martin, and Poverty have a number of navigational



aids and related Coast Guard structures, and a series of trails which connect some of these features. Rock and Summer have a number of permanent structures remaining from past activities that are utilized today within Rock Island State Park and privately utilized on Summer Island.

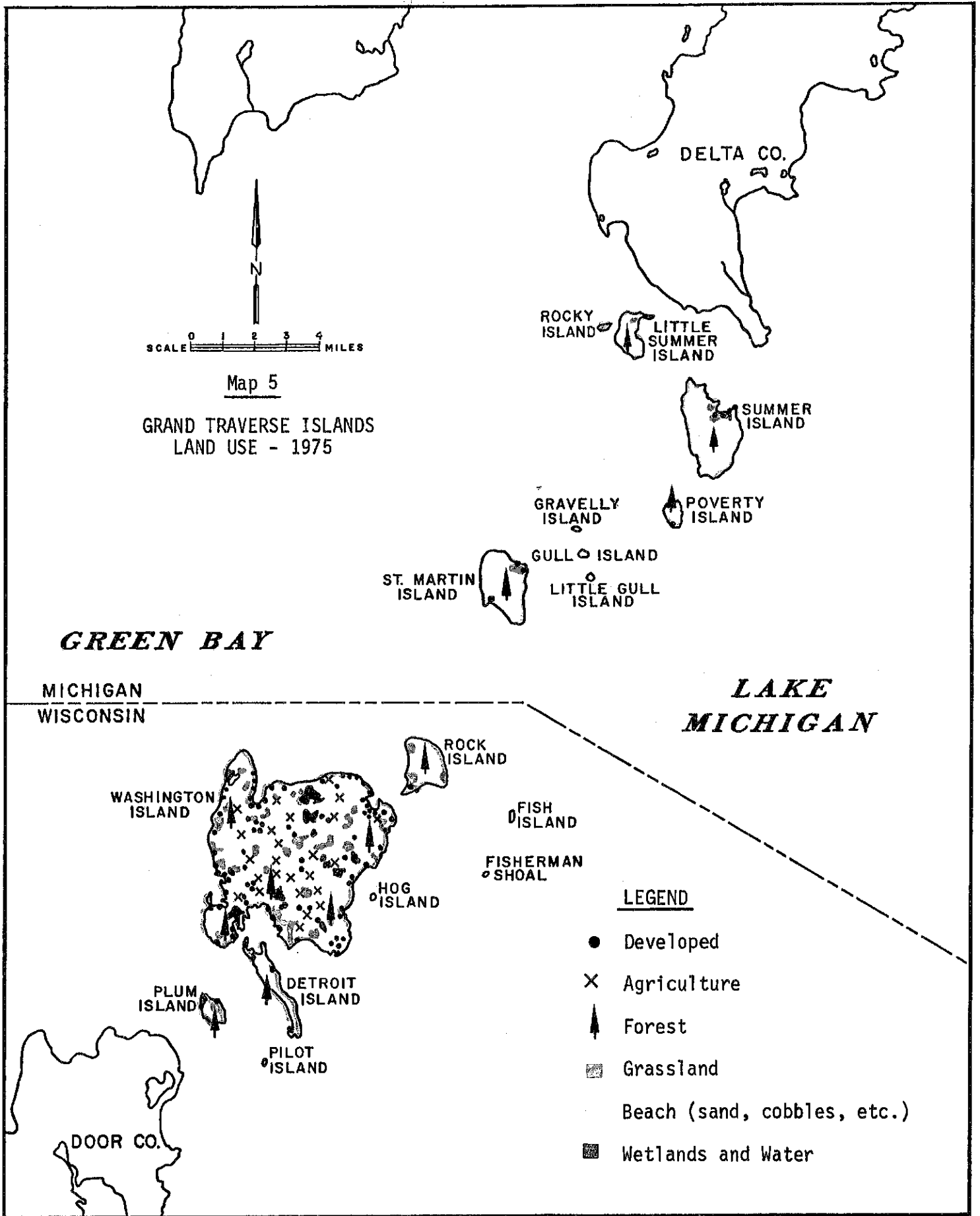
Table 9  
 1975  
 Existing Land Use and Ground Cover  
 on the Grand Traverse Islands

Class	Total Acreage	% of Islands Area
Urban, Residential, Transportation, or other developed land	1,843	9.0
Agriculture	4,000	19.4
Forest	13,647	66.3
Wetland	336	1.6
Grassland	533	2.6
Beach (cobble, gravel, sand)	140	.7
Water	90	.4
TOTALS	20,589	100.0

Source: Bay-Lake Regional Planning Commission

Nearly all permanent residential dwellings are located on Washington Island, as are all commercial and agricultural uses, and the majority of internal water features, wetlands, and transportation features. Perhaps the most significant land use change has been the displacement of forest lands by residential uses on Washington Island, and recently on Detroit Island with the construction of several new homes.

The location and servicing of residential development poses one of the most important land use questions facing the Town of Washington, because of the limitations of soils for septic tank waste assimilation, and the possible need to construct a sewer system to handle sanitary wastes from residential and commercial uses. Soil limitations will continue to exert a strong force in land use decisions in both Fairbanks and Washington Townships.



## TRANSPORTATION

Delta County, Michigan is in many ways the transportation hub of the Upper Peninsula. The county is traversed by State Highway M-35 and two major U.S. Highways, east-west Route 2 and north-south Route 41. (See Map 6) The two U.S. Highways are principal arteries in the upper Peninsula and they share the same roadbed from Escanaba to Rapid River. The 1973 annual average daily traffic (AADT) on this particular segment was 6,500 vehicles per day, greater than any segment of Interstate 75 from St. Ignace to Sault Ste. Marie. This section of U.S. 2-41 is currently a limited access highway. Plans are being formulated to upgrade U.S. 2 across the entire Upper Peninsula. Such an improvement is needed to handle the large volume of summer recreation traffic on U. S. 2 which is overtaking this roadway at present.

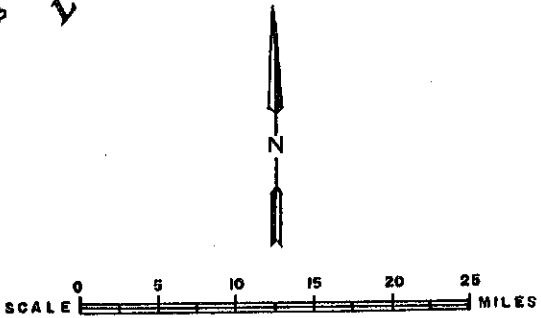
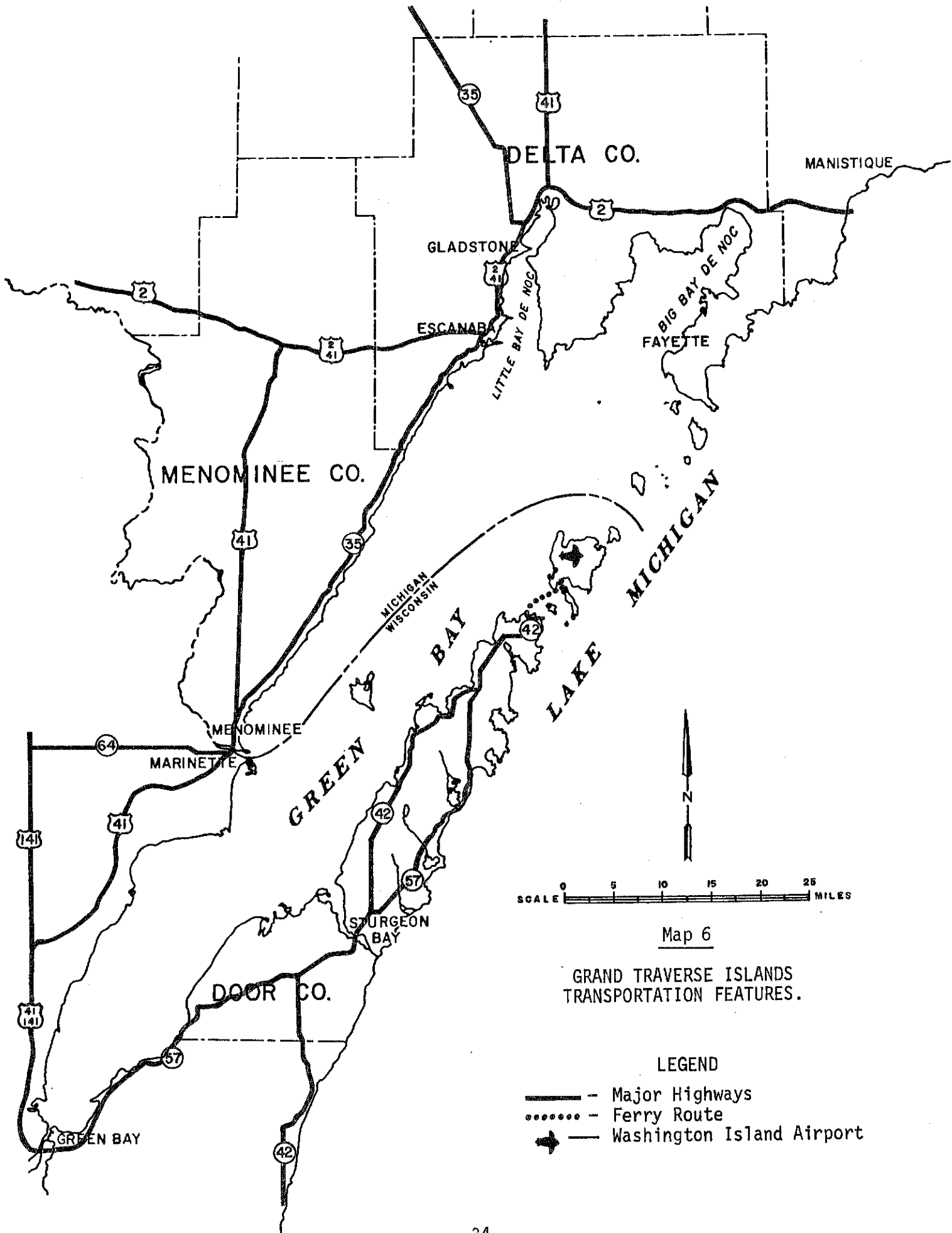
Upgrading U.S. Highway 2 to Interstate Highway standards could generate additional recreation traffic in Delta County and expand its market potential by reducing travel time and costs. However, although improved highway transportation may benefit the county in many ways, in itself it will not insure that more people will spend their vacations in Delta County.

Delta County Highway 483 provides access to Garden, Fayette State Park, and Fairport, from U.S. 2. The AADT on U. S. 2 as it crosses the tip of the Garden Peninsula is only 2,600 vehicles per day, but this would be well below the figure for summer traffic. County Highway 483 receives fairly limited use even though it is virtually the only road on this peninsula. A 1970 traffic count indicated that just over 200 vehicles per day were passing the traffic counter. Once again, this is considerably under the summer figure, when visitation to Fayette State Park contributes heavily to the total volume of traffic along this route. County 483 is currently being improved but the highway is not designed for large volumes of traffic, and would not accommodate the establishment of a large traffic generator on the peninsula.

No highways or roads exist on the Michigan islands. A few old logging trails are present on Summer, St. Martin, and Poverty Islands, but these are useable only by pedestrians, all-terrain vehicles, or snowmobiles.

No Interstate or U.S. Highways are located in Door County, owing in part to the geographic orientation of the peninsula away from major population centers. State Highways 42 and 57 presently serve the area and both run virtually the length of the peninsula, with Highway 42 providing a connection to the point of embarkation on the ferry to Washington Island.

There is a marked seasonality in highway use in Door County, with peaks occurring during the summer months. As traffic data for three recording stations in the county indicate, there is a substantial increase in traffic during August and on Saturdays in August, relative to the annual average daily traffic (AADT). The difference between the highest and lowest monthly average daily traffic would be even more pronounced.



Map 6

GRAND TRAVERSE ISLANDS  
TRANSPORTATION FEATURES.

LEGEND

- Major Highways
- ..... Ferry Route
- ✈ — Washington Island Airport

Table 10

1972 Door County Traffic Data

Station and Location	AADT	August ADT	August Sat. ADT	August Sat. as a % of AADT
006 Hwy 42 Town of Gibraltar	2,330	4,857	5,860	252%
007 Hwy 57 Town of Bailey's Harbor	1,890	3,141	3,730	197%
008 Hwy 42 Town of Liberty Grove	2,040	3,978	4,470	219%
Hwys 42, 57 Sturgeon Bay Bridge*	16,945	18,978	21,445	127%

Source: Wisconsin Department of Transportation

\* Figures for the Sturgeon Bay Bridge are for 1974.

Washington Island is the only Wisconsin island with a developed transportation network, although Detroit Island has some primitive roads and Plum and Rock Islands have a few old logging trails. No major highways exist on Washington Island, but a grid system of over 100 miles of roads is present, and many of the roads are paved, including County Trunk W. Vehicular traffic on Washington Island is necessarily limited by the problem of obtaining access to the island. There were 505 motor vehicles registered in the Town of Washington in the fiscal year 1974-75.<sup>11</sup>

The Washington Island Ferry Line provides scheduled service between Gills Rock, Door County and Detroit Harbor on Washington Island. In the fleet are three boats having capacities of 10, 14, and 20 vehicles. All are in service during the busy summer months. One ship operates throughout the winter.

The Town of Washington owns a small airport on Washington Island which is open for public use. The 2500 ft. runway is turf and the airport receives only a limited amount of use. There is no regularly scheduled commercial air service.

#### ISLAND OWNERSHIP

Land ownership patterns on the Grand Traverse Islands reflect historical actions of the state and federal governments and the private ownership decisions of individual landowners. The present pattern of ownership illustrates this point, with some islands being privately owned, others totally in public ownership, and still others exhibiting a mix of ownership. Excluding Washington Island, which is entirely in private ownership, the remaining 15 islands have a total area of 6,040 acres. Of this total, 2,835 acres (47%) are already in public ownership and 3,204 acres (53%) are privately owned. If Washington Island is included, public ownership of the 16 island chain is reduced to 14 percent of the total number of island acres, or 2,915 out of 20,040 total acres. (See Table 11 and Map 7)

<sup>11</sup> Wisconsin Department of Transportation, Division of Motor Vehicles

Table 11

Areas and Ownership Characteristics - Grand Traverse Islands

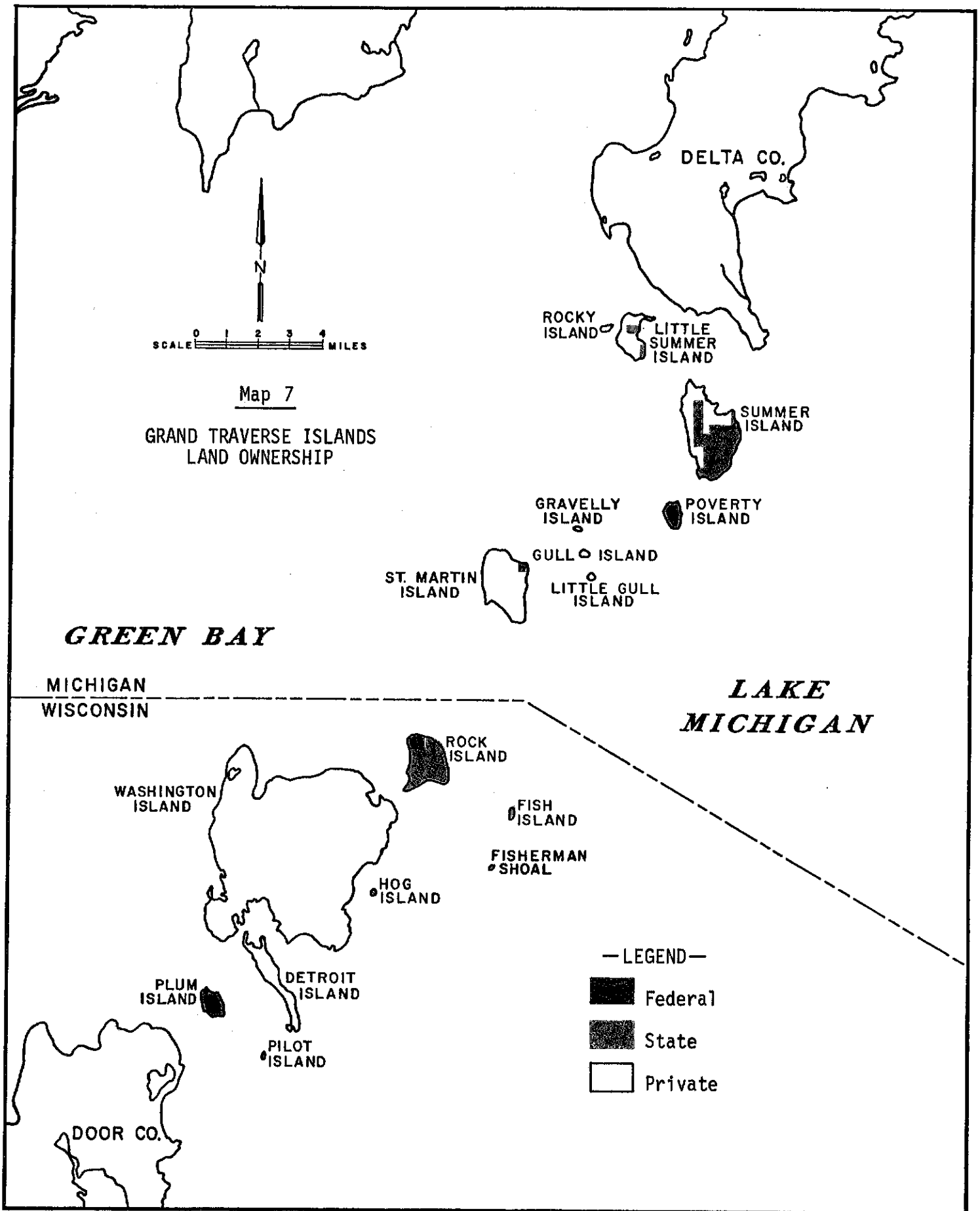
MICHIGAN	Private	Public/Owner	Total Acreage
Gravelly Gull	3.00	0.00	3.00
Little Gull	13.53	0.00	13.53
Little Summer	5.25	0.00	5.25
Poverty	399.65	90.90/State	490.55
Rocky	0.00	192.00/Federal	192.00
St. Martin	9.70	0.00	9.70
Summer	1,292.70	34.40/Federal	1,327.10
	831.80	1,337.62/State	2,169.42
	<u>2,555.63 (61%)</u>	<u>1,654.92 (39%)</u>	<u>4,210.55 (100%)</u>
WISCONSIN	Private	Public/Owner	Total Acreage
Detroit	649.21	0.00	649.21
Fish	0.00	1.50/Undetermined*	1.50
Fisherman Shoal	0.00	1.00/Undetermined*	1.00
Hog	0.00	1.87/Federal	1.87
Pilot	0.00	3.70/Federal	3.70
Plum	0.00	265.97/Federal	265.97
Rock	0.00	777.37/State	
Washington	14,352.72	129.37/Federal	906.74
	<u>15,001.93 (92%)</u>	<u>85.70/Local</u>	<u>14,438.42</u>
		<u>1,266.48 (8%)</u>	<u>16,268.41 (100%)</u>
<b>GRAND TOTAL</b>	<b>17,557.56 (86%)</b>	<b>2,921.40 (14%)</b>	<b>20,478.96 (100%)</b>

\* Additional legal research would be necessary to determine if these are state or federal property.

Source: CUPPAD, BLRPC

WISCONSIN

- 1) Detroit Island is the only Wisconsin island in this chain which is entirely privately owned. Over 649 acres in size, Detroit Island has witnessed a rapid creation and sale of subdivided lots, with the number of private land owners increasing from four in 1966 to twenty-one by 1973.
- 2) Fish Island's ownership is undetermined at present. Fluctuating lake levels make ownership of this 1.5 acre island difficult to establish and additional legal research would be necessary to determine whether it is state or federally owned.



- 3) Fisherman Shoal also experiences periodic inundation due to high lake levels, and the ownership of this island has not been determined.
- 4) Hog Island is two acres in size, entirely owned by the federal government and utilized as a National Wildlife Refuge.
- 5) Pilot Island, 4 acres in size, is also owned by the federal government and administered by the Coast Guard Station on Plum Island.
- 6) Plum Island is 266 acres in size and is owned by the U.S. Government, which utilizes the island as a Coast Guard Station.
- 7) Rock Island is also in public ownership. Of the 906 acres on the island, 129 acres are owned by the federal government for its Potawatomi Light-house installation, a light which has operated since 1836. The remaining 777 acres were all purchased by the State of Wisconsin in 1965 and designated as Rock Island State Park.
- 8) Washington Island is by far the largest island in the chain, but it has an extremely small amount of land in public ownership. There are 14,438 total acres on this island of which 14,352 or 99.4 percent are privately owned.

#### MICHIGAN

- 9, 10, and 11) Gravelly, Gull, and Little Gull are three small islands 3, 13, and 5 acres, respectively, which are privately owned by one individual.
- 12) Little Summer Island exhibits mixed ownership with 90 acres being owned by Michigan as part of Bay de Noc State Forest and 400 acres being jointly owned by two private individuals.
- 13) Poverty Island is 192 acres in size and is owned by the federal government. This island is in the process of being transferred to the Bureau of Land Management for administrative purposes.
- 14) Rocky Island is ten acres in size and privately owned by one individual.
- 15) St. Martin. This relatively remote island, 1,327 acres in size, has mixed ownership consisting of 34 acres owned by the federal government and administered as a Coast Guard installation and 1,292 acres which are owned by three individuals and one corporation.
- 16) Summer Island is the largest of the Michigan islands, having 2,169 acres. Summer Island has a mix of state and private ownership. Michigan owns 1,337 acres and administers this as part of the Bay de Noc State Forest. The other 832 acres are privately owned by a consortium, two companies, and three individuals.

It is apparent then, that if Washington Island is excluded, the bulk of the privately owned land is on the Michigan islands. In fact, six of the eight islands in Wisconsin are in public ownership, while just one of the Michigan islands is entirely owned by the public.



Table 12  
GRAND TRAVERSE ISLANDS SUMMARY

#	Name	Approximate Location	Size	Owned by	Natural Features	Development
1.	Plum Island, Wis.	1 1/2 mi. NE from tip of Door County	266 acres	Federal	Wooded, cliffs	Coast Guard Station, dock, Lighthouse
2.	Pilot Island, Wis.	2 1/2 mi. E from tip of Door County	4 acres	Federal	Rocky, some vegetation	2 Buildings, light-house dating to 1830
3.	Detroit Island, Wis.	3 mi. NE from tip of Door County	649 acres	Private	Wooded	6 Seasonal residences
4.	Washington Island, Wis.	3 1/4 mi. NE from tip of Door County	14,438 acres	Mostly Private	Wooded, farmland, permanent population	Farms, seasonal residences, commercial bldgs.
5.	Hog Island, Wis.	1/2 mi. E of Washington Island	2 acres	Federal	Wooded	None
6.	Rock Island, Wis.	1/2 mi. NE from corner of Washington Island	906 acres	129 acres - Federal 777 acres - State	Wooded, beach	Lighthouse first built in Wis., 1836, few bldgs.
7.	Fish Island, Wis.	2 1/4 mi. SE of Rock Island	1.5 acres est.	Ownership to be established	No tree cover, surrounded by shelf	None
8.	Fisherman Shoal, Wis.	2 3/4 mi. SW of Fish Island	1 acre est.	Ownership to be established	No tree cover, surrounded by shelf	None
9.	St. Martin Island, Mich.	16 1/2 mi. from tip of Door County, 9 1/2 mi. SW of tip of Garden Peninsula	1,327 acres	1,292 acres - Private 34 acres - Federal	Wooded, cliffs, swamp	Lighthouse, Coast Guard Station, Village of Winona, cemetery
10.	Gravelly Island, Mich.	2 mi. NE of St. Martin Island	3 acres	Private	Little vegetation, rocky	None
11.	Gull Island, Mich.	3/4 mi. SE of Gravelly Island	13 acres	Private	Wooded, narrow rocky perimeter	None
12.	Little Gull Island, Mich.	Southernmost of the 3 small islands	5 acres	Private	Wooded, shoreline sandy/rocky in parts	None
13.	Poverty Island	5 1/4 mi. SW of tip of Garden Peninsula	192 acres	Federal	Wooded, cliffs	Lighthouse, 2 bldgs., underwater cable
14.	Summer Island	2 mi. SW of tip of Garden Peninsula	2,169 acres	1,337 acres - State 832 acres - Private	Steep bluff, gently rolling, wooded, beach	Lodge, several cabins, Lighthouse
15.	Little Summer Island	3/4 mi. S of tip of Garden Peninsula	490 acres	90 acres - State 400 acres - Private	Wooded, cobbles, marsh	None
16.	Rocky Island	1 3/4 mi. SW of the Garden Peninsula	10 acres	Private	Wooded	None

## PROPERTY VALUATION AND TAX REVENUES

Property values and tax revenues are rising throughout the study area, both on the islands themselves and on mainland areas in Delta and Door Counties. These trends reflect a nationwide increase in real estate values and especially the growing demand for recreational land for both permanent and second-home developments. This type of development is particularly attracted to both counties due to the large amount of scenic shoreline within the counties.

