

LOAN COPY ONLY

LAND MANAGEMENT ALTERNATIVES

for

St. John's Marsh

St. Clair County

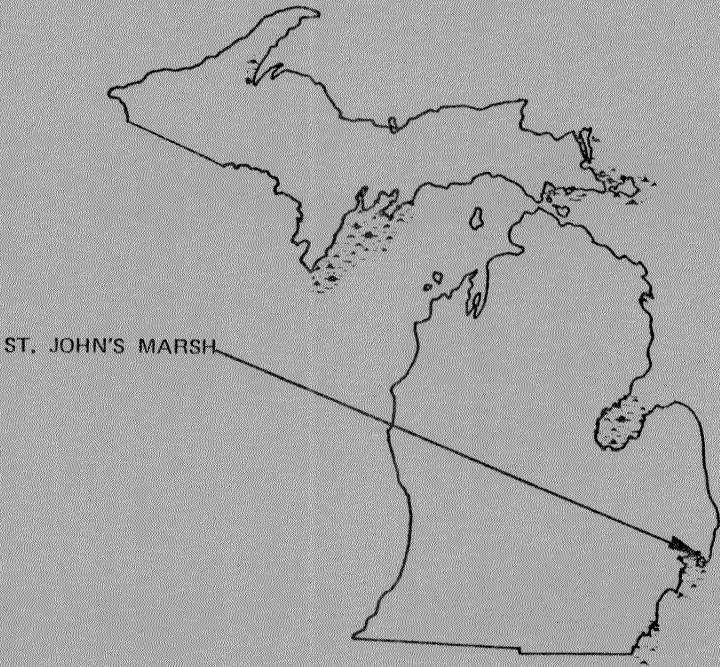
Michigan



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## PREFACE

This booklet contains four management alternatives for the St. John's Marsh area. The alternatives also apply to other marshes in the State of Michigan. This booklet is the third, in a reference series which gives background information on Michigan coastal wetlands, a description of the St. John's Marsh area, and these management alternatives for St. John's Marsh. The series was prepared by Kurt Acker and Nancy Karner. Suzanne Tainter edited them. Marcia Dorr drew cover illustrations; Cheryl Baker typed the booklets. These alternatives were developed in *COASTAL WETLANDS with Emphasis on Freshwater Systems* by Jane Kreisman, James McDonald, Gary Rosenbaum and Jonas Snyder, Regional Planning Program, School of Natural Resources, University of Michigan, Ann Arbor, Michigan 48109. April 1976.



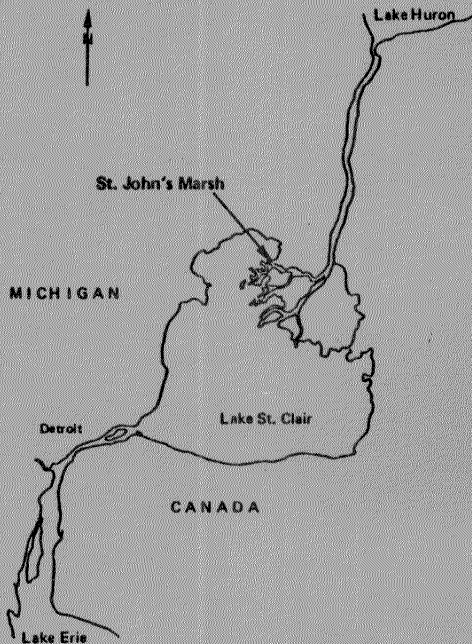
## INTRODUCTION

The St. John's marsh area, located on Michigan's northeastern shore of Lake St. Clair where the north channel of the St. Clair River enters the lake, is an example of a wetland area facing intense pressure for development.

Its location in the wake of Detroit's urban expansion along with its waterfront gives the area interest for residential development.

But its proximity to Detroit also favors some sort of recreational development. Questions about what type of recreational or residential developments would be best in the marsh are at the center of management plans for the area.

