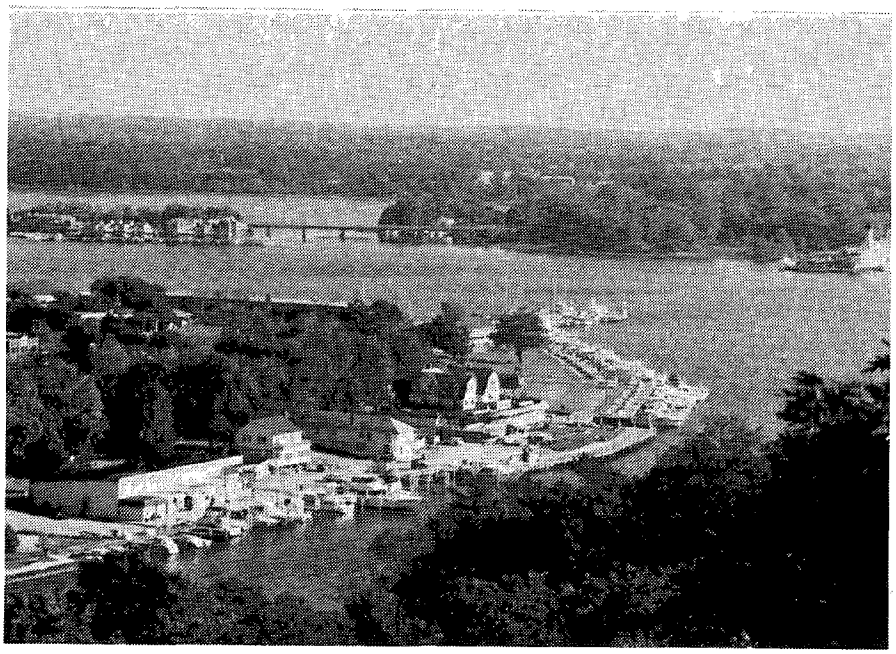
# CITY OF SAUGATUCK

# COMPREHENSIVE PLAN



Prepared By The City Of Saugatuck
Planning Commission

# CITY OF SAUGATUCK
# COMPREHENSIVE PLAN

Prepared by the

**City of Saugatuck Planning Commission**
**in cooperation with the Saugatuck City Council**

HT168.S28C58 1989

in cooperation with:

**Coastal Zone Management Program**
Land and Water Management Division
Department of Natural Resources

and with the assistance of:

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November 1989

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## CITY OF SAUGATUCK

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# INTRODUCTION

## OVERVIEW

The purpose of this Plan is to provide a policy and decision making guide regarding all future land and infrastructure development within the City of Saugatuck. Within the Plan, key planning issues are identified; a clear set of goals and policies are outlined; future land uses are described and mapped; and specific implementation measures are recommended.

All future land uses and policies presented in this Plan were developed based on a blending of the natural capability of the land to sustain certain types of development; the important natural functions played by unique land and water resources in the area; the relative future need for residential, commercial, and industrial uses; the existing land use distribution; and the desires of local residents and public officials as expressed through direct interviews, a public opinion survey, town meetings, and public hearings.

This Plan was prepared by the Planning & Zoning Center, Inc., under the direction of the City of Saugatuck Planning Commission. Financial support was provided by the Michigan Dept. of Natural Resources, Coastal Zone Management Program.

There are three critical components to using this plan as a decision making guide. First, are the goals, objectives and policies in Chapter 1. Second, is the future land use map and associated descriptive information presented in Chapter 10. Third, is the supporting documentation found in Chapters 2-9.

Although this Plan states specific land use development policy and proposes specific land use arrangements, it has no regulatory power. It is prepared as a foundation for and depends primarily on the City zoning ordinance (and other local tools) for its implementation. This Plan is intended as support for the achievement of the following public objectives, among others:

