RESEARCH STRATEGY
FOR
RECREATION SUB-PROGRAM
MICHIGAN
INSTITUTIONAL SEA GRANT PROGRAM

by

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Michigan Sea Grant Program
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TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

I. SUMMARY OF CONTENT

The recreation portion of the Michigan Sea Grant Program is a multi-discipline program devoted to the development, planning and management of recreation resources through basic and applied research. The major emphasis of this sub-program is directed toward the entire spectrum of spatial allocation of water recreation in the urban coastal zone. The sub-program addresses regional and national problems that relate to the planning and development of these resources.

Michigan ranks high in water related recreation due to its geographical uniqueness. In addition to 3200 miles of Great Lake shoreline, Michigan has 11037 inland lakes and 43 river systems. One of the primary uses of the coastal zone of the Great Lakes and the inland lakes and rivers is recreation. The waters are used on a year around basis for broad spectrum of recreational activities.

Increased population size, the change of community composition, and the improved community attitude toward recreational values have put growing pressure on recreational facilities, particularly around the urban coastal zones. Yet the lack of understanding in this fragile environment has made planning, development and management of recreational facilities, whether under private or public control, economically and ecologically unsound and occasionally detrimental to the future viability of the social and natural system involved. Fundamental information on questions concerning user needs, user preferences, travel time, land use control and ownership, public right-of-way, current and potential ecological, social and economic impact of support facilities, compliment and conflict and adjacenct condition of

recreational types, and the recreational suitability of water resources, is fragmented or more typically, lacking entirely. Therefore, lack of an adequate data base together with questionable planning and spatial allocation methods often led to unsound planning and cumulation of unmet needs.

Through collaborative effort with various municipal planning agencies and other research institutions, these recreational problems identified will be investigated. In short, the sub-program's effort will be directed toward a better planning of our Great Lakes Marine Resources and meeting the immediate needs of selected user groups particularly in the case of coastal zone water recreation.

II. RECREATION SUB-PROGRAM

A. Origin

In early 1979, representatives of the Michigan Sea Grant program approached the Landscape Architecture and Regional Planning Program at The University of Michigan in order to develop a sub-program that would encourage research in the subject area of water-oriented recreation within the coastal zone. The intent of these efforts was to establish a direction concerning urban waterfront recreation.

In the course of developing the framework for such a sub-program, the study group concluded that the urban waterfront from Toledo to Port Huron represents one of the most important coastal areas along the Great Lakes (see Figure 1). This zone includes the Port of Detroit, portions of the Detroit metropolitan area within Wayne County and Macomb County, and portions of Monroe County and St. Clair County. As reflected in previous studies and reports, the problems associated with this zone and specifically with the Port of Detroit are deeply rooted in the history of Detroit.

The study group also noted that major opportunities for recreation along this stretch of urban waterfront are generally non-existent. Except for some shining examples such as Belle Isle, the urban waterfront is locked into a pattern of industrial, commercial and sprawling residential uses. Historically, the city and the urban area have not utilized the availability of the water resources for recreation purposes. According to The Land and the River (1976) report the Detroit River has not been sufficiently recognized as a unique recreational resource and has not been used to its maximum potential. And just as Detroit became the most controversial and least appreciated port on the Great Lakes, public accessibility to the waterfront and opportunities for recreation

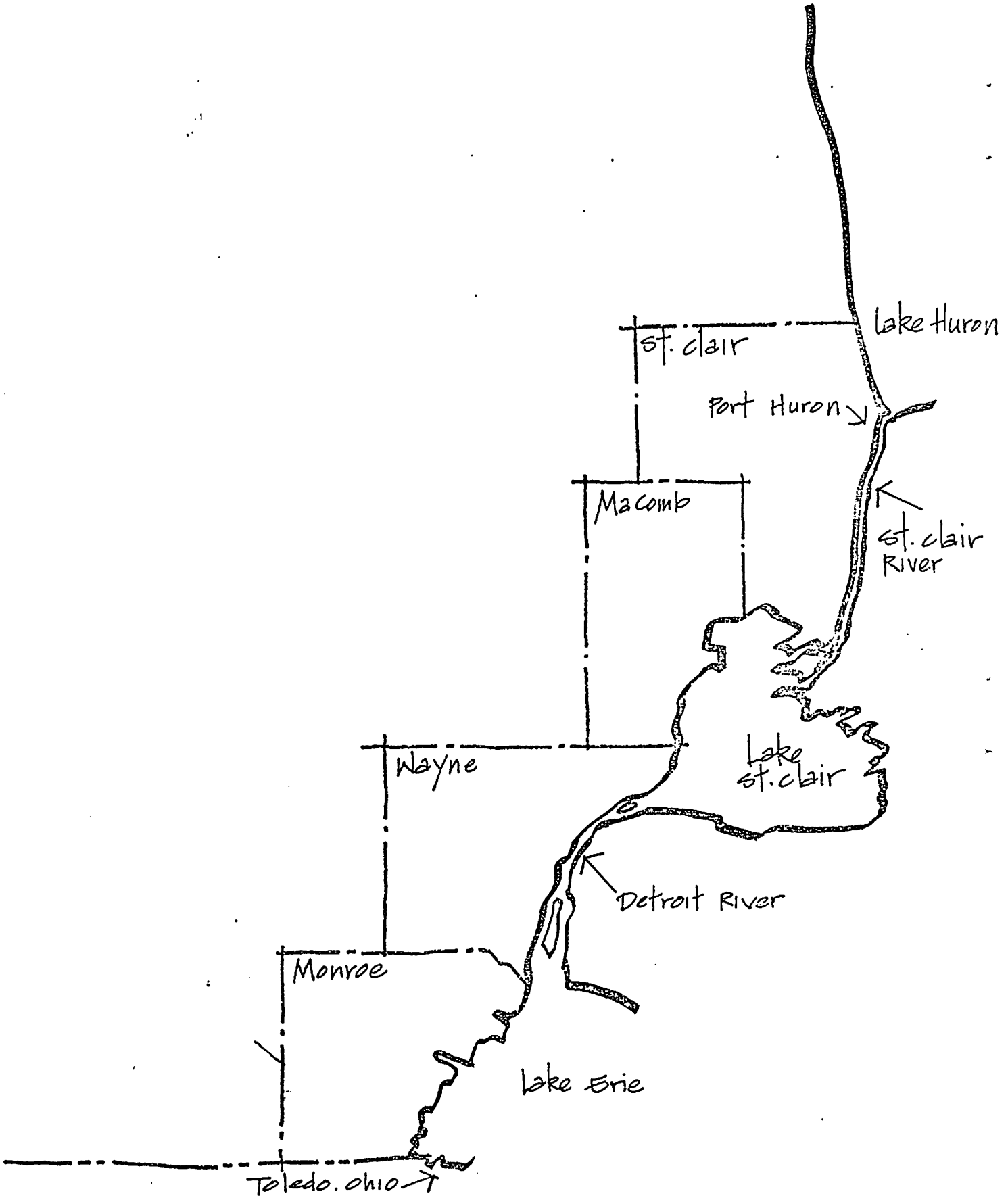


Fig: 1 (a)

