

MICHIGAN  
OCZM GRANT #NA-80-AA-H-CZ157  
SUBTASK 4D-10-6B

SKETCH LAND USE GROWTH MANAGEMENT PLAN  
FOR THE SOUTH ARM OF  
LAKE CHARLEVOIX

HD  
211  
M2  
S54  
1980

HD  
211  
M2  
S54  
1980



NORTHWEST MICHIGAN REGIONAL PLANNING AND DEVELOPMENT COMMISSION

160 East State Street, Traverse City, Michigan 49684 (616) 946-5922 Robert C. Morris, Exec. Dir.

SKETCH LAND USE GROWTH MANAGEMENT PLAN  
FOR THE SOUTH ARM OF  
LAKE CHARLEVOIX

TABLE OF CONTENTS

INTRODUCTION

AREA DESCRIPTION

- History
- Geography and Soils
- Land Use
- Existing Land Use Regulations

COMMUNITY PROFILE

- Population
- Economy
- Constraints and Opportunities

ZONING

FUTURE DEVELOPMENT

- Development Theme
- Goals
- Actions to Move Toward Goals
- Sketch Growth Management Plans
- Recommendation for Actions on the Plan

This document was funded in part through a contract with the Michigan State Department of Natural Resources under financial assistance provided by the Coastal Zone Management Act of 1972, administered by the Office of Coastal Zone Management, National Oceanographic and Aerospace Administration.

## INTRODUCTION

Our "coastal zone" consists of those lands within approximately 2000' of Lake Michigan and its connecting water bodies. Because the Northwest Michigan Regional Planning and Development Commission believes the local officials of the communities bordering on the South Arm of Lake Charlevoix share the Commission's concern for the quality of the waters and the proper management and development of the adjoining lands, it has prepared this report on the South Arm area.

Basically we evaluated the present development, identifying problems and potentials, and developed two possible future land use patterns. Either of them would serve as a useful guide for the growth of the area, but our intent is not to impose a plan upon the area, but rather to encourage and assist local officials and their constituents to develop some plan which reflects their own needs and desires.

Such a plan, used as a guide for regulation such as zoning, public expenditures for utilities and services, and private residential, commercial, and industrial development, would ensure that each action was a step toward a better future.

The Regional Planning Commission urges Eveline and South Arm townships and the City of East Jordan to join in a coordinated effort to plan for the sound and desirable development of the area they share. We have provided this material to help them get started, and pledge our support and assistance in the future.

## AREA DESCRIPTION AND ANALYSIS

### History

The early history of the South Arm of Lake Charlevoix was tied to local natural resources, particularly lumber. Charlevoix County's municipalities, including East Jordan, were built around the local lumbering industry. Much of northern Michigan lost population after the turn of the century because of the depletion of marketable timber, and even though local soils were less fertile than in downstate areas, agriculture replaced lumbering. Tourists and summer vacationers were also attracted to the area because of its natural beauty and recreational potential.

In the late 1950's small industries began to locate in the County's population centers, and by 1968 East Jordan was Charlevoix County's manufacturing center. Today, manufacturing continues to be the County's major employment source, although the local government and service sectors employ a substantial portion of the population.

While East Jordan developed because of the lumbering industry, the South Arm (formerly called Pine Lake) became populated with summer homes and cottages. Today, year-round homes are becoming more common.

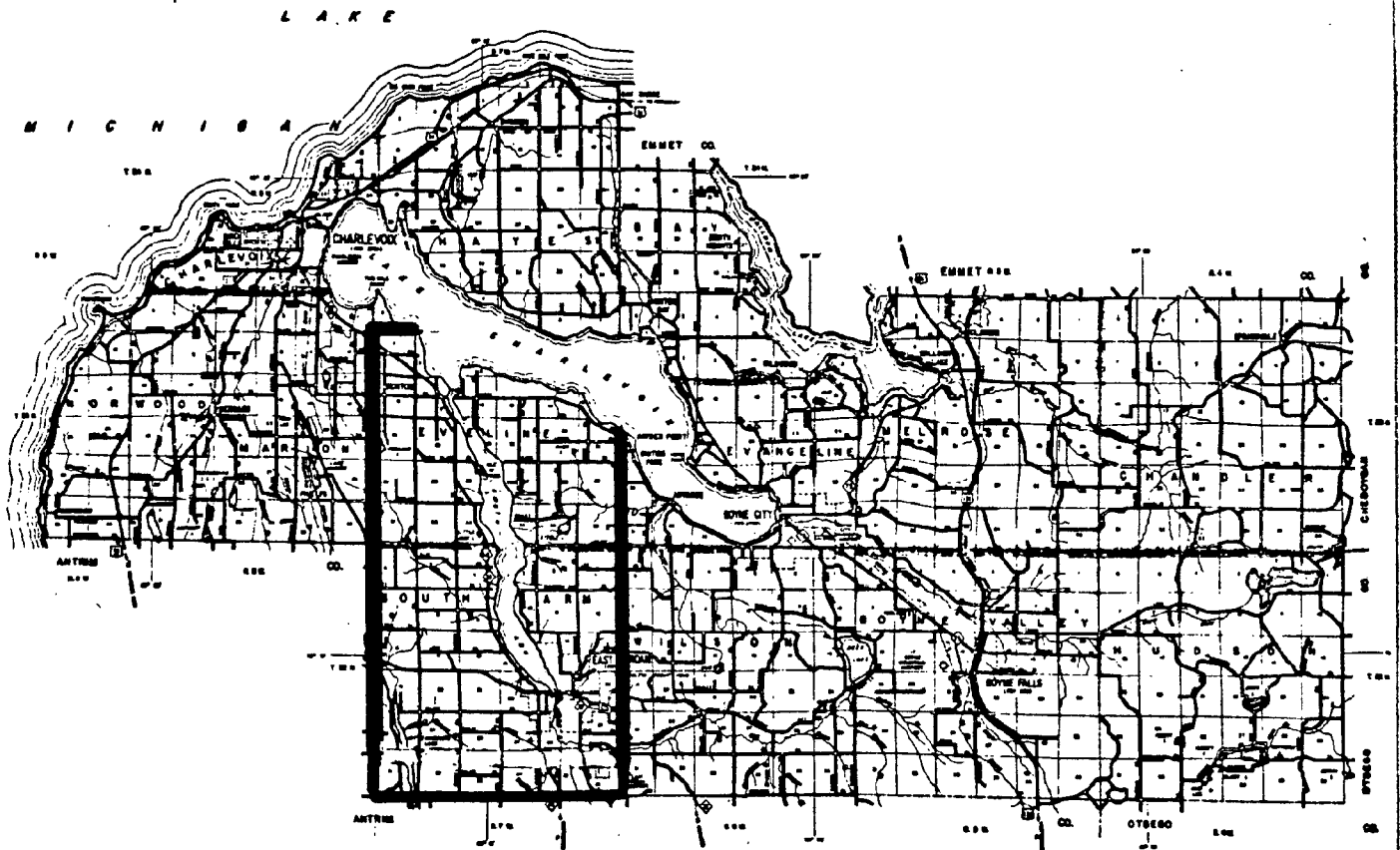
### Geography and Soils

The area has a relatively moderate topography, with the exception of steeper terrain on both sides of the southern end of the lake. Most slopes are less than 12%, but some are over 18%. Land immediately adjacent to the lake is forested, mostly with hardwoods, while higher elevations away from the lake are more sparsely covered and more suitable to farming.