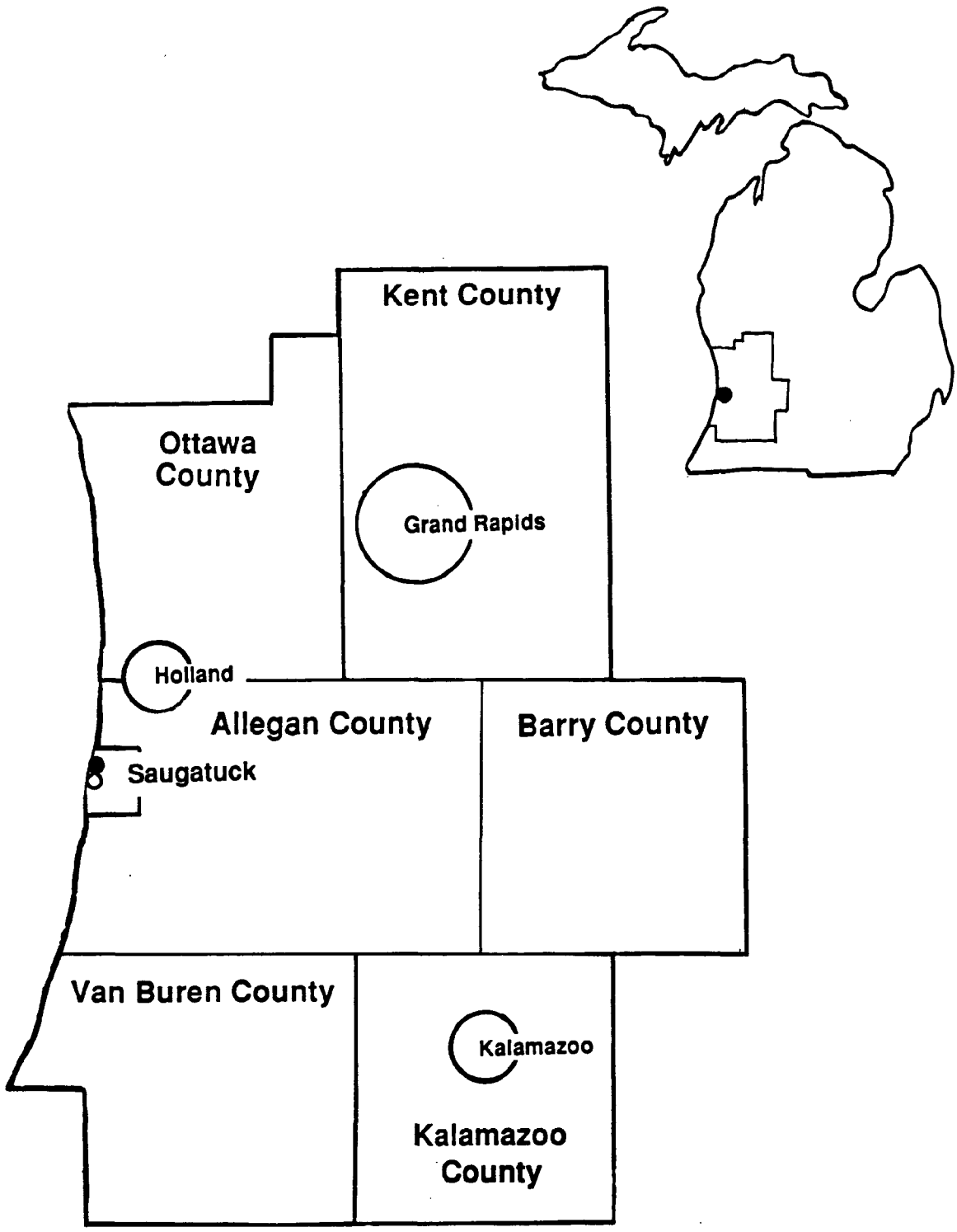
- to conserve and protect property values by preventing incompatible uses from locating adjacent to each other;
- to protect and preserve the natural resources, unique character, and environmental quality of the area;
- to maintain and enhance the employment and tax base of the area;
- to promote an orderly development process by which public officials and citizens are given an opportunity to monitor change and review proposed development; and
- to provide information from which to gain a better understanding of the area, its interdependencies and interrelationships and upon which to base future land use and public investment decisions.

This Plan is unique in that it was prepared concurrently with plans in Douglas and Saugatuck Township. It was prepared in light of the issues, problems and opportunities that the three communities face together, rather than being done in isolation as is more frequently the norm. While the City of Saugatuck Planning Commission oversaw the production of this plan, the City Council was also involved in its preparation. Chapter 11 proposes that the Joint Planning Committee established to prepare a Joint Plan for Saugatuck, Douglas, and Saugatuck Township (tri-community area) be continued and that it be updated at a minimum of every five years.

The contents of this Plan draws directly from previously adopted planning documents. There has been no effort made to explicitly footnote when material has been so used. Instead it is intended that the content of those documents continue to carry forward where they were found to be helpful in addressing the current and projected issues facing the tri-community area. In particular, the City of Saugatuck Land Use Plan of 1979 was frequently relied upon in drafting portions of this Plan. A number of engineering and technical documents prepared by outside consultants over the past decade have also been relied upon. They are referenced in Appendix A.

## SPATIAL LOCATION

The map on the following page show the location of the City of Saugatuck on the shores of Lake Michigan. This location along I-196 makes it easily accessible to travelers from across


Kent County
Ottawa County
Grand Rapids
Holland
Allegan County
Barry County
Saugatuck
Van Buren County
Kalamazoo
Kalamazoo County

# SAUGATUCK

across North America. The shoreline along the Kalamazoo River, Lake Kalamazoo, and Lake Michigan and the beautiful sand dunes and wide beaches make this a tourist mecca and an attractive place for retirement.