Location Map showing Counties involved

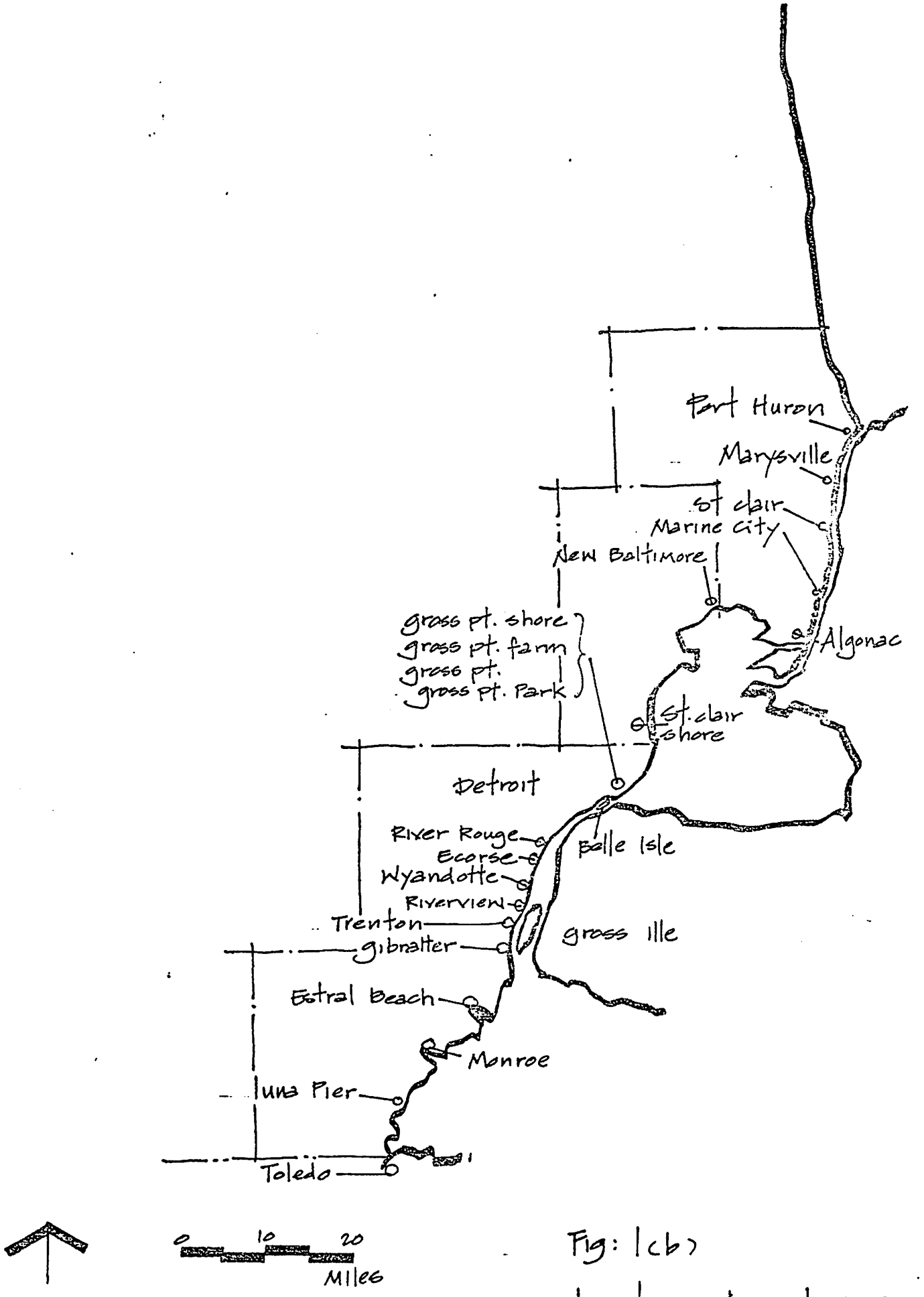


Fig: 1(b)

Location Map showing Cities involved

pursuits were downplayed or ignored.

This is not meant to overlook the recent changes that are occurring along the urban coastal zone however. As pointed out by the report entitled The People and the River, (1977) during the past few years there have emerged some remarkable shifts in attitude. The recent development of Renaissance Center, the Detroit Civic Center Plaza, Fort Wayne, Elizabeth Park, Lakeshore Drive, the soon to be developed Lake Erie Metropark and the renovated Belle Isle are but seven examples of facilities that have generated excitement on the Detroit River. They have helped to create a positive attitude toward the waterfront and, therefore, they provide a good stepping stone toward the future. When viewed in combination, they become an excellent statement that the riverfront need not be viewed as a failure of mankind; that the riverfront offers significant opportunities for recreational activities and for improving the imagability of the urban area.

B. Statement of the Problem

The shoreline of the urban area from Toledo to Port Huron has the potential to meet many of the recreational needs generated within the Detroit Metropolitan region. The coastal zone in this area includes natural shoreline, developed lakefront and stretches of riverfront development. In many cases, these shorelines and waterfronts have been extensively altered and developed for residential, commercial and industrial uses. As a result, the dedicated areas for recreation and open space resources are extremely limited; and at this time are not considered adequate to meet the basic recreational needs of the urban area.

The major problems and concerns that affect the use of the waterfront have already been well described in reports such as, People and the River and The Land and the River.

1. Although the waterfront along the Detroit River has always been an exciting place to watch international freighters, carriers and pleasure boat traffic, it has not been sufficiently recognized as a unique recreational resource and has not been used to its maximum potential.

   Access and availability seem to be the most important factors. For example, access to the riverfront is limited and uneven especially for certain segments of the population. Moreover, there seems to be no conceptual treatment of the unseen, unknown, and often unconnected patchwork or recreational land on the river's edge.

2. There is insufficient information about the major institutions and agencies involved in controlling waterfront activities and in providing funding for improving facilities or enhancing their accessibility and usability.

3. There is serious competition for the use of the waterfront for housing, industry, shipping and recreation. The traditional concept that the "highest and best use" predominate has historically resulted in significant expansion for industrial uses because they produce the most immediate tax and employment returns to a weary economy. Recreational use of the waterfront has therefore been relegated to a secondary concern.

4. Traditionally, recreational use is seen in limited "open space" terms rather than in any comprehensive framework, or through innovative solutions such as extending the shoreline, developing piers, marinas, or bridges, or considering recreational use of the riverfront from the water resource point of view. Moreover, little effort has been made to explore the possibilities of mixing recreational uses with other land uses and activities that exist along the riverfront; or to find ways of improving recreational access around and through existing development.

5. There are some coastal zone situations which require special attention, such as seawall/flood protection in low lands and the purchase and protection of river islands that serve as ecologically important flyways for migrating birds.

6. The shorelands of many waterways are seriously degraded by uses and developments which are non-essential to a shoreline location. Warehouses, parking lots, mineral storage piles, sanitary land fills and other similar uses preclude the development or use of the waterfront for recreation and also detract from the aesthetics of the coastal zone.

7. For those who do find the water resource a desirable location for recreation pursuits, there is a shortage of facilities available to meet these needs. Currently, private enterprise has been able to keep pace with the demand for boat wells, particularly in the range of the 20 and 30 foot class sizes.

8. For those who desire to be near the water resource because it enhances their recreational activities, there are few locations where these needs can be met. There is a lack of marked and specifically designated scenic drives along the coastal zone that are easily accessible to the urban populations. There is also a serious need for trails of all kinds to serve urban day use needs. The opportunity for walking, bicycling, horseback riding, snowmobiling and motorcycling along the coastal zone is very limited at present.

9. Finally, for those who desire a special contact with the water resource, there are few opportunities for water recreation pursuits. Swimming, water skiing, sailing, canoeing, scuba diving, boat fishing, ice skating, and wading are activities that rarely occur along the coastal zone because of the lack of available land for recreation and the scarcity of available facilities.

It is apparent from this brief list that the situation concerning water recreation in the urban coastal zone is not particularly healthy. And it is safe to say that additional research and concerted action is necessary in order to improve this situation. The potential benefits are too great to allow the situation to remain as it exists or to deteriorate.

C. Role of Michigan Sea Grant

When it was initially established and funded by Congress, the Sea Grant program faced such pressing issues as water pollution, misuse and misunderstanding of

the water resource, inadequate port development, and outdated marine technology. Of these problems, water pollution was certainly the most important single issue of the time especially within the urban area. Orange tinted water, oil slicks, deteriorating boat hulls, and massive waterfowl dieoffs were all part of urban scene in the mid-1960s. As exemplified in the legislation, court decisions, and public concerns of the time, the needs of the country were clearly directed toward cleaning up the environment.

As a result, a significant emphasis was placed on improving the condition of our living environment including the quality of our water resources. New state regulations and individual initiatives have now begun to show results. Fishlife, as one indicator of water quality, continues to improve. Small mouth bass, perch, rock bass, bluegills, and even salmon and trout can now be found along with the ever present walleye and muskie. To say the least, fishing is again becoming an important pasttime and recreational pursuit for inner city residents.

Combined with the improvement of water quality is the changing character of urban life. Residents now seek the opportunities of the coastal zone as a relief from the pressures of urban life and also to satisfy new demands for recreation. Of special consideration is the fact that the elderly, the youth, and the disadvantaged and handicapped all have special recreation demands that can be met along the urban coastline.

The Michigan Sea Grant program has a special role to play in this changing act. Because of its previous work, the Program has developed a significant body of information concerning the nature of the water resource. This

information is critical to the proper phrasing of the questions and issues associated with water recreation within the urban coastal zone. For example, planning issues concerning the location and extent of recreation opportunities and the allocation of activities require a significant understanding of water resource data. Moreover, the formulation of policies concerning the urban coastal zone and waterfront requires the proper balancing of environmental and economic information.