The St. John's Marsh is also one of the last remaining wetland areas under single ownership in southeastern Michigan. This has saved it from much development thus far. Given the loss of wetlands over the years, the importance of the remaining wetlands to fish, wildlife and Lake St. Clair's ecological balance also becomes a factor in plans for the marsh area. And some persons would like to see the St. John's marsh area maintained in its natural state.



This booklet presents four land management alternatives for St. John's Marsh, ranging from complete preservation to total residential development. It outlines the effects of the alternatives to help the decision-making process. Governmental levels from federal to local groups may implement these alternatives. These plans are not the only ways to manage the area, but other solutions would probably include the ideas presented here. Although these alternatives are specifically for St. John's Marsh, they might also apply similar wetlands in Michigan, of which there are many.

## ALTERNATIVE I

### *Full Protection of the St. John's Marsh as a Wildlife and Fish Sanctuary*

Alternative I maintains the present structure of St. John's Marsh. Total protection and preservation of this area includes the wetlands and those upland regions necessary for the maintenance of the marsh.

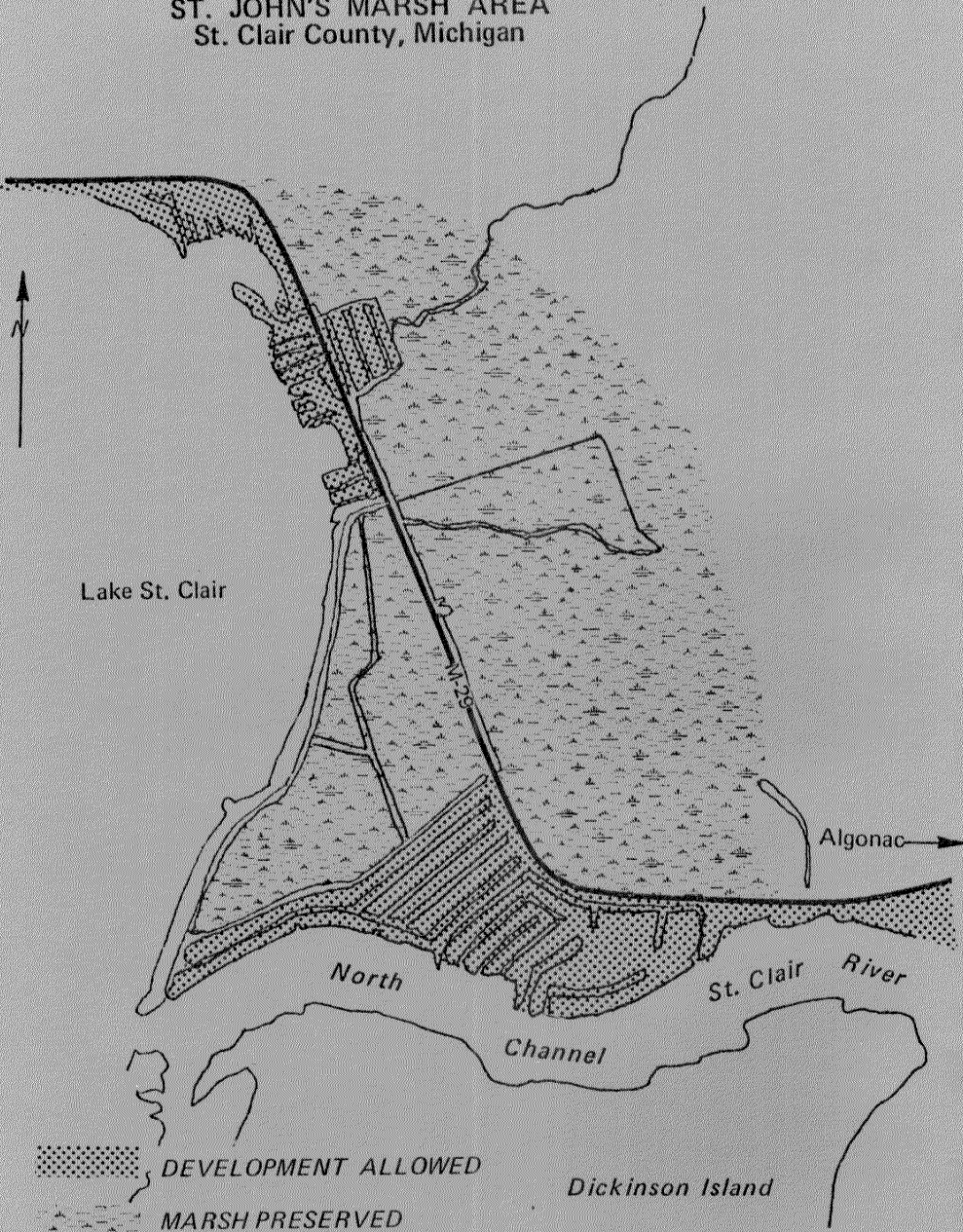
This is an area of about 3,000 acres (2,000 wetlands and 1,000 uplands). The marsh and uplands function as an ecological system, so preservation of the uplands is necessary to maintain the marsh.