Delta County, Michigan, has witnessed increasing densities in existing residential shoreline developments and new development along previously natural shorelines. According to CUPPAD's Draft Shorelands Management Plan, 4% of the existing natural shoreline in Delta County has been subdivided since 1962, while 22.2% of the shoreline is in public ownership. Public ownership of the shoreline varies considerably among the individual townships, from a low of 0.0% in Brampton Township to a high of 35.8% in Garden Township. Fairbanks Township, which contains Michigan's Grand Traverse Islands, has 19.8% of its shoreline in public ownership, a figure which has not significantly changed during the past 12 years.

The eight Michigan islands, all within the Fairbanks Township, have themselves more than tripled in their full assessed values since 1967, even though no residential development has occurred. While 39% of the total eight island acreage is publicly owned, the other 61% (2,555.63 acres) is valued at \$268,700. Their total valuation comprises 7.53% of the township's full assessed valuation. (See Table 13) Clearly this represents a significant proportion of the township's taxable property. In 1967 these islands contributed 5.3% of the total tax revenues collected by Fairbanks Township. That proportion has since risen to 7.5%, or \$3,932.28 of the total of \$51,773.40 in taxes collected by Fairbanks Township.

Door County, Wisconsin, has long been a haven for second-home developments, and property values have been rising throughout the county. The majority of second-home developments have taken place in the northern half of Door County, north of Sturgeon Bay. The Town of Liberty Grove, for instance, situated at the northern extremity of the Door Peninsula, has witnessed a very rapid rise in total property valuation as a result of increasing real estate transactions by non-residents purchasing land within the town. From 1964-1974, non-residents of Door County increased their holdings within Liberty Grove in the following ways:<sup>12</sup>

- 1) Non-resident holdings increased as a percentage of the total assessed valuation within Liberty Grove, from 43.3% to 54.5%.
- 2) Non-residents increased their proportion of the total number of parcels within the town from 38.8% to 54.7%.
- 3) Non-residents owned 81.1% of all waterfront parcels in 1974, up from 70.9% in 1964.
- 4) Non-resident land ownership within the town increased from 26.1% of the total land area to 37.8%.

<sup>12</sup> Bay-Lake Regional Planning Commission, *Town of Liberty Grove Tax Assessment Roles*

Table 13

GRAND TRAVERSE ISLANDS TAX BASE INFORMATION - 1974 MICHIGAN

Island	Private Ownership		State or Federal Acreage	Total Acreage	% Public Ownership
	Acreage	Valuation*			
Poverty	0	\$	192.00	192.00	100.00%
Summer	831.80	51,527	1,337.62	2,169.42	61.66%
St. Martin	1,292.70	55,394	34.40	1,327.10	2.59%
Little Gull	5.25	595	0	5.25	0.00%
Gull	13.53	2,380	0	13.53	0.00%
Gravelly	3.00	952	0	3.00	0.00%
Little Summer	399.65	20,111	90.90	490.55	18.53%
Rocky	9.70	3,391	0	9.70	0.00%
TOTALS	2,555.63	\$134,350	1,654.92	4,210.55	39.30%

Valuation Islands \$134,350  
 Fairbanks Township 1,783,784  
 % of Township Tax Base 7.53%

\*Note: Local assessed valuation of the islands is .50 of their full assessed value as determined by the State of Michigan. Full assessed valuation is therefore \$268,700.

Source: CUPPAD, BLRPC

GRAND TRAVERSE ISLANDS TAX BASE INFORMATION - 1974 WISCONSIN

Table 14

Island	Private Ownership		State or Federal*		Total Acreage	% Public Ownership
	Acreage	Valuation	Acreage			
Detroit	649.21	\$ 531,050	0		649.21	0%
Pilot	0	0	3.70		3.70	100%
Plum	0	0	265.97		265.97	100%
Hog	0	0	1.87		1.87	100%
Rock	0	0	129.37	Federal	906.74	100%
			777.37	State		
Fisherman Shoal	0	0	Est. 1.50	Ownership	Est. 1.50	100%
				Unknown		
Fish	0	0	Est. 1.00	Ownership	Est. 1.00	100%
				Unknown		
Washington	14,352.72	10,404,480	85.70	Local	14,438.42	1%
TOTALS	15,001.93	\$10,935,530	1,266.48		16,268.41	7.78%

Valuation Detroit Island \$531,050  
 Town of Washington 10,935,530  
 % of Township Tax Base 4.85%

Local assessed valuation is .4573 of the full assessed value as determined by the State of Wisconsin.  
 Full assessed value is therefore \$1,161,272 (excluding Washington Island)

Source: CUPPAD, BLRPC

The full assessed value of Detroit Island in 1967 was \$52,938. At this time there were only four private landowners on the island, and no development had taken place. One individual has begun subdividing property, selling off lots, and four lots have been built upon. Currently as a direct result of this activity, the full assessed value of the island is \$1,161,272, and at least 21 individuals own land on Detroit Island. While the value of the island has greatly increased, so has the tax burden on the other three original owners, who were not contemplating subdividing their properties. As an example, one individual owned a 2.9 acre unimproved lot which was assessed at \$500 and paid \$9.44 in taxes in 1966. In 1974 this same undeveloped parcel was assessed at \$10,800 and the taxes had risen to \$216.63. While the owner has seen a tremendous increase in the value of his property, concomitant tax pressures may force him to consider subdividing some of his holdings in order to lower that burden, and the process may continue to spiral. The increased assessed valuation of Detroit Island has meant a significant rise in its value with respect to that of the Town of Washington as a whole. Detroit Island contributed 0.8% of the total town tax revenues in 1966, but this figure has since risen to 4.5% of the revenues in 1974.

Table 15

Total Tax Revenues Collected\*

State	Total Amount	% of Total
<b>MICHIGAN</b>		
Delta County	\$ 971	14.18%
Fairbanks Township	194	2.84%
Bay de Noc School Dist.	4,672	68.23%
Comm. College, Voc. Ed.	1,010	14.75%
	<u>\$6,847</u>	<u>100.00%</u>
<b>WISCONSIN</b>		
State	\$ 255	2.16%
Door County	4,058	34.36%
Town of Washington	1,844	15.62%
Washington Island School Dist.	4,918	41.64%
Community College	735	6.22%
	<u>\$11,810</u>	<u>100.00%</u>

\* Collected in 1974 from areas considered for public acquisition. This would include all the Michigan islands, 253 acres at Sac Bay, Michigan, Boyer Bluff on Washington Island, and all of Detroit Island.

Source: BLRPC

## COMMUNITY SERVICES

Both Fairbanks Township and the Town of Washington are rural townships and neither contains an incorporated community. Both townships offer only a limited number of community services. Therefore, public service costs are currently quite low, since many services aren't available, or are provided privately. The following tables give a brief overview of existing services.

Table 16

### Community Services within Fairbanks Township

<u>Transportation</u>	
Highways	No Interstate, Federal, or State Hwys. Delta County 483 (13 miles within Fairbanks Township) is the only county highway
<u>Utilities and Public Works</u>	
Sewer	None, individual septic tanks
Storm sewer	None
Water	No public supply, individual wells
Solid waste	Township will be included in county-wide green box system, collection twice a week
Electric	Wisconsin-Michigan Power Company, et.al.
<u>Public Safety</u>	
Police	State Police, County Sheriff, \$552 spent for part-time local police protection in 1973. Nearest jail in county is in Escanaba, 52 miles away
Fire	Volunteer fire service is provided from Fayette State Park
<u>Education, Health</u>	
Schools	Nearest school within district, K-12 in Garden Township, with 1975 enrollment of 613. Bay de Noc Community College is in Escanaba.
Library	Nearest public libraries are at Gladstone (27,000 vols.) and Escanaba (45,309 vols.). Library by mail available for U.P. Branch of Michigan State Library (60,000 vols.) in Escanaba
Hospital and Medical	Volunteer ambulance service in Garden Township. Nearest hospital is in Escanaba.
<u>General Government</u>	
Community facilities	Township Hall built in 1910, addition built in 1935.

Note: While few services are available within Fairbanks Township, and local residents may go to Escanaba when in need of certain services, a number of services (e.g. medical, shopping) could be obtained in Manistique (Schoolcraft County), which is 33 miles away.

Source: Delta County Comprehensive Plan, 1974; Personal Interviews; BLRPC

Table 17

Community Services within the Town of Washington

<u>Transportation</u>	
Highways	No Interstate, Federal, or State Hwys. 17 miles of County Trunk W, and over 50 miles of local roads and streets
Airport	Small town airport
<u>Utilities and Public Works</u>	
Sewer	None, individual septic tanks, holding tanks
Storm sewer	None
Water	No public supply, individual wells
Solid waste	Modified Landfill operation, no collection service, will go to countywide system
Electric	Washington Island Electric Co-op (oil)
<u>Public Safety</u>	
Police	Protection provided by two part-time local policemen, \$3168.63 spent in 1974
Fire	Volunteer fire department, fire house, rescue service
<u>Education, Health</u>	
Schools	Town is entire school district, grades K-12, 1975 enrollment of 109 Branch of Northeastern Wisconsin Vocational and Technical School in Sturgeon Bay
Library	Very small community library
Hospital and Medical	Resident physician, nearest hospital is in Sturgeon Bay, 55 miles away
<u>General Government</u>	
Community facilities	Town Hall built in 1967 Community Center Community Action Program

Source: Washington Island Community Action Program, Personal Interviews, BLRPC

## ZONING

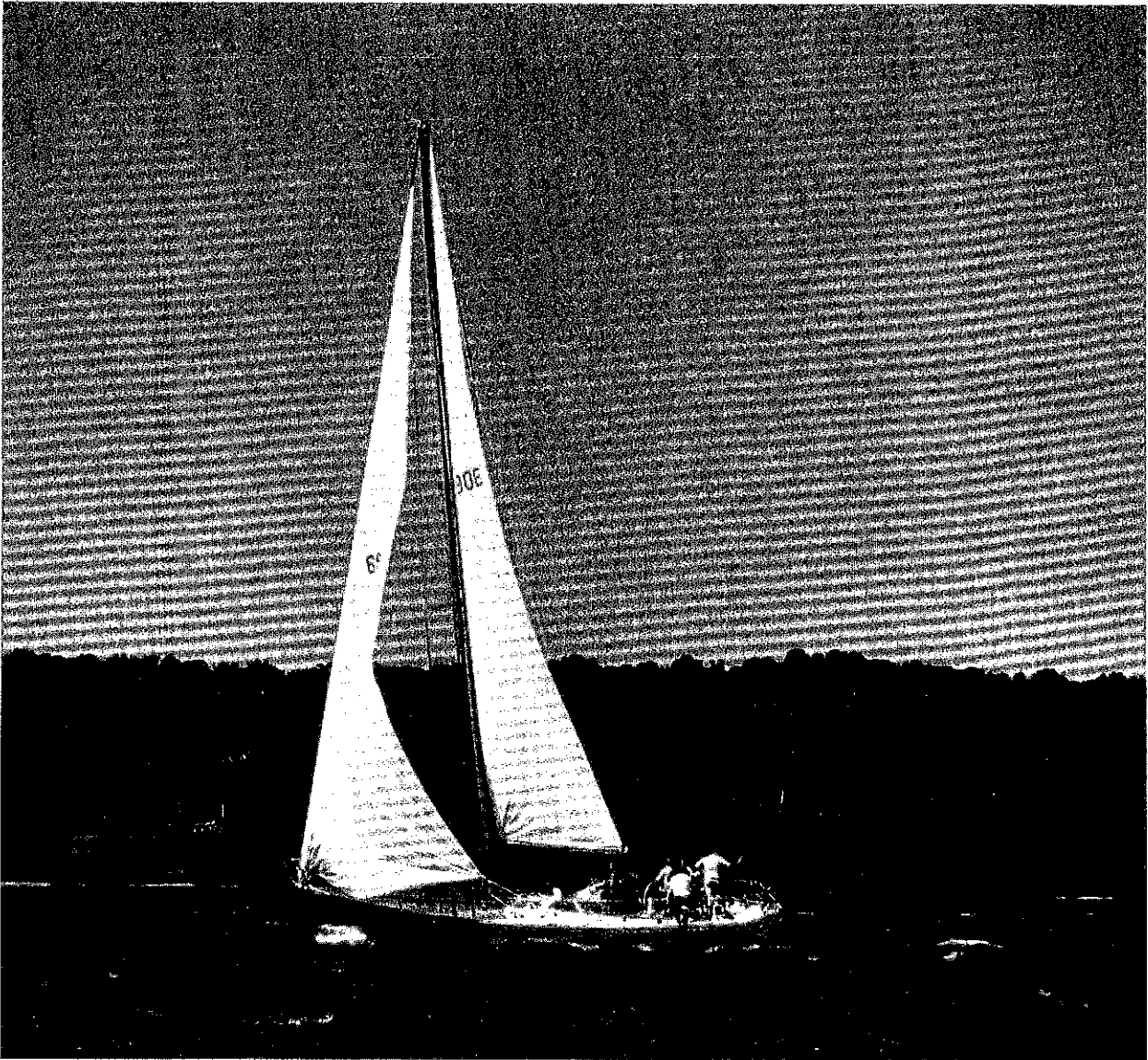
In 1968 there were no zoning ordinances or other regulations affecting private uses on any of the Grand Traverse Islands, but this situation has partially changed since then.

Delta County is in the process of adopting a county zoning ordinance. If and when this ordinance is adopted by the county, it must still be approved by each individual town board before it can go into effect in that town. Fairbanks Township (Delta County) does not possess its own zoning ordinance at present, nor does adjacent Garden Township.

Door County has formulated a zoning ordinance which has been adopted by a number of towns in the county, including Washington and Liberty Grove, the two towns which would be most affected by any recreational area. This ordinance is currently undergoing revision. Also in effect are specific shoreland and floodplain regulations which have been formulated by the State of Wisconsin which legally insures a statewide minimum of protection in unincorporated areas. The shoreland regulations must be adopted by the counties and do not require town board approval to be effective. The statute specifies that lands within 1,000 feet of lakes, ponds, and flowages are to be included as critical areas. Zoning in such areas must be consistent with standards and guidelines published by the Wisconsin Department of Natural Resources.



# chapter IV



## recreational aspects of the islands

Photo by Harmann Studios

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## IV - RECREATIONAL ASPECTS OF THE ISLANDS

### RECREATIONAL POTENTIAL

The Grand Traverse Islands offer the potential for a variety of recreation activities. Wooded limestone bluffs, sandy beaches, rock-bound shorelines, and numerous vistas of adjacent islands comprise a scenic backdrop for these recreation activities. In the 1968 unofficial study of the Green Bay (Grand Traverse) Islands, the Bureau of Outdoor Recreation evaluated the ability of the islands to provide for certain types of recreation. The island group was deemed suitable for those recreation activities listed below.

- 1) Fishing - An abundance of good fishing exists in the waters surrounding these islands which have received relatively little pressure from sport fishing.
- 2) Camping - Public campsites are presently available only on Washington Island (23 sites) and in Rock Island State Park (40 sites). There are no other campsites on any of the other islands, although areas could be developed for this activity.
- 3) Boating - The islands are an attraction for boaters interested in island hopping or cruising from one mainland to the other. Boats under the 30-40 foot class are limited in their use by rapidly changing weather conditions but can be utilized in certain areas when weather permits.
- 4) Nature and scientific study - The limited number of human developments on these islands has encouraged the existence of numerous plant and animal species and the essentially undisturbed character of the islands provides an outstanding array of natural resources for interpretation, study, and appreciation.
- 5) Hiking - Old logging trails are already utilized by hikers who explore the islands at their leisure, and a number of islands are conducive to the further development and demarcation of hiking trails to connect points of special natural or historical significance.
- 6) Picnicking - Picnicking can become an important highlight for day-use visitors and picnic areas could be developed in close proximity to docking facilities.
- 7) Scuba Diving - Clean, clear water and a long history of shipwrecks in this area provide the basis for this growing recreational activity.
- 8) Swimming - While cold water temperatures prevail during the entire summer, swimming is possible in sheltered areas, and sunbathing is definitely an attractive possibility.

While the potential recreational uses listed by the BOR are certainly valid, the list is by no means complete. There are a number of additional non-intensive activities such as backpacking and photography which would be appropriate on the islands. It is important to emphasize that not all activities are suitable for all islands. The natural character of each island must be the determining factor in the use of that island, as for example, the Hog Island National Wildlife Refuge is best left undisturbed.

## REFERENCES TO THE GRAND TRAVERSE ISLANDS IN RECREATION PLANS

Neither the Michigan Outdoor Recreation Plan 1974, nor the Wisconsin Outdoor Recreation Plan 1972, make specific reference to the Grand Traverse Islands. However, mention is made of this island group in a number of other plans and studies. The Delta County Comprehensive Plan, published in 1974, notes the presence of Summer, Little Summer, and St. Martin Islands off the coast of Fairport, Michigan, which is listed as a scenic site. Mention is also made of the nearby sites of historic Fayette State Park, the Niagara formation at Burnt Bluff, and the area around Sac Bay. The Central Upper Peninsula's Draft Shorelands Management Plan lists the islands south of the Garden Peninsula as an environmental area whose preservation should be given major consideration. Reference to on-going discussions of the possibilities for developing some type of interstate recreation area for the Green Bay (Grand Traverse) Islands is made in the preliminary Areas of Particular Concern in Michigan's Coastal Zone (1975). This document also presents an excellent synopsis of the philosophy behind the special recreation potential of these islands:

"In many cases, islands offer unique recreational opportunities. This isolation, lack of significant development and low or no population create recreational opportunities and qualities in some ways equivalent to those of larger wilderness tracts on the mainland; the surrounding open water creating the seclusion and solitude normally the result of the large tracts of undeveloped, undisturbed lands associated with wilderness areas."<sup>13</sup>

The Door County Outdoor Recreation Plan 1974-78 also makes reference to the Grand Traverse Islands. Under its guidelines for land acquisition, this document lists the public acquisition of Plum, Pilot, and Detroit Islands as a high priority. The Outdoor Recreation Plan published by the Wisconsin Department of Resource Development in 1966, listed potential public acquisition sites throughout the state by a quality index. Detroit and Plum Islands were listed as first quality sites. Boyer Bluff, an outstanding natural area on Washington Island, was mentioned as a second quality site.

Mention is also made of the Grand Traverse Islands in a number of federal documents. The Great Lakes Basin Framework Study Appendix 21 Outdoor Recreation (1975) noted that the Grand Traverse Islands are "...an excellent base for recreational use and development..."<sup>14</sup> Mention of this island group was also apparent at earlier dates, as in Islands of America, a 1970 publication by the Federal Bureau of Outdoor Recreation. This booklet termed the Grand Traverse Islands "...an exceptional wilderness island group..."<sup>15</sup> Finally, the

<sup>13</sup> Michigan Department of Natural Resources, Water Development Services Division, (preliminary) Areas of Particular Concern in Michigan's Coastal Zone (Lansing, Michigan: 1975), p. 96.

<sup>14</sup> Great Lakes Basin Commission, Great Lakes Basin Framework Study Appendix 21 Outdoor Recreation, (Ann Arbor, Michigan: Public Information Office Great Lakes Basin Commission, 1975), p. 13.

<sup>15</sup> U.S. Department of the Interior, Bureau of Outdoor Recreation, Islands of America (Washington, D.C.: U.S. Government Printing Office, 1970), p. 31.

Federal Bureau of Outdoor Recreation conducted an in-depth study of these islands in 1968. While the study was never adopted as official policy, it did recommend preserving the islands as an Interstate Wilderness Park.<sup>16</sup>

#### DEMAND FOR RECREATION FACILITIES

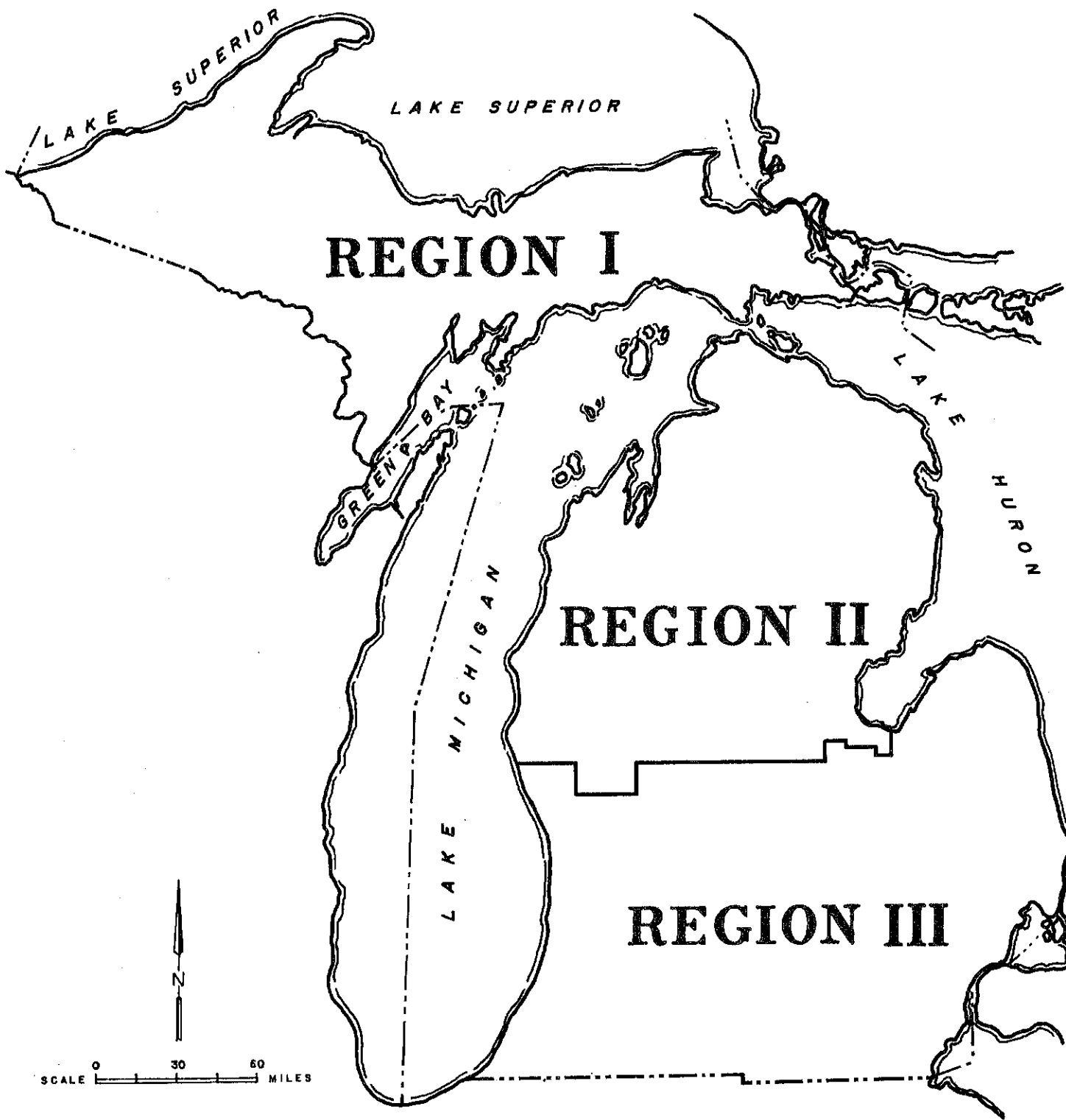
The existing and potential demand for a recreation area is derived from a number of sources which measure related activities. The following are typically used as indicators to estimate demand: Proximity to markets, attendance at other similar parks in the vicinity, present recreational use of the resource, specific recreation demand indicators such as hunting and fishing licenses sold, boat registrations, and traffic counts on area highways. These indicators will be examined to attempt to arrive at an estimate of the demand for recreational use of the islands. The analysis presented intends to provide a general overview of the actual and projected demand for any type of lakeshore recreation area.