We expect that the establishment of a recreation sub-program within Michigan Sea Grant will provide the reasoning for additional study of water recreation issues especially concerning spatial allocation of activities. As a result, we expect that better information will be available to enable decision-makers to address the questions associated with water recreation within the urban coastal zone.

III. WATER-RECREATION IN THE URBAN COASTAL ZONE

A. Introduction

According to current lifestyles, recreation cannot easily be separated from the daily living pattern of most Americans. It prevades almost every area of American life and involves a tremendous output of energy, interest and expenditure on the part of both participants and program sponsors.

Since early civilization, man has always had some degree of unobligated time. The wealthy and influential social classes of each era had countless forms of activities, pursuits and diversions that they used to fill leisure hours. But it has only been within the past century, particularly among the highly industrialized Western nations, that both leisure time and economic growth have made it possible for recreation to be widely available to all social classes.

Within the United States, there has been a vast expansion of recreation programs, services, facilities and activities. Current categories of institutional sponsors include the government, voluntary agencies, private groups and commercial/business enterprises. Each has a special role in the overall system.

According to Kraus, ten factors are important in the growth of recreation and leisure in the United States. They include:

- .the growth of leisure time
- .increasing affluence
- .higher levels of education
- .urbanization and suburbanization
- .an expanding and mobile population

.advances in modern technology

.the cultural explosion

.the expansion of social welfare

.professional development of recreation and parks

.public attitudes concerning recreation

These factors account for the rapid growth of the recreation movement during the last several decades. Concurrent with these social factors are a number of major challenges concerning recreation and leisure which face us all in the future. They include:

.challenge of increased leisure

.challenge of education for leisure

.challenge of meeting special needs

.challenge of conservation

.challenge of planning

.challenge of economic support

.challenge of professional development

.challenge of the cities

.challenge of accommodating change

As pointed out by Kraus, it is impossible to predict the total challenge of the future especially concerning recreation and leisure. The only certainty is that the role of change is so tremendous that the society of tomorrow will be vastly different from that of today.

B. Overview of Recreation, Play and Leisure

Regardless of the energy situation, it is becoming common to hear comments concerning the increase in leisure time-- a frequently heard statement is

that one of the most crucial challenges of the present day is the need to come to grips with the "new leisure." But what exactly is leisure? And how is it related to recreation and play?

(i) Concepts of Leisure

From a conceptual point of view, the term "leisure" has at least four widely found meanings -- 1) the classical view, 2) the view of leisure as a function or symbol of social class, 3) the concept of leisure as a form of activity and 4) the concept of leisure as free time.

Common to all of these meanings, however, is the important element of non-obligation and a sense of freedom and personal choice on the part of the participant. According to Kraus, a realistic approach to classifying leisure would be to suggest that leisure represents all free time and that it provides the potential for freedom of choice. Within the meaning of leisure one may engage in a wide range of activities -- including those which are negative, passive, and destructive or those which are positive, active, self-enhancing, and constructive for the community as a whole.

(ii) Conceptual Freamwork for Recreation

Historically, the term "recreation" stems from the Latin word recreatio, meaning that which refreshes or restores. Traditionally, recreation is considered to be a period of light and restful activity, voluntarily chosen, which restores one for heavy or obligatory activity, or work.*

However, the concept of recreation lacks acceptability today for two reasons. First, much work in our society is less demanding and, therefore, many people are becoming more fully engaged, both physically and mentally,

*Max Kalpan, Leisure in America: A Social Inquiry

in their recreation. Secondly, the idea that recreation is primarily intended to restore one for work has no meaning for such groups as the elderly and the youth, who have no formal work yet who certainly need recreation to make their lives meaningful. Recreation must be perceived as valuable in its own right, not simply because it makes it possible for one to engage in more work.

(iii) Definitions of Leisure, Recreation and Play

In order to classify some of the ambiguity concerning these terms the following definitions will apply --

1. leisure is that portion of an individual's time which is not devoted to work or work-connected responsibilities. It is regarded as discretionary or unobligated time.
2. recreation consists of activities or experiences carried on within leisure time, usually chosen voluntarily by the participant, either for satisfaction or pleasure arising from the activity/experience or because he perceives certain personal or social values will be derived from them. Like leisure, recreation does not have work connotations.
3. play is also regarded as an activity carried on within leisure for purposes of pleasure and self-expression. Play tends to be active and to be carried out in a spirit of competition, exploration, or fantasy. Customarily, play is considered to be a childs activity.

C: Water Recreation in Perspective

1. Definition

Water is a major focal point for outdoor recreation activities. Most

people seek water in order to swim, or dive, or fish, or boat. Others seek water in order to camp, picnic or walk beside it; still others just like to look at or meditate near it. Michigan's 3,200 miles of Great Lakes shorelines combined with its 11,000 inland lakes and 43 river systems form a magnet which from the past to the present day continues to attract people seeking a pleasant recreational experience.

Water recreation encompasses a wide variety of activities and uses. Many of the activities such as swimming and diving requires physical contact with the water and are therefore dependent upon water quality characteristics. Other activities such as fishing or boating may or may not require physical contact. Still, other activities such as picnicking and viewing do not require physical contact but seek locations near water. Regardless of the physical contact requirements, however, all water recreation activities are generally dependent upon the overall aesthetics or scenic quality of the water resource. For purposes of discussion we identify these types of recreation activity as water dependent and water seeking. The following chart portrays this classification.

Water Recreation Activities

Water Dependent	Water Seeking
Swimming	Picnicking
Wading	Hiking/backpacking
Fishing (bank/boat)	Bicycling
Boating/canoeing	Nature studies
Aquatic nature study	Camping

cont'd.

Water Dependent	Water Seeking
Water skiing	Viewing/sightseeing
Sailing	Hunting
Ice Skating	Sledding/skiing

As previously discussed, recreation in general can be either primarily a physical or a mental activity. The physical is exemplified by organized sports or activities with an emphasis on discipline and body finess; while, at the other extreme, day-dreaming and meditating may typify the most popular mental forms. We can generally classify recreation activity, therefore, as having active or passive characteristics.

(ii) Demand for Water Recreation

The best available basis for estimating present and future outdoor recreation activity according to these categories is found in the Outdoor Recreation Resources Review Commission reports. According to these studies, swimming and boating activity can be expected to increase between four and five times the present level by 2010. In a similar fashion, fishing may be expected to double while water skiing activity may be expected to increase by six to seven times their present levels. These projections were developed for the Lake Michigan Basin but can also be expected to apply to the Southeast Michigan area.

Two factors appear to have a permanent influence on recreational use of water resources. These include: 1) the quality of the water resource, and 2) the availability of water and accessibility to it by the public. Therefore, although a coastal zone may be well endowed with the natural resources

required to provide water recreation activities, poor water quality combined with other competitive uses of the water resource may eliminate its potential use for recreational pursuits.

(iii) Relationship to Water

Since it affects health and safety considerations, water quality is the most important factor influencing the recreational use of water resources. Water-oriented recreational activities may be divided into two categories - the first involving actual contact with the water; the second involving the aesthetic enjoyment of viewing the water and its enclosure.

The first category may be further broken down into activities which involve whole body contact with the water resource such as swimming, diving and water skiing and also those activities which involve limited contact such as pleasure boating and fishing. These activities are described as water dependent. (See figure 2).

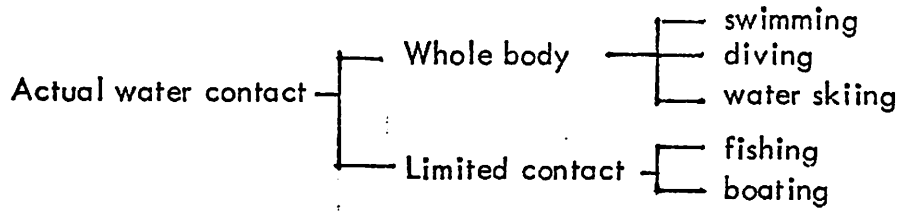


Fig. 2.

The second category precludes water contact and includes such activities as driving and hiking for pleasure along the coastline. Since an important part of the recreation value of water is its aesthetic value, certain outdoor recreation activities, while not directly water-dependent are considerably enhanced as an experience when located near water resources. These include camping, picnicking, sightseeing, and backpacking and bicyling.

Water pollution and inappropriate spatial allocations rob the water resource of its aesthetic value for such activities.