The trade area for commercial businesses in the three communities is quite small. Local residents tend to only do daily and weekly shopping locally as Holland, Grand Rapids, and Kalamazoo are nearby for wider selections of consumer goods. Three school districts serve the area but all of the students in Saugatuck attend the Saugatuck School District.

**KEY FACTORS GUIDING THIS PLAN**

Three considerations played prominent roles in fashioning the contents of this Plan just as they do in the Joint Plan. These are based on widely held public opinions, past and present investment by public and private entities and a growing recognition among citizens of the interdependence of the three communities.

First, Saugatuck, Douglas and Saugatuck Township function as a single economic, and social unit. Many people live in one of the three communities and work in another of the three. Most people live in one and shop with some frequency in another. School children, by in large, attend the same schools. Local cultural, conservancy and retiree activities are jointly supported by residents of all three communities. Several public services are jointly provided including the Interurban bus service, sewer and water (at least between Douglas and Saugatuck) and fire protection. The Kalamazoo River and Lake Kalamazoo connect all three communities, as do the local road network. Sometimes it seems, only the three units of government are separate. Yet despite these interrelationships, each community maintains a strong separate identity among many citizens of the three entities. Even many neighborhoods have strong separate identities (e.g. the hill, the lakeshore, Silver Lake, etc.). This provides an important richness and depth to the area, but it can also be politically divisive.

Second, tourism is the primary engine driving the local economy. Despite several industrial employers that provide important diversity to the area's economy, it is the dollars brought in by tourists and seasonal residents that fuel most of the local wages and local purchasing. The environmental splendor and wide range of activities open to tourists are the primary attraction. But no less significant is the small town character of the area. This character, often described as "cute" or "quaint" by tourists, is highly favored by visitors and deeply cherished by local citizens. As a result, any intensive or poorly planned alterations to the natural environment, or homogenization of the character of the individual communities is likely to have a potentially negative effect on both tourists and residents. This Plan proposes keeping the scale and intensity of such future changes low and proposes a variety of mitigation techniques to prevent adverse impacts on the environment or on the character of the area from these kinds of changes.

Third, a balance of future land uses is necessary to enhance the stability of the community during poor economic times and to broaden the population base. Presently there is a significant lack of housing in the area that is affordable for families with children. That, in concert with a decline in children generally (and an increase in the elderly) has severely impacted the Saugatuck School District. If all future land use decisions were made based exclusively on minimal alteration of the natural environment or maintenance of the existing community character, then over time, the community would become more vulnerable to economic downturn, which usually hits tourist communities very hard. Thus, a balance must be sought between what otherwise become competing goals (economic development and environmental protection/community character). This will present a serious challenge in the future. The pressure will be great to "sell the farm" for developments which promise new jobs/tax base. And while these are important, the long term impact of such proposals (in a particular location) could be very negative and not worth the tradeoff. All such decisions need to be made primarily based on long term considerations, rather than short term ones.

**MAPS**

Except as otherwise noted, all the full page maps presented in this Plan were produced using C-Map software. This is a PC based computer program initiated by William Enslin, Manager of the Center for Remote Sensing at Michigan State University. All the data on the maps was digitized either by Tim McCauley of the Planning & Zoning Center, Inc. or was downloaded from the Michigan Resource Inventory Program (MRIP) database maintained on

the State's mainframe computer system by the Department of Natural Resources.