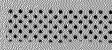
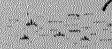
This alternative would limit development to work necessary to enhance the natural value of the marshlands. These plans for the marsh will also restrict hunting and fishing in accordance with the refuge plans. Applicable state and federal regulations may apply to this area depending on the ownership of the marsh.

Private funding could implement this alternative by turning St. John's Marsh into a private sanctuary, which would function much like a state or federal refuge. Canadian experience with private marshes is favorable. But State of Michigan experience with wildlife refuge management would seem to demand their involvement with development of this alternative.

An important part of this plan is prohibition of any development in the marsh. Land in Clay Township east of the marsh is suitable for development. These lands may present fewer problems for developers than the marshlands because fill and dredge would not be required. This alternative would allow public access to Lake St. Clair for the residences east of the marsh rather than developing the waterfront.

ST. JOHN'S MARSH AREA  
St. Clair County, Michigan



 DEVELOPMENT ALLOWED  
 MARSH PRESERVED

ALTERNATIVE I

### *Township Tax Base*

Large land portions of Clay Township are already in public ownership. The removal of additional developable land from the tax rolls could result in significant tax base loss. Waterfront homes tend to have higher values than similar inland homes. However, the township would have to provide utilities and services to any homes. The cost of these services might exceed the net tax gain due to the development. Management alternatives for the marsh must consider this. Since most of the marsh is under water and is cut off from Lake St. Clair, development projections for the area may be greater than is realistic. A detailed evaluation of these projections must determine the actual developable area.

Under the refuge alternative, entrance fees could be charged. This would provide revenue for the township.

### *Local Economy*

Most of the development proposed for St. John's Marsh is residential, and preservation of the marsh as a refuge should not adversely influence long-range local employment. The establishment of a refuge may actually stimulate the economy by creating the need for limited recreational services for users of the marsh.

### *Distribution of Benefits*

Marsh preservation will undoubtedly provide both tangible and intangible benefits. The presence of the wetlands and lake was a main factor in attracting people to Clay Township and, in addition, property values are likely to increase because of public open space in the township. The marsh also serves as a buffer against the effects of changing water levels in the lake. Increased development in the marsh may increase the susceptibility of this area to flooding. Wetland maintenance may prove beneficial to the township and its residents in the long run.

### *Land Use*

The organic soil and high water table make wetlands difficult to develop. Construction requires bulkheading and backfilling to provide dry, stable building sites. This makes homes expensive. Since Clay Townships' projected housing needs are for low to moderate income families, such houses may be priced out of the market. Continuing use of the land as marsh is consistent with natural characteristics of the area.

### *Transportation*

The existing uncontrolled recreational use of the marsh already presents Clay Township with parking problems. Preservation of the marsh would require provisions to alleviate traffic flow problems.

At present, M-29 running through the marsh is a major traffic corridor. Salt runoff, noise, air pollution and traffic accidents involving wildlife are examples of environmental problems which need consideration under the refuge alternative.

### *Public Services*

Public utilities are always an area of concern when discussing regional development. Alternative I appears to have little long or short-term effects on major public services. Either the State of Michigan or the federal government should provide law enforcement and solid waste disposal for the refuge. The refuge would put no burden on the township's sewer, water, school or energy facilities, but rather would add stability to the area.