The most notable causes of pollution affecting recreational waters are effluents from municipal sewage systems and industrial plants. In addition, suspended silt from erosion and even pollution caused by recreationalists themselves have on occasion rendered water or adjacent land areas unsuitable. For example, waste discharges from pleasure boats, or unsewered cottages have resulted in unsuitable conditions along coastlines.

In addition, water temperature is a physical characteristic not related to pollution which has a significant effect on the potential for recreational uses of water resources. The general low temperatures of much of the Great Lakes shore causes much of the coastal zone to be unacceptable for certain recreation activities such as swimming.

Although winter sports such as ice fishing and ice skating are not directly affected by water quality and spatial limitations, other water-oriented recreation activities may be significantly affected. For example, water skiing requires a considerable amount of area to attain speeds necessary for hydraulic lift and maneuvering. On some portions of highly urbanized coastlines such use is difficult because of spatial restrictions or low water quality.

In swimming, the limitations placed on recreation by water quality will vary depending upon the type of water-oriented recreation to be engaged in. Swimming and other activities requiring complete body contact with the water demand the highest quality. On the other hand, limited contact activities, such as fishing and boating, and non-contact activities, such as sightseeing

and camping can adapt to lower water quality but demand the highest scenic and aesthetic quality.

D. WATER RECREATION WITHIN THE URBAN COASTAL ZONE

1. Introduction

Water-oriented recreation is becoming increasingly important within the urban area. This is especially true for certain segments of the urban coastline such as those within the City of Detroit where the recreational needs are the greatest. The ability of the coastal zone to support various types of water recreation, however, is dependent upon a host of important environmental and economic factors.

Currently, the urban coastal zone includes both natural shoreline and man-made waterfront or riverfront. Natural shorelines within the Detroit urban area include such examples a Pointe Mouillee, the Lake Erie Metro Park, portions of Grosse Isle and most of Belle Isle. On the other hand, urban waterfronts include the Port of Detroit, the Detroit Civic Center Plaza and Renaissance Center. Of course, there are additional examples within the urban coastal zone that may not be so easily classified. For example, most of the land in residential use along the coastal zone remains in a natural condition but is privately owned and occasionally used for recreation purposes.

2. Setting for Water Recreation

The southeastern Michigan coastal zone comprises approximately 160 miles of shoreline in Macomb, Monroe, St. Clair and Wayne Counties. It includes approximately 13 miles along Lake Huron, 38 miles along the St. Clair River,

46 miles of the Lake St. Clair shoreline, 31 miles along the Detroit River and 32 miles of Lake Erie shoreline.*

The topography of this area is characterized by a broad 15 to 20 miles belt of relatively flat lake plain . The shoreline consists of sandy beaches, low marshy shores, and low bluffs overlooking the river portions. Extensive alteration and development have changed much of the natural shoreline character. Approximately 52 percent of the shoreline has been altered by artificial fill, and the remaining 48 percent is classified as wetlands and erodible bluffs or plains that should be maintained in a natural state.*

The existing land use pattern reflects the kinds of pressures on the coastal zone. The dominant land use is residential while the combined categories of agricultural, undeveloped, recreational and wildlife refuge constitute a significant proportion of use. According to the Shorelands Study, the southeastern Michigan shoreline will continue to be influenced by a rapid encroachment of urban development upon agricultural and open space lands. In addition, undeveloped shorelands are expected to decrease significantly in the future as the demands for urban development increase. (Figure 3).

*Southeastern Michigan Shoreline Study. Bureau of Outdoor Recreation, Department of Interior. (Dec. 1974).

Fig. 3a Existing Land Use of Urban Coastal Zone

	Miles	Percent
Residential	90	56
Commercial and Industrial	26	16
Agricultural and Undeveloped	17	11
Recreation and Wildlife	24	15
Public non-Recreational and Military	3	2
Total	160 miles	100%

Fig. 3b. Land Ownership in the Urban Coastal Zone

	Mainland Miles	Percent	Island Miles	Percent
Private	118	73.9	53	45.1
Public				
State	28	17.8	54	46.2
Local	11	6.7	6	5.3
Federal	3	1.6	4	3.4
Total	160 miles	100%	117 miles	100%

The 13-mile segment of the coastal zone located along the southern end of Lake Huron is developed almost entirely for residential use except for over one mile at Lakeport State Park. The shoreline of the St. Clair River is, likewise, developed for residential and some industrial uses. The low flood prone lands at the mouth of the St. Clair River are largely undeveloped except for some residential development on Harsens Island.