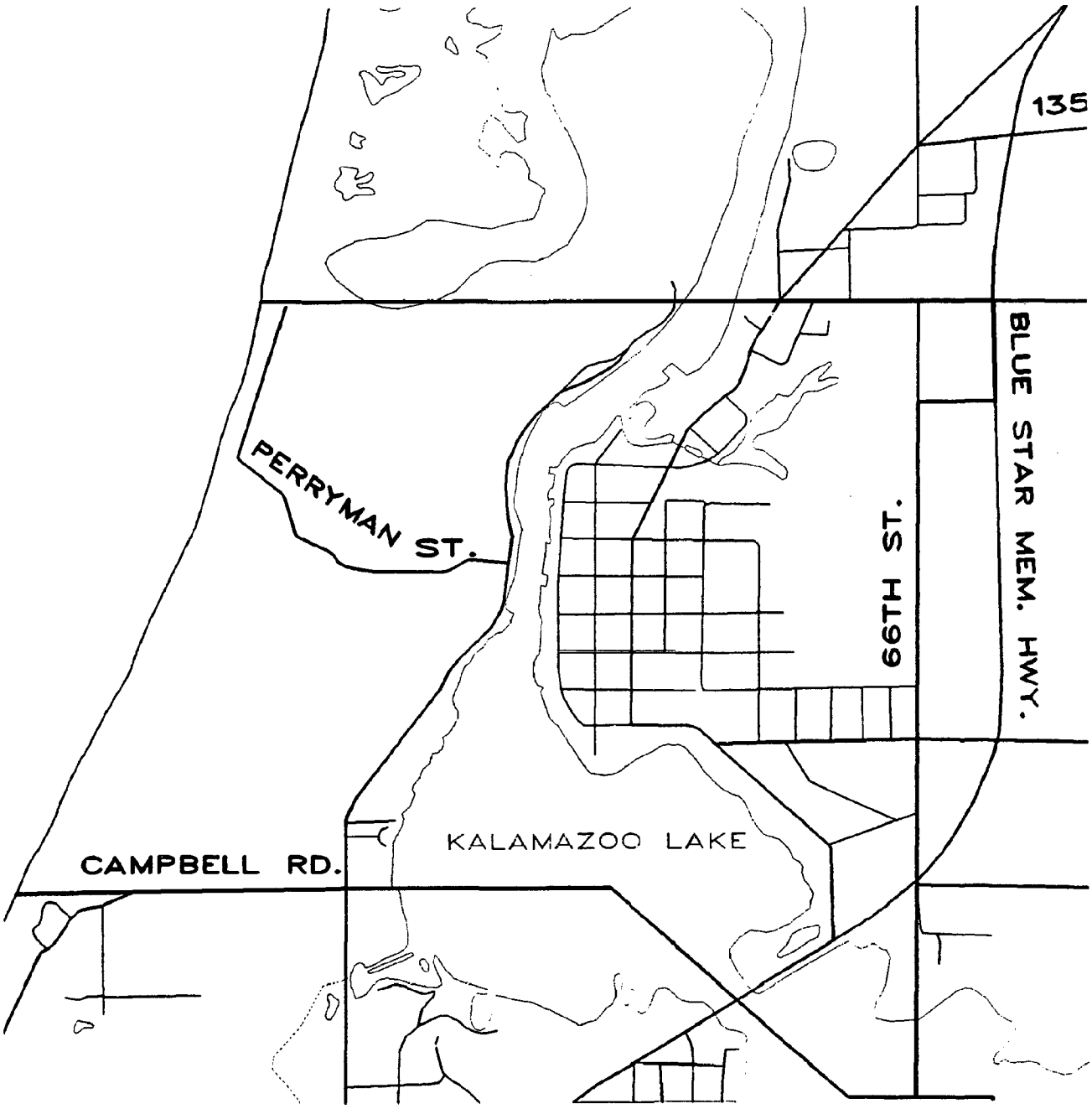
Several advantages are realized by computerizing this data. Typically, geographic information is only available on paper maps at widely varying scales, which makes it difficult to compare data sets for planning purposes. With C-Map, all of the maps can be viewed and printed at any scale via a variety of different media (color plotter, laser or ink jet printer, or dot matrix printer). Information can also be combined (or overlaid) so that composite maps can be created and compared in a fraction of the time and expense normally required to obtain the same results. Another major advantage of computer mapping is the ability to update maps continuously, so that an up-to-date map is always available.

There are three different base maps that have been used in mapping this information: 1) a base map prepared by the DNR which was digitized from the United States Geological Survey (USGS) topographic map series for the area; 2) a lot line map created by digitizing the lots of record used for assessing purposes in the three communities; and 3) a soils base map derived from the SCS Allegan County Soil Survey. None of these base maps are exactly identical as they originate from different sources. All of the land cover and use based information and topography is keyed to the DNR/USGS base map. All of the soils related data is keyed to the soils base (which was interpreted and mapped by the SCS from nonrectified aerial photos, so there is some distortion at the edges of each photo frame). The existing land use, sewer and water line maps are keyed to the lot line base map.

A transparent copy of the DNR/USGS base map and the lot line base map follow. These can be overlaid on any of the maps in this Plan, but the "fit" will be best when overlaying information that it was used as the base for. Please note that the extent of the Kalamazoo River on each base is noticeably different and is related to the water levels at the time the inventory or survey was conducted. On the maps showing all of Saugatuck Township, we have "corrected" the DNR/USGS base map to include Silver Lake, which is merely shown as a wetland (not an open water body) on USGS maps. A transparency can easily be made by photocopying any of these maps in order to overlay several levels of information. Using C-Map on a color monitor, up to ten levels of information can be overlaid on the screen at once, including "zooming" in on any area first (e.g. as would be desirable when examining a specific parcel).

While the accuracy of all of this data is very satisfactory for land use planning purposes (especially when contrasted with traditional techniques), none of it is sufficiently detailed to be absolutely reliable at the parcel level. As a result, detailed site analyses of soils, topography, drainage, etc. are still necessary any time specific site designs are being prepared.