### *Open Space Provided*

Under the refuge alternative, the marsh would remain in its natural state. Space provided would total about 3,000 acres.

### *Quality of Area Preserved*

The prevention of further intrusion upon the marsh helps maintain necessary breeding and nesting sites of waterfowl. It protects important fish spawning grounds as well. The area continues to act as a natural buffer to high lake levels, as well as continues its maintenance of water quality.

The historical trend of wetland destruction has placed a tremendous value on St. John's Marsh from a natural viewpoint. Not only would the marsh provide benefits for the Clay Township area, but it would benefit the entire southeastern Michigan area.

## ALTERNATIVE II

### *Development of St. John's Marsh into a State Recreation Area*

This alternative requires the State of Michigan to purchase St. John's Marsh and develop a recreation and ecological area. The goal of this alternative is to create a park similar to the St. John's Marsh Recreation Area proposed by the Michigan Department of Natural Resources. In that plan, part of the marsh remains a refuge with restricted use, while passive activities like nature observation, photography, and fishing could occur in other sections of the marsh. The St. John's Marsh would be connected by trails to the Algonac State Park. Playgrounds, ball fields, and picnic areas in the present park would allow the marsh to remain in its natural condition.

The present uncontrolled use of the marsh would change into a well-managed system, offering protection of the marsh and at the same time providing additional recreational benefits.

The State of Michigan would fund this alternative. This may be possible through the Michigan Duck Stamp Bill and the proposed Recreation Heritage Fund. Matching federal funds would also be available to the state through the Land Water Conservation Fund.

### *Township Tax Base*

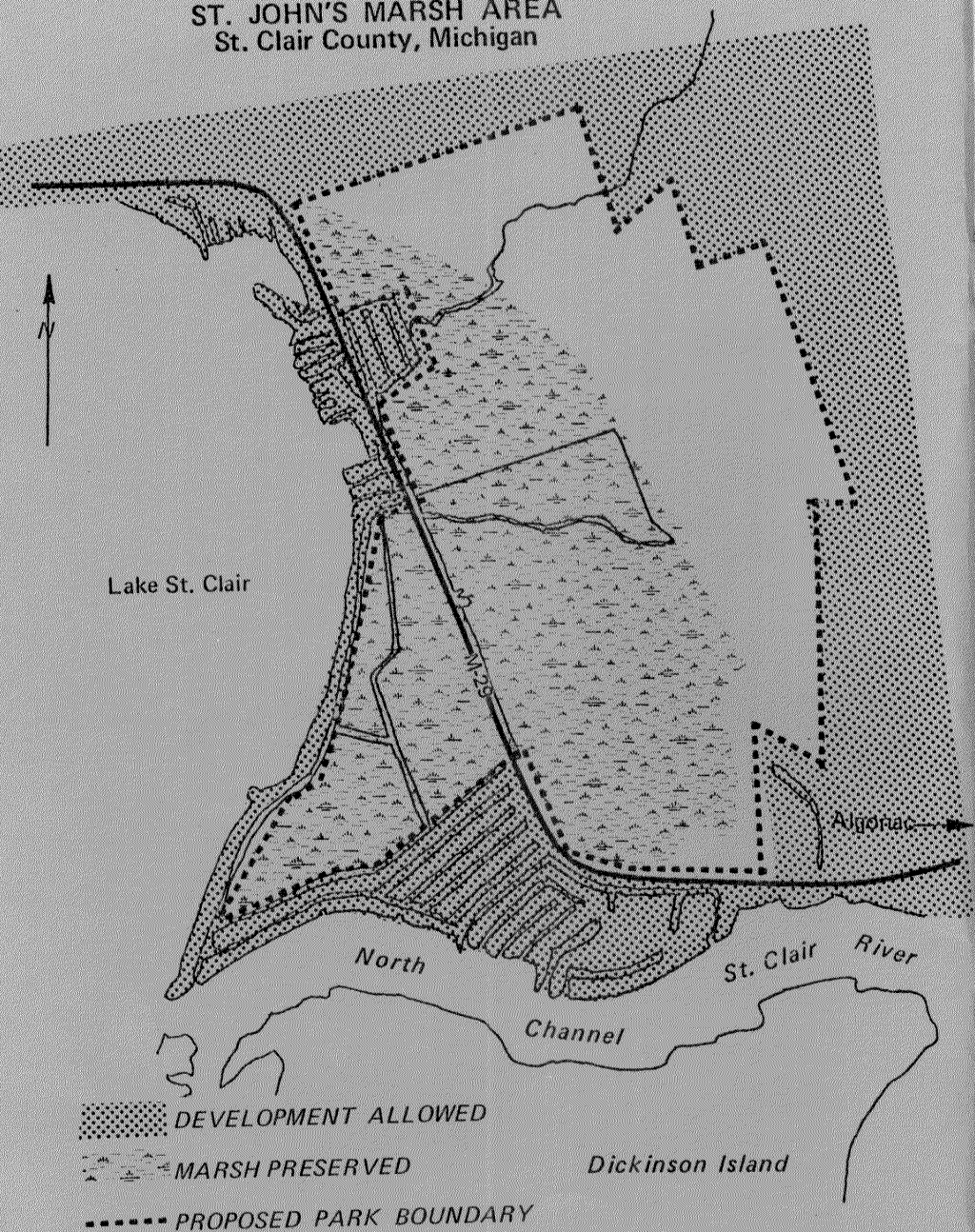
As under Alternative I, areas east of the marsh can accommodate the residential development proposed for St. John's Marsh. This alternative removes a portion of developable land from the township's tax rolls. The size of this loss needs evaluation.