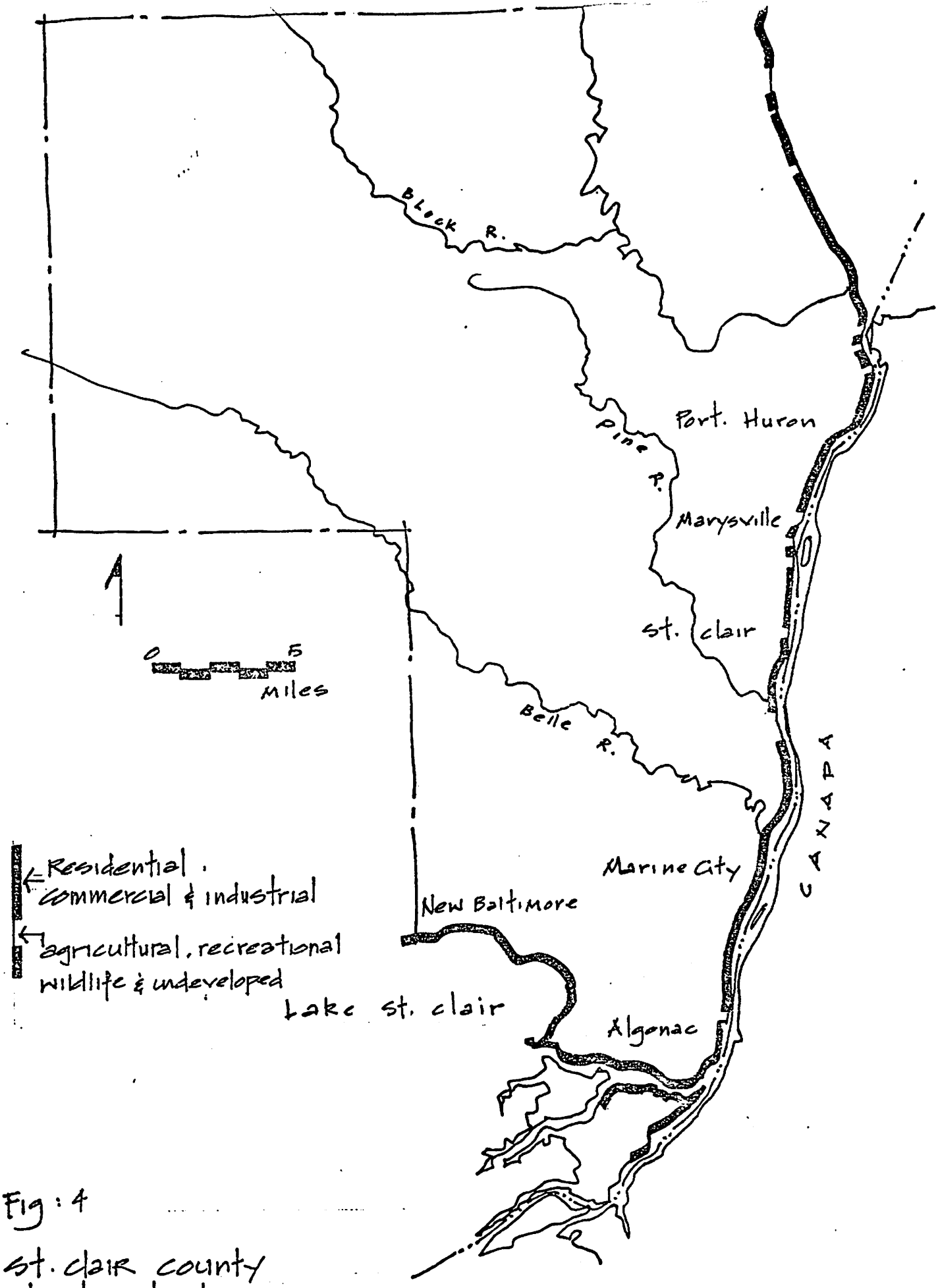


Fig: 4

St. clair county shoreline landuse

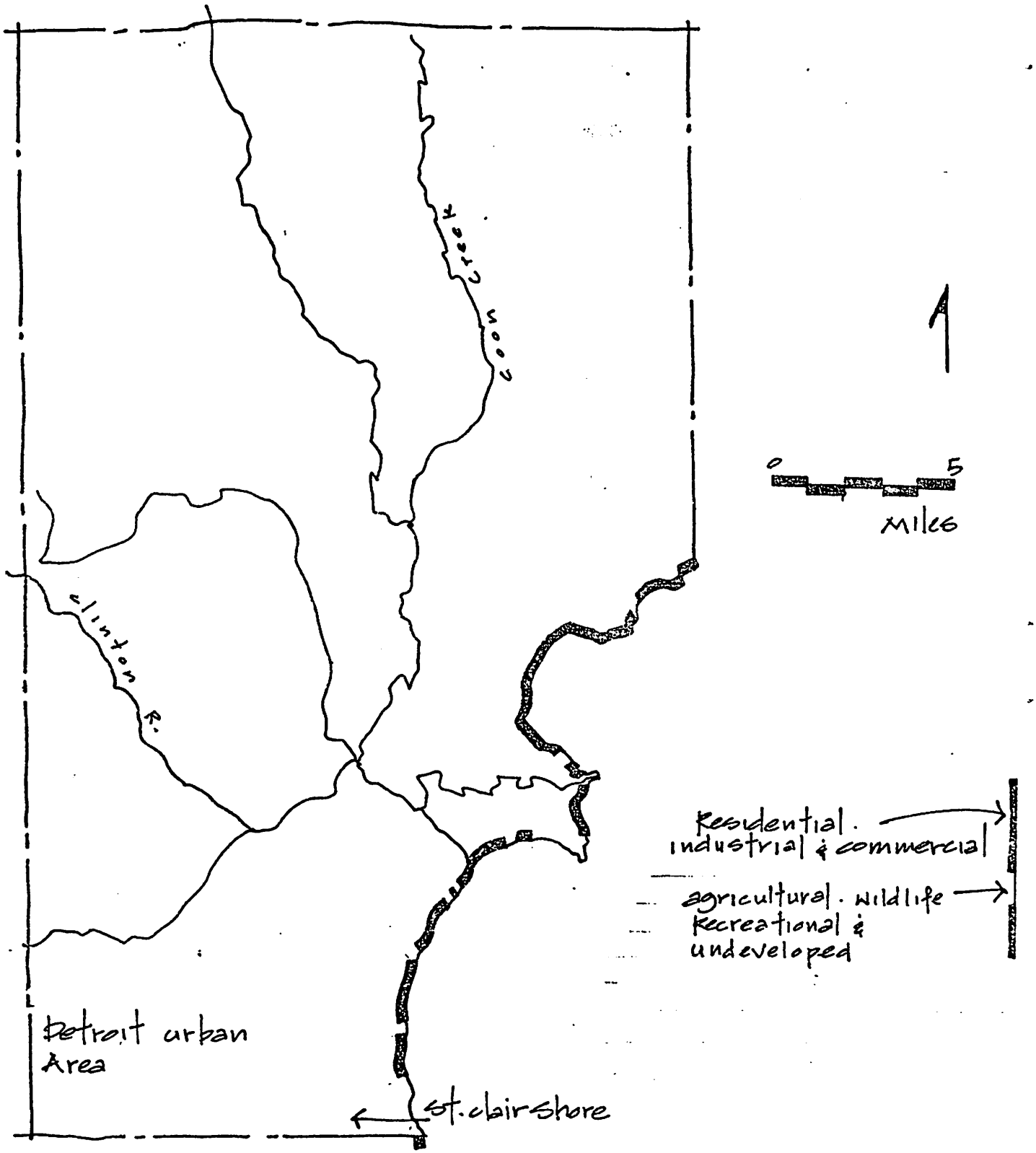


Fig: 5

Macomb County Shoreline Landuse

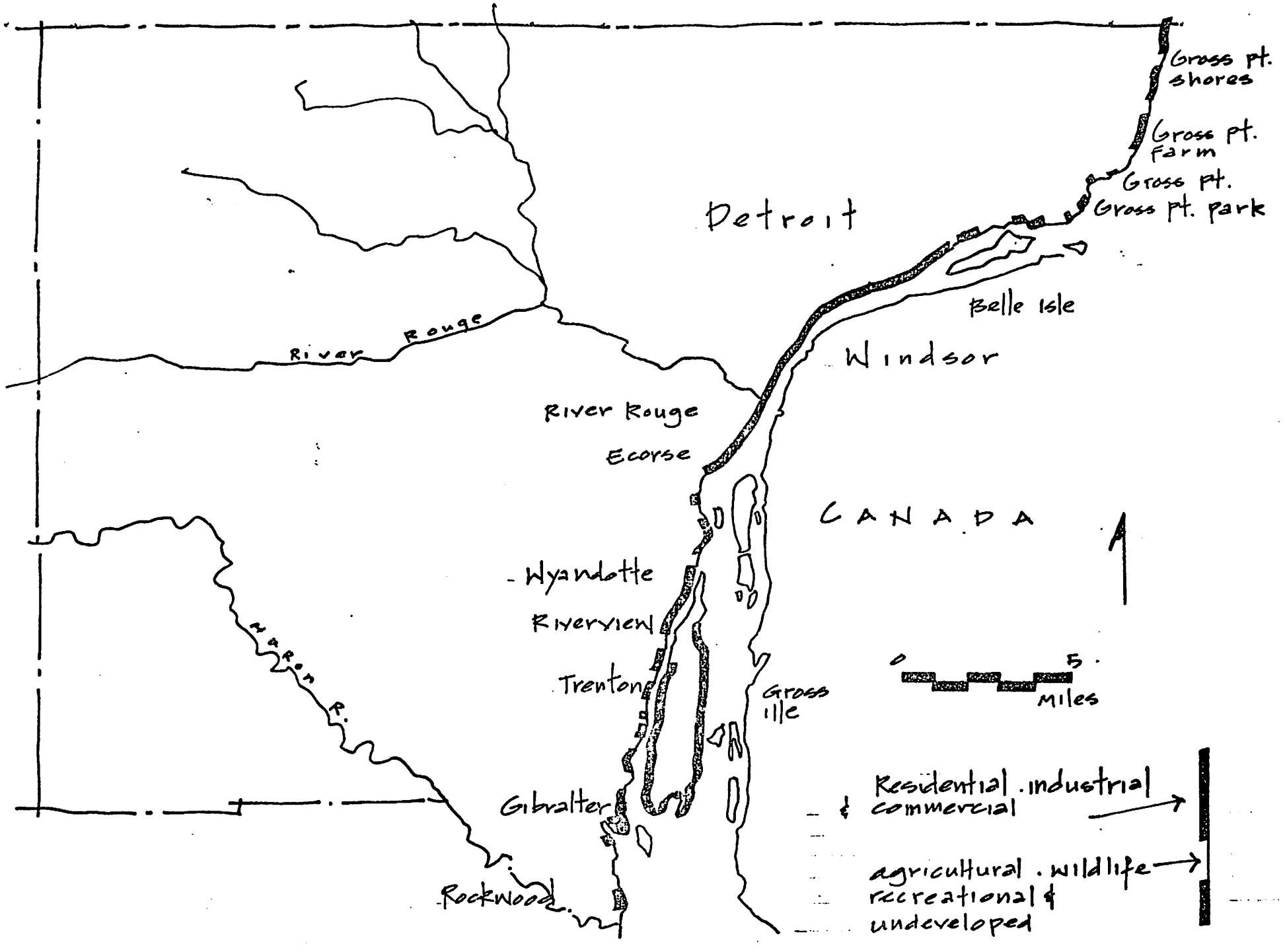
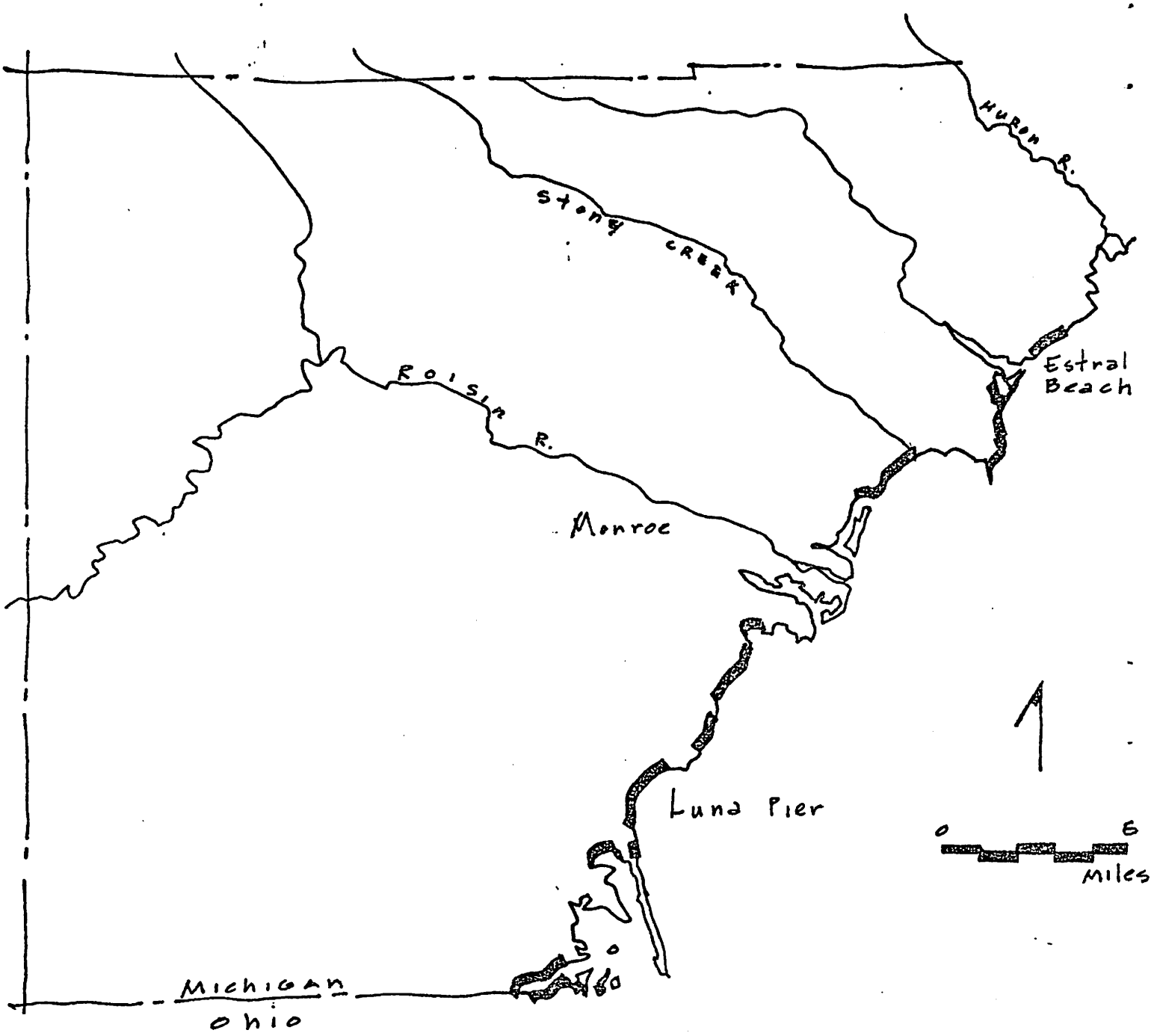