Analysis of soils in the area reveals that most land adjacent to the lake is suitable for either residential or agricultural use. Several smaller areas bordering the lake have soils which make them unsuitable for extensive residential or agricultural activities.

The current uses of land in the area generally conform to the best use of the soils. That is, residences along the shoreline are, for the most part, located on soils well suited to residential development. Holy Island (a peninsula on the west shore in Eveline Township) is an exception. Soils there are not able to properly handle the septic effluent of the peninsula's twenty residents. Additionally, about 400 acres in South Arm Township and 1700 acres in Eveline Township have unbuildable soil.

EVELINE TOWNSHIP, SOUTH ARM TOWNSHIP, CITY OF EAST JORDAN



### Land Use

Residential Residential land makes up approximately 15 of the 19 miles of lake shoreline. The remainder is primarily undeveloped land covered with hardwoods and conifers. Residences on the eastern shoreline are, in general, year-round ranch-type homes, while those on the western shore along M-66 are primarily seasonal.

In 1980 there were approximately 1610 houses in the area; 260 in South Arm Township, 440 in Eveline Township, and 910 in East Jordan. Approximately 75% of all the houses within the two townships are along the waterfront, but very few of the city's residences are on the lake.

Information on housing characteristics is available for entire cities and townships only. As we are considering only portions of those areas, it is necessary to make some assumptions from the 1980 census data. Since approximately 50% of the housing units in Eveline Township and 40% of those in South Arm Township are within the area we studied, we can assume that many of the characteristics that apply to housing in those two jurisdictions generally also apply to our area of concern.

Seventy-two percent of each township's housing units are constructed for year-round living. In South Arm Township, 411 (81%) of all year-round housing units were occupied during the 1980 census, while at the same time 371 (60%) of Eveline Township's year-round houses were occupied. Of the 900 year-round houses in East Jordan in 1980, 733 (81%) were occupied. Assuming these rates for the townships can be applied to the smaller areas, there were 1208 occupied year-round housing units around the South Arm in 1980.

The following table shows the forecasted number of housing units for the study area. These forecasts are based upon the estimated number of existing units in the study area and the forecasted population for the study area.

#### HOUSING FORECASTS SOUTH ARM AREA

	<u>1980 Estimated</u>			<u>1990</u>			<u>2000</u>		
	<u>Yrly</u>	<u>Sesn'l</u>	<u>Total</u>	<u>Yrly</u>	<u>Sesn'l</u>	<u>Total</u>	<u>Yrly</u>	<u>Sesn'l</u>	<u>Total</u>
Eveline Twp.	315	125	440	415	185	600	550	220	770
South Arm Twp.	185	75	260	250	100	350	350	140	490
East Jordan	900	10	910	1,135	15	1,150	1,400	15	1,415
TOTAL	1,400	210	1,610	1,790	290	2,080	2,300	375	2,675

Commercial The commercial center for the area is East Jordan. In addition to a central business district, there are various commercial developments along M-66 and M-32 which create some traffic congestion, and which also draw shoppers from the central business district. The city's 1977 comprehensive plan identified a number of conditions contributing to the deterioration of the downtown, including poor land use distribution, the absence of a cohesive architectural pattern, and buildings that do not lend themselves to modern marketing techniques.

Outside East Jordan the only concentration of commercial activity is in Ironton. Businesses there include a restaurant, a marine gas station, and a fishing tackle shop. The Ironton ferry, a historical site, is a significant tourist attraction. The ferry is also the most direct route between Eveline Township and M-66 during the spring and summer. Other tourist-oriented businesses, mostly cabin resorts, are dispersed along the South Arm shoreline.

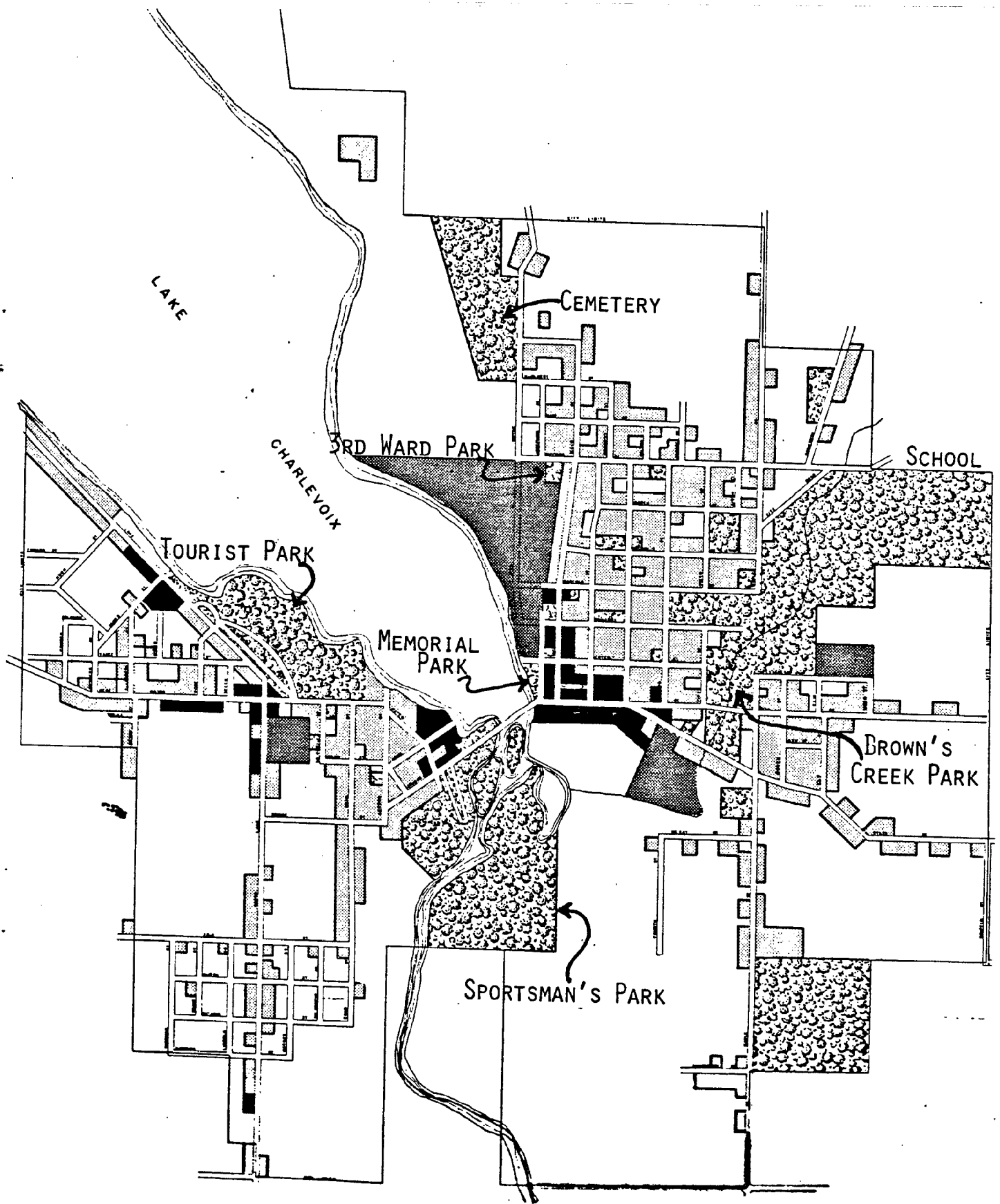
Industrial Industrial land uses within the area are in or adjacent to East Jordan, in different parts of the city, often adjacent to commercial or residential land. The East Jordan Iron Works, a major local employer, is on lakefront property which could very nicely be used for commercial, residential, or recreational activities.