### *Economy*

The establishment of the recreation area would stimulate the local economy. The State Park-Recreation Area concept would create short-term jobs during construction, as well as full and part-time employment once the project is operational. Over the long run, recreational activity in the township would stimulate commercial development.



ST. JOHN'S MARSH AREA  
St. Clair County, Michigan



ALTERNATIVE II

### *Distribution of Benefits*

By preserving the marsh area under Alternative II, the state will provide benefits to the residents of Clay Township and all of southeastern Michigan. In the township, preservation of the marsh would protect the resource which attracted many of the residents to the area; private development could occur elsewhere but not destroy the marsh. On a larger scale, preservation of the marsh would distribute the benefits to all those able to enjoy the area in the future, while protecting a vital part of the Lake St. Clair ecological system.

### *Land Use*

Establishment of a park would be consistent with the soils and water table and other physical conditions of the marsh land.

### *Transportation*

If this alternative were decided on, transportation would be a major area of impact. Present use of M-29 exceeds its design capacity. During the summer, recreational traffic causes tie ups. Development of area for recreation would presumably increase recreational traffic. Parking could be concentrated and directed to the state park, thus reducing present congestion on M-29.

Alternatives to present M-29 include widening the existing road or relocating the highway to the north and east of the marsh.

Before implementation of Alternative II, a study of best location for the traffic corridor in that region is suggested.

### *Public Services*

Local police protection may need to be increased to handle the additional flow of people through the township, and other emergency services may also require expansion. However, this alternative should not significantly affect sewer and water utilities.

### *Open Space Provided*

This alternative will provide access to the marsh for more people, yet it attempts to maintain the marsh as close to its natural state as possible.

### *Summary*

This alternative proposes a state recreation area which provides access to the marsh for a large number of people from southeastern Michigan. It could decrease the tax base, yet it provides a mild stimulus to the local economy. The plan will require limited expansion of township police, fire, and medical services. It could conceivably provide unique opportunities as an ecological park.

## ALTERNATIVE III

### *Partial Development of St. John's Marsh*

This alternative allows development in part of the marsh, preserving the remainder in its natural state. This plan is similar to the township's Planned Residential Development zoning and is a compromise solution. It would accommodate the same growth of the township projected through total development, but use less land by imposing higher density housing than the township's plan.

The area west of Route M-29 is waterfront property and, therefore, prime residential property. If development is allowed in this area, some marsh would be lost. But the marsh east of M-29 could remain in its present condition. The section west of M-29 contains 510 acres, but only 290 acres are developable because of existing water channels.