Fig: 6 Wayne County shoreline landuse



← Residential, industrial commercial

← recreational, wildlife, agricultural & undeveloped

Fig: 7 Monroe County shoreline landuse

The coastal zone conditions are significantly different along Lake St. Clair (Figure 4). The 46 mile shoreline has been extensively altered by artificial fill. It is almost entirely developed for residential use although it is still subject to frequent flooding (Figure 5). The 31 mile shoreline of the Detroit River has also been extensively altered by filling and shoreline structures. This segment of the coastal zone is highly developed for industrial and residential uses and accommodates the Port of Detroit and such recent developments as Renaissance Center and the Detroit Civic Center Plaza (Figure 6).

Finally, the 32 mile segment of the Lake Erie shoreline located within Michigan consists of the low marshes and sand beaches subject to frequent flooding. Several of the marsh areas have been altered in order to accommodate residential and industrial activities; however, this segment of the coastal zone is significant in the fact that extensive, natural shorelands still remain (Figure 7).

Several islands are also classified as portions of the coastal zone. Some are natural whereas some have been created from dredge spoil deposits. Although most of these islands are subject to partial and periodic flooding, residential development continues to occur. Harsens Island within the St. Clair River is a good example. The eastern half of the Island primarily consists of residential development. The remainder of Harsens Island, Dickensen Island, and the small islands of the St. Clair Flats area are either undeveloped or dedicated to wildlife management by the State of Michigan.

Belle Isle in the Detroit River is a recreation park serving the residents of the City of Detroit and its surrounding communities. The shoreline of Grosse Isle primarily consists of residential development except for the Naval Air Station which has been transferred to Grosse Isle Township and is currently being used as a commercial airport. The remaining islands in the Detroit River are undeveloped and flood prone. The islands in North Maumee Bay are dedicated to wildlife management or are primarily undeveloped at the present time.

3. Agency Involvement

Since the future of the urban coastal zone depends upon the actions taken to manage its resources, it is important that future research activities reflect a realistic state of affairs concerning water recreation. Therefore the role of individual agencies in managing various aspects of the coastal zone is most important.

a. State - DNR

It is clear that the agency most actively involved in waterfront and coastal zone activities is not any single municipality, but rather the Michigan Department of Natural Resources. Although, the Department has 13 divisions involved in funding, regulating or participating in river and waterfront activity, it appears that no definite policy for the urban coastal zone has been developed.* Only recently has any major attention been paid to urban concerns.

State agencies are, for the most part, concerned with regional recreation and large scale park development. And in providing for these concerns, urban recreation needs have generally been ignored. The history of providing large areas for outdoor recreation has naturally

resulted in an avoidance of urban access, where the need may be the greatest but the cost of land and development is the most restrictive. In short, the day to day needs of the urban resident have not been clearly recognized or understood in the past.

The shining exception to this description is the Fisheries Division of the Department of Natural Resources. The division has an active interest in the urban area and has several projects devoted to the urban riverfront. For example, the Division is responsible for the fish ladder on Belle Isle, the underwater viewing area along Belle Isle Bridge, the fishing piers, marinas, and boat launching ramps along the Detroit riverfront, and the Metro Fishing Program.

b. Regional Concerns

Although regional bodies do not usually wield significant governmental powers, they are very important in water recreation planning. The Southeast Michigan Council of Governments (SEMCOG) and the Huron Clinton Metropolitan Authority each have different responsibilities and interests concerning the urban coastal zone and water recreation.

SEMCOG is comprised of the seven counties in southeastern Michigan. The agency's function is strictly devoted to inventory and planning, and it has no authority to implement its plans. Nevertheless the agency does fulfill another important role: it attempts to keep a current record of information and activities that significantly affect the resources of the region.

The HCMA has been legislatively created to provide regional facilities in the five county area surrounding Detroit. The Authority is empowered with its own funding source provided by a local tax levy. In addition, HCMA has the authority to acquire and develop land and to maintain complete control of recreational operations once they are provided. These powers have been used to provide relatively large regional parks that serve the entire metropolitan area.

Metropolitan Park on Lake St. Clair serves as a good example of HCMA efforts. The park is the prototypical example of a water-oriented park as conceived of during the 1950s and 1960s. Currently, the park continues to be successful and satisfies important regional recreation needs. However, the pressures associated with energy and transportation costs combined with the need to satisfy the daily needs of urban residents, necessitate that alternative solutions to water recreation in the urban coastal zone be investigated.

c. Local Concerns

Perhaps the most important governmental role in waterfront activity is located at the local level. Municipalities have the final say on the implementation of most recommendations, and can significantly alter the character of the coastal zone by their actions.

Nevertheless, according to the report, The People and the River, local recreation plans for communities along the waterfront inadequately assess the recreational potential of the coastal zone.* The City of Detroit certainly is an exception to this assessment as proven by its

* P. 12

recent efforts to upgrade the character of its riverfront and the general accessibility to its water resources. Possible reasons for the general lack of concern regarding the water resource at the local level have been pointed out by others.* They include:

1. Local communities generally fail to perceive the changes associated with improved water quality that have recently occurred.
2. The existing developed character of the waterfront discourages many communities from fully evaluating the river's recreational potential.
3. The existing knowledge of the needs and desires of the public for recreational facilities is virtually nonexistent; and user surveys have been done infrequently and are somewhat suspect in content.
4. Local funds are inadequate to consider anything beyond traditional community planning concerns, i.e. having commerce, transportation, education, and basic levels of recreation.
5. Good cooperation between city and regional park agencies is generally lacking, i.e., each tends to go to its own way and cities resent the intrusion of other agencies into their domains.
6. The lineal nature of the Detroit River and the comparatively small river frontage within some communities make separate water recreation plans difficult to develop or to implement.