The amount of use which any recreation area receives is heavily dependent upon its geographic proximity to the major markets of the area. While people seek recreation for many diverse reasons, recreation is in part an economic activity which has a supply and demand function. Both functions are influenced by distance, a cost which must be overcome for consumption to occur. This is well illustrated by 1974 attendance figures for the Michigan state park system. The system is administratively divided into three regions which are coterminous with the Upper Peninsula and the northern and southern halves of the Lower Michigan Peninsula. (See Map 8) Statewide, the total 1974 attendance decreased 1.9% from 1973. This can be partially attributed to bad weather, but even more to the uncertainty of gasoline supplies and the resultant partial decline in vacationing.

It is interesting to note, however, that the decrease was distributed unequally throughout the state park system. Region III, which contains the vast majority of people in the state, experienced a slight decrease, -0.1%, in attendance at Region III parks. Region I parks, heavily utilized by out-of-region users, experienced the greatest decline, a substantial 8.2% decrease. Region I lies the greatest distance from heavily populated southern Michigan, Region III. Region II lies within the extremes in both the percentage decrease in its park attendance and in distance from the major market to the south. Its decrease of 2.5% was less than in Region I, but more than in Region III. This information would seem to indicate that the energy crisis highlighted the effects of proximity to market as a factor in recreational demand. Those parks lying closest to major centers of population experienced only a very slight decrease in attendance while those parks located farther from the major markets incurred a considerable decrease in park attendance. (See Table 18)

The market area for the Grand Traverse Islands has been defined in a number of ways. The 1968 unofficial Bureau of Outdoor Recreation report on these islands viewed the islands' principal market as all of the counties lying within a

<sup>16</sup> U.S. Department of the Interior, Bureau of Outdoor Recreation, (unofficial) Green Bay Islands Michigan and Wisconsin (1968), p. 51.



Map 8

MICHIGAN PARK ADMINISTRATION AREAS

SOURCE: Michigan Dept. of Natural Resources

Table 18

Change in Michigan State Park Attendance 1973-74

	No. of Parks	Acres in Parks	Regional Pop.	'74 Park Attendance	% Change in Attendance 1973-74
Region I Upper Peninsula	16	89,097	304,347	2,238,516	-8.2
Region II Northern Lower Peninsula	31	37,994	762,142	5,688,867	-2.5
Region III Southern Lower Peninsula	33	89,866	7,808,594	11,558,541	-0.1
<b>MICHIGAN TOTALS</b>	<b>80</b>	<b>216,957</b>	<b>8,875,083</b>	<b>19,485,924</b>	<b>-1.9</b>

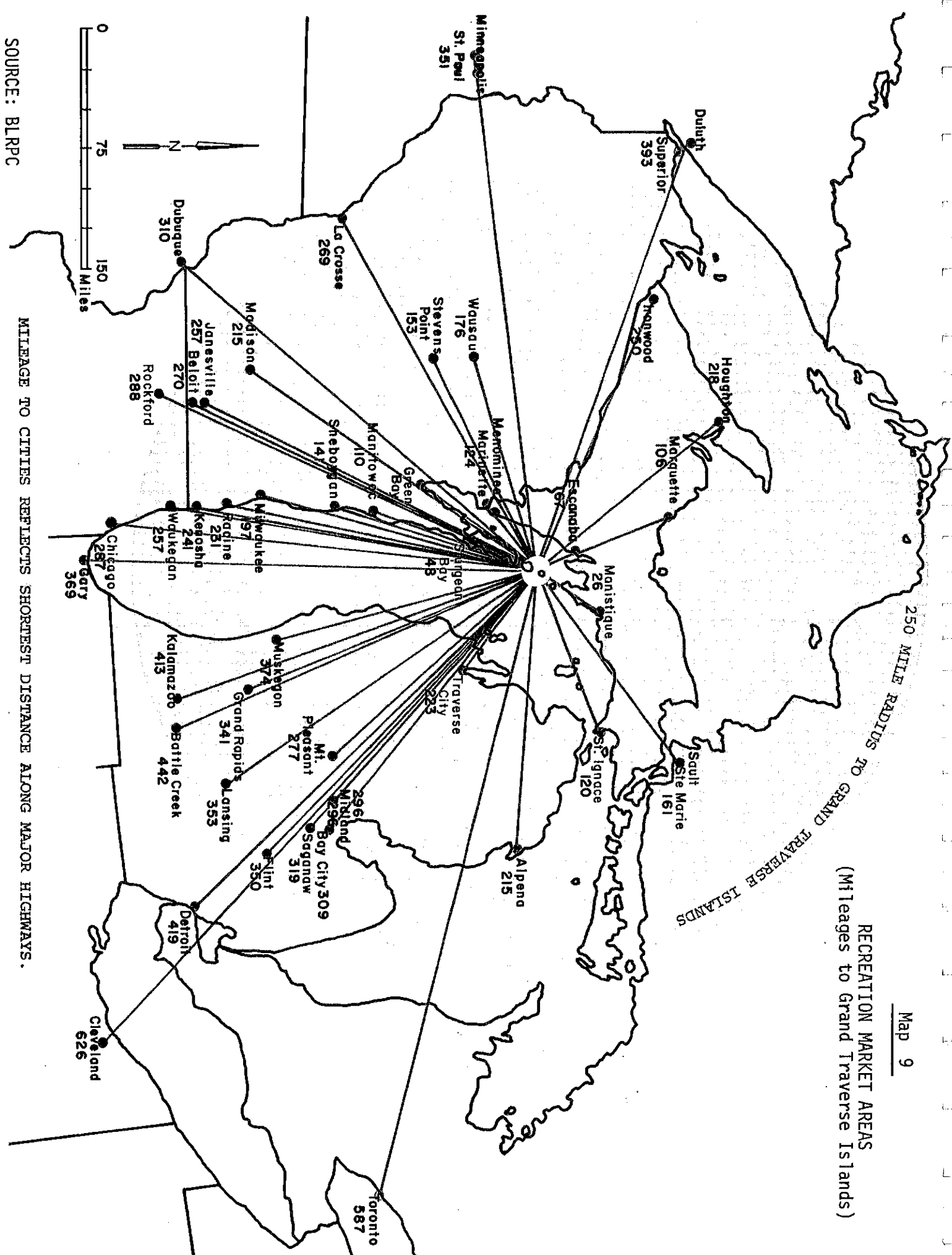
Source: Michigan Department of Natural Resources, Parks Division, BLRPC

250 mile radius, while the Upper Great Lakes Regional Commission often utilizes a 275 mile radius in recreation market delineation. Clearly, either figure encompasses a substantial and growing market. Using the BOR's 250 mile radius the market is comprised of virtually the entire State of Wisconsin, all but 10 counties in southeastern Michigan, and heavily urbanized northeastern Illinois and northwestern Indiana. (See Map 9) The 1960 population of this market was 14,151, 306, a figure which was surpassed by the 1970 figure of 17,233,652, and is undoubtedly close to 20,000,000 today. Within this market area are 18 Standard Metropolitan Statistical Areas, though none are within 50 miles. The 18 SMSA's had a 1970 population of 12,537,716. While all these figures represent only a potential market, it would appear to be a lucrative one if it can be tapped.

The 1974 Delta County Comprehensive Plan states that the majority of tourists currently visiting the county come from lower Michigan, Wisconsin, Ohio and Illinois, respectively. The University of Wisconsin Recreation Resources Center has studied origin-destination patterns of tourists visiting the Upper Great Lakes region and found that most vacationers in northern Wisconsin are from Wisconsin, Illinois, and Minnesota. Both findings appear to indicate that the proximity to market and the lack of intervening opportunities may be more important as indicators of expected recreation use, than any arbitrarily defined market radius. Both Ohio and Minnesota lie totally outside any 250 mile radius from either Delta County or Door County, yet both are major market segments which utilize recreation facilities in these two counties. The potential market population which lies within a 250 mile radius of the Grand Traverse Islands (17,233,652) may therefore be conservative.

A second method of estimating demand for recreation resources would be to look at comparable parks located in this region. Table 19 describes attendance at seven parks in northern Wisconsin and in the Upper Peninsula of Michigan which may be of use in evaluating potential demand.

RECREATION MARKET AREAS  
(Mileages to Grand Traverse Islands)



SOURCE: BLRPC

MILEAGE TO CITIES REFLECTS SHORTEST DISTANCE ALONG MAJOR HIGHWAYS.



Table 19

1974 Attendance at Certain Upper Great Lakes Region Parks

Name	Ownership	Type of Park	Acres	1974 Attendance*	Average Annual Increase in Attendance 1967-74
Peninsula	Wisconsin	Recreation	3,763	745,703	8%
Newport	Wisconsin	Natural	1,991	59,759	10%
Rock Island	Wisconsin	Natural	777	21,991	19%
Apostle Islands	United States	Recreation	42,000	25,559	NA
Isle Royale	United States	Natural	539,498	13,964	7%
Porcupine Mts.	Michigan	Natural	58,329	273,829	6%
Fayette	Michigan	Historical	171	99,360	5%

\* Attendance is defined as a visit by one person for any length of time

Source: Michigan DNR, Wisconsin DNR, National Park Service, BLRPC

While care must be taken in drawing conclusions from Table 19, some inferences can be made. The park with the largest attendance, Peninsula State Park, is one of the smaller parks, but it is highly developed for recreational use and perhaps most importantly, it is closest to the major markets of Milwaukee and Chicago. Isle Royale National Park is the largest park of those examined but received the least amount of visitation owing in part to the remoteness and cost of attaining access to this wilderness park. Rock Island State Park, a Grand Traverse Island, experienced the greatest increase in visitation, a 19% average annual increase from 1967-1974. Noteworthy is the fact that all of the parks have experienced general increases in annual visitation, indicative of the growing importance of existing recreation areas and the potential growing demand for additional recreational land beyond those areas which have already been set aside for such purposes.

Another way of looking at demand would be to investigate the current amount of recreational use which the islands receive. At present there is no reliable data which can be used with certainty for the Michigan portion of the Grand Traverse Islands. No public access is available, no recreation facilities are present, and little publicity has been generated. There is evidence of some camping activities on some of the Michigan islands, and local residents have indicated that the islands do lend themselves to boating, fishing, and hunting. Fayette State Park, located to the north on the Garden Peninsula, received a record 118,798 visitors in 1975 and many boaters visited Snail Shell Harbor, a natural harbor within the park. Overnight stays by transient boaters at Fayette have increased at an annual rate of 34% since statistics on this were first kept in 1972.<sup>17</sup> A visitors log at the U.S. Coast Guard Station on St. Martin Island indicated that over 200 people had registered during the period from April to September of 1975.

Recreational use of the Wisconsin islands is easier to analyze in that visitor statistics are available for Rock Island State Park and for the Washington Island Ferry Line, which provides transportation to Washington Island for visitors going to either Washington or Rock Islands.

Rock Island State Park had 21,991 visitors in 1974. This figure represents a threefold increase in annual visitation since the park's creation in 1965. Rock Island State Park was not designed as a highly developed park but as rather a limited-use wilderness type park. Only 40 primitive campsites exist, and the park has been at capacity on numerous weekends during the summer months.

The Washington Island Ferry Line provides regularly scheduled car and passenger ferry service from Gills Rock, Wisconsin to Washington Island. The ferry operates year-round but the bulk of its traffic is carried during the summer months with August, July, September, and June predominating in the number of passengers carried. Annual statistics for this four month period, shown in Table 20, serve to illustrate the growing demand for access to Washington Island.

<sup>17</sup> Provided by James Kent, Superintendent, Fayette State Park

Table 20

Washington Island Ferry Passengers

Year	Four Month <sup>1</sup> Total Passenger Crossing	<sup>2</sup> No. of Occasions	No. of <sup>3</sup> Recreation Visitors	No. of <sup>4</sup> Recreation Visitor Days
1960	32,314	16,559	14,541	29,082
1963	39,002	19,501	17,551	35,102
1967	50,680	25,340	22,806	45,612
1968	57,719	28,860	25,974	51,948
1969	71,661	35,830	32,247	64,494
1970	78,876	39,438	35,494	70,988
1971	75,935	38,467	34,620	69,240
1972	77,664	38,832	34,949	69,898
1973	85,730	42,865	38,579	77,158
1974	97,069	48,555	43,700	87,400
1975	105,673	52,836	47,553	95,105

<sup>1</sup> Total number of passengers carried in June, July, August, and September.

<sup>2</sup> Total number of passengers divided by two to eliminate round trips.

<sup>3</sup> BOR estimate of 90% of ferry passengers in summer being for recreation.

<sup>4</sup> Assumed average length of stay per recreation visitor is two days.

Source: U.S. Dept. of Interior, BOR, Washington Island Ferry Line, Inc.; and BLRPC

The number of recreation visitors has increased at an average annual rate of 10% from 1967-1974, doubling in the last eight years and tripling in the last fifteen. It might also be noted that visitation did not seem greatly affected by the gasoline shortage during 1974. This is possibly due to the islands' fortunate location with respect to the Chicago - Milwaukee market. More people may have visited Washington Island during 1974 as a result of the energy crisis, since the number of passenger crossings was up, and it is relatively near this large market. Fayette State Park, which draws heavily from markets farther away in Michigan and Ohio, experienced an 11% decrease in attendance from 1973-1974, whereas Washington Island was visited by a record 43,700 visitors in 1974, up 13% from 1973.

The number of hunting and fishing licenses sold is generally a stable indicator of the continued increased demand for specific recreation activities. While the comparison between Michigan and Wisconsin is tenuous since different license classifications and different fee schedules are utilized, the general trends in both states point to increasing demand for both activities. In many cases the demand is increasing at a faster rate than the rate of population increase within the state. Michigan Resident Fishing Licenses, for example, rose from

709,536 to 871,557 from 1967 to 1974, a gain of 22.8%.<sup>18</sup> Hunting licenses also rose, albeit much more slowly, but this is due in part to a desire by the state to limit the number of licenses to reduce hunting pressure. Wisconsin Resident Fishing Licenses increased by 5% from 1970 to 1974 and Resident Deer Licenses rose from 487,782 to 548,788, a gain of 12.5%.<sup>19</sup> During this same four year period, the state population increased from 4,417,821 to 4,586,061, a gain of only 3.8%. Clearly there is a demand for these forms of recreation, and that demand is growing.

The increasing number of boats registered in Michigan and Wisconsin also provides an indication of the growing demand for water-based recreation, particularly recreational boating. While comparison between the two states is again difficult due to varying methods of data collection, both states exhibit upward trends in boat registration. In Michigan, the number of registered boats increased from 358,997 in 1968 to 535,555 in 1974, an increase of 49%.<sup>20</sup> In Wisconsin, where more detailed statistics were available, the figures indicate substantial increases in the number of registered boats of all kind, between 1968 and 1974, as shown in Table 21.

Table 21

Wisconsin Boating Registration Certificates\*

	1968	1971	1974	1968-1974
Type of Boats				
Outboards:				
Under 16'	242,111	268,057	292,133	21%
16-25'	47,104	54,574	67,075	42%
26-39'	884	898	1,102	25%
40-64'	48	73	86	79%
65'+	10	8	13	30%
All Sailboats	6,760	8,102	10,027	48%
All Inboards	6,040	9,664	12,745	111%
TOTAL	302,957	341,376	383,181	26%

\* All motorboats and sailboats over 12 feet in length are required to be registered. The figures indicate the total number of valid state certificates outstanding at the date indicated.

Source: Wisconsin Department of Natural Resources and BLRPC

<sup>18</sup> Michigan Department of Natural Resources

<sup>19</sup> Wisconsin Department of Natural Resources

<sup>20</sup> Michigan Department of State

Data assembled in the Great Lakes Basin Framework Study, Recreational Boating, provides a useful source of boating information. The States of Michigan, Minnesota, and Wisconsin contain 22% of the population of the eight Great Lake States, but 50% of the registered boats.<sup>21</sup> While these three states contain thousands of inland lakes, the resident demand for recreational boating on inland waters, coupled with the demands placed upon them by non-residents, is sufficiently great to have fostered a number of state programs which seek to divert some of this demand to the Great Lakes themselves. From available data, Recreational Boating assumes that 30% of the boats throughout the Great Lakes Basin utilize the Great Lakes for recreational boating while the remaining 70% use inland waters. This imbalance can be partially alleviated if harbors of refuge can be constructed to facilitate the use of Great Lakes waters by smaller craft. While most of the existing use of the Great Lakes by smaller craft occurs within waters adjacent to existing harbors, the lack of existing public docking facilities, available vehicle and trailer parking areas, and inadequately spaced harbors of refuge minimizes the amount of use which the Great Lakes presently receive.

The Michigan State Waterways Commission, Department of Natural Resources, is pursuing a program of constructing harbors of refuge at 15-mile and 30-mile intervals along its Great Lakes shoreline to facilitate increased recreational boating on the Great Lakes and reduce the recreational boating pressure on inland waters. This policy would greatly contribute to the vitality and feasibility of a Grand Traverse Islands Park, since no boating facilities presently exist in the Michigan portion of the island chain. Harbors in both states in areas adjacent to the Grand Traverse Islands would enhance boater safety.

A number of projections in the growth of boat registrations are made in the Great Lakes Basin Framework Study. Three projections, each having a different set of assumptions, are used here. Projection one, utilizing national trends in boat registrations and a Bureau of Outdoor Recreation growth index, projects an increase of 41% in the number of boats registered from the 1968 base year to 1980, and an 81% increase from 1980 to the year 2000. A second projection uses the existing boat registrations as a constant proportion of population size, and projects boating increases in relation to population projections. Here too, the expected increases in the number of registered boats is substantial. A third projection looks at the expected growth in recreational boat registrations irrespective of population increases, and assumes no increase in the supply of boating waters. Even here, a 4% increase is foreseen by 1980. (See Table 22)

<sup>21</sup> Great Lakes Basin Framework Study Appendix R9, Recreational Boating, p. 5.

Table 22

Registered Boats within Great Lakes Basin (1,000s)

Projection	1968	1980	% Change 1968-1980	2000	% Change 1980-2000
I	922	1,297	41%	2,348	81%
II	922	1,121	22%	1,378	28%
III	922	960	4%	1,002	4%

Source: Great Lakes Basin Framework Study Appendix R9, Recreational Boating, and BLRPC

From the above information a number of conclusions can be drawn. First, the demand for recreational boating is increasing for all types and sizes of boats. Second, although smaller craft comprise the vast majority of registered and nonregistered boats (approximately 95% of all recreational boats are 20 feet or under)<sup>22</sup> their use on the Great Lakes is limited by the lack of adequate shore related facilities. If harbors of refuge and marina facilities are constructed, smaller craft will have vastly increased opportunities for recreational boating on the Great Lakes. The amount of use which the Grand Traverse Islands receive will be at least partially dependent on the nature and number of boating facilities both on and in areas adjacent to the Grand Traverse Islands.

The traffic counts on area highways listed in the Transportation section, provide a poor index of the potential visitation to these islands. This is partly because highway traffic counts are adjusted to annual averages which minimize the often substantial dichotomy between summer and winter traffic volumes in recreation areas. Closer analysis reveals other factors which deserve mention. The recreation market for these counties which exists at present is quite widespread. Both counties draw visitors from many areas rather than luring people from a particular Interstate Highway exit or single urban area. While Delta County receives a sizable proportion of its total traffic volume from vehicles travelling through the county, Door County is more often a final destination for visitors. If regional transportation facilities such as Interstate 43 from Milwaukee to Green Bay and U.S. Highway 2 across the Upper Peninsula are completed, ease of access to the two peninsulas will be improved.

In the publication, Outdoor Recreation Demand Survey, outdoor activity interests of households in a nine state area were surveyed by the Recreation Resources Center of the University of Wisconsin. The findings indicate that the top eight activities in terms of recreation participation, shown in Table 23, are all feasible forms of recreation which could be undertaken in a lakeshore preserve which included the Grand Traverse Islands. For example, bicycling can take place on Washington Island, where it is already a popular activity.

<sup>22</sup> Recreational Boating, p. 43.

Table 23

Outdoor Recreation Activity Interests  
of Households in the Region

Recreation Activity	% of Households Participating (Total - 6,440 Households)
Picnicking	72%
Sightseeing	62%
Swimming	58%
Fishing	49%
Bicycling	40%
Boating	38%
Hiking	32%
Camping	26%
Horseback Riding	22%

Source: Upper Great Lakes Regional Recreation Planning Study,  
Outdoor Recreation Demand Survey, Recreation Resources  
Center, Madison, Wis., Oct. 1972, p. 44, and BLRPC

Since the top eight activities are all feasible on Washington Island, and reliable data is available for visitation to Washington and Rock Islands, projections of future visitation to these islands are made by extrapolating recent trends in annual visitation. This projection gives a general indication of the increases which are expected to occur on Washington and Rock Islands, regardless of the status of the Grand Traverse Islands. A projection of 71,500 visitors is estimated to be travelling to the islands by 1985, as shown in Table 24.