There are two industrial parks south of the city. One is a privately owned twelve-acre site. The other is a 56-acre publicly owned park containing several large industrial buildings and located across from the city's airport.

### Public

Most public land around the South Arm is in East Jordan. The city has five outdoor recreation sites in addition to facilities at the public school complex. The East Jordan Tourist Park, covering 27 acres adjacent to the lake, has a camping area, a public beach, boat slips, a community building, a picnic area, children's play equipment, and baseball and softball diamonds. Sportsmarine Park, on the Jordan River, is a natural wildlife habitat but it also has picnic facilities. Third Ward Park is a one-acre site with playground equipment, a baseball diamond, and a basketball court. Brown's Creek Park, covering nine acres, contains children's play equipment and a baseball diamond. Memorial Park, with boat docks, is a one-acre park near the central business district.

The only sites outside the city are the outdoor recreational sites. In Eveline Township, next to Ironton, is a 1.5-acre public facility with playground equipment and a playfield. Villa Nuava Subdivision, also in Eveline Township, has a private park with access to the lake, boating facilities, fishing, playground equipment, playfields, volleyball courts, and horseshoe pits. The State owns 16 acres on Dutchman's Bay which has a boat launch.



EAST JORDAN EXISTING LAND USE





There are also many non-recreational public land uses. East Jordan has a city garage, city hall, police department, city library, fire hall, elementary and junior-senior high schools, and a basic utility airport. South Arm Township and Eveline Township have township halls. The 74-bed Grandview Medical Care Facility, a county-maintained nursing home, is in South Arm Township just north of East Jordan. The East Jordan Family Health Center serves the population in and around the city, including parts of Antrim County.

#### Existing Land Use Regulations

Each of the three jurisdictions has adopted a zoning ordinance. The Eveline Township Ordinance, enacted in 1969 and amended in 1973 and 1978, is very similar to the South Arm Township Ordinance which was adopted in 1974 and revised in 1981. Each ordinance has three residential zones, an agricultural zone, a commercial zone, and an industrial zone. Eveline Township has a recreational zone permitting public lake access sites and park areas. South Arm Township also has a natural resource zone which permits single family residences, and a conservation reserve zone which permits only outdoor recreational uses.

The East Jordan zoning ordinance, adopted in 1976, has five residential zones, including one for mobile home parks. It also has a Planned Unit Development zone, two commercial zones, a professional office zone, and an industrial zone.

Although each of the townships has three residential zones, practically all the land in the area we are concentrating on is in one of the zones, called R-1. It permits single-family dwellings (South Arm Township also permits duplexes and farms in its R-1 zone). Home occupations, churches, schools, libraries, community buildings, parks, playgrounds, public utility buildings and hospitals are allowable uses in this zone in East Jordan, and are subject to special use permit in the R-1 district in the two townships. South Arm Township's R-1 district also permits professional offices, sanitariums, and nurseries by special use permit.

Minimum allowable lot sizes in the R-1 districts in the three are as follows:

<u>City of East Jordan</u>	single-family dwelling	15,000 sq. ft.
<u>Eveline Township</u>	single-family dwelling	22,000 sq. ft.
<u>South Arm Township</u>	farms	10 acres
<u>South Arm Township</u>	single family dwelling	12,000 sq. ft.
<u>South Arm Township</u>	two-family dwelling	20,000 sq. ft.

In each of the jurisdictions, a large proportion of year-round residents are in the "middle-family" age group, because it covers a 20-year period. It is the largest segment of the local work force and is more dependent upon local employment than those in the "retired" age group. Primary-school-age children are also a large proportion of the local population. Their recreational requirements include playgrounds, swimming areas, indoor basketball courts, and arts and crafts workshops, and the recreation programs that accompany them.

Population Forecasts In 1977, the Northwest Michigan Regional Planning and Development Commission developed population forecasts for all governmental units within the ten-county Region because the 1970 census figures were so badly out of date.

The forecasts for 1980 were in error by only 4% for Eveline Township and 3.1% for South Arm Township. Using the actual 1980 figures and adjusting the Commission's 1990 and 2000 forecasts to compensate for the 1980 forecast error will yield an acceptable forecast for those jurisdictions for the years 1990 and 2000.

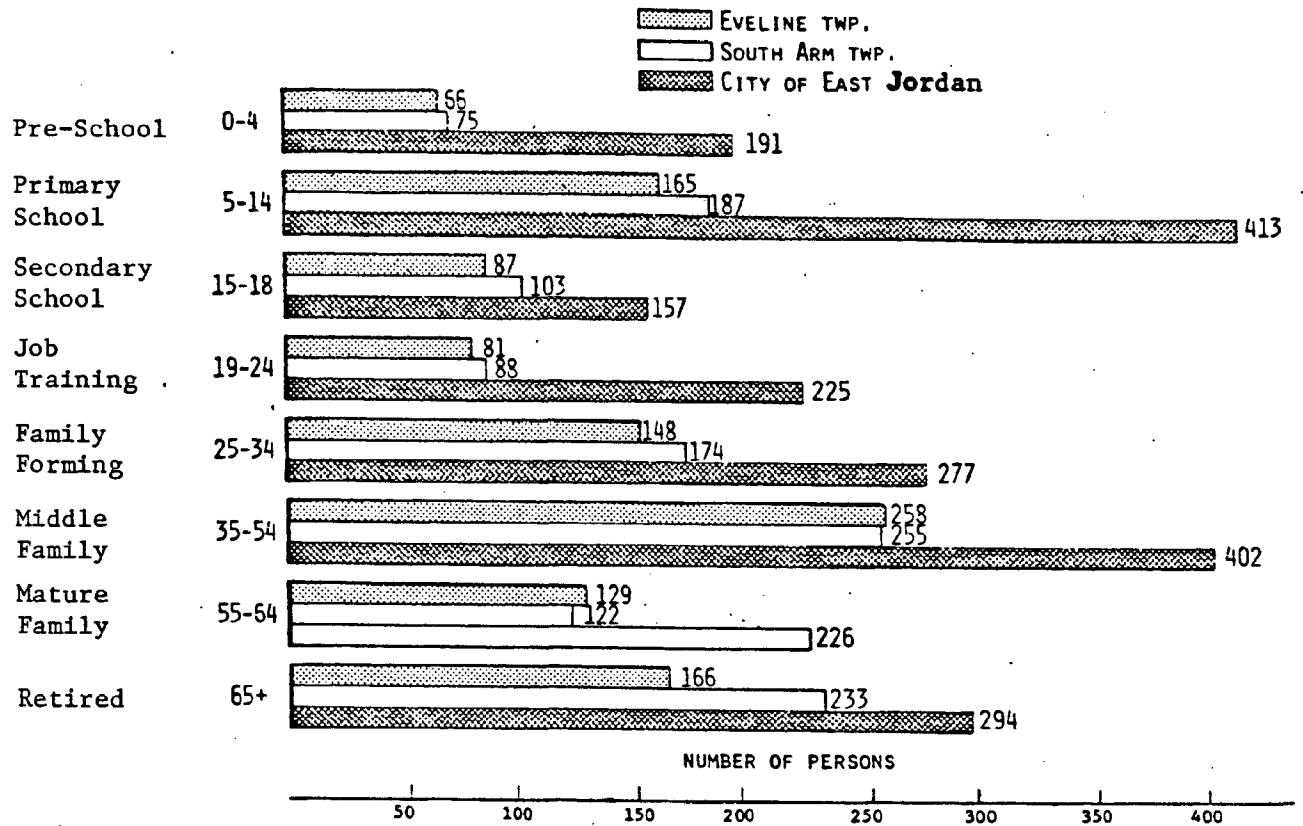
The Commission's forecast for 1980 for East Jordan was about 12% higher than the 1980 census count, very probably because of the unforeseen economic downturn of the late 1970's. We have modified the Commission's 1977 forecast to provide a general picture of where the City is going. Although that is completely adequate for our present purposes, a much more careful population study must precede any plan to install community facilities, calculate future revenues, etc.