### *Township Tax Base*

This developable area would add to the township tax base. The added tax base would be less than that generated by total development but greater than in Alternatives I and II which limit development.

### *Economy*

The waterfront location of the development could attract high income residents, raising the standard of living in the area. Increasing consumer demand may increase revenue to local businesses and stimulate commercial growth in the region.

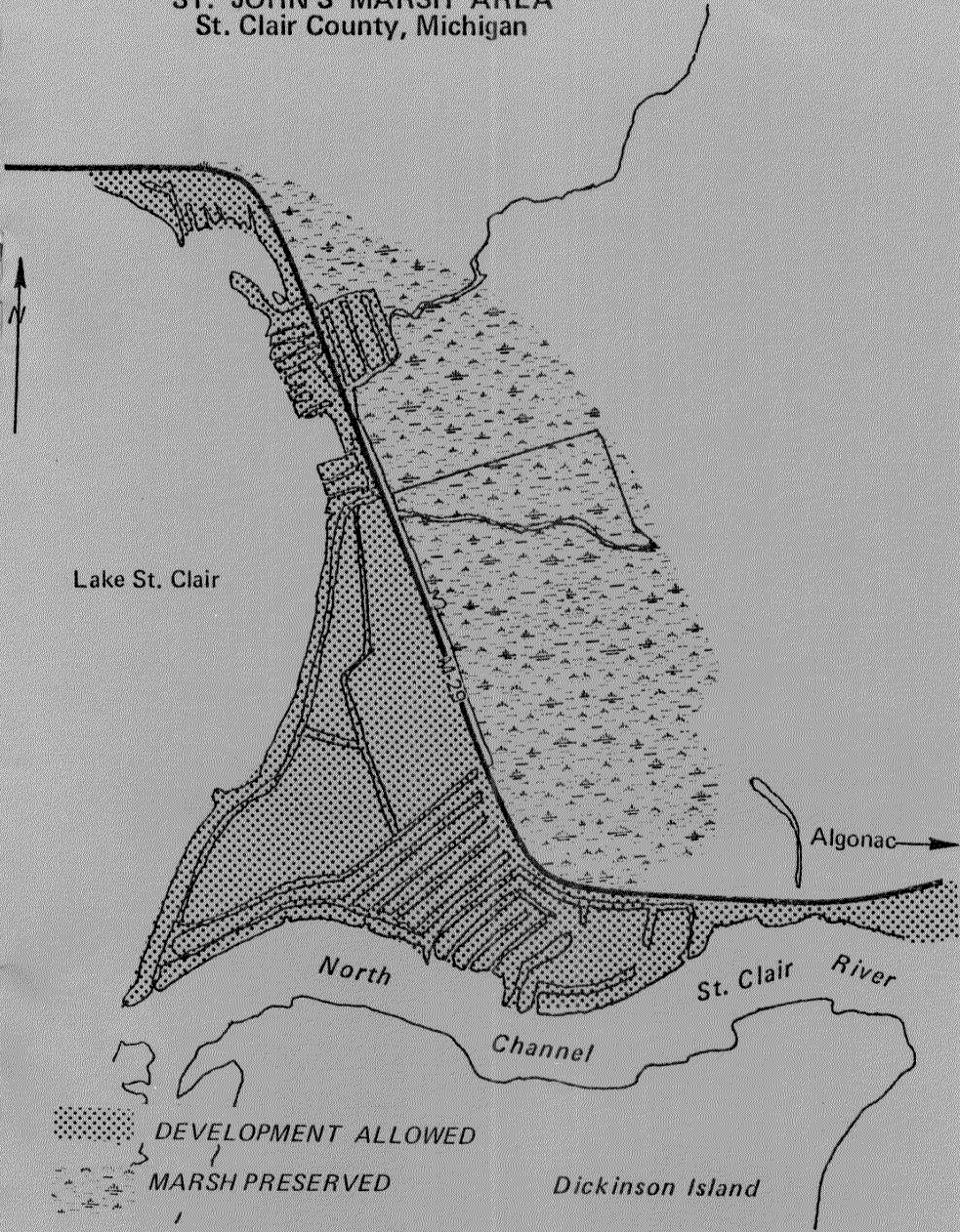
### *Distribution of Benefits*

Present Clay Township residents would benefit from the growth of their community and economy. New residents would also gain. Hunters and fishermen would gain access to the marsh to the extent permitted by the type of preservation.