Table 24

Past and Projected Visitation to Islands\*

Annual Visitors			Projected Visitors	
Year	No. of Visitors	% Increase	Year	No. of Visitors
1959	14,903		1976	50,500
1960	14,541	-2	1977	53,000
1961	16,724	14	1978	55,000
1962	16,063	-4	1979	57,500
1963	17,551	9	1980	60,000
1964	20,910	19	1981	62,400
1965	22,842	9	1982	65,000
1966	24,379	7	1983	67,000
1967	22,806	-6	1984	69,500
1968	25,974	14	1985	71,500
1969	32,247	24		
1970	35,494	10		
1971	39,770	12		
1972	38,721	-3		
1973	44,451	15		
1974	48,672	9		
1975	53,785	11		

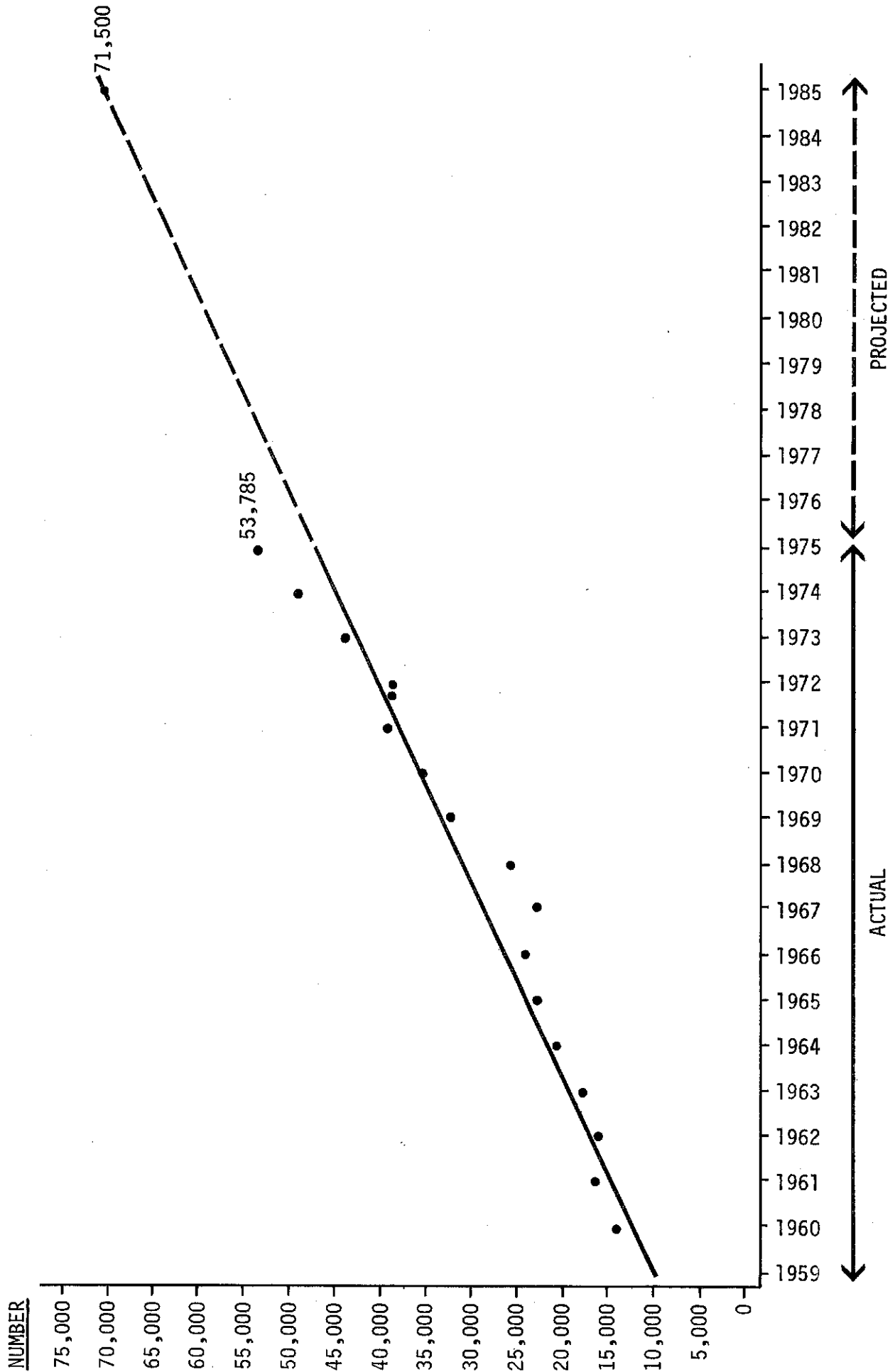
Ave. annual increase 1959-1975, 8.6%

\* These figures indicate the number of recreation passengers carried by the Washington Island Ferry, divided by two to eliminate duplication. From 1971 on, the figures also include the number of passengers carried to Washington Island by excursion boat, and to Rock Island directly from Gills Rock. Total attendance at Rock Island State Park is not included because most visitors to this park come via Washington Island, the exception being those coming directly from Gills Rock and visitors cruising to the park in their own boats. No statistics were available for the latter. The figures thus avoid double counting, but are conservative in that private boats visiting either island are not included. The projected number of visitors was determined by plotting the 1959-1975 visitation statistics and extending the general trend in visitation through 1985.

Source: Dept. of Interior, BOR, Washington Island Ferry Line, Inc., Charles Voight Marine, and BLRPC



ACTUAL AND PROJECTED VISITATION TO WASHINGTON AND ROCK ISLANDS



SOURCE: Dept. of the Interior, BOR; Washington Island Ferry Line, Inc.; Charles Voight Marine; BLRPC

## BOATING AND RELATED CONCERNS

Any proposal which calls for the development of recreation facilities for the island group must necessarily consider the needs and desires of boaters, an interest group which conceivably will benefit from such facilities and be among the chief users. Boaters must be aware of various marine hazards and consideration must be given to a number of factors which are important to boating.

Lake levels for Lake Michigan and Green Bay have a mean elevation of approximately 580 feet above sea level, with extremes of 575' and 582' occurring in the past. The lake level has annually fluctuated throughout the many years that records have been kept, from less than half a foot to over two feet per year. Short-term differences in the lake levels are due to windstorms and differential atmospheric pressure. Seasonal differences caused by varying amounts of precipitation, evaporation, and streamflow also occur.

Waves and currents on both bodies of water can be dangerous. The arrangement of the islands helps break waves from Lake Michigan, but strong winds from any direction can create extremely strong currents between some of the islands, particularly in the Porte des Morts Passage. The size of waves is related to the wind velocity and direction, the duration of the wind, the distance the wave has travelled, and the water depth. Since large waves can form on both Green Bay and Lake Michigan, caution must be exercised at all times. While boats in the 30-40 foot class are ideal for these waters, on certain days boats in the 12-20 foot class can safely navigate these waters. However, as a rule, boats under 20 feet are quite restricted as to their use on these waters, although they could be towed by larger boats (similar to arrangements made for boats journeying to Isle Royale National Park) to docking areas on some of the islands.

Data concerning marine warnings issued for this area is sparse. The U.S. Army Corps of Engineers, in its Interim Review Report on Northport Harbor, noted that severe windstorms had very seasonal characteristics. "It was found that 44 percent of these storms with winds in excess of 35 mph occurred in winter, 41 percent in spring, 2 percent in summer, and 13 percent in fall."<sup>23</sup> This information appears to indicate that pleasure boating on these waters would not be adversely affected by normal wind disturbances.

The length of the navigation season is dependent upon ice conditions. Pleasure boating usually occurs between mid-May and mid-September, averaging 120 days per year. Some boats do venture out at other times. The Washington Island Ferry Line, Inc. provides service throughout the year with infrequent interruption due to adverse weather conditions in winter. Shipping concerns in area ports are very conscious of ice conditions. Ice often covers Green Bay completely during the winter, whereas areas to the east of the Grand Traverse Islands are frequently ice free. Historical records for Menominee, Michigan, 30 miles southwest of these islands on Green Bay, indicate that the duration of the ice cover there has annually averaged 95 days, beginning about December 31 and breaking up around April 7. Annual differences in the amount of ice cover can

<sup>23</sup> U.S. Department of the Army, Chicago District, Corps of Engineers, Interim Review Report on Northport Harbor (Chicago: 1970), p. A-2.

be substantial. Ice is likely to form around Rocky, Little Summer, Summer, Rock, and Detroit Islands due to the shallow waters bordering these islands.

With respect to water quality, the waters surrounding these islands have been judged to be generally well-suited for all types of recreational use. The Great Lakes Basin Framework Study Appendix R7, Water Quality, indicated that impaired water was found in the southern one-third of Green Bay, Sturgeon Bay, Menominee-Marquette and Little Bay de Noc. Water impairment was not a problem near the Grand Traverse Islands and waters are generally quite clear, as evidenced by the skin diving activities which occur in these waters. Algae occasionally surface during the summer months, but do not significantly detract from recreation activities.

For the sake of convenience and safety it is essential that any recreational development on these islands include facilities that would assure boaters of shelter. Ideally, docking facilities should be provided at harbors of refuge. (See Table 25 and Map 10) However, the nature of the Grand Traverse Islands makes this policy difficult to implement.

There are many good bays and harbors along the Door Peninsula and the Garden Peninsula and, of course, there are excellent ports at Green Bay, Sturgeon Bay, Menominee-Marquette, and Escanaba. The facilities at the various bays vary considerably, and many of them have few services available to the public. Furthermore, the islands themselves have a decided lack of facilities. There are no protected areas or docking facilities on any of the following islands: Hog, Fish, Fisherman Shoal, Gravelly, Gull, Little Gull, and Rocky. Many of these islands lie in shoal areas and landing on the islands is occasionally difficult. The small size of many of these islands as well as their importance as wildlife breeding grounds may preclude human use of these islands. The other islands are more conducive to visitation by boaters, and visitors should be directed to exploring them.

There are no harbors on Plum, Detroit or Pilot Islands. The Coast Guard maintains docking facilities and a boathouse on Plum Island, manned during the summer months; Detroit and Pilot Islands both have very small dilapidated docks but no other facilities. Washington Island has four natural harbors: Detroit, West, Washington and Jackson. West Harbor, on the west side, and deepwater Washington Harbor, on the northwest side, have no improvements. Detroit and Jackson Harbors are federally improved light-draft harbors. Detroit Harbor is the best harbor of refuge north of Eagle Harbor (Ephraim), and there is none better going north until Escanaba or Fayette, Michigan, both over 30 miles away. The Washington Island Ferry has a dock at Detroit Harbor and utilizes the 14-foot dredged channel for passage between Washington and Detroit Islands. Fuel is available but holding tank pump-out and water facilities are limited. There are no public restrooms. Jackson Harbor lies on the northeast corner of Washington Island and provides a dock for Rock Island ferries and a limited number of other boats. There are few public facilities and no gasoline. Rock Island has a dock for a very small number of boats.

Table 25

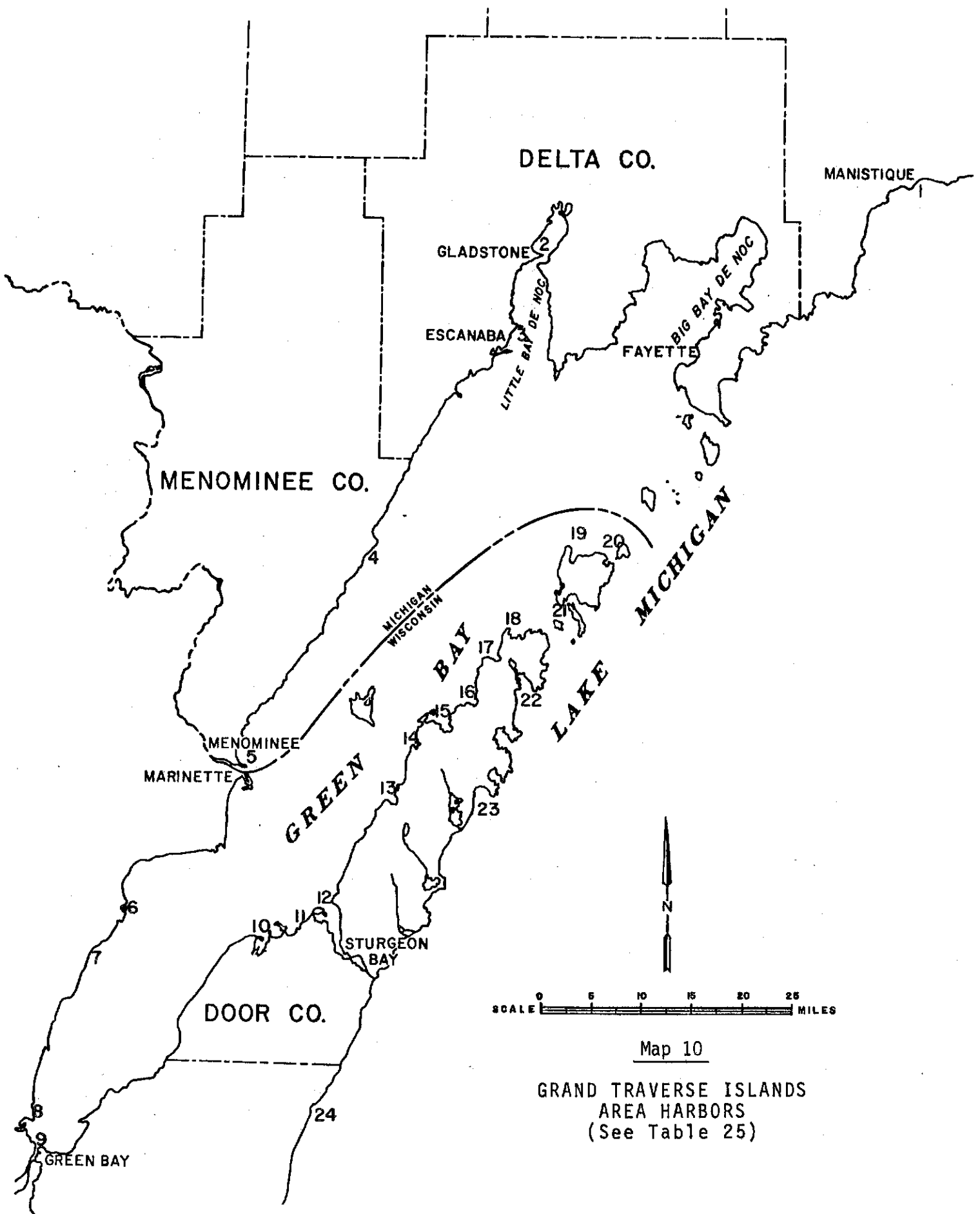
EXISTING PUBLIC AND PRIVATE  
HARBORS OF REFUGE

Location on Map 10	Name	County
1	Manistique	Schoolcraft
2	Gladstone	Delta
3	Escanaba	Delta
4	Cedar River	Menominee
5	Menominee	Menominee
6	Oconto	Oconto
7	Pensaukee	Oconto
8	Big Suamico	Brown
9	Green Bay	Brown
10	Little Sturgeon Bay	Door
11	High Cliff	Door
12	Sturgeon Bay	Door
13	Egg Harbor	Door
14	Fish Creek	Door
15	Eagle Harbor	Door
16	Sister Bay	Door
17	Ellison Bay	Door
18	Gills Rock	Door
19	Washington Harbor	Door
20	Jackson Harbor	Door
21	Detroit Harbor	Door
22	Rowleys Bay	Door
23	Baileys Harbor	Door
24	Algoma	Kewaunee

Source: Great Lakes Basin Framework Study Appendix R9,  
Recreational Boating, and BLRPC

On the Michigan side four of the islands possess some natural basis for potential docking facilities. St. Martin Island has two docks existing at present. The Coast Guard maintains a station and dock on the northeast shore, manned except during the winter months. A dock also exists on the southwest side. In tandem, these two docks would provide a good place to moor that would be shielded from all winds. As the middle island in the chain and lying the greatest distance from an existing or potential harbor, docking facilities would be needed on this island.

Summer Island offers the only genuine harbor between Jackson Harbor (Washington Island) and Sac Bay or Fayette. Summer Harbor is a beautiful but shallow harbor, with depths as shallow as 2½ feet approaching the shore. The safest entrance to this harbor is from Lake Michigan. Passage to Little Summer Island or Fairport is risky except for small boats with light drafts, as the waters are very shallow. This harbor is totally undeveloped. Little Summer Island offers some protection from winds on its northeast coastline, but the area is very marshy and too shallow for all but the smallest boats. Poverty Island has a dilapidated dock which could be improved.



Map 10  
 GRAND TRAVERSE ISLANDS  
 AREA HARBORS  
 (See Table 25)

SOURCE: Great Lakes Basin Framework Study Appendix R9, Recreational Boating and BLRPC.

While a number of state and federal programs have greatly expanded and improved recreational boating opportunities, boating on the waters adjacent to the Grand Traverse Islands is not for novices. Though the natural resource base offers substantial potential for recreational boating, the undeveloped nature of nearly all the islands means that boating here requires skill and knowledge. This area can be very hazardous to boaters owing to treacherous storms that may abruptly arise, shoal areas, rockbound coasts in many areas, cold water, lack of sheltered harbors, relatively long distances between some of the islands, and virtually no facilities for boaters. Even with the establishment of some type of lakeshore preserve for the islands, the area would still remain quite primitive with only a minimum of facilities provided. Boaters would still have to rely heavily on their own resourcefulness. The dangers of these waters would need to be emphasized for anyone not intimately familiar with this area.

The U.S. Coast Guard maintains two stations on the Grand Traverse Islands, a rescue station on Plum Island and a Lighthouse on St. Martin. Both are presently manned only during the warmer months. The Coast Guard is considering automating the light on St. Martin, and there has even been speculation that they may abandon their Plum Island station. If any type of expanded recreation facility is established here there will be a need for a permanent installation that could provide rescue operations when necessary. Although this area is not currently subjected to heavy recreational boating traffic, a large increase in the use of these waters would undoubtedly occur if any island park concept is implemented. During the last eight years alone, the Plum Island station responded to 145 cases where boating mishaps occurred.<sup>24</sup> Traverse City, Michigan, is the closest station with air rescue capability.

#### LIMITATIONS AFFECTING RECREATIONAL USES

There are a number of existing limitations which have acted to minimize the amount of use of the islands. Some of the limitations are imposed by the nature of the resource itself, others are due to institutional factors. Some of the more significant limitations include:

- 1) Lack of access - Much of the mystique and charm of the islands is due to their isolation. Unfortunately, this characteristic also makes public access a very real problem. The only form of transportation to any of the islands is by boat, with the exception of a small landing field on Washington Island for planes, which greatly limits the amount of visitation to the islands.
- 2) Unpredictable waters - Lake Michigan can be quite dangerous at times for even an experienced boater, as witnessed by the Porte des Morts (Death's Door) Passage between the Door County mainland and Plum Island. The rapidity of change in weather conditions makes boating very hazardous for craft smaller than 30-40 feet and caution must be exercised by all boaters in the area. The waters surrounding the islands are unpredictable and very shallow in numerous places and preclude the novice boater from fully participating in marine activities which might be possible in more sheltered areas.

<sup>24</sup> According to 9th District U.S. Coast Guard records.

- 3) Distance from mainland - The distance from the mainland to the islands restricts the amount of time that the casual day-user can spend on any of the islands. Island hopping in any one day must necessarily be limited by the time/distance factor and consideration must always be given to weather conditions.
- 4) Small size of islands - Eight of the islands (Rocky, Gravelly, Gull, Little Gull, Fish, Fisherman Shoal, Hog, and Pilot) are each under 15 acres in size and cannot be extensively developed for recreation purposes. If one also excludes Washington Island, the other seven islands (6,000 acres total) can only experience limited development without jeopardizing their wilderness value.
- 5) Rocky shoreline - Many of the islands possess rocky shorelines which make access difficult. In addition, some of the beaches on the islands are cobblestone beaches, which are not as attractive for sunbathing and swimming as are sand beaches.
- 6) Water temperature - The water temperature surrounding these islands peaks in August, but even at its peak, it seldom reaches 70° F., and is always lower on the Lake Michigan side of the islands. This does not rule out swimming, especially in some of the more sheltered areas, but it does inhibit many would-be swimmers.
- 7) Limited season - The length of the vacation season on these islands is from June to September because climatic conditions usually are not conducive to many recreational activities during the rest of the year. Facilities for winter visitation and winter sports activities are lacking.
- 8) Shallow soils - The natural characteristics of many of these islands, especially the shallow depths of the soil, will limit the extent and type of development that can take place, be it paths and trails, campsites, or sanitary facilities.
- 9) Lack of facilities - Owing in part to the soil characteristics and to private ownership of much of the area of the islands, very few facilities exist at present for public recreation. Rock Island State Park is, of course, an exception.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



# chapter V



## alternatives for island preservation

Photo by John Montgomery

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

## V - ALTERNATIVES FOR ISLAND PRESERVATION

### RECREATION USE OF THE ISLANDS

Given the sensitive nature of the island resource, should the Grand Traverse Islands become a public recreation area, only a limited range of uses could be permitted without destroying the natural values of the island chain. Public ownership of the islands cannot imply intensive use, but rather could provide a means to manage a fragile resource while permitting public enjoyment of the wilderness values of the islands.

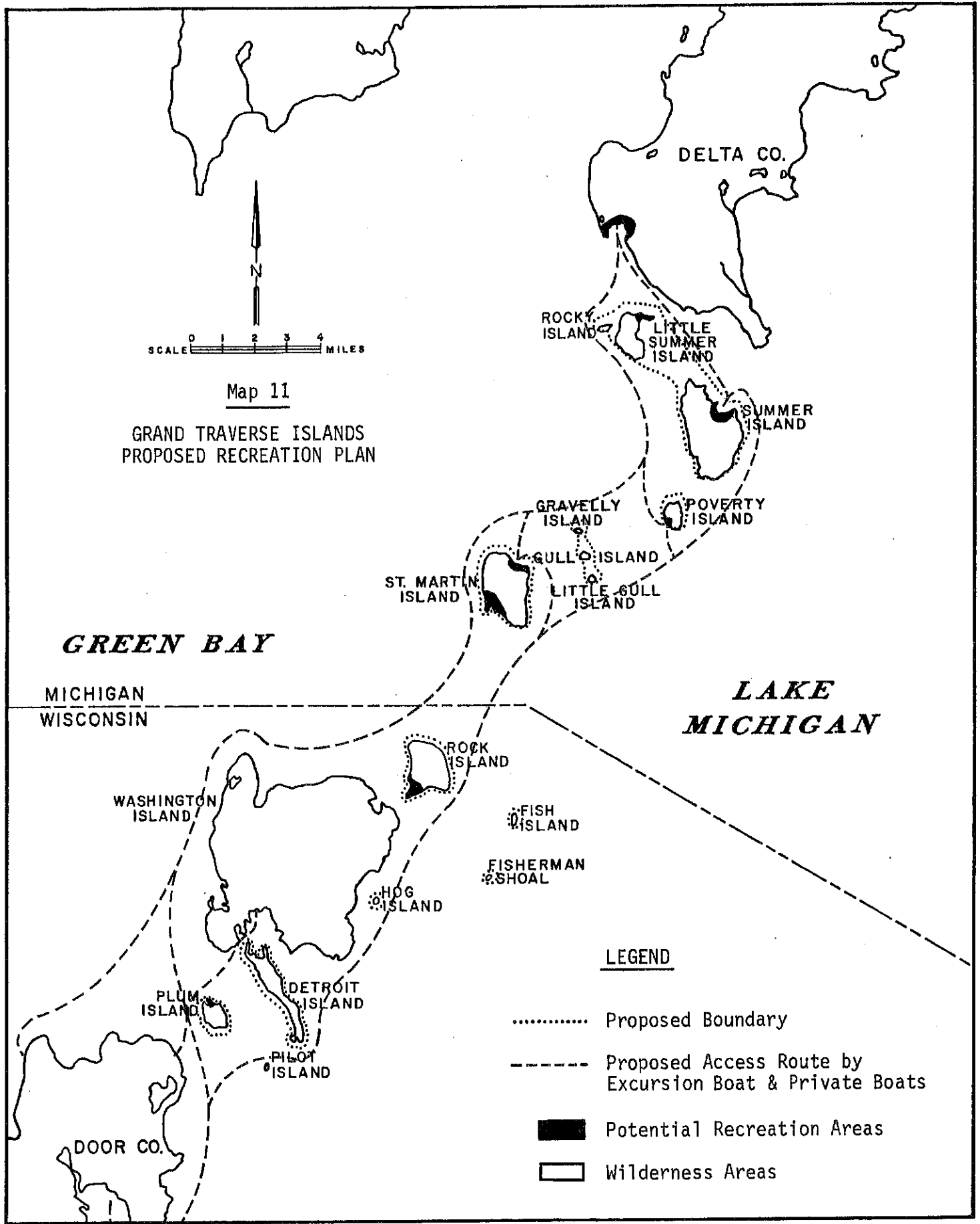
At present, many people cruise throughout the island chain without actually landing on the islands, or utilizing them in any fashion except to view the scenery. Most of the lesser islands cannot support development and visitation to them should be discouraged. Thus, it would be desirable to utilize the islands primarily as a wildlife refuge, with only limited recreation development. This would restrict recreation to wilderness camping, hiking and picnicking on the larger islands; and carefully managed hiking and picnicking on selected smaller islands. The more sensitive areas and wildlife producing areas should be reserved for sightseeing and photography from a distance. While these managed uses may have a somewhat limited appeal, they would ensure the protection of an important resource.

Some may find it more appropriate to term such an area a preserve rather than a park, or perhaps a lakeshore rather than a recreation area. Regardless of the nomenclature chosen, public use consistent with the preservation of the resource would remain the prime reason for establishing this facility, with only certain wilderness recreation areas being constructed to provide for public use.

Minimal facilities needed would include docks, primitive campsites, sanitary facilities, water pumps, and trails. These could be provided only at sites which are designated as recreation areas. No development would take place in wilderness areas. While both offer natural settings, the distinction between the two is that wilderness areas are generally wild and totally undeveloped, whereas the recreation areas would contain some works of man, such as docks, lighthouses and campsites, situated within natural surroundings.