The table below shows our rough past, present, and future population figures for each jurisdiction in the study area.

	<u>POPULATION</u>				
	EVELINE AND SOUTH ARM TOWNSHIPS AND CITY OF EAST JORDAN				
	<u>1960</u>	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>
Eveline Township	602	837	1,061	1,350	1,550
South Arm Township	726	995	1,237	1,500	1,800
East Jordan	<u>1,919</u>	<u>2,041</u>	<u>2,185</u>	<u>2,350</u>	<u>2,500</u>
TOTAL	3,247	3,873	4,483	5,200	5,850

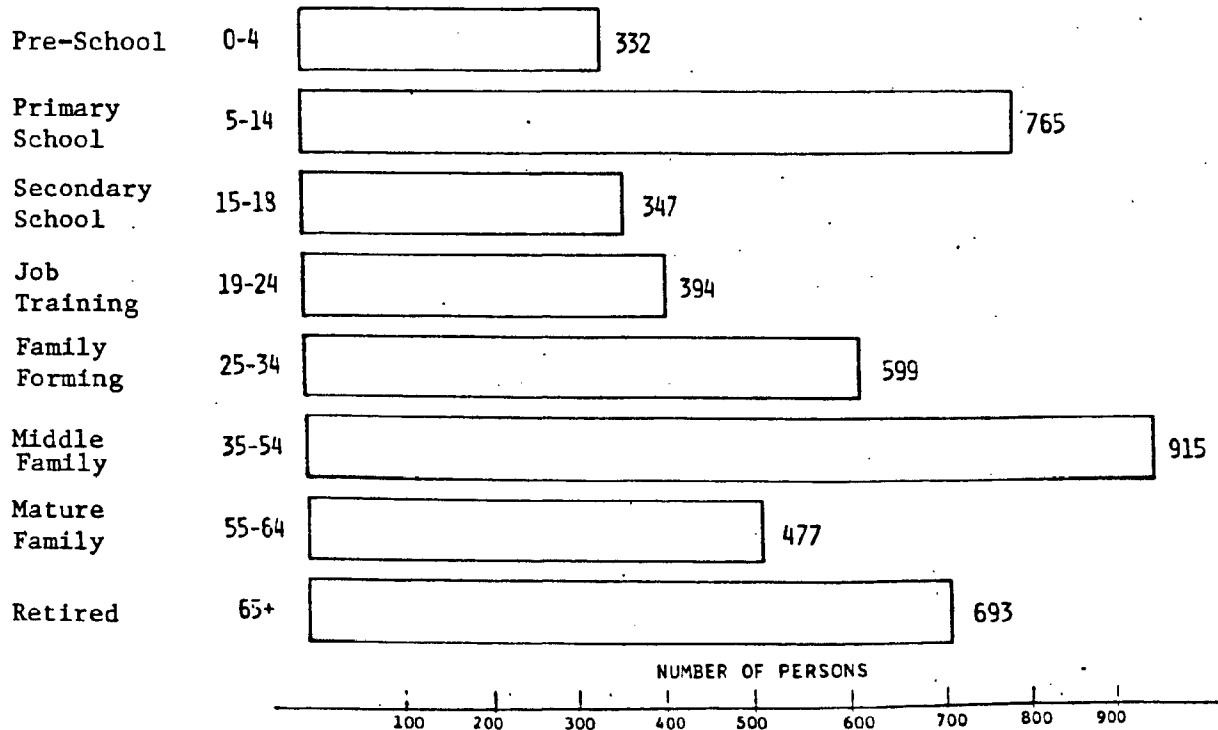
Based upon the estimated number of occupied houses in the area in 1980, and the average number of persons per dwelling unit for each township and the city, it is possible to estimate the 1980 population for those portions of each township in the study area. If we assume the study area grows at the same rate as the two townships, and using East Jordan's average growth rate, we can calculate the population of the smaller area for the years 1990 and 2000. That process yields the following figures.

# AGE GROUPS



# AGE GROUPS

Eveline Township, South Arm Township, City of East Jordan -- Combined  
1980



STUDY AREA  
YEAR-ROUND POPULATION

7

	<u>Estimates</u>	<u>Forecasts</u>	
	<u>1980</u>	<u>1990</u>	<u>2000</u>
Eveline Township	540	700	800
South Arm Township	450	550	650
City of East Jordan	<u>2,180</u>	<u>2,350</u>	<u>2,500</u>
TOTAL	3,170	3,600	3,950

Economy The seasonal economy of the study area is tied closely to the lake. East Jordan is the center of the South Arm's economic activity, although residents of the northern portion of the area also shop in Charlevoix or Boyne City. The deterioration of East Jordan's central business district has discouraged shopping there. Consequently, merchants have had limited, if any, resources with which to upgrade their stores, and the East Jordan Comprehensive Plan (April 1977), noted this "vicious cycle" of deterioration.

Residents of the area shop locally for non-durable goods such as food, and personal services such as banking, but are more inclined to shop for major items in Petoskey or Traverse City. East Jordan's trade area contains the city itself and South Arm Township. Although Eveline Township is split between the Charlevoix and Boyne City trade areas, residents of the township are close enough to East Jordan to periodically shop there.

Property taxes are the primary source of operating funds for local governments and schools. The East Jordan Public School District covers the entire area, and its schools are located in East Jordan.

Comparing the distribution of the sources of local property tax revenue over a period of years, there have been changes in the relative importance of residential and non-residential property to the local tax bases. The following table shows the changes.

TAX BASE BALANCE  
SOUTH ARM STUDY AREA

	% of Tax Base <sup>1</sup> derived from		% of Tax Base <sup>2</sup> derived from		Non-Res. AdValorem Tax Contrib. per	
	<u>Non-res. sector</u>		<u>res. sector</u>		<u>\$300 of res. taxes</u>	
	<u>1968</u>	<u>1981</u>	<u>1968</u>	<u>1981</u>	<u>1968</u>	<u>1981</u>
Eveline Twp.	51.8	25.0	48.2	75.0	\$322	\$100
South Arm Twp.	38.5	25.0	61.5	75.0	\$180	\$100
City of E. Jordan	68.8	27.0	36.2	73.0	\$529	\$111

<sup>1</sup>Consists of utility, industrial, commercial, timber cutover, 75% of agricultural valuation.

<sup>2</sup>Consists of residential , 25% of agricultural valuation.

Sources: Michigan Department of Treasury; State Tax Commission

These figures show growth in the State equalized value of residential property in each of the three jurisdictions. The most dramatic increase in the residential tax base was in East Jordan. Essentially the same number of housing units were added to the housing stock in East Jordan between 1970 and 1980 as were added to each of the townships. The relatively dramatic increase in the percent of tax base from residential land use in East Jordan can reasonably be attributed to a decrease in the tax value of other land uses, particularly commercial and industrial. That verifies the fact that commercial, and perhaps industrial, facilities in the city are deteriorating, decreasing, or both.