### *Transportation*

Transportation is inadequate for the township as it presently exists. New residents would add to traffic congestion. Transient motorists interested in the amenities of the marsh already cause parking problems along M-29.

ST. JOHN'S MARSH AREA  
St. Clair County, Michigan



ALTERNATIVE III

### *Public Services*

Present sewer facilities can accommodate an additional 370,000 gallons per day, which is twice the projected need under this alternative. The number of school children in the township might increase, but the present system appears to be adequate. Police and emergency services would need to be expanded, but additional tax revenue should cover this.

### *Open Space Preserved*

This alternative preserves approximately 1120 acres of marsh and upland. The fish, wildlife, and vegetation need a refuge-like habitat with protection from residential development by a barrier, in this case Route M-29. The aesthetic value of the preserved area would decrease because of residential development between the marsh and Lake St. Clair.

### *Summary*

This alternative allows some development in the marsh, yet also allows preservation of some of the marsh. The development east of M-29 uses the most valuable residential land and the road acts as a barrier separating the development from the refuge. The built-up area's proximity to the marsh decreases the quality of the preserve. The development of this area will require expansion of township services and should provide a stimulus to the local economy.

## ALTERNATIVE IV

### *Full Development of St. John's Marsh*

This alternative is similar to the township's Conceptual Plan which designates the marsh for Planned Residential Development. It would require dredging to make water channels and filling to make buildable areas. This results in high development costs which need to be absorbed by high income housing.

Approximately 400 acres of St. John's Marsh are already committed to drainage channels; 1,100 acres remain for "development." Of the remaining areas, perhaps as few as 343 acres are useful for building.

### *Township Tax Base*

Full marsh development would result in the greatest immediate increase in the township's tax base. In the long run, however, the outcome is uncertain. The need for increased township services might require a tax increase. This aspect of the plan needs further study.

### *Economy*

The local economy would benefit by residential development, and the income from additional residents would stimulate the local commerce as in Alternative III.