Hog, Fish, Fisherman Shoal, Gravelly, Gull, Little Gull, and Rocky are primitive areas presently having no development, and none would be constructed as part of the park. Detroit, Plum, and Rock in Wisconsin, and St. Martin, Summer, and Poverty in Michigan, all have some developments and could thus be utilized for creation of recreation sites. They are of sufficient size that facilities could be located in natural environment areas while still maintaining the integrity of primitive environments found elsewhere on these same islands. (See Map 11) Little Summer Island does not contain development at present, but is sufficiently large to accommodate minimal recreation facilities.

Some of the existing manmade features on the islands could be retained. (See Map 12) The lighthouses on several of the islands could well serve as focal points for hikers and could possibly be nature interpretive centers. Pilot Island, for instance, while very small in size, has an interesting lighthouse which could be maintained. Several buildings exist from the former estate of Chester Thodarson on Rock Island. These have been maintained as integral parts of



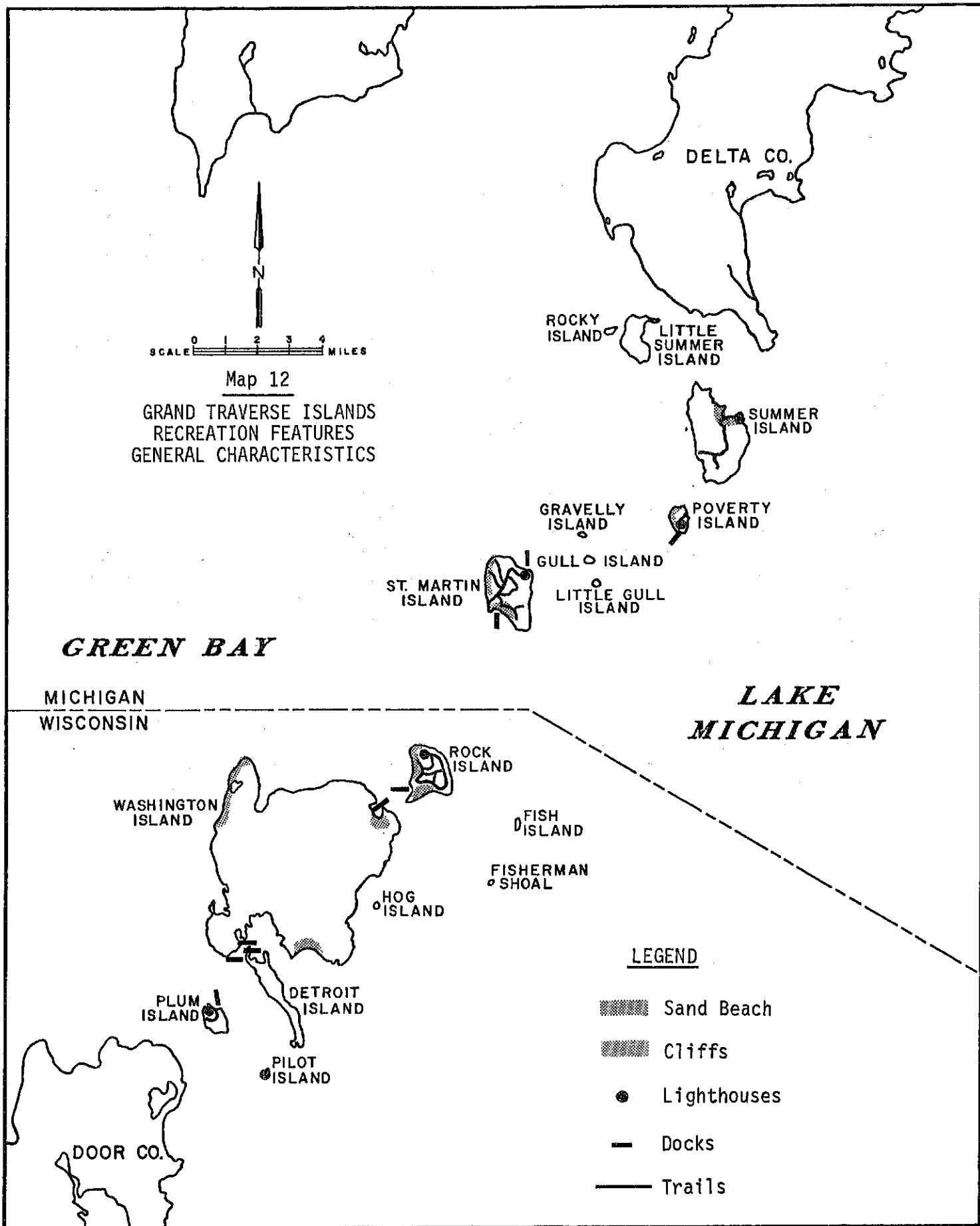
Rock Island State Park; the assembly hall, for instance, serves as a museum. Old logging trails on several islands could be utilized as hiking trails, minimizing the need to construct new ones.

Access from the Garden Peninsula could be secured by purchasing land located at Sac Bay. Facilities provided there might include a boat launching ramp, a parking lot at the ramp, a dock, campsites, picnic tables, a boathouse, maintenance shop and garage, a hiking trail, improvements to an access road and a visitor center. These would be necessary if Sac Bay were to be the main access to the islands from the State of Michigan.

Access from Wisconsin could be possible through the proposed Northport Harbor. In addition, expanded ferry service could be sought to permit visitation to other islands in addition to current Washington and Rock Island visitations. An excursion boat service could be instituted to the Michigan islands in the chain, possibly from Sac Bay, to carry wilderness campers and other visitors to the islands.

It should be emphasized again that the islands could tolerate only a limited amount of carefully managed use. Thus, while it would be important to provide access for persons who do not own boats, use of the islands by boaters and non-boaters alike would have to be regulated. Using the existing development on the islands as a focal point, it is possible to identify areas that seem best suited for recreational use. (See Map 11) A limited number of camping sites could be established near these developed focal points, with sufficient separation to enhance a primitive camping experience. In addition, existing trails which are shown on Map 12 could provide the basis for a hiking network on the major islands.

Should the decision be made to acquire the islands for a public natural reserve, it would be important to conduct a more detailed study of the characteristics of the islands to determine the suitability and carrying capacities for developed recreational areas. Only through a well designed and carefully managed program of controlled use can the islands be preserved in their natural state while providing recreational enjoyment to the public.








Map 12  
 GRAND TRAVERSE ISLANDS  
 RECREATION FEATURES  
 GENERAL CHARACTERISTICS

**GREEN BAY**

MICHIGAN  
 WISCONSIN

**LAKE MICHIGAN**

LEGEND

-  Sand Beach
-  Cliffs
-  Lighthouses
-  Docks
-  Trails

## ALTERNATIVE METHODS OF ACQUISITION

Many different methods of acquiring land on the islands for a public recreation area are possible. The alternatives listed below are guided by the following assumptions:

- That the viability and vitality of any recreation area would be greatest if all of the Grand Traverse Islands, excluding Washington Island, were included in the proposal
- That dollar costs are a prime factor where acquisition of land is contemplated, and that the acquisition costs for land needs to be justified in terms of the benefits accruing to public acquisition

Within this basic framework four alternatives were looked at:

- 1) Consolidation of all public land within the study area
- 2) Purchase of easements on private land
- 3) Fee simple purchase of all lands having significant recreation potential
- 4) Fee simple purchase of all private land within the study area

There are numerous possibilities. The alternatives presented here range from acquiring the minimum land necessary to support the concept of an islands recreation area, to total public ownership of 15 islands. All four alternatives could be regarded as either mutually exclusive or inclusive. Indeed, a pragmatic approach should be adopted so that the best features of each alternative could be explored for its possible application to any of the islands. If the first alternative is implemented, consolidating all public land; then executing the second, purchase of easements on private land, might further contribute to the concept. It may be most desirable to seek a combination, such as, consolidate all public land and purchase in fee only those lands with significant recreation potential.

### 1) Consolidation of All Public Land Within the Study Area

Fourteen percent of the acreage which comprises the Grand Traverse Islands is publicly owned at present. When Washington Island is excluded, the public land comprises 47% of the acreage of the 15 islands. This rather sizable proportion of public land necessitates asking the question: Could more recreational use be made of this public land and lessen or forego the need to purchase private land? Since public land may be transferred from one governmental agency to another without cost, it should be possible to establish some type of recreation area designation on the existing public lands, without incurring any acquisition costs.

Table 26

Public Land Within the Grand Traverse Islands

<u>Michigan</u>	<u>Public Acres</u>	<u>Owner/Administrator</u>	<u>Present Recreational Use</u>
Little Summer (part)	90.9	Mich./DNR (Forestry)	Insignificant
Poverty	192.0	U.S.	Insignificant
St. Martin (part)	34.4	U.S./Coast Guard	Slight
Summer (part)	1,337.9	Mich./DNR (Forestry)	Slight, hunting
	<u>1,655.2</u>		
<u>Wisconsin</u>	<u>Public Acres</u>	<u>Owner/Administrator</u>	<u>Present Recreational Use</u>
Fish	1.5	Undetermined	Insignificant
Fisherman Shoal	1.0	Undetermined	Insignificant
Hog	1.9	U.S./Fish and Wildlife Service	Insignificant, Nat. Wildlife Refuge
Pilot	3.7	U.S./Coast Guard	Slight
Plum	266.0	U.S./Coast Guard	Slight
Rock	906.7	777.37 Wis./DNR (Parks)	Moderate to Significant
Washington (part)	85.7	129.37 U.S. County, Town	40 primitive campsites Picnicking, Swimming
	<u>1,266.5</u>		
<b>TOTAL</b>	<b>2,921.7</b>		

Source: CUPPAD and BLRPC

Other public lands within the study area include 65.85 acres at Sac Bay, Michigan, a Delta County Park, and six local parks on Washington Island having a total area of 85.7 acres. The public land in Sac Bay could probably be obtained by the Michigan Department of Natural Resources and utilized as part of an interstate recreation area. The federal government has indicated a willingness to transfer surplus and underutilized real property to state and local governments for park and recreation purposes at no cost, if the recipient will assume responsibility for developing and maintaining the area.<sup>25</sup> On the Michigan islands, 39% of the total acreage is in public ownership. Nearly all of this area is contained within three large islands; all of Poverty Island (U.S.), and parts of Summer and Little Summer Islands (Bay de Noc State Forest). Michigan State Forests have long applied a multiple use policy for these forest resources. Camping, picnicking, boating, and other recreational activities are legitimate uses within this multiple-use concept. Although four camping areas totaling 62 campsites are found within the Michigan Bay de Noc State Forest, only one is within Delta County, and that 18-unit campground (Portage Bay) is not located on the islands.

Access is a problem for recreationists, but people are going to the islands in pursuit of recreation in spite of the lack of facilities. Docking is

<sup>25</sup> BOR Report No. 30 Winter (1973-1974).



hazardous, no pump-out facilities exist for boat holding tanks, nor are there any toilets, camping areas, drinking wells, or harbors of refuge; yet people continue to use the islands. The St. Martin Coast Guard Station briefly hosted at least 204 people who registered at this station between April and September of 1975. The officer-in-charge estimated this number to be only one-third of the number of people who actually landed on the island during that period, even though St. Martin is the most remote island in the chain.

On all the islands which exhibit mixed ownership, it is a difficult task to discern where the public land ends and the private land begins. Since only Rock Island is being managed for recreation, people are camping wherever it is convenient on the other islands, often disregarding private property. This has occurred even on Washington Island.

There are six publicly owned islands within the Wisconsin portion of this chain. Here too, better use could be made of some of the existing public lands. Hog, a National Wildlife Refuge, Fish, and Fisherman Shoal, have low recreation potential because they perform crucial functions with respect to waterfowl production. These islands are important nesting grounds and may well best serve the public as natural wildlife production areas. Their contribution in providing wildlife habitat adds to a visitor's experience on the other islands, and these islands produce waterfowl which many parts of the Midwest can appreciate.

Plum Island is large enough, with 265 acres, to provide primitive campsites similar to those on Rock Island. The Coast Guard has been considering abandoning their station on Plum Island. Whether or not ownership is relinquished, most of the island could still be utilized for low-density recreation. The Coast Guard could limit their holdings to the extreme northern portion of the island, similar to St. Martin Island, and allow the remainder of the island to be available for recreation.

Primitive camping at Rock Island has been so popular that the park is occasionally at capacity during the summer months. A demand for this type of camping is obviously present. Perhaps the success of Rock Island State Park means that additional primitive campsites should be developed on other islands, particularly the larger public islands, to avoid over-development of Rock Island.

A management plan aimed at providing minimal (but essential) facilities on the islands could be formulated which would recognize the existing public land and assign additional use to it. This strategy would not entail acquisition costs, nor would it remove private land from the tax rolls.

## 2) Purchase of Easements on Private Land\*

The expenditure of considerable sums of money to purchase land having a restricted use recreation potential may not be justifiable in terms of a

\* Much of this material was derived from Bronstein, Daniel A. and Leighty, Leighton L. Acquisition of Less Than Fee Simple Interests in Michigan Shorelands - A Legal Analysis, Dept. of Resource Development, Michigan State University, 1975.

cost/benefit ratio. Therefore, it may be worthwhile to seek ways to control development on these lands without having to purchase the total land area in fee simple. It may be desirable to leave the lands in private ownership and purchase easements which would allow uses that are compatible with, or facilitate recreational use of the Grand Traverse Islands.

There are two approaches by which easements could be utilized:

- A) A state could purchase an affirmative easement which would permit public access or some other use, such as hunting on privately owned land.
- B) A state could purchase a negative easement which would limit the rights of a land owner to exercise an otherwise legal act, such as construct a house on the property.

The former seeks to secure land for a specific public use while the latter seeks to protect land from a specific private use. Both types of easements can be used in combination, but there must always be a public purpose which justifies purchasing the easement.

Easements can become very entangled in legal terminology, so the discussion will be limited to a general application of the concept to the Grand Traverse Islands. The use of easements allows private owners to retain their property while providing some tangible benefit to the public, be it a specific recreation use or an aesthetic function such as preserving a scenic vista from being degraded by billboards. By permitting private retention of the land the property remains on the tax rolls, although the valuation of the land is usually somewhat diminished, particularly when negative easements are purchased. This means that the tax burden of the individual owner should be lessened and when selling the property, the valuation is also lower, owing to the restriction placed upon the property by the negative easement.

There are a number of different easements, development easements, conservation easements, and scenic easements, which could be utilized. All are specific types of land use controls which place specific restrictions on private property for a public purpose. It might be desirable to purchase easements on private land which adjoins public land. This would permit greater use of those islands with a high recreation potential, Little Summer, Summer, and St. Martin, without having to purchase the land in fee simple. Combining specific easements to permit certain recreational uses while limiting development might also be desirable.

There are certain areas of special recreational importance which merit public use. For example, if only public land is used for a recreation facility, it may still be desirable to obtain at least an affirmative easement on the area bordering Summer Harbor on Summer Island, so that this area could be utilized by visiting boaters as an access point to the public land on Summer Island. Summer Harbor is not within the Bay de Noc State Forest, although it is in close proximity. A specific management plan could be formulated to identify areas which ought to be included as part of any park, regardless of the existing ownership.

An often troublesome aspect of easements is determining the value of an easement. How much is the value of a specific property diminished as a result of the easement? This should be possible to determine by calculating

'...the difference in the market value of the land free of the easement and its market value burdened by the easement,' but (it) is considerably more difficult to determine in practice. No more difficult, however, than any legal problem involving land valuation, such as condemnation cases.<sup>26</sup>

The purchase of an easement will generally cost less than purchasing the fee, but just how much less will often have to be decided on each individual case. Clearly the greater the restrictions on the use of the private land, the greater the cost of the easement.

Use of easements would perhaps best apply to seven Michigan islands: Gravelly; Gull; Little Gull; Little Summer; Rocky; St. Martin; and Summer; and to the southern half of Detroit Island in Wisconsin. Purchasing these easements would allow private individuals to keep their land, though the use of their land would be restricted. The private land would then be a useful addition to the public land for recreational purposes in that it will prevent development which is incompatible with wilderness values and would permit public access across private land in some locations.

All campsites, sanitary facilities, and picnic areas should be developed on the public land under this arrangement. Private land would be utilized only for access from docking areas, where feasible.

Implementing this acquisition alternative might prove to be difficult since easements have not been used extensively in either state. Most of the easements in Wisconsin are scenic easements along highways which regulate roadside areas from development. Nevertheless, use of easements is a definite alternative. If, however, the cost of the easements approaches that of acquiring the fee, it might be more beneficial to purchase the land outright.

### 3) Fee Simple Purchase of all Lands Having Significant Recreation Potential

The rationale for this alternative is that priorities should be set for acquisition dollars and expenditures should be justified in terms of the amount of use the purchased area could receive. It would logically be an additional step to follow if acquisition beyond the existing public lands is considered desirable.

Recreation potential is determined by examining such factors as island size, accessibility, soil capability for sanitary facilities, the natural features which are present, and the need for acquiring certain parcels of land. In Michigan, three islands have a potential far above the others. Summer, Little Summer, and St. Martin possess the greatest diversity of landscapes, are the largest islands, are most accessible in terms of distance or in having possible docking areas, and have the greatest areal extent of soils

<sup>26</sup> Bronstein and Leighty, p. 16.

which can assimilate human wastes and support primitive development. Natural limitations on use would make it difficult to justify purchasing the lesser islands first. These three islands also contain a large amount of public land and purchasing the remaining private land would facilitate better management of these islands as whole units. (See Table 27) Along with Poverty Island, already in public ownership, the total area of the four islands would comprise well over 90% of the Michigan islands total acreage.

Table 27

Islands of High Recreational Value

Island	Public Acres	Private Acres	Total Acres
Little Summer	90.90	399.65	490.55
St. Martin	34.40	1,292.70	1,327.10
Summer	1,337.62	831.80	2,169.42
Sac Bay Area	67.55	96.13	163.68
			<u>4,150.75</u>
Boyer Bluff (Washington Island)	0.00	134.48	134.48
Detroit	0.00	649.21	649.21
			<u>783.69</u>
GRAND TOTAL			4,934.44

Source: CUPPAD and BLRPC

Consideration must also be given to securing land on the Michigan mainland to ensure public access to the islands. The Michigan Department of Natural Resources maintains three public boat launching ramps on the Garden Peninsula at Garden, Fayette, and at Portage Bay. However, none are within 10 miles of the potential harbor of refuge on Summer island. There is a need for a good harbor of refuge on this peninsula in close proximity to the islands. There are four areas which have high recreational value by virtue of their potential capacity to provide public access to the islands. All are on the western side of the Garden Peninsula, adjacent to Big Bay de Noc.

Fayette State Park is 14 miles north of Summer Island, but is included here because the area is already in public ownership and Snail Shell Harbor, located within the park, is the finest natural harbor north of Detroit Harbor on Washington Island. In keeping with the historical theme of this 19th Century village, few facilities are available for boaters. No holding tank pump outs are available, nor is gasoline available. The park master plan makes no provision for them in the future. Docking and suitable water depths are available, and water and toilets are found at the park visitor center near the harbor. Many boaters visit the park during the summer, cruising over from Escanaba for the day or docking overnight. Overnight

boat camps in this harbor totalled 468 in 1975, with 3,340 people included in this count.<sup>27</sup> Snail Shell is an excellent harbor of refuge, but its utility may be limited by its distance from the islands. A public boat launching ramp exists within the park, although not at Snail Shell Harbor.

Burnt Bluff is a striking example of the Niagara Escarpment, and is the highest point on Green Bay and Big Bay de Noc, jutting out 230 feet above the water. A private dock and breakwater is located here, with deep water available. Anchorage is limited. There is no public access to the water from the Garden Peninsula at Burnt Bluff, nor are any public facilities available. The dock is 10 miles from Summer Island. All surrounding lands are private.

Sac Bay is a secluded, mile-wide natural harbor having shoal water deep within the bay. On the east shore of the bay is an old stone pier with depths of up to six feet available for larger boats. The shoreline around the bay is heavily wooded, though some development has taken place. Sac Bay County Park, 67.5 acres in size, is located on the western promontory of the bay. Public access is available, but the water is extremely shallow for launching all but the smallest craft. This park presently contains public toilets, picnic tables, and grills. Camping is not permitted. Sac Bay is six miles from Summer Island.

Fairport is a small fishing village with a population of 115 located at the southern tip of the Garden Peninsula, directly opposite Little Summer Island, one mile to the west. Summer Harbor on Summer Island is three miles away. A number of fishermen's docks are present. Water is extremely shallow between Fairport and both Little Summer and Summer Islands. Depths to seven feet exist off the fishermen's docks but the passage is a difficult one for anyone not familiar with the area. Fairport is sheltered from most winds by the Garden Peninsula itself and by the Michigan islands. Holding tank pump outs, sanitary facilities, water, and gas are not available.

One of these four areas could be developed for public use as a docking and boat launching area. Fayette would be an excellent choice except that it is not within reasonable distance of the islands, although many desirable features are present - camping, docks, public access, toilets. Burnt Bluff is privately owned and has a number of natural constraints on development. It, too, is rather distant from the islands.

Sac Bay or Fairport would be the logical sites for the development of boater facilities. Fairport's proximity to the islands makes it an attractive candidate for such facilities. A breakwater and new docks for Fairport would be very beneficial to both local fishermen and to recreational boaters. However, increased vehicle traffic and visitors may easily overwhelm the village's ability to handle the additional number of services which might be required. Sac Bay may be a more desirable choice. Part of Sac Bay is already a park and the immediate area around the present pier could be further developed to permit greater use by the public as a point of access to the islands.

<sup>27</sup> Provided by James Kent, Superintendent, Fayette State Park.

In Wisconsin, Detroit Island could be acquired to preclude further second home development and to provide an additional unit for the island recreation concept. (See Table 27) It is close enough to Detroit Harbor on Washington Island and its sheltered waters that it permits access from Washington Island by smaller craft under 20 feet in length.

Four modern homes have been constructed on Detroit Island which have been unable to obtain septic tank permits because of soil limitations. Soils on this island generally cannot assimilate septic tank effluent, and the fissured nature of the bedrock makes contamination of the ground water supply a real possibility. Problems with sanitary facilities, land surveys, and high taxes have clouded the validity of the assessed valuation of the island. It is quite possibly inflated, since it was calculated during a time when it seemed that substantial further residential development would take place. Continued development is questionable at this time, although the recently approved mound disposal system could be an alternative to conventional septic systems.

Boyer Bluff on Washington Island is a noteworthy feature which has been recognized as a potential scientific area by the Scientific Areas Preservation Council, Wisconsin Department of Natural Resources.<sup>28</sup> This scenic bluff is well forested and an excellent example of the Niagara Escarpment. It is the largest single natural area remaining on Washington Island, and would also be considered for public acquisition. (See Table 27)

Public access to the islands from the Door Peninsula would be possible from at least three locations, Ellison Bay, Gills Rock, and Northport. All are located at or near the tip of the Door Peninsula in the Town of Liberty Grove.

Ellison Bay is a small unincorporated community located on Ellison Bay. A boat launching lane and dock are available for transient boats. Deep water is available as are marine services. Two shortcomings of this location are that the surrounding area is highly developed and the boat launching area somewhat constrained by this development. It is also a good distance further from Detroit Harbor, some 10 miles, than either Gills Rock or Northport. No public toilets or holding tank pump outs are available.

Gills Rock is also an unincorporated community and serves as the southern terminal of the Washington Island Ferry. Marine services are available for boaters, including a holding tank pump out. Gills Rock is even more congested than Ellison Bay, especially during the summer months. If it is to become the staging area for a major park, additional visitors may overwhelm this area. Gills Rock is five miles from Detroit Harbor. There is no public access at present.