#### Constraints and Opportunities -- South Arm Area

##### Soils Opportunities

- More than enough buildable land is available to accommodate the anticipated population.
- Approximately 500 acres are suitable for agriculture.
- Over 500 acres are suitable for recreation.

##### Soils Constraints

- Sewage disposal problems occur when there is higher density development along the shoreline.
- About 2,000 acres are unsuitable for building or other activities that require land alteration.

##### Residential Land Use Opportunities

- Because many existing seasonal residences are being converted to year-round structures, the average quality of housing is being improved.
- The availability of considerable new residential building away from the lake provides an opportunity for rational planning for the area.

##### Residential Land Use Constraints

- The current high density of development of the shoreline detracts from the area and could discourage future building.
- That same extensive development also decreases the options available to local governments who may want to locate parks or playgrounds on the lake shore.

- Continued shoreline development will increase the need for, and likelihood of, a costly solution to the sewage disposal problem.

#### Commercial Land Use Opportunities

- East Jordan is a commercial center with adequate utilities.
- The absence of commercial facilities in the townships makes it easier to plan for and properly locate future commercial land uses.

#### Commercial Land Use Constraints

- The absence of convenience stores forces residents to travel relatively long distances for necessary purchases.
- The deterioration of stores and inefficient marketing techniques in East Jordan discourage frequent shopping.

#### Industrial Land Use Opportunities

- The concentration of industries in East Jordan helps preserve the rural residential nature of other parts of the area.
- Having two industrial parks help to attract new industries and increase employment.

#### Industrial Land Use Constraints

- Existing industries are poorly located, but being relatively permanent land uses they make it necessary for us to plan future land uses around them.
- Industrial locations within the city are also scattered, which contributes to local traffic problems and inefficient services.

#### Public and Recreational Land Use Opportunities

- The large amount of public land in East Jordan ensures future public access to the South Arm, and affords options for a variety of public uses.
- State-owned property on Dutchman's Bay can be developed into a major recreation site in South Arm Township.

### Public and Recreational Land Use Constraints

- The boat launch in East Jordan is inadequate.
- Eveline Township owns very little property with access to the South Arm. South Arm Township has none.
- The dense residential development makes it difficult to find new access sites to acquire.

### ZONING

The fact that each of the three jurisdictions has adopted a zoning ordinance shows that someone has given serious thought to guiding growth into desirable locations. However, zoning is an implementation tool to carry out a plan, and as neither of the townships had or has a land use plan, local officials had little to base their ordinances upon beyond what was existing at the time. In most such instances the ordinance simply recognizes and legalizes the existing uses, and for undeveloped land has little to go on except the expressed wishes of the current owner.

We are of course emphasizing that an overall plan should be developed to ensure that the area grows in a way which reflects the needs and desires of the people, and takes advantage of all the potential of the area. Only then will a comprehensive re-evaluation of zoning be possible. However, some opportunities for improvement are apparent at this time, especially in the two townships. The East Jordan ordinance appears to be basically adequate to meet the current needs of the City.

All of the township land adjacent to the South Arm is zoned R-1, except for small commercial and resource conservation zones in the Ironton area and a Resource Conservation district at the southern edge of Eveline Township. Consequently, desirable convenience commercial establishments are limited to either the northern or southern end of the South Arm.

One of the attributes of the South Arm is its rural scenic environment, and many residents live there because of that feature. However, the existing zoning ordinances, particularly the South Arm Townships ordinance, promote high density residential land use by their small lot-size requirements. We recommend that neither township permit dwellings on less than a half-acre parcel, and that they consider greater minimums in some areas. We also recommend they consider some small areas for commercial development. Aside from these observations, we believe the existing ordinances, as they apply to the South Arm, correspond reasonably well to the existing and future needs of the area.

## FUTURE DEVELOPMENT

### Development Theme

Only by identifying and agreeing upon a theme or direction will the officials and citizens of an area progress through the development and implementation of a general plan for the physical development of the South Arm. Such a theme can initiate and guide the three units of government as they cooperate in matters pertaining to the South Arm.

Because a major asset of the South Arm is its residential/recreation character, it is important to retain those residential and recreational qualities while at the same time upgrading and expanding the area's commercial and industrial activities. If such an approach is agreeable to the officials and has citizen support, goals and objectives similar to the following should be adopted and worked toward.

### Goals

- Residential development which will have minimal adverse impact upon the area's natural environment.
- Commercial facilities to meet the needs of local residents but compatible with the rural environment.
- East Jordan's improved status as a commercial/employment center.
- More light industries in East Jordan's industrial park.
- More and better recreational facilities along the South Arm.
- Efficient, economical public facilities.

To make progress in the direction of these goals, specific actions such as the following should be agreed upon.

### Actions to Move Toward Goals

- Promote a variety of housing which will conform to the area's topography, vegetation, and surface waters, which will maximize open space.
- Establish lower density zoning along the shoreline of the South Arm.



- Encourage small convenience-type commercial facilities in several locations in the study area, outside East Jordan.
- Renovate East Jordan's central business district as recommended in 1977 East Jordan Comprehensive Plan.
- Retain and when possible improve East Jordan's recreational facilities.
- Acquire additional public sites giving access to the South Arm in Eveline and South Arm townships.
- Provide and maintain recreational facilities and equipment for all age groups in public access areas.
- Construct a bicycle path in the area, connecting East Jordan and Eveline and South Arm townships.
- Minimize the need for public sewer or community septic systems through careful distribution of housing.
- Encourage East Jordan and South Arm and Eveline townships to establish ties with each other to share services when possible.
- Encourage East Jordan to adopt and carry out its 1977 Comprehensive Plan.

#### Sketch Growth Management Plans

We offer the following sketch plans to help the local governments surrounding the South Arm to choose a course of action for future development within the framework of the stated goals and action statements.

The different plans are based on the different types and distributions of residential land uses. Each plan conforms to the goals specified in the plan.

Scheme No. 1 calls for large-lot residential zoning (minimum 1/2 to 1-acre building lots) throughout the area, except for East Jordan. Almost all housing would be single-family detached units. Small convenience stores (particularly grocery) would be located in small commercial districts on each side of the South Arm and within easy reach of most residents. Industrial activities would be located in the two industrial parks near East Jordan. Property with access to the South Arm would be purchased by both townships and improved with landscaping, playground equipment, playfields, and beaches.

East Jordan would expand and improve its boat-launch. A bikeway would be constructed, either as a separate bike-path or a street right-of-way dedicated for bike use. The route should follow the shoreline as closely as possible and connect with Boyne City and Charlevoix.

Scheme No. 2 calls for concentrated "pockets" of residential land use, with extensive open space between them. This scheme would better handle a variety of housing types, such as duplexes, single-family-detached units, and multiple-unit housing.

Small convenience commercial outlets would be located as proposed in Scheme 1, with the difference that each concentrated residential area would have its own play area. Each play area should be from 1/2 to 1 acre and include swings, sand boxes, monkey bars, and other similar equipment. Secondary bike paths should connect the residential centers with the proposed primary bike path.

It may be necessary in the near future to extend the East Jordan sewer to include residences on the western shoreline of the South Arm. Such a system would extend approximately two miles north of the city limits and encourage new construction in that vicinity. The system should extend no further, however, as that would conflict with either scheme.