All computerized data is on file locally and accessible via C-Map for local use and updating. Contact the zoning administrator or clerk for further information.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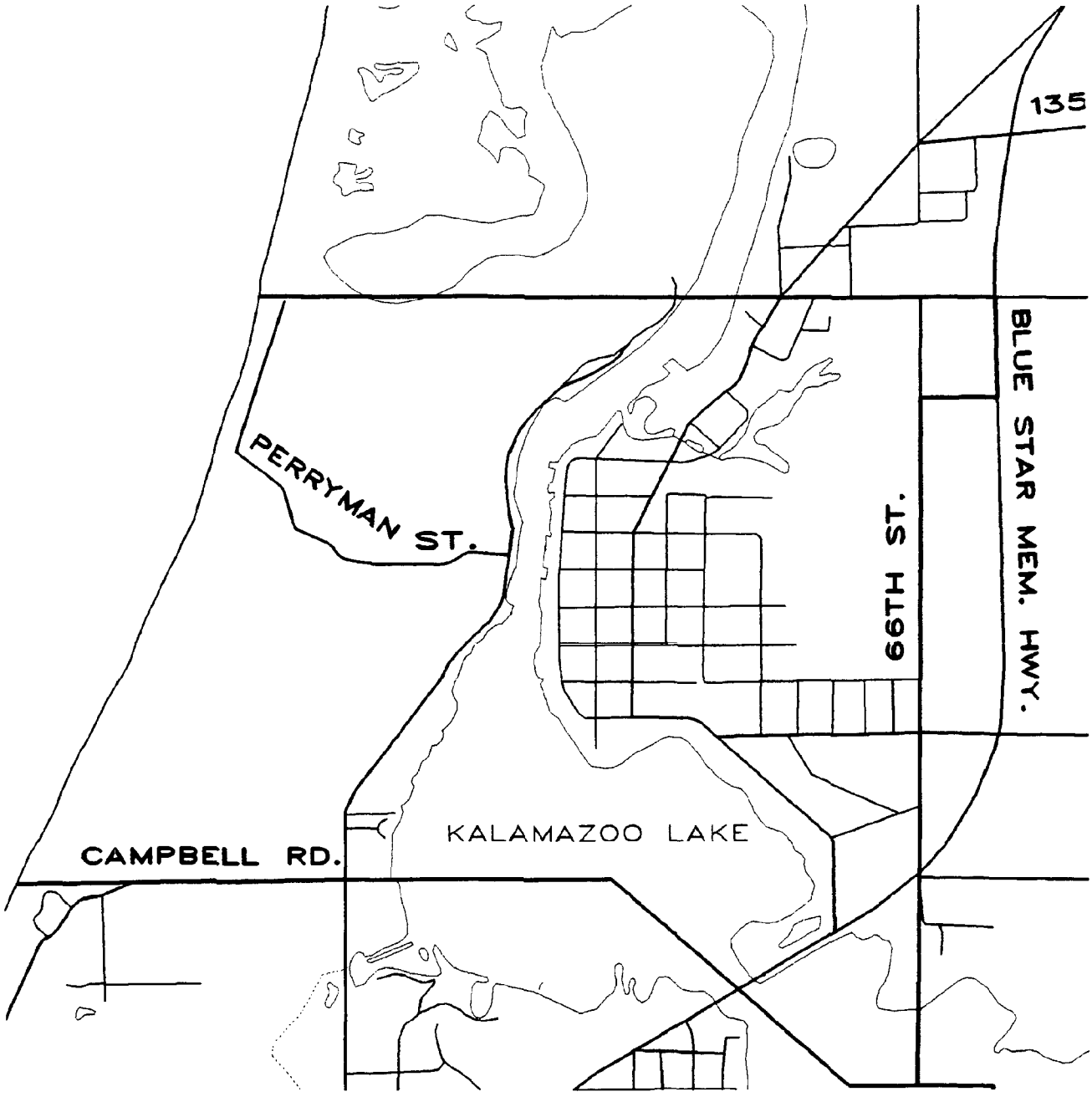