Northport is utilized by the Washington Island Ferry from January to April because adverse ice conditions exist at Gills Rock. Northport is the closest point to any of the Wisconsin islands and is four miles from Detroit Harbor. Northport is an undeveloped area with the ferry dock being the only improvement. Northport is being considered as the location for an all-weather harbor

<sup>28</sup> Door County Outdoor Recreation Plan, 1974-1978, p. 20.

for the ferry and for recreational boats needing refuge. The U.S. Army Corps of Engineers recommended this site over Gills Rock and a proposed harbor plan which includes breakwaters, a harbor entrance channel, and a maneuver area, has been formulated. Additional facilities would be provided for boat launching, such as a parking area, toilets, etc. The Door County Board of Supervisors has endorsed the Corps' plan, as have the Wisconsin Department of Natural Resources, Wisconsin Department of Transportation, Door County Planning Department, and the Town of Washington.<sup>29</sup> Such a facility would be a decided asset to an islands recreation area.

Construction is awaiting an assurance that Door County will be able to meet its financial share in the project. Proximity to the islands and the undeveloped nature of the surrounding area gives Northport an advantage over the other two areas, offering sufficient room for all necessary facilities. Door County would assume the costs of acquiring the land necessary to execute this project, and would administer the harbor after its completion.

#### 4) Fee Simple Purchase of All Private Land Within Study Area

Total public ownership of all the Grand Traverse Islands may be a desired form of acquisition. Although this alternative is the most expensive, it would also allow the greatest leeway in planning for and managing an island recreation area, and it provides the largest number of acres for such a facility. (See Table 28) This alternative would seek to acquire all private land on the islands and additional land adjacent to the Delta County Park at Sac Bay, Michigan. A larger unit at Sac Bay encompassing all the land ringing the bay would be necessary to provide for the expected increases in visitation resulting from total public ownership of all the islands.

<sup>29</sup> *U.S. Department of the Army, Chicago District, Corps of Engineers, Northport Harbor, (Chicago: April 1970), p. 31*

Table 28

Fee Simple Purchase of all Private Land within Study Area

Island	Public Acres	Private Acres	Total Acres
Gravelly	0	3.00	3.00
Gull	0	13.53	13.53
Little Gull	0	5.25	5.25
Little Summer	90.90	399.65	490.55
Poverty	192.00	0	192.00
Rocky	0	9.70	9.70
St. Martin	34.40	1,292.70	1,327.10
Summer	1,337.62	831.80	2,169.42
Sac Bay	67.55	186.03	253.58
<b>TOTAL MICH.</b>	<b>1,722.47</b>	<b>2,741.66</b>	<b>4,464.13</b>
Detroit	0	649.21	649.21
Fish	1.50	0	1.50
Fisherman	1.00	0	1.00
Hog	1.87	0	1.87
Pilot	3.70	0	3.70
Plum	265.97	0	265.97
Rock	906.74	0	906.74
Washington*	85.70	14,352.72	14,438.42
<b>TOTAL WIS.*</b>	<b>1,266.48</b>	<b>15,001.93</b>	<b>16,268.41</b>
<b>GRAND TOTAL*</b>	<b>2,988.95</b>	<b>17,743.59</b>	<b>20,732.54</b>

\* The full assessed valuation of Washington Island comprises 94% of the total assessed valuation of the entire study area, owing to the size of the island and the degree of development which exists relative to the other islands. This development, along with its \$24,000,000 full assessed valuation, would seem to preclude it from being considered for public acquisition. Boyer Bluff, however, would still merit consideration for acquisition as a part of the islands proposal.

Source: CUPPAD and BLRPC



## ALTERNATIVE MANAGEMENT POSSIBILITIES FOR THE GRAND TRAVERSE ISLANDS

There are various alternatives available for future public recreational use of the Grand Traverse Islands. Five alternatives have been prepared for discussion which range in scope from not expanding recreation opportunities to achieving national recognition for this recreation resource. The alternatives are titled No Expanded Park, County Park, State Park, Interstate Park, and National Lakeshore.

While each alternative represents an exclusive form of use and development, there can be compromise between alternatives to obtain the best features of each alternative. None would have to include all of the islands for instance, and what is desirable for one island would not necessarily be desired for the others.

Each of the alternatives has a different set of assumptions and implications which have been examined using the following considerations:

- 1) Relative implementation costs
- 2) Resource protection
- 3) Potential for economic growth
- 4) Land use, transportation, and zoning
- 5) Property valuation and tax revenues
- 6) Demand for the alternative
- 7) Servicing demands created by the alternative
- 8) Possible changes in residents' lifestyle
- 9) Summary of relative costs and benefits

### Implications

The implications presented are general in nature, and are intended as a guide for discussion and decision making. Rather than presenting extensive detailed information, an overview of major implications has been prepared with the alternatives being presented in a fashion which simplifies comparisons.

The implications of each alternative are dealt with by examining the impact of the several alternatives on different issues faced by local governments, including: Will the alternative increase job opportunities? Will it create transportation problems? Can the required level of services be provided at the present level of taxation?

The study itself does not recommend a specific alternative. Each alternative has several merits and drawbacks. The emphasis given to the merits and drawbacks will vary according to the needs, desires, and philosophies of different people and different units of government. Thus the questions raised by each alternative are deserving of local and regional consideration.

### Geographic Application of the Alternatives and their Implications

In most cases the alternatives and their implications will be applied to the islands and the Townships of Fairbanks and Washington. The Townships of Garden and Liberty Grove will also be affected by some of the implications, and where appropriate, county-wide ramifications will also be addressed.

## Cost Estimates

Cost estimates of the alternatives have not been prepared for this report. Actual market value of the islands would depend on a variety of factors, and an estimate of their current value would have little meaning at the time of potential acquisition of any of the islands. The discussion of costs of the alternatives focuses on relative costs, which alternative would cost more, rather than presenting a specific dollar figure. A rough approximation of value in 1975 can be obtained by examining the full assessed value of the islands. These values, shown in Table 29, can be considered only an indicator of minimum value in 1975, and cannot be assumed to reflect potential purchase costs.

Table 29

### Full Assessed Value of all Private Land within Study Area

Island	Public Acres	Private Acres	Total Acres	1975 Full Assessed Value
Gravelly Gull	0	3.00	3.00	\$ 1,904
Little Gull	0	13.53	13.53	4,760
Little Summer	0	5.25	5.25	1,190
Poverty	90.90	399.65	490.55	40,222
Rocky	192.00	0	192.00	----
St. Martin	0	9.70	9.70	6,782
Summer	34.40	1,292.70	1,327.10	110,788
Sac Bay	1,337.62	831.80	2,169.42	103,054
	67.55	186.03	253.58	202,748
<b>TOTAL MICH.</b>	<b>1,722.47</b>	<b>2,741.66</b>	<b>4,464.13</b>	<b>\$471,448</b>
Detroit	0	649.21	649.21	\$ 1,161,272
Fish	1.50	0	1.50	----
Fisherman	1.00	0	1.00	----
Hog	1.87	0	1.87	----
Pilot	3.70	0	3.70	----
Plum	265.97	0	265.97	----
Rock	906.74	0	906.74	----
Washington	85.70	14,352.72	14,438.42	23,913,251
<b>TOTAL WIS.</b>	<b>1,266.48</b>	<b>15,001.93</b>	<b>16,268.41</b>	<b>\$25,074,523</b>
<b>GRAND TOTAL</b>	<b>2,988.95</b>	<b>17,743.59</b>	<b>20,732.54</b>	<b>\$25,545,971</b>

Source: CUPPAD and BLRPC

## Flexibility

While each of the alternatives could stand alone, they should not be viewed as being so rigid as to exclude compromise. Each could be modified if a pragmatic approach is adopted. Many elements of one alternative might be feasible for a second alternative. However, many legal and financial constraints cannot be divorced from the specific alternatives. A national lakeshore, for example, cannot be instituted without ultimate Congressional approval, any more than a county park could reach fruition without local support.

## NO EXPANDED PARK

The rationale behind this alternative is that a sufficient number of recreation areas already exist in this region, including Rock Island. No additional private land should be taken off the tax rolls, nor should the public sector intervene and attempt to secure more land. The resource has been protected by the existing owners and no additional protection is warranted.

### Implementation Costs

Since this alternative is compatible with present conditions and does not seek to alter the status of any of the islands, it does not require any additional legal or financial tools to be implemented. No costs are involved. Public recreation opportunities would generally be limited to Rock Island's 906 acres.

### Resource Protection

Resource protection would rest upon the general lack of public access to the islands, zoning ordinances, where existing, and individual land use decisions. Resource protection for over half the total island acreage would rest within the private sector. Protection of public land rests with the Michigan Department of Natural Resources, the U.S. Coast Guard, the Bureau of Land Management, the Fish and Wildlife Service, and the Wisconsin Department of Natural Resources. Preservation of all important wildlife habitat areas, a severe problem within the entire Great Lakes Basin, would not be assured.

### Potential for Economic Growth

Neither township has a diverse economy. Fairbanks Township has few economic activities other than farming and commercial fishing, both of which are declining. The Town of Washington is heavily dependent upon tourism at present. Private commercial investment needs to be able to receive a high return during the short tourist season in order to justify investment. For tourism to develop further, more attractions and facilities would be needed. Without increasing the number of attractions, it is doubtful that significant increases in visitation to the islands can be realized.

Potential for economic growth in both areas is limited. Beyond recreation, there are few activities offering much opportunity. Agriculture is not practicable. Woodlands on the islands vary. Many areas are scrubby, or have very dense underbrush. Much of the better forests are within public holdings which return little monies, if any, to the townships. Information from the U.S. Department of Agriculture, Soil Conservation Service, shown in Table 30, indicates that soil conditions generally preclude wood production from being an environmentally sound use on the Grand Traverse Island.

Washington and Detroit Islands have more potential for logging but added transportation costs in marketing products place all the islands at a pricing disadvantage relative to mainland areas.

Table 30

Soil Limitations for Woodland Uses

Island	Acreage	% Slight	% Moderate	% Severe
Summer	2,169	0	10.0	90.0
St. Martin	1,327	0	22.7	77.3
Little Gull	5	0	0	100
Gull	13	0	0	100
Gravelly	3	0	0	100
Little Summer	490	0	49.4	50.6
Rocky	9	0	0	100
Detroit	649	60	33.0	7

Source: CUPPAD, Soil Conservation Service and BLRPC

Encouraging retirement or second-home developments would provide local employment opportunities in construction and would increase the amount of taxable real property. No residential development has occurred on the Michigan islands, but some development has taken place around Sac Bay. Problems with access to the islands from Michigan may be limiting home construction there.

Washington Island has many seasonal and permanent residences and more can be anticipated if present trends continue. By far the largest island within the chain, Washington Island can support some additional unsewered development. Many of the lesser islands cannot. Four homes have recently been constructed on Detroit Island which have failed soil percolation tests and have not been able to obtain septic tank permits. The soils on most of the islands are not conducive to unsewered residential development. Within Door County, 70% of the soils present problems for private sewage treatment and disposal systems.<sup>30</sup> The situation throughout the islands is generally more severe, as indicated in Table 31.

<sup>30</sup> U.S. Department of Agriculture, Soil Conservation Service, Soils Interpretations: A Guide to Land Use and Conservation Planning (Lincoln, Nebraska: U.S. Dept. of Agriculture, Soil Conservation Service, 1974), p. 5.

Table 31

Soil Limitations for Residential Development

Island	Acreage	% Slight	% Moderate	% Severe
Summer	2,169	10.4	0	89.6
St. Martin	1,327	19.6	0	80.4
Little Gull	5	0	0	100
Gull	13	0	0	100
Gravelly	3	0	0	100
Little Summer	490	49.4	0	50.6
Rocky	9	0	0	100
Detroit	649	17.0	20.0	63.0

Source: CUPPAD, U.S. Dept. of Agriculture, Soil Conservation Service, and BLRPC

It would appear that both wood production and residential development offer only a very limited potential for stimulating economic growth within the two townships.

Land Use, Transportation, Zoning

Significant land use changes are not anticipated within Fairbanks Township with this alternative. Developmental pressure for either commercial or residential use of the Michigan islands is not evident. Land use on these islands should remain relatively constant without this pressure. Increasing residential development will probably occur around Sac Bay, but this may remain slight. Transportation to these islands would continue to be totally dependent upon private means of conveyance. There should be no additional burden placed upon County Highway 483 in Delta County.

Land use on Washington Island has been changing and will continue to do so. Residential, and to a lesser extent commercial uses, will occupy a greater proportion of land while farmland and forest land is reduced. If septic tank permits are granted, residential development on Detroit Island may also continue at a relatively rapid pace, as owners build on their properties. If requests for these permits are denied, no further development is likely to occur. Transportation needs for access to Washington and Rock Islands will be met by the existing ferries, whose capacity should be adequate to provide service even during peak summer periods. The road network on Washington Island is generally adequate except for peak periods when the ferries load and unload at Detroit Harbor. Detroit Harbor and Gills Rock will continue to be congested during the summer.

There is no existing zoning ordinance in effect within Fairbanks Township. This alternative will not create a situation where it would be necessary to immediately adopt a local zoning ordinance. The Town of Washington would have no new stimulus created by this alternative to revise its zoning ordinance.

## Property Valuation and Tax Revenues

Property values in both townships have been rising faster than within their respective counties as a whole. Property values at Sac Bay have increased faster than within Fairbanks Township, and have been the major factor in raising the township's proportion of full assessed value relative to that of Delta County.

The rapid increase in the full assessed value of Washington Island will likely continue, though at a slower rate. Detroit Island may fall in its full assessed value if further development is halted due to environmental considerations. If this occurs, the rate of increase in the full assessed value of the Town of Washington should be slowed further. The alternative itself will not affect recent trends in property values.

Tax revenues obtained from the Grand Traverse Islands have risen, reflecting the increase in their full assessed value. In both townships, tax revenues from the islands have contributed a growing proportion of total township tax revenues. Choosing this alternative should not alter this trend.

## Demand Generated by the Alternative

Since this alternative does not attempt to make additional island land available for recreation, or develop additional visitor facilities, no additional demand should arise beyond the existing annual rate of increase in visitation to Washington and Rock Islands. More people will "find" the Michigan islands but problems with access will keep their numbers relatively low. Since no statistics are available on their present numbers, no attempt is made to estimate future visitation to the Michigan islands. Nationwide growth in demand for recreation is one factor in forecasting continuing increased visitation to Washington and Rock Islands. By 1985, 71,500 visitors potentially could come to these two islands, but this figure may be excessive unless some additional facilities are constructed.

## Servicing Demands Created by Alternative

With no additional recreation facilities on the islands, there would be no additional burden created by this alternative upon either township to provide community services for residents and tourists alike. In Fairbanks Township, extremely few community services exist. Since an influx of tourists would not occur with this alternative, it would appear that few additional demands for services would arise. Few tourists venture south of Fayette State Park, and many of their needs can be met within the park or in Garden Township to the north. This should hold true with increasing visitation at Fayette. Very slight additional visitation would accrue because of the islands.

The Town of Washington is already in need of certain additional visitor facilities, such as toilets and camping areas and may be pressed to meet anticipated visitor increases, whether or not an island park system is created. If residential development continues on Detroit Island, town residents can expect to pay for services that residents of Detroit Island may seek to obtain. These may be costly because the development on Detroit Island may necessitate increased transportation and utility costs.

### Possible Changes in Residents' Lifestyle

Adopting the no park alternative will not affect the lifestyle of local residents in either township. Fairbanks Township is very isolated and sparsely populated. This alternative will not conflict with the existing style of life. In the Town of Washington, residents are already quite dependent upon tourism. This situation leads to some contradictions because tourism at present is responsible for increasing traffic and bringing more outsiders into the community, which occasionally disrupts the serenity usually enjoyed by islanders. This alternative will not cause further intrusion in the lifestyle found on Washington Island, but as previously noted some increased tourism is likely to continue, as will the island's dependency upon it.

### Summary of Costs and Benefits

Choosing the alternative of not implementing any expanded type of park carries little cost to either township. No acquisition costs, no tax losses, no influx of additional visitors, and no unusual public servicing demands will have to be supplied. If Detroit Island continues to develop, however, very expensive servicing demands could result, which would also be true on any of the Michigan islands where development might be contemplated.

Benefits of the no park alternative would come primarily as a result of maintenance of existing conditions and trends in the study area. The existing recreational areas are attracting an increasing number of visitors, and it may not be desirable to further increase visitor levels by establishing new recreation areas. In addition, although a substantial amount of island property is in private ownership, the land remains predominately natural. Added patrols to reduce trespass, plus local zoning or other development controls could serve to adequately protect the natural values of most of the islands. A final benefit would be the maintenance of tax revenue from the privately held land on the islands.



## COUNTY PARK

This alternative proposes that the island resource deserves additional protection. Therefore, the counties should seek to acquire the islands and develop a recreation area. Existing Door County and Delta County recreation areas are expected to experience additional difficulties in accommodating the anticipated growth in the demand for recreation areas, and the islands offer an additional local recreation opportunity in both counties.

### Implementaion Costs

The counties could either act independently or jointly to implement this alternative. Because neither county has a large budget for parks, it is doubtful that all the islands could be acquired. Purchase of land having high recreation value, transfer of public land, and purchasing easements on private land may be more feasible. If all existing public and private lands on the islands were included, the acreage totals to be included in the area would be 4,210 acres in Michigan and 1,829 acres in Wisconsin.

If Delta County sought to purchase all private land on the islands, a large capital outlay would be required. Since the proposed park would primarily be for county residents, there would not be a need for additional land at Sac Bay. Arrangements could be worked out to have camping facilities developed within the Bay de Noc State Forest, at state expense. There are presently six county parks within Delta County totalling 248 acres. Camping areas are provided at four of the parks. During the first nine months of 1975, \$23,480 of county funds had been spent on maintenance within the county parks. There is no single agency responsible for identifying recreation needs or park policy in Delta County, but responsibility for maintaining the parks has been delegated to the Delta County Road Commission.

Door County could obtain title to the federal islands within the county and purchase Detroit Island. Door County has 14 county parks containing 546 acres. None provide camping facilities. The county park system is under the jurisdiction of the Resource Planning Committee of the County Board. This committee oversees the maintenance and development of the county parks, and secures specialized assistance from the Door County Highway Department when necessary. During 1975, \$39,600 was appropriated for maintaining and developing the park system.

### Resource Protection

County ownership of the islands would insure at least a minimal level of protection for the resource. One question, however, is whether either county would be able to provide adequate supervisory and maintenance personnel. Neither county has a Parks Department and current appropriations for maintenance of existing county parts are quite low. Acquiring the islands would more than double the existing acreage within the county park system of each county, with at least commensurate doubling of the need for maintenance appropriations.

### Potential for Economic Growth

This alternative offers little potential for economic growth. The Delta County Comprehensive Plan (August 1974) recommends that only day-use facilities be developed within the county parks and reserves the provision of camping areas to the private sector.<sup>31</sup> The plan also recommends that wilderness campgrounds be provided on large tracts of state and federal land.<sup>32</sup> This policy indicates that if recreation facilities were developed on the islands, the areas would be limited to day-use facilities. No revenue from camping fees would be realized, and use of the islands would be somewhat more limited than if camping facilities were provided.

Since Door County parks do not provide camping facilities or charge an admission fee, no revenue would be generated to help maintain the park. However, as a day-use attraction, the islands could be expected to generate some income through tourist spending or related items, such as gas and groceries. It would be expected that as county facilities the islands would not be as widely publicized as would state or federal facilities. As a result, a county islands park could not be expected to attract large numbers of visitors from a wide area.

### Population Growth and Distribution

A county park would have little impact upon population growth and distribution except that no future residential development would be possible on any of the islands acquired as part of the park. Existing population trends would not be altered in either township.

### Land Use, Transportation, Zoning

Some changes in land use and transportation would occur if this alternative were implemented. Private land would become public land on all the islands that are acquired. On Detroit Island, residential land would be converted to recreation land. This alternative would not create land use changes in non-park areas. The acquisition of private lands on the islands would not displace any income producing property, such as farms, wood lots or commercial establishments.

No major burden will be placed upon existing transportation facilities. However, the alternative has implications with respect to access to the islands. It is not anticipated that a sufficient number of visitors would be attracted to the Michigan islands to warrant either the private or public sectors' providing ferry service to the islands. Access would still be by private craft only. In Door County, the additional demand placed upon existing ferry and charter service would not be great enough to justify expanding service to other islands in addition to Rock and Washington.

Creation of a county park should provide no special incentive for Fairbanks Township to adopt a zoning ordinance, nor should it provide reason to amend or revise the existing zoning ordinance in the Town of Washington.

<sup>31</sup> *Delta County Comprehensive Plan, August 1974, p. 141.*

<sup>32</sup> *Ibid.*, pp. 144-45.

### Property Valuation and Tax Revenues

Some property values in Fairbanks Township may increase very slightly, as less land would be available within the township and less shoreline property in particular. Property values on Washington Island could rise for the same reasons with this alternative. It is not anticipated that the assessed valuation on adjacent mainland properties or on Washington Island would rise as a result of proximity to this county park unless there is a change in the use of the land due to the park development. Therefore, in both townships the total assessed valuation initially would be reduced by the acquisition of private lands by the county.

Tax revenues obtained from both townships would initially decline. In view of recent assessments (1974), the decrease would be 7.5% (\$3,932) in Fairbanks and 5.1% (\$11,810) in Washington. This would be a loss for both townships in an absolute sense, particularly for the school districts. In addition, because of the recreation use proposed, it does not appear that private development would have a sufficient incentive to undertake construction of numerous new tourist facilities in other parts of either township. Without new construction to offset this loss in taxable property, this alternative will create somewhat of a hardship for both townships. No payments-in-lieu of taxes would be received with county ownership, and increased levies against the remaining private property would be necessary to insure a continued level of community services within both townships.

### Demand Generated by the Alternative

Only limited additional demand for this resource would be generated by this alternative. This would hold true for a number of reasons. First, county parks would be for day-use only. As a result, the park would have limited appeal as few facilities would be provided. In addition, a county park would not receive state-wide or national promotion. Finally, the counties would not be likely to be able to provide services such as ferry transportation to the islands, so use would be limited to those with boats of sufficient size to reach the islands.

### Servicing Demands Created by the Alternative

Acquiring the islands as a county park would create some servicing demands. Solid waste would need to be properly disposed, probably by burning it in a modified landfill on the major islands. Another possibility would be to haul the waste off the islands to tie in with the green box collection in Fairbanks or the Washington Island landfill. Police and fire protection would be difficult to provide. The park supervisor would have the responsibility for both, although perhaps an agreement could be arranged so that assistance from the mainland would be assured should the need arise.

### Possible Changes in Residents' Lifestyle

This alternative will create little change in the lifestyle of inhabitants of both townships. Slightly more visitors would travel to the townships than at present, but this should not present any particular difficulties.

## Summary of Costs and Benefits

This alternative would involve substantial costs for the counties. Included would be the initial acquisition cost for the private lands; the costs of administration; annual maintenance; costs of developing day-use facilities; costs of purchasing equipment for maintenance, administration and service; and the costs of taxes which would be lost as private property is removed from the tax rolls. These anticipated costs would depend in part upon the approach taken by each county. For example, equipment may not have to be purchased new; existing equipment could perhaps be used; or the counties may not desire to purchase all the private land but only selected areas. Finally, this approach does not consider the source of funding necessary to execute this alternative. Certain recreational aids, notably from the LAWCON and ORAP programs, may be available which could lower acquisition and development costs considerably.

The benefits that would accrue to county acquisition of the islands would include both the enhancement of the islands as a recreation resource and possible added economic benefits derived from user spending. Protection of wildlife habitat, preservation of open space for future recreation use, and the prohibition of development in areas that are unsuited for development would all be gained by preserving the islands in their natural state. These environmental benefits are intangible, but nevertheless significant.

Economic gains would be only minimal with this alternative. Each county would need to provide supervision and maintenance for the park. No direct revenue would result from campers. Additional tourist spending on gasoline, groceries, motels, restaurants, ferries, and so on would occur, but the number of additional tourists who would be attracted to the area as a result of the development of a county park would be small.

## STATE PARK

This alternative assumes that either of the two states would desire to act alone to preserve its respective islands regardless of the actions of the other state. The rationale for viewing the islands as a state concern would be that they are of potential state-wide significance and deserve state protection. Recognizing their size, features, and value for scientific, educational, and recreational pursuits, the islands would be acquired by the state and utilized as a wilderness state park. Both states have island state parks at present, Mackinac Island in Michigan and Rock Island in Wisconsin, both of which have been visited by many people.