*The Land and the River, Report of the Interagency Task Force for Detroit/Wayne County Riverfront Development (June, 1976) p. 59).

IV. SUB-PROGRAM RESEARCH STRATEGY

a. Historical Precedents

Because of the precedents established to date, any strategy for decision-making associated with the coastal zone will usually be based on the traditional planning process. The emphasis placed upon environmental, ecological, social and cultural information will certainly vary depending upon the characteristics of the region and the proposed site area. And similarly, the recognition of more current and critical factors such as accessibility and implementation procedures will usually be addresed. Regardless of the particular strategy chosen, however, the results will usually be concerned with spatial relationships and user needs as determined solely by land resources. The nature and character of the water resource as a planning and design factor has not been sufficiently investigated and utilized. As a result we will continue to see many of the resulting problems associated with traditional land planning which are economically, socially ecologically unsound and are particularly non-sensitive to the needs of the people and the water sources.

The intent of the recommended strategy that follows attempts to lay the foundation for an appropriate strategy that can be used to address the problems associated with water recreation within the urban coastal zone. In summary, the following section has three pruposes - - -

1. to describe the importance (the need?) of developing a recreation planning strategy that can be used to make better decisions in the urban coastal zone;
2. to describe the initial thoughts concerning the development of such a strategy for water recreation within the

coastal zone; and

3. to enunciate the importance of using spatial allocation as the cornerstone to such a strategy.

b. Rationale for Strategy

Before attempting to develop an approach to a problem situation it is helpful to begin to clarify the nature of the particular problem. In simple terms, this sub-program is concerned with the planning, development, and management of water recreation activities within the urban coastal zone.

The geographical (physical) boundary of this strategy is limited to the urban coastal zone, primarily located in the southeastern Michigan region due to the concentration of population. There are many other factors, however, which reinforce the selection of the urban coastal zone.

First, the land resources of the coastal zone may be under the jurisdiction of several agencies and governments, planning activities for the coastal zone are usually uncoordinated at best. Each of these agencies have different goals and objectives based on the particular purposes. Land use policy established at one level of government may have little or negative impacts at another scale of concern. Planning results do not find their way to those decision-makers who need such information. Likewise, adjacent conditions to an area of study may pose unique problems to a proposed alternative for development but may never be brought up or properly addressed in the local planning process.

Second, the coastal zone is defined as the interface between land resources and water resources. Whereas we have been building up a case for land planning and environmental planning for at least 100 years, the history

for water resource planning is relatively young. Essentially, we have ignored our water resources and the potential they offer for urban recreation. There are only a handful of cities that have recognized the potential that waterfronts offer to an urbanized area. Moreover, it is only recently that we are witnessing a renewed interest not only in cities and urban life but also in water and waterfront development and redevelopment.

Third, this situation is compounded by the fact that we have amassed very little information concerning the interface between land and water especially with respect to the urban waterfront. This fragile environment demands special attention not only because of its complex physical characteristics but also because of the conflicting pressures for its use. Currently, we are not prepared to begin to understand this interface, nor are we prepared to understand the impact of each upon the other.

Fourth, and perhaps the most important, the urban coastal zone is usually inhabited by industrial, commerce and transportation activities while residential neighborhoods are usually excluded from this zone. Moreover, except for some remarkable far-sighted plans such as for Belle Isle, the urban coastal zone is usually devoid of public parkland or public access points that can be used to enjoy the water resource. From a human service point of view it would appear that we have ignored the needs of those who live in our cities in return for the meeting the needs of industry.

Fifth, although the boundaries of the coastal zone are arbitrarily set as that zone within 1000 feet of a coastal water body, the actual water network extends inland through the numerous rivers, streams, lakes and

creeks that bisect urban areas. Therefore although the coastal water zone is the area under study, it may occur that the secondary water network of rivers and streams is the actual linkage of many communities to the urban coastal zone.

As a result of such factors, many opportunities for innovative approaches to urban waterfront development and re-development are overlooked. Just as we have witnessed a Balkanization of our landscapes and local governments, so too do we now see our urban waterfront being strangled by piecemeal actions and indiscriminate development. Ironically, just at the time when our efforts to clean up our waters on a national scale are just beginning to reap benefits. We need to make the urban waterfront more accessible to the public -- we need to give it the stature and respect it deserves after serving our nation of cities for so many years.

c. Recommended Strategy

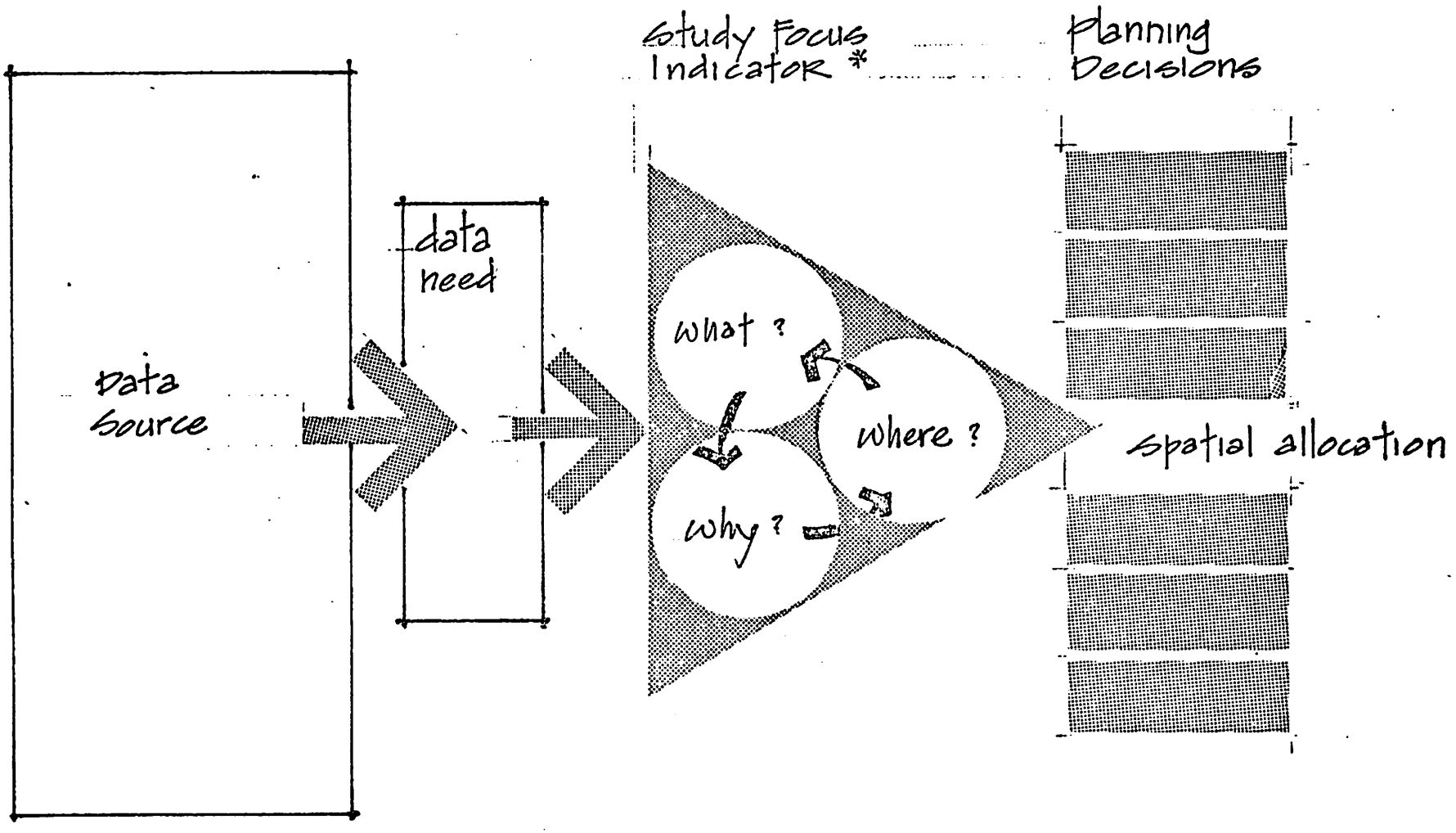
1. Introduction

One of the most important objectives of this recreation sub-program is to provide helpful data to agency officials in planning, developing and managing urban coastal zone resources. Many planning decisions, especially those related to recreational opportunities along the waterfronts affect directly the location of activities and its uses; where to encourage or allow particular water oriented activities such as boating, fishing, swimming, or diving; where to locate support facilities such as marinas, docks and transportation linkages; where to plan and acquire land for public access to the water front; and even where to encourage private initiation and development. The questions of "where" (spatial allocation of recreation activities) is critical in any planning process because it determines the

success or failure of a planning problem.