BLUE STAR MEM. HWY.
66TH ST.
PERRYMAN ST.
KALAMAZOO LAKE
CAMPBELL RD.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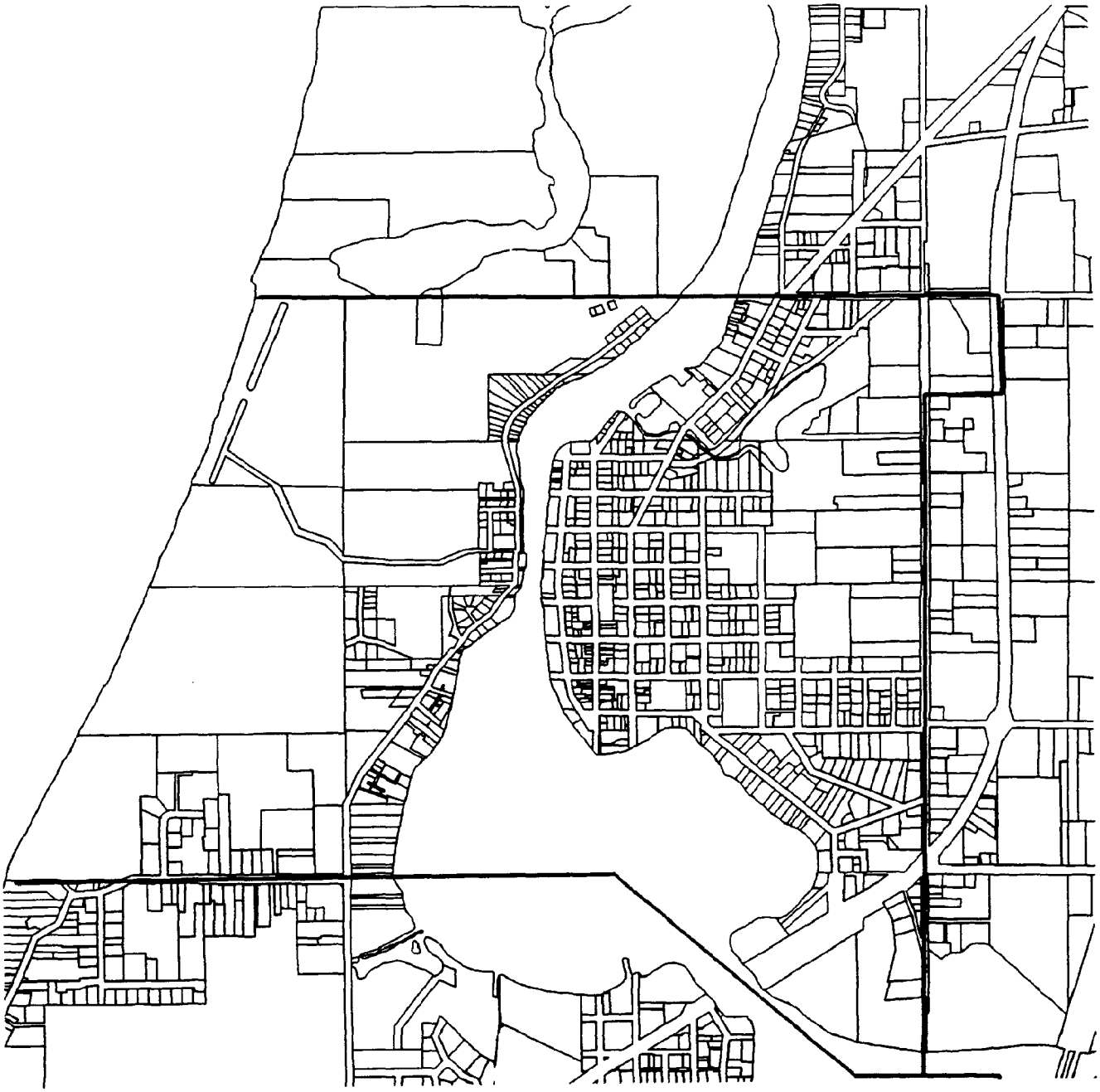
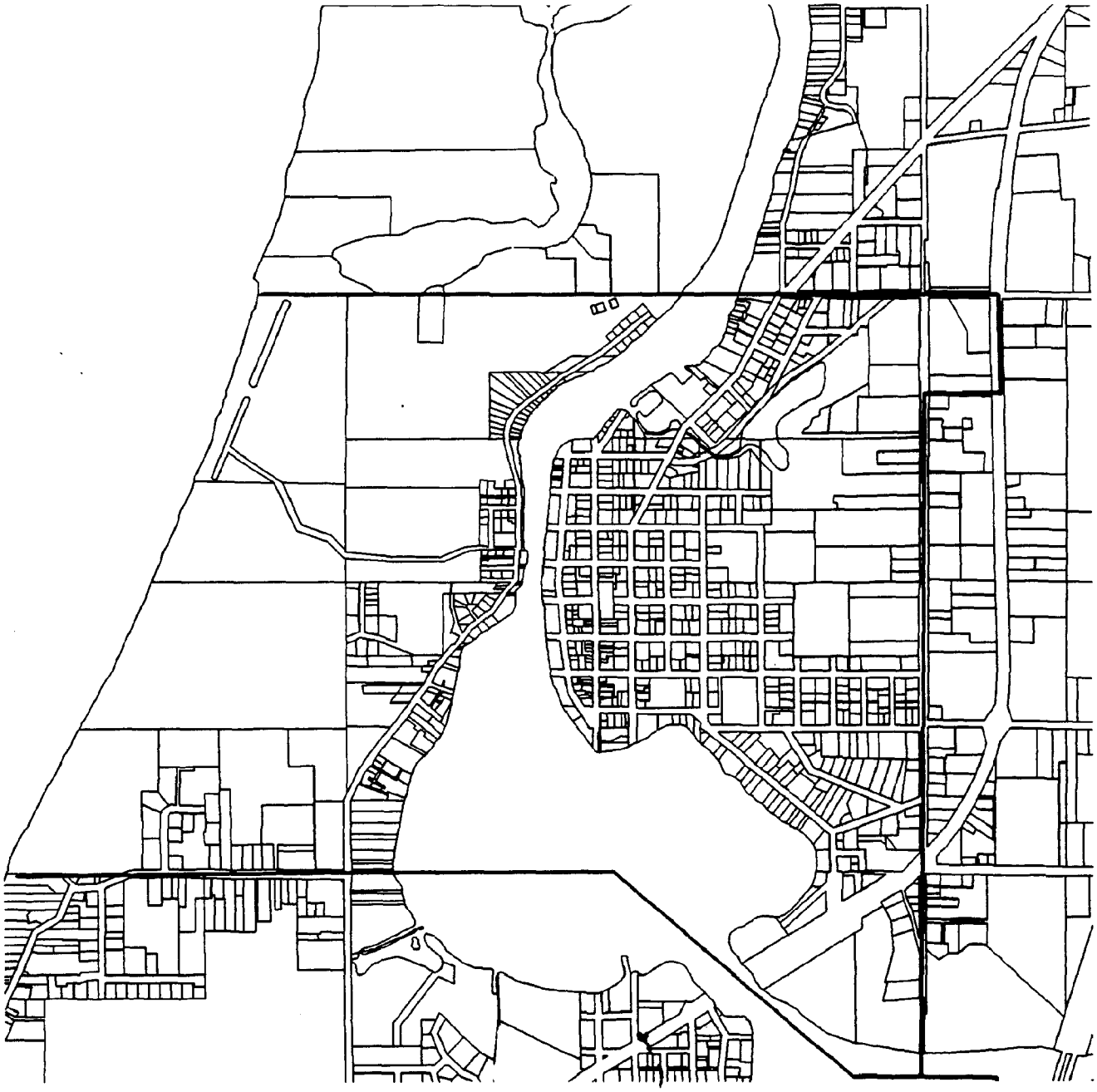
PERRYMAN ST.
KALAMAZOO LAKE
CAMPBELL RD.