Both schemes presume the carrying out of the East Jordan Comprehensive Plan, particularly the renovation of the central business district.

#### Recommendation for Actions on The Plan

The following recommendations for carrying out the goals and objectives outlined in the plan are by no means detailed or exhaustive. They are intended to spur discussion and clarify the options available to the city and townships.

The proposed changes in residential density in Scheme 1 would require a change in each township's zoning ordinance calling for a minimum density of one-half acre, and preferable one acre, per dwelling unit throughout the area. Portions of each township should be designated multiple-family residential.

Scheme 2 would require changing the South Arm Township zoning map to include R-2 properties. Eveline Township should have a similar zone in the area.

Commercial locations specified in the plan should be zoned for small retail establishments. Adequate parking and sign control provisions should be included.

Eveline Township should, as suggested in the 1976 Charlevoix County Recreation Plan, lease five to ten acres from the Sequanato Club near Ironton to use the beach now on the site, add picnic facilities, children's play equipment, a ball diamond, and public restrooms.

South Arm Township should lease or buy vacant waterfront property on the western side of the South Arm, preferably acreage owned by East Jordan at the mouth of Monroe Creek. The Township should place picnicking and playground facilities on the site. Township officials should also continue to encourage the State to improve the State-owned 16-acre public access site on the east side of the South Arm near Dutchman's Bay.

All three jurisdictions should, as a single unit, approach the County with a proposal for a County-wide bike path connecting all three cities and surrounding the South Arm. A committee should be established to work with the County Planning Commission to determine the best route, implementation measures, and funding for the bike path.

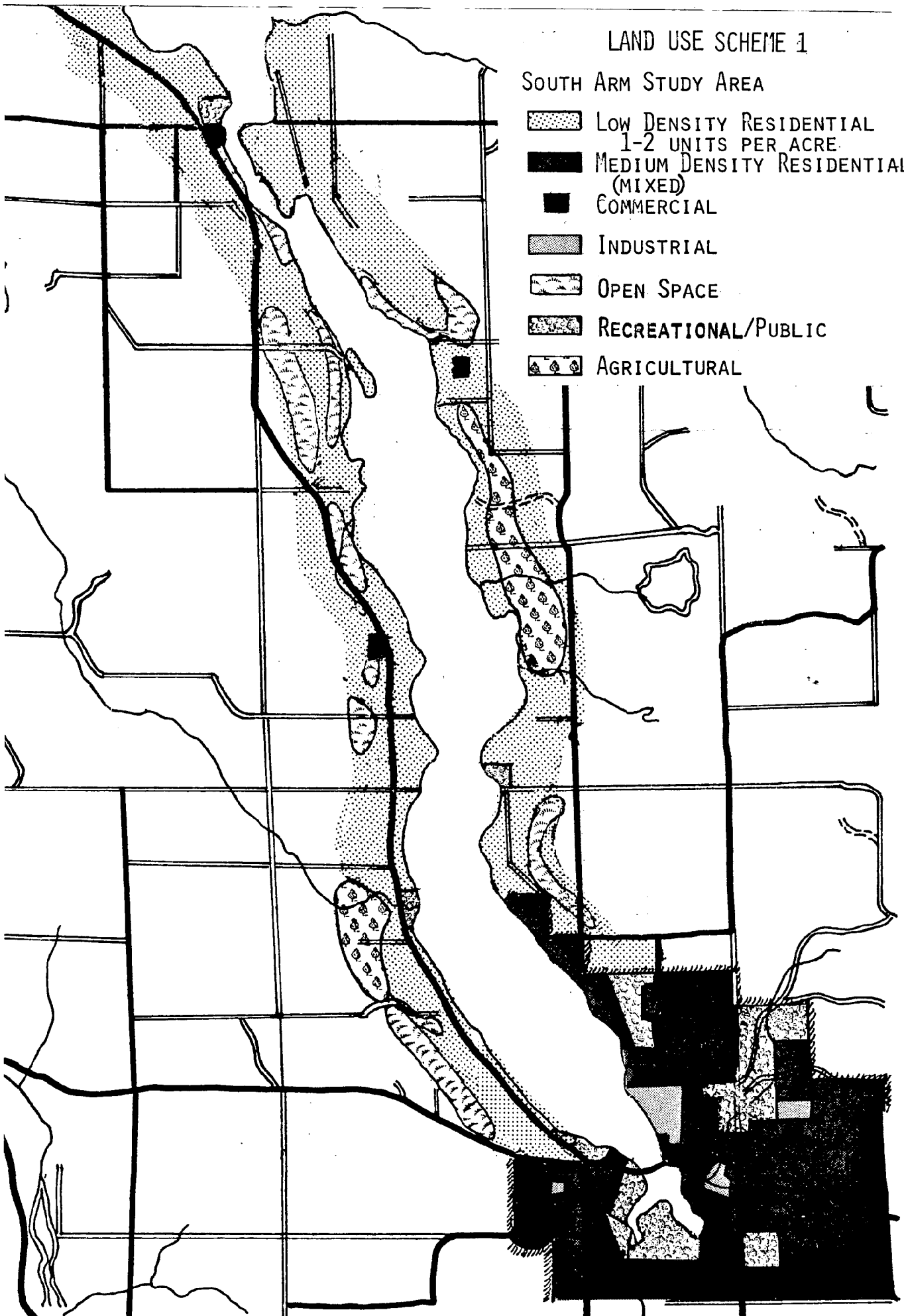
East Jordan and the South Arm Township should continue to work together to expand, at the appropriate time, the city's sewer system into the township. If Scheme 2 is selected the townships should ensure, through local ordinance, that once a specific density is reached in a development area, the residents of that area, or the developer, install a community septic system. The threshold density should be determined with the help and advice of the county health department.

Perhaps the most important implementation measure is to institute a continual exchange of information and ideas among the three units of government. The planning commissions of the three jurisdictions should meet at least once, and preferably several times, a year to discuss mutual problems concerning the South Arm, and to exchange ideas for directing new development. The three planning commissions should use the same or compatible plans as the basis for their own comprehensive plans. Once there is an agreed-upon set of policies and overall direction for sound development of the South Arm, local decision-makers will have made the first, and most important, step in ensuring the coordination of the South Arm's land use.