These planning decisions deserve special attention because they demonstrate how we should make best use of our urban waterfronts to meet the increasing recreation needs and how we should sensitively and intelligently allocate a scarce resource to sometimes competing interests along this fragile environment. In many cases, inappropriate allocation decisions cannot be reversed; in others, narrowly defined solutions are forced to be ill-equipped to accommodate changing urban needs. Therefore, these decisions should be carefully studied and tested in order that the planning results may be able to satisfy human needs while also ensuring environmental compatibility. in order to accomplish this task, it is important for this sub-program to identify a specific resource strategy that can be used to guide and direct the decision-making or planning process. This strategy must be developed to help resolve the inherent conflicts associated with the various components of an allocation problem. Essentially, the strategy must set forth an approach within which the recreation planning process can be analyzed and communicated. One could visualize this strategy as a continuous decision-making loop which is made up of various components. (Figure 8). Each of these components is independent in the sense that each is involved with a particular aspect or issue and can be taken apart and studied independently. However, they can also be highly related to one another and are affected by each other within the realm of physical planning.

There are three important questions planners must address in any recreation planning process which focuses on spatial allocation. They are the questions



* This study focuses on spatial allocation, an aspect of physical planning w/ emphasis on "where?"

Fig: 8 A TYPICAL PLANNING PROCESS FOR RECREATION.

of "where," "what" and "why." "Where" looks at the general framework of spatial planning and deal with the physical resource as having a defined boundary whether it be on land or water. "What" deals with the recreation opportunities, their characteristics, demands and impacts. "Why" refers to the rationale and logic behind certain planning decisions. It looks at both the physical and cultural resources in order that the attractiveness be maximized and the undesirable impact be minimized. In short, the research strategy of the recreation sub-program focuses on a segment of physical planning in order to establish a well-defined research framework with specific research opportunities which are not only interdisciplinary yet individually indispensible, but above all, accomplishable.

2. Spatial Allocation

As stated earlier, the thrust of this research strategy deals with the many aspects of spatial allocation of recreation activities along the urban coastal zone and waterfront. Location of these opportunities is a major determinant of a successful recreational plan because success can be measured by user satisfaction, environmental impact, spatial pleasantness or even overall urban viability. This strategy would focus on the process and methods of selecting locations for recreational opportunities along the urban coastal zone. The planning decision should meet the identified leisure needs of urban population, and in addition, maximize the site attractiveness (as expressed in aesthetic, environmental, and perhaps economic terms) while minimizing the negative impacts associated with various spatial allocations. Therefore, it is essential for the recreational planners to tackle the spatial allocation problem with complete understanding of the resources, the recreational types and the impacts of these upon one another.

These components are essential and are indispensible ingredients to a successful water related recreation scheme. They support and reinforce one another. However, it is sometimes questionable whether the search for a location or design solution will be feasible because in most cases, these components are compatible instead of complementary. For example, the ideal fishing spot may be inaccessible due to control by private land ownership. Yet,an easily accessible location may lack all the basic recreation attractiveness. Therefore, these differences will have to be weighed and analyzed by testing various alternatives.

Conflicts between natural resources and conflicting land uses, cultural amenities vs. natural beauty, projected development and economic feasibility and public needs vs. private interest are but a few that challenge spatial allocation. Trade offs are inevitable but the degree of balance should ultimately be influenced by the way these resources fulfill the identified leisure needs of urban population.

3. Research Focus

The research will focus on three problem areas. The problems are interrelated and we will work on all simultaneously, using the best available information from previous related research.

1. Little is known about the coastal zone resources and the susceptibility to increase recreation uses.

   Most planning efforts to date are primarily concerned with the land resources aspect of recreation planning. For example, there are many approaches that utilize land resources data such as soil, topography, geology, vegetation and others

to determine spatial allocation of water recreation opportunity. These approaches are limited in their ability to adequately reflect the uniqueness of waterfront and coastal zone.

Other concentrations on the land resources with insufficient attention given to water resources often resulted in poor water recreation plans. Some even discourage uses.

Research on this problem will include the following efforts - - -

- .review existing data related to water resources and translate them into an acceptable format for future analysis
- .develop recreation models (such as fishing) focusing on site selection criteria and accessibility
- .analyze wave action upon shoreline, direction and velocity of flow and pattern condition and develop water recreation attractiveness models based on these findings
- .analyze and study water quality and its ability to support fish life and other water-demand activities such as swimming, skiing, diving, etc.
- .assess and develop practicable methods of measure to visual and ecological impact of potential recreation development along the coastal zone
- .develop efficient and practical methods to predict and measure the need for land supporting facilities such as parking, restaurants, gas stations, etc. and

develop models to assess its impacts, both environmental and economic

.analyze and assess the feasibility of coastal realignment by land fill and artificial islands.

2. Little is known about water recreation and how it can satisfy the leisure needs of urban dwellers.

Recreation types refer to activities that take place in water or adjacent to water. According to initial findings, water recreation activities are identified and classified into water dependent and water seeking. Physical contact with water is the prime factor for this differentiation. Many studies have been done to analyze these recreation types, their characteristics, their demands and their psychological and sociological implications. Yet few have looked at these through the spectrum of spatial allocation. For example, what makes a place attractive for swimming?What are the site selections criteria for boating and swimming?

The thrust of the research is therefore to understand the characteristics of these recreation types, their compatibility, and to demonstrate improved ways to achieve a higher level of satisfaction of water recreation needs through better management of water recreational resources.

Problems include:

.develop ways to enhance existing water recreation opportunities

.develop better management techniques and strategies for potential recreation opportunities

.document existing water recreational opportunities along the defined urban coastal zone and analyze their use patterns, problems and growth projection

.develop better ways to improve linkage between these facilities and coastal communities

.develop a comprehensive site selection criteria for water-defendent activities

.assess the impact of various water related activities on the coastal resources; be able to predict changes and manage the changes

.identify and analyze the kinds of recreational opportunities that can potentially be provided in the urban coastal zone.

3. <u>The water recreational needs of urban dwellers and their preferences are not well understood and methods for assessing such needs are inadequate.</u>

Recreation involves uses, it satisfies not only individual but community recreation needs. It is a form of education and it reflects the characteristic of the participants and the community attitude. Methods traditionally used to evaluate recreation needs include expression of public sentiment through the political process. Judgement by bureaucrats

and professionals, head counts at recreation sites and population surveys. These methods often ignore large segments of urban population, the less articulate groups and thus result in inadequate estimate of needs. Knowledge and technology resulting from works done in environmental psychology, economics, recreation planning, urban planning, and many others will have some application to solution of this problem.

Research on this problem should relate to an identified site (community) along the defined urban coastal zone.

- .determine similarities and differences among people with regard to water recreation needs
- .develop models to assess the visual preference upon water and related activities
- .analyze the personal, social, institutional reasons for inadequate and disproportional opportunities to satisfy recreation needs
- .study the behavioral and physical processes through which water recreation activities and coastal zone resources interact to satisfy needs
- .translate and develop the concept of leisure need into recreation experiences and conditions that make up the basic components of urban recreational activities

- study and predict the change of recreational habits and patterns due to forseeable fuel shortage increased gasoline price
- develop models to analyze the relationship between recreation needs and future population projections.

4. Research Accomplishments

Research accomplishments will include:

1. Publications and projects that contribute to understanding coastal resources, recreation suitability and impact which lead to (a) specific locations for defined recreation uses and (b) better methods for planning, site analysis and site selection.

2. Publications, workshops and conferences that contribute to understanding water recreation needs and ways of providing for them along the urban coastal zone in southeastern Michigan.

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