# Chapter 1

# GOALS, OBJECTIVES, & POLICIES: THE CITY OF SAUGATUCK POLICY PLAN

Goals, objectives, and policies are the foundation of a comprehensive plan. They address the key problems and opportunities of a community and help establish a direction and strategies for future community development and growth. Goals establish general direction, objectives represent tasks to be pursued, and policies are decision guides. The goals, objectives, and policies embodied in this plan were prepared through an extensive process of leadership surveys, public opinion surveys, meetings with local officials, and town meetings.

The first step in this process was a survey of area leaders– including members of the City Planning Commission, City Council, prominent members of the private sector, and other citizens identified in the individual surveys. Leaders were asked their views on the major problems and opportunities facing the City and the tri-community area, and the results were tabulated and presented to City officials. These results served as the basis for initiating a public opinion survey.

Citizen views on local planning issues were obtained through public opinion surveys mailed to every property owner in the City and distributed in each rental complex. Survey questions were prepared for the City through consultations with the City Planning Commission and City Council. Dr. Brent Steel, Oakland University, conducted and tabulated the survey.

The response rate of 51% in Saugatuck was very high considering the length (about 1 hour completion time) and type of survey and thus responses probably represent the majority view. Most respondents were homeowners in their mid-fifties, registered to vote, who are long-term residents and plan to live in the area for ten or more years. Survey results are shown in Appendix A.

Results of the citizen opinion survey and leadership survey were used to identify issues for discussion at the first town meeting. This meeting was a "futuring" session where participants were asked to imagine how they would like the community to be in the year 2000. Participants were separated into groups and asked to prepare of list of their "prouds" and "sorries" in Saugatuck, and things from the past which they would like to preserve. The lists were compared and then all engaged in an imaging exercise where groups were established according to topic area and were asked to imagine that element of the Saugatuck in the year 2000. This futuring process identified key issues and community elements which were pulled together to form a vision and direction for the City in the year 2000.