# LAND USE SCHEME 1







## SOUTH ARM STUDY AREA

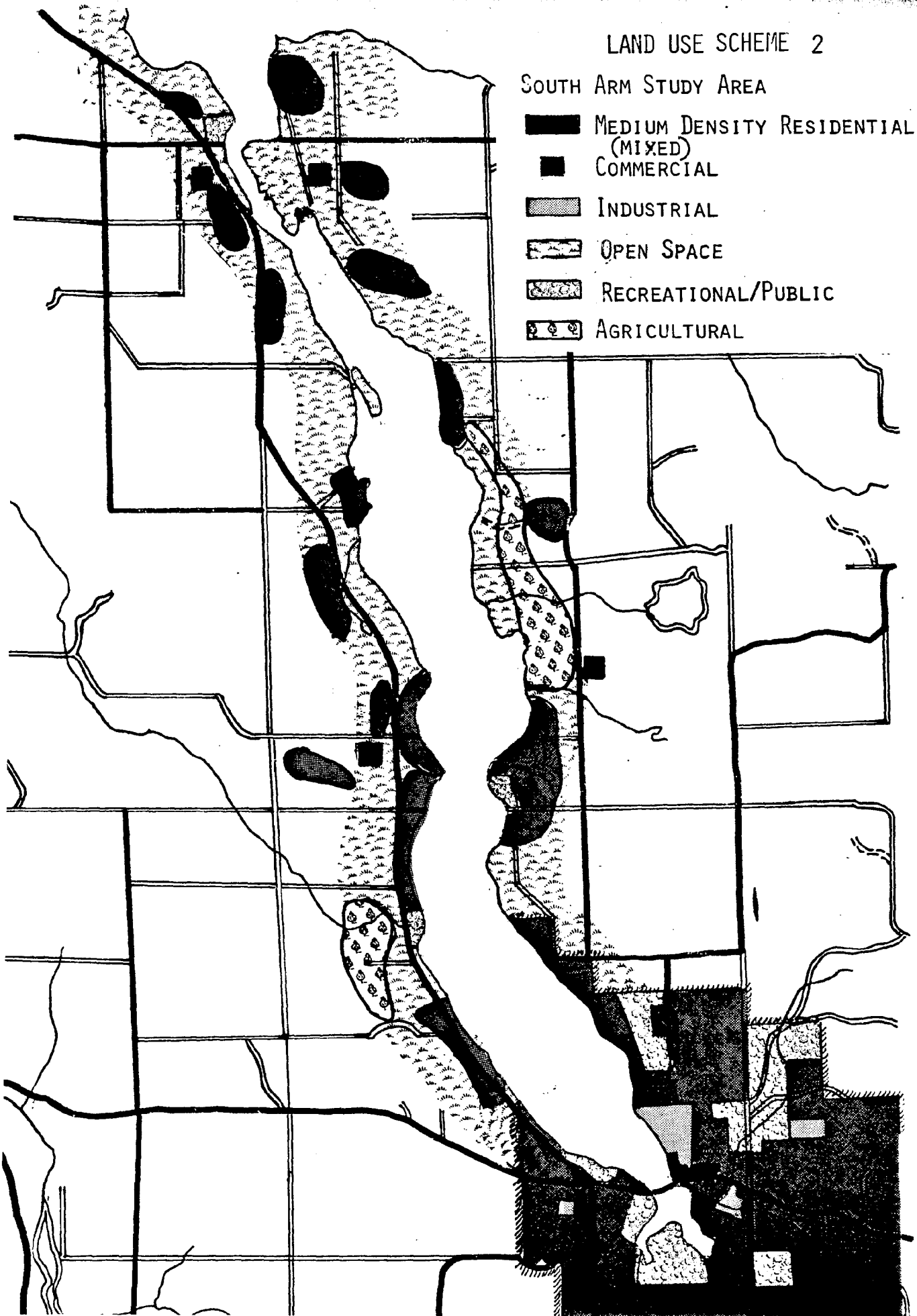
- Low Density Residential  
1-2 UNITS PER ACRE
- Medium Density Residential  
(MIXED)
- Commercial
- Industrial
- Open Space
- Recreational/Public
- Agricultural