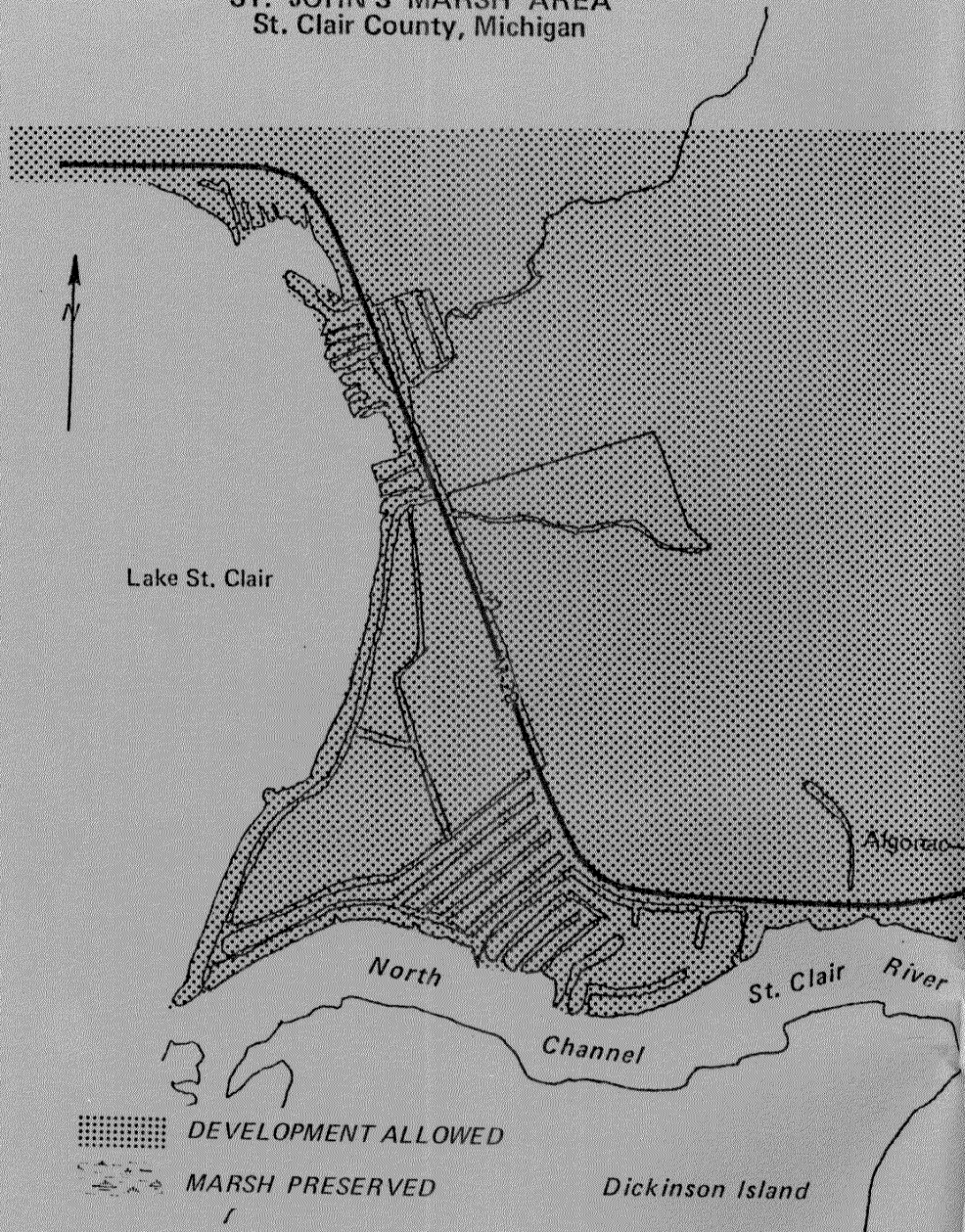
### *Distribution of Benefits*

Full development will make any natural benefits available to only a few, higher-than-average income persons. This alternative would destroy necessary marshland and alter the Lake St. Clair fish and wildlife populations.

### *Transportation*

Traffic congestion is most prominent during the weekends on M-29. Full development of the marsh would reduce this somewhat by eliminating the attraction for many day-use recreationalists. However, development would add to locally generated traffic, and create additional intersections which both slow the flow and add potential safety hazards.

ST. JOHN'S MARSH AREA  
St. Clair County, Michigan



ALTERNATIVE IV

### *Public Services*

The demand for public services will parallel the amount of development. The present sewer line has an excess capacity that can handle only about one half the total projected development. Other services will need to be expanded as the development progresses. Police and emergency services initially might have a lower level of demand than the park alternative.

### *Open Space Preserved*

This alternative would essentially eliminate the marsh. The open space preserved would be very different than the natural marsh. Mostly linear drainage channels, the remaining space would be strongly influenced by the abutting urban use and of direct value only to adjoining property and of no value to most of the township or the general public.

### *Summary*

The full-development alternative is similar to the township's plan and would eliminate the marsh in its present form. This might have very detrimental effects on the Lake St. Clair ecological system. This would increase the local population and stimulate the local economy, but it would also increase the local population and stimulate the local economy, but it would also increase the demands on township services



## SUMMARY

### *Management Alternatives for St. John's Marsh*

Four management alternatives for St. John's Marsh were outlined in this reference series. These plans range from total preservation of the marsh in its present form to total residential development in the marsh. Each of these alternatives has benefits, and each has detriments. All positive and negative aspects need consideration when management plans for St. John's Marsh are made, whether by the United States Government, the State of Michigan, or Clay Township. Any one of these alternatives, or a combination of these plans, may provide satisfactory use of the St. John's Marsh.

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