### Implementation Costs

Michigan would acquire all private land on the Michigan islands. Public land within the Bay de Noc State Forest could remain under the jurisdiction of the Michigan Department of Natural Resources, Forestry Division. Poverty Island would be transferred from the federal government as would the Coast Guard holdings on St. Martin, should the lighthouse be automated. Acquisition of land around Sac Bay would not be required.

Wisconsin would acquire title to all of the public islands except Hog, which would remain a National Wildlife Refuge. Detroit Island and Boyer Bluff on Washington Island are the only areas where acquisition costs would be incurred.

Acquisition by either state would necessitate negotiations between the respective Departments of Natural Resources and private landowners, or from legislative action. A Michigan state park would comprise 4,210 acres and a Wisconsin state park 1,964 acres.

### Resource Protection

Those islands included within the state park should be adequately protected. The carrying capacity of the islands with respect to wilderness camping should be established before developing park facilities. A program which would guide visitors to locations where facilities can be developed without harming the environment should then be formulated, and a management policy for regulating the number of visitors in accord with the carrying capacity should also be instituted. Use should be consistent with long term preservation of the natural resource base.

### Potential for Economic Growth

A state park for either state could contribute to both the state and local economies. User-fees obtained from visitors attending the park are state revenues which provide for approximately 50% of the costs of operating and maintaining the state parks within both states. Local communities within both counties would benefit from their proximity to this park due to anticipated spending by visitors on such items as motels, restaurants, groceries, gasoline, and souvenirs. In addition, certain commercial endeavors might be attracted to locations in close proximity to the state parks, due to the potential increased market. Some jobs may result from the expanded commercial opportunities, though most would be low-paying and seasonal.

## Land Use, Transportation, Zoning

Few land use changes in non-park areas should result from establishing a state park. In Fairbanks Township, this alternative would not produce any significant changes. Except for Washington Island, all of each state's islands would become public land. No private development would then occur and most of the existing structures would eventually be razed. Particularly on Washington Island, however, more land would have to be devoted to visitor facilities, both private and public. This would logically occur at the Detroit Harbor area and near the ferry dock.

Transportation on area highways would begin to reflect the increasing use of the islands as a recreation resource. Delta County 483 would become somewhat crowded south of Fayette, as would the road leading to Sac Bay. In Door County, Highways 42 and 57 north of Sister Bay would be more congested, and the road network on Washington Island would also experience increased traffic. It is not anticipated that the additional increases in traffic would present any severe problems for either the road network or the ferry line.

A zoning ordinance might be desirable for Fairbanks Township because additional residential development may take place at both Sac Bay and at Fairport. The Towns of Washington and Liberty Grove may wish to examine their zoning ordinances to determine their adequacy in light of possible commercial and residential developments.

## Property Valuation and Tax Revenues

Fairbanks Township would not witness a rise in the value of its real property simply because a state park is established. Since Michigan would assess the properties it purchases at 50% of full market value, no loss in total valuation would ensue.

Washington Island may experience an increase in its property values following the creation of a state park. Most of the increase would be attributed to existing real estate valuation trends, the loss of developable land on Detroit Island, the enhancement of Washington Island as a place for retirement, second-homes, and recreation, and the increasing number of visitors who would provide an incentive for private development of tourist services, such as motels and campgrounds.

Tax revenues would remain at the same level in Fairbanks Township and there would be no tax loss and no consequent need for an increased tax levy against existing property. On Washington Island a potential tax loss of 5.1% (\$11,810) would be partially offset by payments-in-lieu of taxes made by Wisconsin on state purchased lands. The payments are equal to 100% of the tax which would normally have been received during the first year after acquisition, declining by 10% per annum until the 10th year is reached, at which time and thereafter, 10% of the first year payment of 100% would be received by the Town of Washington.<sup>33</sup> This effectively minimizes the tax

<sup>33</sup> Sec. 323, S. 70. 113 Wisconsin Statutes (1973).

loss hardship by phasing the loss over a period of time and it assures that a payment of \$1,181 would be received annually after the 10th year. After the 10th year, the tax loss from the town would be \$10,629, but development in the interim would be expected to more than offset this loss.

#### Demand Generated by the Alternative

Some additional demand would be evident if docking and camping facilities are established, but the use of the new facilities would still be virtually restricted to private boat owners, although the state may wish to provide for expanded ferry service. The proximity of Little Summer and Summer Islands would enable trailered craft in the 12'-20' boat class to travel to the islands from the Garden Peninsula, and the development of minimal facilities on these islands should enable the expected increase in demand for this resource to be accommodated.

Expanding the opportunities for wilderness camping similar to that possible on Rock Island would in itself generate an increase in visitation. It would ensure that the existing demand could be met by providing adequate facilities for all who wish to participate in this type of recreation experience. Rock Island is generally close to, or at, full capacity on summer weekends, and establishing primitive campsites on Plum and/or Detroit Islands would meet the need for additional facilities. More boaters would frequent Plum and Detroit Islands, both of which are closer to the mainland than Washington or Rock.

Many visitors to the islands would be from outside either Delta or Door County, and would be contributing to the economy of both counties, and both townships in particular.

#### Servicing Demands Created by the Alternative

Additional local expenditures would be needed to facilitate the increased number of servicing demands created by implementing this alternative. Although police and fire protection and solid waste disposal would be provided by the state within the park itself, some additional development may result as spin-offs from the state park, and may require additional local services.

#### Possible Changes in Residents' Lifestyle

Increased numbers of visitors would create some changes in the lifestyle of inhabitants of both townships. For the most part these would be minimal. However, an islands state park for either state would bring in more visitors who in turn may comprise a growing majority of the summer population of both townships. A park for either state would probably result in increased use of all the other islands in the chain, whether part of a park or not. Remaining private property should be respected, throughout Washington Island and on any other island exhibiting private ownership. In order to insure this, public facilities such as restrooms must be developed which are publicized and sufficiently attractive so as to provide the visitor with a clear idea of the areas open to public use and the services which exist to meet his needs.

### Relative Costs and Benefits

Costs of acquisition would be expected to approximately equal acquisition costs of other alternatives. A somewhat larger area would be acquired for a state park than for a county park, which would involve higher costs. Development and operating costs for a state park could be expected to be higher than for the county as the state would provide additional services and facilities such as camping, boat landings, more extensive patrolling; and possibly ferry service. These additional costs would be partially offset by fees collected from park users.

Expected benefits would include the creation of an additional state recreation area, and the protection of the natural values of the islands. It would be important to carefully design facilities to ensure that critical natural areas were not adversely affected by a state park. Some financial benefits might result from added visitor spending encouraged by creation of a state park, and from potential private development providing services and facilities to the additional visitors.

### INTERSTATE PARK

This alternative envisions both states acting together to administer all of the islands as an interstate park. Since the islands are collectively a distinct geologic entity, the two states would enter into an agreement to acquire and develop their respective islands consistent with the philosophy behind the interstate park. This philosophy envisages a public recreation area which transcends state boundaries and warrants joint action to preserve and protect the natural resource base for numerous pursuits.

### Implementation Costs

Both states would acquire title to all of the Grand Traverse Islands within their boundaries. Exceptions would be for Hog Island to remain as a National Wildlife Refuge; and, other than Boyer Bluff, Washington Island would remain in private ownership. Land on the Garden Peninsula around Sac Bay would also be acquired to provide a sufficient unit for public access to the islands from Michigan.

Although interstate parks are not common, the first state park in Wisconsin was, in fact, Interstate State Park (1900), a joint effort between Minnesota and Wisconsin. A joint agreement for the Grand Traverse Islands should not present any particular problems if both states are supportive of the concept. An interstate park would comprise 6,428 acres; 4,464 acres in Michigan and 1,964 acres in Wisconsin. It should be noted that although Michigan would acquire substantially more acreage, the value of the Wisconsin islands, particularly Detroit Island, is presently much higher. Thus, based upon 1975 assessed values, Wisconsin could expect to pay somewhat more for island acquisition than would Michigan.

### Resource Protection

Under joint Wisconsin-Michigan administration, the undisturbed character of most of the islands should remain substantially unchanged and the foremost management consideration should be the perpetuation of the natural resource



base with public recreation use being consistent with that goal. While detailed site planning and administration of the islands would rest with the individual states, a joint development plan should be first formulated to recognize natural constraints imposed upon the interstate park concept. Most islands should remain undeveloped as a wilderness island area and only those developments necessary to insure safe public access and limited use recreational pursuits should be permitted on the remainder.

#### Potential for Economic Growth

An interstate park would offer more potential for economic growth in surrounding communities than would a single state park because it would be jointly promoted as an outstanding recreation resource of two states. Both Michigan and Wisconsin could provide mainland access points for visitors desiring to go to the islands and both could encourage private development in adjacent mainland areas to compliment this public resource. This could take many forms, such as arranging for interstate excursion boat service from one peninsula to the other with stops at several islands to deposit or take on visitors or campers. Many out-of-state visitors would be likely to frequent this interstate park, and residents of both Michigan and Wisconsin would likely desire to visit the other state's islands.

#### Land Use, Transportation, Zoning

This alternative would provide public ownership on all islands except Washington, and recreational uses would displace residential use at Sac Bay and on Detroit Island. More commercial uses might arise in the Detroit Harbor area, at Fairport, and at Garden Village, due to increased business opportunities for servicing tourists. This type of land use change may occur at any point throughout the Garden Peninsula along 483, because there are few intervening opportunities and only one road to and from Fairport from U.S. 2.

Traffic volumes would increase on Highway 483 and general resurfacing of the highway might be necessary. It may also be necessary to surface the road leading to Sac Bay, but this might be accomplished in conjunction with the development of park facilities at Sac Bay. Vehicular traffic on Washington Island would also increase. Private boats may also create an equally congested situation in Detroit Harbor, if they consider this immediate location as their principal destination. Two marinas exist within Detroit Harbor; use of both should be encouraged. Expanded ferry service may also be encouraged.

Strong consideration should be given to adopting a zoning ordinance in Fairbanks Township to provide a framework for future development. The zoning ordinance in effect in the Town of Washington may need revising. Adjacent townships, such as Garden and Liberty Grove, might also experience a need for zoning arising from this alternative.

#### Property Valuation and Tax Revenues

Purchase of the islands by Wisconsin and Michigan for an interstate park would have essentially the same fiscal impact as the creation of individual state parks. Each state has a program to offset potential tax revenue losses to local government. Michigan continues to assess property it purchases at 50% of its full market value and makes payments to the local governmental unit

on that basis. Wisconsin makes payments-in-lieu of taxes to the local community. Wisconsin's payments are equal to 100% of the tax which would normally have been received during the first year after acquisition. This payment then decreases by 10% per year until the tenth year. The local unit of government receives a payment of 10% of the first year payment annually after the tenth year. Any eventual loss of revenues should be replaced in a short while as a result of existing upward trends in real estate values.

There would initially be a loss in assessed valuation of each town as a result of state purchases of land. The loss in assessed valuation would have the greatest effect on the school tax assessment district on Washington Island. The precise effect of the loss is as yet uncertain. With the negative school aids policy a major issue of local concern, the removal of Detroit Island from the tax roll could actually benefit local residents, since the equalized assessed valuation in this district is far in excess of the state average. While this would still hold true even if Detroit Island was acquired, the districts actual negative aids payment to the state would be less than if this island remained on the tax rolls. However, a slight additional levy would still be necessary since the remaining taxable property would have to offset that portion of local school costs formerly paid by property being acquired. That amount was \$4,910 in 1974 and should not pose any major difficulties, since it would be a gradual decline over a number of years. The Department of Natural Resources seldom purchases all needed properties for a project in one year, so any losses could be expected to occur gradually over a several year period.

#### Demand Generated by the Alternative

An interstate park would generate greater demand beyond that which exists at present. Most of the public development called for in this alternative would take place on the Michigan islands, where no recreation facilities presently exist; and at Sac Bay, presently without camping opportunities. Wisconsin would develop additional campsites on Detroit and/or Plum Island, and private development might occur on Washington Island.

An interstate park would create more of an attraction than a state park because of the increased publicity and interest spurred by joint implementation of the alternative. A two-state cooperative program of publicizing a recreational facility should encourage greater visitation. It will be important for each state to be aware of the limitations of the resource so as to avoid excessive visitation which would endanger the natural character of the islands.

#### Servicing Demands Created by the Alternative

Services required by visitors within the park itself should be adequately provided for by facilities developed as part of the park, and by personnel employed by the states specifically for the purpose of maintaining the park in its day to day operations. By increasing the number of people attending this park, an increased number of services will be required from the local governments to serve visitor needs outside the park boundaries.

Additional police and fire protection may be desired, particularly during the summer. This may also be needed if additional residential and commercial development occurs. Capital expenditure in the form of additional streets, parking, sewers, and water may also become necessary. Since the manpower services are a local budgetary item and capital expenditure is in part dependent on local land use decisions, no attempt is made to estimate the service costs which may arise with this alternative. It would appear, however, that an interstate park would have relatively greater service costs than would the state park, county park, or no expanded park alternative, because an interstate park would have a greater impact on the local communities in terms of additional numbers of visitors.

#### Possible Changes in Residents' Lifestyle

An interstate park may cause some changes in the lifestyle of local residents. Increased traffic, noise, and development may create tangible evidence of change. Many of these may be minimal discomforts but others might be perceived as major inconveniences. Increasing numbers of visitors would compete with residents for service at gasoline stations and marinas, and for parking spaces. The specific impacts of this alternative depend in large part upon the number of additional visitors it attracts, and upon the amount of spin-off development which takes place.

#### Summary of Costs and Benefits

Acquisition costs would be comparable to those of a state park, particularly for Wisconsin. Costs for Michigan would be somewhat higher as the interstate park alternative includes the purchase of 253 acres at Sac Bay for additional support facilities. Development, operating, and related costs would be somewhat higher than for the previous alternative as the interstate park would provide a somewhat higher level of services and facilities, and could be expected to attract a greater number of visitors. User fees could be expected to offset at least a portion of these ongoing operating costs. Additional costs to the states would include their property tax related payments to the local units of government.

Local costs could come in several areas. First, there could be some direct costs involved in servicing additional visitors, as well as serving any development which might occur as a result of the interstate park. Second, there may be some costs involved in loss of revenues as a result of state purchase of private lands. Third, and perhaps most important, there could be significant indirect costs to local residents resulting from adverse impacts of additional visitors to the area.

Expected benefits again would include preservation of the natural values of the islands. Careful management of an interstate park would be necessary to ensure that the natural resources are not damaged through over-use. Additional benefits would include the establishment of an additional recreational facility for public use; and increasing the availability of a unique island recreation experience. The additional visitors attracted by this alternative might also provide a benefit through their spending in the area. This visitor spending might be a significant contributor to area revenues depending in part upon the extent to which the resource is promoted, and the extent of private development generated by the presence of an interstate park.

## NATIONAL LAKESHORE

Because public acquisition of the Grand Traverse Islands would involve a sizable capital outlay, require acquisition of lands within two states, and could be a major tourist attraction, national attention might be justified. Designation as a national recreation resource could manifest itself in a variety of forms. Within the broad classification of national parks, natural features having national significance may be established as national parks, monuments, lakeshores, or recreation areas. Evaluation and selection of areas as either natural areas or national recreation areas follows criteria which have been formulated to provide guidelines for areas proposed for federal acquisition. Consideration is also given to the development possibilities and management constraints inherent within each proposal.

Covering 20,478 acres in total, and 6,040 acres excluding Washington Island, the Grand Traverse Islands are somewhat limited in terms of land area. The islands are relatively inaccessible, and have a limited carrying capacity that cannot withstand intensive public use. Providing for public use consistent with the preservation of the resource could represent a challenge for park personnel. Limitations for recreational use of the island group, discussed earlier, also must be weighed in deciding the merits of national designation for the Grand Traverse Islands.

The Grand Traverse Islands could lend themselves to numerous recreational pursuits. They are presently an underutilized resource from the standpoint of recreation. They could embody the pocket-wilderness concept and provide excellent opportunities for solitude, education, and scientific study. While the islands cannot withstand millions of visitors, they are relatively close to major urban markets and could provide a wilderness-type experience for many urban Americans.

Since the islands would not be a park in the traditional sense, and are not closely related to older national parks, national park designation does not seem likely. Two other possibilities are national monuments and national recreation areas. National monuments are primarily utilized to represent striking examples of natural phenomena, such as a plant species, an unusual rock formation, or a geologic process. This might be a feasible designation for the Grand Traverse Islands since they serve as an excellent example of the Niagara Escarpment. National recreation areas are designed for intensive outdoor recreation by large numbers of individuals. This designation does not appear to be a proper one for the Grand Traverse Islands. Those national areas which are physically most similar to the Grand Traverse Islands have been designated as national lakeshores. Examples of these include the Pictured Rocks (1966) and the Apostle Islands (1970). These areas did not fit existing typologies when first proposed for national designation. A new designation was formulated which recognized their unique natural features and the recreation potential associated with the presence of the Lake Superior shoreline. It appears that national lakeshore designation would most closely represent the nature of the Grand Traverse Islands and their ability to provide for low-density recreation. While other possible federal designations exist, the concept of public use consistent with the preservation of the natural environment on the Grand Traverse Islands seems best suited to a national lakeshore designation. The national lakeshore should contain 6,428 acres, which would

include all 15 islands (6,040 acres), Boyer Bluff on Washington Island (135 acres), and land around Sac Bay, Michigan (253 acres).

### Implementation Costs

Creation of a Grand Traverse Islands National Lakeshore would need to receive approval from both houses of Congress and the President. Appropriations for acquiring, developing, and maintaining the islands as a national lakeshore could come only from subsequent Congressional action. This legislation would not likely be adopted without concerted state action and general local support.

The costs of implementing this alternative would generally be born by the federal government rather than the States of Michigan or Wisconsin. The federal government would acquire title to all of the state and private property on the islands. Washington Island would remain in private ownership, and Hog Island could remain as a National Wildlife Refuge.

### Resource Protection

As a national lakeshore, the protection of the natural environment on the Grand Traverse Islands would be entrusted to the National Park Service. As a national attraction the islands would be subjected to a larger number of demands and heavier visitation than with any other alternative. The protection of the resource base is not a problem that is automatically solved by national designation. In fact, this alternative would require the most stringent regulations to protect wildlife habitat and regulate visitation. Washington Island itself, though not included within the park, would need to work with officials of the National Lakeshore to ensure proper protection of its natural resource base as well.

### Potential for Economic Growth

This alternative offers the greatest potential for increasing commercial development, employment, and income within both Fairbanks Township and the Town of Washington. A Grand Traverse Islands National Lakeshore would be an attraction with nation-wide exposure, drawing a far greater number of visitors than any other alternative. Additional local jobs might be created in the private sector in servicing tourists and constructing new developments which might be spurred by the development of a major tourist attraction. Although many of the jobs created would be seasonal, part-time, and pay relatively low wages, they would nevertheless provide more opportunities than any of the other alternatives and could supplement other seasonal jobs. In addition, while a national lakeshore would be quite seasonal, it has the greatest potential for year-round development of any of the park alternatives.

### Land Use, Transportation, Zoning

A national lakeshore would have additional ramifications with regard to land use, transportation, and zoning. Island land use would be dominated by the types of recreation and open space areas on all but Washington Island. The National Park Service would be responsible for land use management on the 14 islands acquired. Fairbanks Township and Washington Island would both feel new pressure from commercial and residential development. Land use changes in non-park areas, such as the Door Peninsula and the Garden Peninsula, would also be likely to occur.

Local reactions to this pressure will vary; since it would mean additional tax revenues, but also might require additional public services. Both townships are logical staging and service areas for a lakeshore preserve. Since most visitors would be travelling to the end of either peninsula to visit the lakeshore, how each township views its role in servicing tourists would go far in determining the amount of private development undertaken. Both townships would be competing with other areas for commercial development associated with the larger tourist markets of a major attraction. The aggressiveness with which both townships attempt to provide an agreeable business climate for entrepreneurs would go far in determining the rate and intensity of commercial development.

While Fairbanks Township might like to attract commercial development, better community services exist within the Village of Garden, and areas adjacent to Highway 483 would receive the bulk of the commercial pressure. Shoreline property would also be subjected to additional pressures to be subdivided and sold.

On Washington Island, commercial interests should be directed to the Detroit Harbor area and the Main Road commercial cluster. If the Northport area is not commercialized, there would be competition between Gills Rock and Washington Island for tourist dollars associated with the lakeshore.

Highway traffic on Delta County 483 would be increased over present volumes and widening and resurfacing would be necessary. The road to Sac Bay from Highway 483 would also need to be surfaced. Though the volume of traffic would be noticeably greater, traffic congestion shouldn't be a particular problem if the road is improved. A national lakeshore would likely present peak loads of traffic during summer months, however, volumes should be spaced fairly evenly throughout any given day. Possible exceptions to this may occur on weekends and at auto ferry service areas if established.

Traffic volumes on State Highways 42 and 57 in Door County would also be increased due to the establishment of the national lakeshore. This would be most noticeable from Sister Bay to Northport, where existing Highway 42 provides the point for access to the islands. If volumes are sufficiently heavy it might be desirable to encourage vehicles pulling trailered craft to utilize launching ramps at Ellison Bay and Garrett Bay, to ease traffic congestion at Northport. Gills Rock would be a principal location for excursion boat tours.

Traffic on Washington Island would also increase. The amount of increase would be dependent upon the frequency and capacity of ferry and excursion boat service to Washington Island. Existing service would likely expand. The National Park Service would probably work with the existing boat concerns to tailor service to visitor needs. Service from Northport to Sac Bay or Fairport, including stops at selected islands would enable visitors to tour the island chain, making connections for campers, and providing an excursion service for day-users. Ferry scheduling would be a strong factor in structuring traffic flows, since the unloading and loading of vehicles takes place in a very short period of time.

The road network on Washington Island is adequate, but more roads may need paving; particularly the roads on the east side nearest the shoreline for

tourists desiring to drive around the island's perimeter. Traffic at the ferry dock would be noticeably heavier; which would also be true with respect to marine traffic.

Designating the Grand Traverse Islands as a national lakeshore would give impetus to the adoption of a zoning ordinance, or perhaps the revision of an existing ordinance, in areas adjacent to or in close proximity to the lakeshore. Since there aren't any incorporated communities in either Fairbanks Township or on Washington Island, zoning would be instituted at the township level and in effect throughout the township. The Town of Washington already possesses an ordinance. The provisions of the ordinance should be examined before any added development pressure is experienced. The Town of Liberty Grove, at the tip of the Door Peninsula, has also adopted the county ordinance. Fairbanks Township, Garden Township, and the Village of Garden may want to consider adopting a zoning ordinance.

While the adoption of a zoning ordinance is a matter for local consideration and local preference, proper zoning in these townships would help to insure that benefits accruing to the establishment of the lakeshore are in harmony with local needs and desires and that any spillover effects which could arise from the lakeshore are minimal and contained.

#### Property Valuation and Tax Revenues

The establishment of a national lakeshore for the Grand Traverse Islands might have a positive effect on property values in both Fairbanks Township and the Town of Washington. Commercial properties and land suitable for commercial development would rise in value due to the development of a national lakeshore. The increased valuation would be due to the larger number of visitors attracted to the area which increases market potential and sales.

Fairbanks Township would undoubtedly be hurt if it could not attract some commercial development to offset the valuation lost with this alternative. Areas within the township proposed for acquisition have a full assessed value of \$471,448. This comprises 13.21% of the full assessed value in the township, and would be a substantial loss for the township if it were not matched by increased valuation elsewhere. There would likely be some land use changes in non-park areas, and the township should encourage these changes where they will not displace income producing property, such as farmlands, unless the new development assures a much larger total valuation than the use displaced. As this area becomes better known, it is likely that property values would rise in general due to the establishment of a national lakeshore, particularly adjacent to Highway 483 and shoreline property throughout the township that is accessible by public roads.