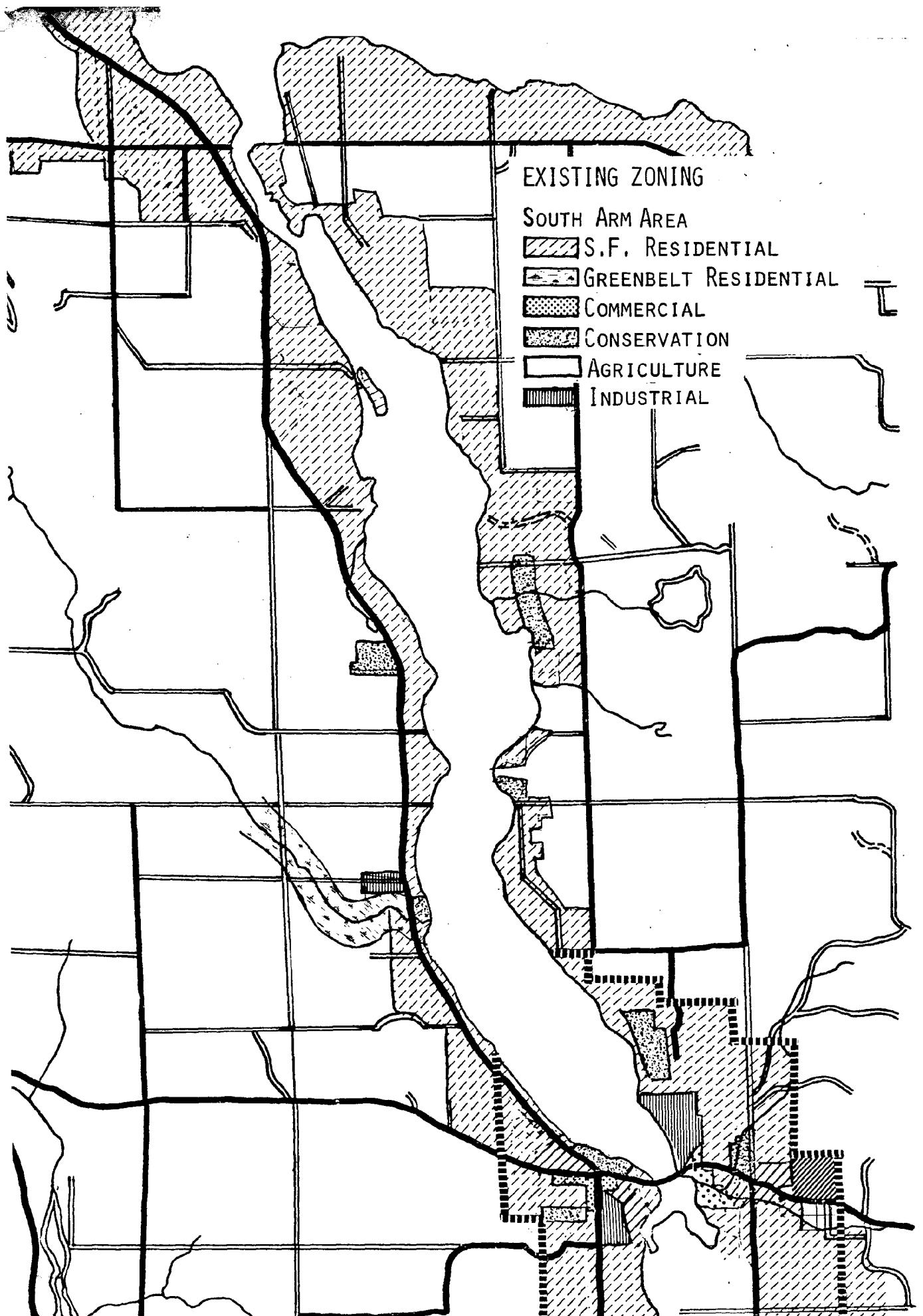


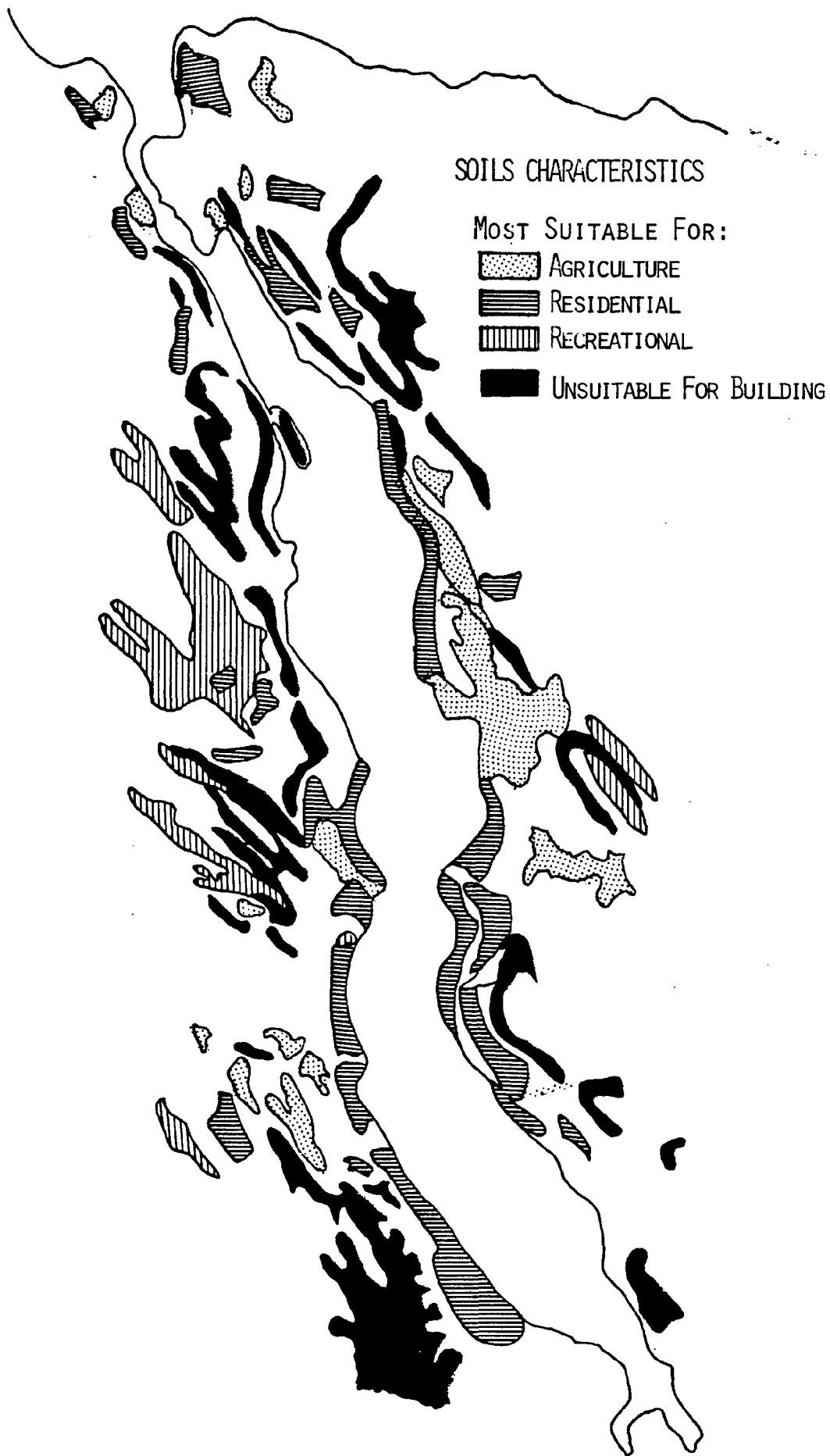
## LAND USE SCHEME 2

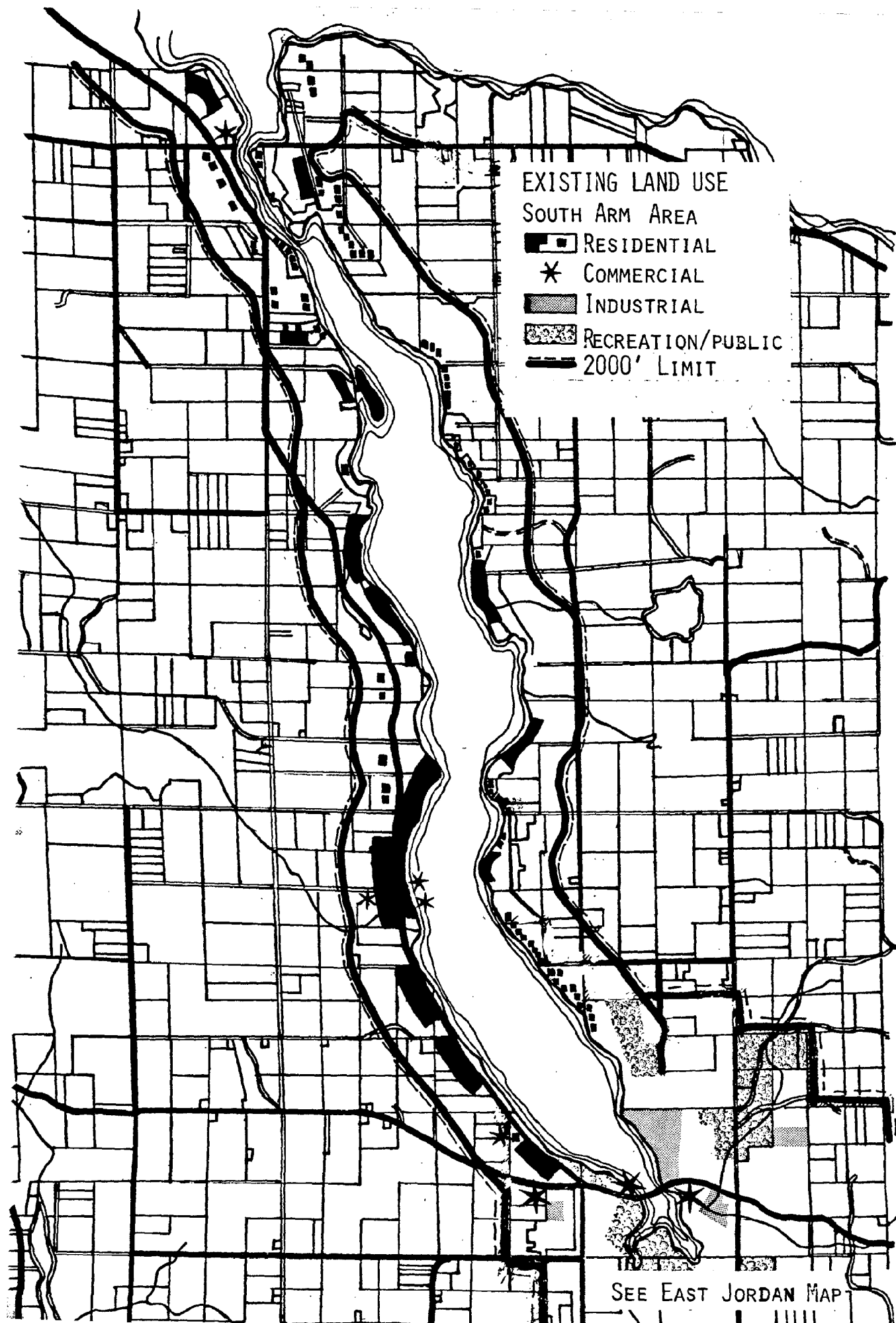
### SOUTH ARM STUDY AREA

-  MEDIUM DENSITY RESIDENTIAL (MIXED)
-  COMMERCIAL
-  INDUSTRIAL
-  OPEN SPACE
-  RECREATIONAL/PUBLIC
-  AGRICULTURAL











NOAA COASTAL SERVICES CENTER LIBRARY



3 6668 14103 2476