The Town of Washington would lose Detroit Island from its full assessed value, a loss of 4.85%. Adding Boyer Bluff on Washington Island, the loss in valuation would be 5.1%, or \$1,302,973. The loss should not be a burden to Washington Island since real estate values have been steadily climbing for some time. The expected commercial development attributed to a national lakeshore should more than make up for the loss, and would be easier to service than the existing residential developments on Detroit Island.

Loss of tax revenues totalling \$6,847 could be a serious problem in Fairbanks Township. The National Park Service would normally purchase needed land over a period of years thus easing the tax loss. Since there are few improvements on the Michigan islands, the tax losses from them would not be substantial. The National Park Service could arrange for Sac Bay residents to have the option of reserving a life estate, and continue to live on their property. The Park Service should carefully assess their needs for land and the township's need for tax revenue, and not displace farmland near Sac Bay.

The Town of Washington would lose \$11,810 in taxes with this alternative and would not receive payments-in-lieu of taxes. Again, however, acquisition would be staged over a period of years and additional commercial development spurred by the lakeshore would offset the loss in the interim, before acquisition is completed. The improved properties on Detroit Island are not currently occupied year-round, and no income producing property would be acquired.

#### Demand Generated by the Alternative

National recreation areas have been extremely popular and establishing a national lakeshore for the Grand Traverse Islands would attract a greater number of people to these islands than any of the other alternatives. Although the Grand Traverse Islands would not be a traditional type of national park, and would have certain limitations on recreation use similar to those in the Apostle Islands National Lakeshore, they would encourage many recreation pursuits and would be relatively close to major population centers. Drawing from these centers and a nation-wide market as well, visitation to the islands would primarily be dependent upon the carrying capacity of the islands, that is, the ability of the islands to withstand recreation use by large numbers of visitors. The National Park Service would determine this capacity and the number and location of facilities provided would in turn regulate the amount of use on the islands to respect the carrying capacity. In addition, the ease of access, which would depend upon the availability of convenient visitor transportation to the islands, would also be a significant factor in visitation.

#### Servicing Demands Created by the Alternative

This alternative creates the largest service demands of any of the alternatives. Service demands arise in two areas: 1) Providing visitors with needed facilities and services, such as restrooms and police protection and 2) Extending services to development resulting from the lakeshore. These demands would be a critical cost in any alternative because they are born by the townships through their tax levies. Since very few services are provided by either township, it is difficult to speculate on just what each township would do if a need arose for a particular service. The delivery of services would be a local responsibility in non-lakeshore areas. The need for added police protection for such things as traffic control would certainly arise, but it is uncertain at which stage in the lakeshore's development that the need would occur. The large increase in the summer population of both townships, plus the expected commercial and residential development, would likely require additional services, and may even require capital expenditures for sewage treatment and road improvements.



### Possible Changes in Residents' Lifestyle

A national lakeshore would create more changes in the lifestyle of local residents than any of the other alternatives. This would result from the larger number of visitors attracted by a national lakeshore. Increased traffic on highways may be the most noticeable impact, although additional noise, congestion, and competition for local recreation areas would also occur. Other possible changes such as a perceived loss of community, may occur as more outsiders are attracted to this area.

### Summary of Costs and Benefits

Acquisition costs for a national lakeshore should be similar to the costs of an interstate park as an equal total land area, 6,428 acres, would be acquired. Development and operation costs would probably be somewhat higher as a higher level of services and facilities would be needed to accommodate the greater numbers of visitors. Local costs would include loss of revenues and assessed value as private lands are purchased, as well as expected higher public service costs as a result of increasing visitation. Indirect costs to local residents could be substantial as increased visitation places added burdens upon the local community. In addition, spin-off development could have significant adverse impacts on the area.

Expected benefits would include the establishment of a major recreation resource available nation-wide. The preservation of wildlife habitat and open space could be assured if the National Park Service were to prepare and implement a management plan which would guard against over-use of the islands. The national lakeshore alternative also would offer the greatest potential monetary benefits, as high visitor levels would provide greater local income. Finally, a national designation would spread implementation costs throughout the United States.

Table 32

## SUMMARY OF MANAGEMENT ALTERNATIVES:

VARIABLE	NO PARK	COUNTY PARK(S)	STATE PARK(S)	INTERSTATE PARK	FEDERAL PARK
Acquisition Costs	None	Market value of land: Door County-1829 Acres* Delta County-4210 Acres*	Market value of land: Wisconsin-1964 Acres** Michigan-4210 Acres	Market value of land: Wisconsin-1964 Acres Michigan-4464 Acres***	Market value of land: 6428 Acres
Development Cost for Potential Recreation Facilities	None	Establishment of picnic, hiking, toilets, and other day-use facilities	Development of camping sites, boat docks, as well as day-use facilities possible provision of ferry service.	Development of camping sites, boat docks, day-use facilities, provision of ferry service	Development of camping sites, day-use facilities, provision of ferry service, creation of harbors of refuge, and possible marina facilities.
Administration, Maintenance and Service Costs	None	Maintenance of day-use facilities; waste removal; patrolling	Maintenance of facilities including docks; waste removal; collection of camping fees; extended patrolling; possible operation of ferry.	Maintenance of facilities; waste removal; collection of fees; extended patrolling; possible operation of ferry.	Maintenance of facilities and harbors; waste removal; collection of fees; extended patrolling; operation of ferry; possible operation of marina
Resource Protection	Depends upon private decisions; and local, state, and federal governmental decisions.	Responsibility of county: supervision needed to protect resources.	Responsibility of individual states: facilities should direct use to non-critical areas.	Two-state responsibility: facilities should direct use to non-critical areas	Federal responsibility: facilities should direct use to non-critical areas; visitation should be limited.
Visitation Expected	Continuation of existing visitation trends.	Additional visitors expected: users of day-use facilities.	State-wide promotion plus camping facilities encourages greater use.	Multi-state promotion plus camping facilities and ferry service increases access and use.	National promotion plus full facilities encourages use to capacity.
Impact on area	Slight	Some additional visitation and visitor spending.	Additional visitation and spending. Possible spin-off development by private sector. Added visitor impact on surrounding area.	Additional visitation and spending. Possible spin-off development by private sector. Added visitor impact on surrounding area.	Substantial visitation and spending increases. Spin-off development by private sector. Substantial visitor impact on area. Additional local services needed.
Fiscal Impacts	Present tax revenues continue	Tax revenues from private island lands would be ended.	State payment-in-lieu-of-taxes would limit revenue losses in Wisconsin. Michigan assesses property at purchases at 50% of full market value and makes payments to local government on this basis.	State payment-in-lieu-of-taxes would limit revenue losses in Wisconsin. Michigan assesses property at purchases at 50% of full market value and makes payments to local government on this basis.	Tax revenues from private island lands would be ended. Expected added revenue from spin-off development

\* Includes all land on the islands, with the exception of Washington Island

\*\* Includes 15 islands plus Boyer Bluff on Washington Island

\*\*\*Includes 15 islands, Boyer Bluff, and land surrounding Sac Bay in Michigan

## ADMINISTRATION

The administration of any recreation area for the Grand Traverse Islands would pose certain problems which are peculiar to an islands park. The foremost problem is simply that of the management of the natural resource base and maintenance of the areas developed for public use on the different islands. Visitation would have to be carefully managed to ensure perpetuation of the natural resources without deterioration in their quality. Visitation should thus be guided to those areas where it is most compatible with the resource base; and camping, hiking, and fires will necessarily be restricted to those same areas.

The day to day servicing of campers including fee collection, garbage collection, water supply, and maintenance of sanitary facilities would be simplified by keeping the activity areas compact and few in number. At Rock Island State Park, for instance, most of the facilities are concentrated at the southwestern portion of the island. Other needed facilities are located at special areas which receive relatively heavy use, such as the Potawatomi Lighthouse, and the picnic areas.

The amount of use which the area receives would itself be heavily dependent on the quantity and nature of the facilities provided. It should be possible to achieve a level of self-regulation by developing selected facilities at specific locations. Boaters, for instance, will be guided to those areas where docks are available, rather than attempting to beach their craft elsewhere. The development of such facilities should be a strong lever in guiding visitation to those areas where it is most suitable.

As an interstate recreation area, administration would be divided between the two states. Wisconsin could administer its portion through Peninsula State Park. Rock Island could serve as a field office. From Michigan, administration could be carried out through Fayette State Park. A field office on the islands might be desirable, either on Summer Island or on St. Martin.

If the islands became a federal recreation area, all the islands would be under single management. A mainland headquarters would be desirable, as is done with Isle Royale and the Apostle Islands, with a ranger station on one or more of the islands, probably St. Martin, Rock, or Summer.

Administrative costs would include salaries, supplies, and the physical equipment necessary for maintenance. These operating costs become an annual budgetary component of any park. Physical equipment to maintain and patrol the islands would also be needed. This item is primarily an initial cost, with maintenance on this equipment recurring as an annual operating cost. Unless additional facilities are desired, the Wisconsin portion of this island group would be fully operational immediately, owing to the existing Rock Island State Park. As new developments are constructed on the Michigan side, more visitors can be expected to explore those islands as well.

Generally, the costs of maintaining any recreation area on the islands would be somewhat higher than maintaining a comparable size area on the mainland. This is again due to the increased cost of transporting personnel, equipment, and supplies to the various islands; from the mainland to the islands, and from island to island.

## SUMMARY AND CONCLUSIONS

While all of the Grand Traverse Islands exhibit a number of similar characteristics, each has a distinct character and different features owing to their natural qualities and historical development. It may be helpful to review the features of each island in order to better understand their nature and potential for recreation, and to provide further insight into the issues to be resolved in deciding the public's role in the future of the Grand Traverse Islands. (See Map 13)

Plum Island is the nearest island to the Door Peninsula, lying a mile and a half northeast of Northport. It is administered as a Coast Guard installation which is manned during the summer months. A lighthouse, foghorn, docking facilities, and two other buildings are present. The majority of these features are found near the dock on the northern shoreline and on the western shoreline. The rest of the island is wooded and undeveloped except for a jeep trail which traverses the island's periphery.

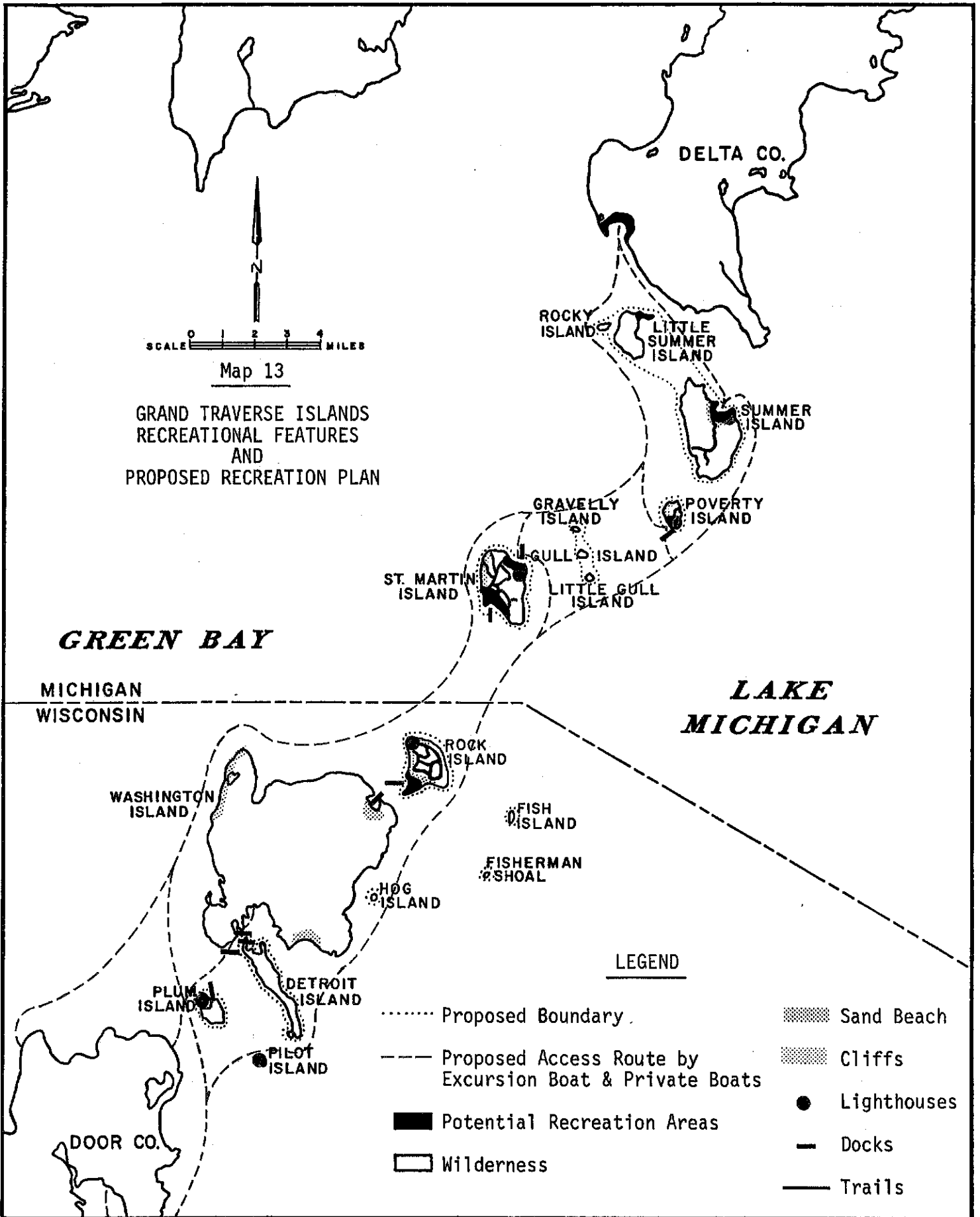
Pilot Island contains two structures and a lighthouse, one of the oldest on the Great Lakes. The island is rocky in sections, with about one-third of the island forested.

Detroit Island is a 649 acre lineal island which is entirely private. Six homes are present. The island is heavily wooded.

Washington Island is over 14,000 acres in size but much of it is developed as farmland, permanent dwellings, second homes, and commercial establishments. There is a permanent population estimated at 530 people with a seasonal population of twice that figure. Washington Island is heavily dependent on tourism and, along with Rock Island, constitute the only islands which are readily accessible to the public by scheduled ferry service. A number of tourist facilities are available. Visitors may take part in such activities as sightseeing, bicycling, visiting farms, orchards, and the museum at Little Lake, chartering fishing boats, and swimming and picnicking at a number of parks maintained by the Town of Washington and at Eastside County Park. A number of natural areas still exist on Washington Island, the best known of which is Boyer Bluff. This prominent limestone bluff is heavily wooded and scenic, with a light perched on the northwestern tip. Boyer Bluff is the only area on Washington Island being considered for public acquisition.

Hog Island is a two acre National Wildlife Refuge, which was set aside as a breeding bird sanctuary by Presidential Executive Order in 1912. It lies immediately adjacent to the eastern shore of Washington Island. No development is present and the island serves as a rookery for gulls and herons.

Rock Island is in public ownership, most of it being Rock Island State Park. Eight buildings remain from the former estate of Chester Thodarson, a millionaire inventor of Icelandic descent who owned the island since 1910, and whose heirs sold it to the Wisconsin Conservation Commission in 1965. The buildings are concentrated in the extreme southwestern corner of the island, an area which Thodarson cleared in the 1920's. The boathouse is a structure of Icelandic architecture and is the most impressive building. The state park encompasses these buildings and a total of 777 acres of forests, limestone bluffs, sand and cobblestone beaches, and a system of



hiking trails. The trails crisscross the island, connecting the campground with an abandoned fishing village, an old cemetery, and the Potawatomi Lighthouse. Portions in the interior are 200 feet above Lake Michigan.

Fish Island and Fisherman Shoal are extremely small rockbound islands that are surrounded by shoals. Neither has any vegetation and they are periodically inundated by Lake Michigan.

Gravelly, Gull and Little Gull Islands are small islands, 3, 13, and 5 acres, respectively, which lie in a shoal area northwest of St. Martin. Gravelly has no tree cover and little vegetation, and it is very rocky. Gull and Little Gull are both wooded and have rocky beaches. Gull has dense vegetation inward from the gravelly perimeter.

Poverty Island is egg shaped and 192 acres in size. It is heavily forested and cliffs are present. There is a Coast Guard lighthouse on the southwestern shore and two buildings in the southern corner. This island is federally owned.

Summer Island is the largest island of the eight Michigan islands. The 2,169 acre island was once utilized for educational purposes by Summer Science, Inc., a nonprofit group which utilized the natural features of the island for an outdoor science study lab for high school students during the summer months. A number of buildings, including the lodge, are still present today; some of the buildings are utilized by interests who recently purchased the property from Summer Science. A Coast Guard light is present, as are a very small number of cabins. Summer Island is undulating, heavily wooded, and has an elongated bluff running northeast to southwest. An archaeological site on the island is listed in the National Register of Historic Places. Summer Harbor is a good harbor for small craft but has no docking facilities. There is a good sand beach lining much of this harbor. Michigan's Bay de Noc State Forest includes 832 acres of this island; the other 1,337 acres are privately owned.

Little Summer Island is the closest island to the Garden Peninsula, lying just under a mile offshore. There is no development on this island. Four hundred acres are privately owned and the remaining 90 acres are part of the Bay de Noc State Forest. Little Summer is heavily wooded and has a cobblestone beach.

Rocky Island is privately owned, 10 acres in size, and wooded with no development.

St. Martin Island is the second largest Michigan island and is over 1,327 acres in size. The island is privately owned except for 34 acres of U.S. Coast Guard property on the northeastern shore, where a dock, several buildings, and a light are present. St. Martin is heavily wooded, with cliffs along its northwestern shore. A swamp is located within the interior and a series of trails exist on the island which permit easy hiking.

Perhaps the most critical question to be resolved is whether the public should become involved in the islands to a greater extent than at present. Excluding Washington Island, some 2,900 or 46% of the 6,300 acres on the remaining 15 islands is already in public ownership. Should the principal objective in developing an island attraction be to provide recreation, the existing public ownership could certainly provide a focal point for recreation use. In fact, the existing public land could be sufficient to completely meet the needs of the limited recreation use to which the islands are suited. The essential question, then, is whether the remaining acreage is of sufficient value to justify public interest. That question ultimately must be answered by the general public, and depends in large part upon the perceived value of primitive natural areas. It is apparent that because of the relatively fragile nature of the islands they could not be subjected to intensive use. The issue is whether public funds should be expended to preserve areas in their natural state which can only be directly used by relatively few visitors.

Essentially, then, this report presents two alternatives: the islands can remain in their present ownership, with less than half of the resources in public hands; or the public can move to acquire additional island area to protect more of the resources of the Grand Traverse Islands. Should the decision be made to increase the public's role in the islands, there is a range of choices available. Additional lands could be obtained selectively, or the entire chain could be purchased. Easements or other methods short of purchase could be used to protect the islands. A variety of options are available for management, ranging from county action to a national lakeshore. Finally, a number of choices are possible with respect to use of the islands, although to preserve the natural resources only a limited level of activity would be possible. Map 13 displays one potential approach to island use, with limited camping facilities centered on existing development; trails on the larger islands for hiking, and excursion boats for more passive enjoyment of the islands.

The issues raised here can only be resolved by area citizens and elected officials and state and federal officials who must assess the value of the natural resources of the Grand Traverse Islands and decide what public action, if any, is needed to determine the future uses of the Grand Traverse Islands.





**appendices**



Appendix A

DOOR COUNTY ISLANDS STUDY COMMITTEE

Ronald Berg, Chairman	Door County Chamber of Commerce
Conan Eaton	Citizen of Washington Island
George Evenson	Door County Board of Supervisors, Chairman of Resource Planning Committee
Robert Florence	Door County Planning Director
Jack Hagen	Chairman of Washington Island
Thomas Herlache	Chairman of Door County Board of Supervisors
Percival Johnson	Door County Board of Supervisors, 9th District

## Appendix B - Chambers Island

In addition to the 16 Grand Traverse Islands which form the chain within the waters between the Door and Garden Peninsulas, other islands exist within Green Bay itself, in Bay de Noc, and immediately south of the study area in Lake Michigan. While the principal concern of this study has been with the 16 islands within the chain, special attention is focused here on Chambers Island. This island is entirely within Green Bay, 13 miles north-east of Menominee, Michigan - Marinette, Wisconsin. Chambers has been suggested as a possible addition to any island park concept.

Chambers Island, 2,796 acres in size is a scenic, heavily wooded island. There are two small lakes present within this island, and two small islands within the largest lake, Mackaysee Lake. Mackaysee Lake covers 354 acres and has a maximum depth of 26 feet, making it the deepest lake in Door County. This body of water provides a good nesting habitat for waterfowl.

Krause Lake is the other internal water feature on Chambers Island. It is 3.7 acres in area, has a maximum depth of 24 feet, and is a kettle lake, formed by a block of glacial ice which melted and caved in the glacial debris lying above it. Krause Lake is surrounded by woods and quite secluded. No public access is available to either lake.

Virtually all of Chambers Island is privately owned. There are at least 35 separate individuals that own land on the island. The island itself is part of the Town of Gibraltar, Door County, Wisconsin. The 1974 local assessed value of Chambers Island was \$323,302. This figure is .4545 of the full assessed value (as determined by the State of Wisconsin), therefore, the full assessed value would be \$711,336. In 1974 the town collected \$10,379.75 in tax revenues from the island.

Development on Chambers Island includes several seasonal cottages, a small landing field for airplanes, and the Chambers Island Lighthouse. This lighthouse was recently entered in the National Register of Historic Places by the Secretary of the Interior. As such, this historic structure is entitled to receive the benefits and protection afforded other historic sites by the National Historic Preservation Act of 1966. The 40.04 acres of land surrounding this lighthouse is the only public land on the island. It appears that this property will be transferred from the federal government to the Town of Gibraltar, Door County, at no cost.

While approximately 5% of this island is developed, most of the natural beauty of this island still remains. The Door County Outdoor Recreation Plan 1974-1978 lists Chambers Island as an area worthy of public acquisition. While it may be possible to include it as part of the proposed Grand Traverse Islands recreation area, Chambers Island is over 20 miles from any of the other islands proposed for inclusion, and this lack of contiguity may pose a serious problem. Were it to be included as part of any island park, it might be better managed as an addition to Peninsula State Park, lying just five miles to the east.

## Appendix C - Underwater Archaeological Sites

One resource that has heretofore received relatively little attention and therefore only scant protection, is the wealth of scientific, historical, and educational materials found in underwater archaeological sites. Many of these are found throughout the waters of this area and have in part fostered the growth of scuba diving activities off of the Door Peninsula and the Grand Traverse Islands. While this sport is encouraged by the clean, clear waters of this area and the existence of a number of sites, there is a lack of policy for dealing with these underwater sites and guarding their varied wares.

Michigan, through its 1929 Antiquities Act and subsequent amendments, has sought to protect underwater archaeological sites through a permit and report system administered by the Department of Natural Resources Law Enforcement Division. Prospective divers must obtain permission to salvage from the owner of the vessel, where possible, before seeking a D.N.R. permit. Vessels downed before 1900 are considered state property and require the same permit. Enforcement of the law has remained difficult and few sanctions have been applied from the Attorney General's Office. One suggestion to better protect underwater areas is to include them as part of a state park, where appropriate, so better control can be exercised over these areas.<sup>34</sup> If a boundary is drawn one quarter of a mile offshore around each island included within alternatives listed in this study, this could be a logical first step towards insuring protection of certain underwater sites from inadvertent or intentional destruction of these areas.

In Wisconsin, the laws concerning underwater salvage appear to be nebulous, and there is a need to inventory the location of sunken ships and catalog the cargos that they carried. There is less known about the underwater archaeological sites in Wisconsin and the protection afforded these sites is uncertain at best. If recreation opportunities on the Grand Traverse Islands are expanded, it may provide an impetus for reviewing present laws which pertain to underwater salvage and to various methods of protecting and possibly excavating some of the underwater archaeological sites.

<sup>34</sup> Michigan Department of Natural Resources, Water Development Services Division (preliminary) *Areas of Particular Concern in Michigan's Coastal Zone* (Lansing, Michigan: 1975), p. 94.