A draft policy plan, with defined goals and objectives, was then prepared based on this futuring process and the survey results. The draft was refined through a series of meetings with local officials and then presented to City citizens in a second town meeting. Citizen comments were reviewed by City officials and incorporated into the policy plan.

Following completion of the draft policy plan, data and trends in the City were analyzed. This analysis supported the direction of the policy plan and was first evaluated by the City Planning Commission, and then by City citizens at the third town meeting. Next, key elements of the plan and proposed strategies to carry it out were first reviewed by the City Planning Commission, and then by City citizens at the fourth and final town meeting.

These goals and policies also look beyond local boundaries to the issues which affect the region. This was accomplished through the joint comprehensive planning process, where representatives of the Village of Douglas and Saugatuck Township participated in the preparation of joint goals and policies for the region. Thus, these goals and policies are premised on a pledge to mutually cooperate in guiding development consistent with the adopted goals and objectives of the Joint Plan.

Thus, the broad based input of area officials, leaders, and citizens, plus detailed analysis of local trends and land use characteristics have formed the goals, objectives, and policies that comprise the policy portion of this comprehensive plan. These goals and policies will serve as a guide for land use and infrastructure deci-

sions in the City of Saugatuck. With time, some elements may need to be changed, others added, and still others removed from the list. Before amendatory action is taken, however, the impact of the proposed changes should be considered comprehensively in relation to the entire plan, and the joint plan. It is intended that the goals and policies be consulted whenever considering future land use decisions.

**CITY CHARACTER**

Goal: Retain and enhance the scenic, small town, resort oriented character of Saugatuck.

Policy: Encourage new land uses and densities/intensities of development which are consistent with and complement the character, economic base, and image of the area, and which are consistent with this plan and zoning regulations.

Policy: Promote site planning and design of new development which is consistent with the established character of the City and compatible with existing neighborhoods.

Objective: Improve the visual appearance of entrances into the city through landscape designs, signs, and land development which promote the vitality and character of the City, without cluttering the area or creating safety hazards.

Objective: Explore the possibility of establishing a sign ordinance which is consistent with Saugatuck Township and the Village of Douglas.

Policy: Encourage the preservation and restoration of historically significant structures.

Policy: Discourage designs which would block significant views and vistas, especially from the ridgeline to the water.

Policy: Manage the trees lining City streets to provide a continuous green canopy.

Objective: Increase enforcement of existing ordinances and regulations to better preserve the established character of the City and promote official goals, objectives and policies.

Policy: Preserve wetlands, woodlots, and other wildlife areas wherever feasible.

**GROWTH MANAGEMENT**

Goal: Guide development in a manner which is orderly, consistent with the planned expansion of public services and facilities, and strives to preserve the scenic beauty, foster the wise use of natural resources, protect environmentally sensitive areas, and enhance the special character of each community.

Policy: Encourage development in locations which are consistent with the capacity of existing and planned public services and facilities, and cost effective in relation to service extension.

Policy: Review all plans by other public entities for expansion and improvement of existing transportation networks for impacts on growth patterns and for consistency with the goals, objectives, and policies of this plan.

Policy: Consider the impact of land use planning and zoning changes on Douglas and Saugatuck Township, and discuss proposed changes with the affected jurisdiction(s) prior to making such changes. A common procedure for such communication shall be established and followed.

**LAND USE & COMMUNITY FACILITIES**

Goal: Promote the balanced, efficient, and economical use of land in a manner which minimizes land use conflicts within and across municipal borders, and provides for a wide range of land uses in appropriate locations to meet the diverse needs of area residents.

Policy: Insure compatible land use planning and zoning across municipal borders and minimize land use conflicts by coordinating planning and zoning, separating incompatible uses and requiring buffers where necessary.

Policy: Discourage sprawl and scattered development through planned expansion of roads and public utilities and through zoning regulations which limit intensive development to areas where adequate public services are available.

Policy: Provide for necessary community facilities (i.e., schools, garages, fire halls, etc.) consistent with this plan and capital improvement programming.

Policy: Coordinate Capital Improvement Programming with the City of Saugatuck and the Village of Douglas.

Policy: Encourage approaches to site design which take natural features of the property, such as soils, topography, hydrology, and natural vegetation, into account and which use the land most effectively and efficiently by maximizing open space, preserving scenic vistas, conserving energy, and any other public policies identified in this plan.

Policy: Advise developers during site plan review to contact the State Archaeologist, Bureau of History (517-373-6358) to determine if the project may affect a known archaeological site.

**ECONOMIC DEVELOPMENT**

Goal: Strengthen and expand upon the area's economic base through strategies which attract new businesses, strengthen existing businesses, and enhance the tourism potential of the area consistent with the character of the City and its ability to provide needed public services.

Policy: Identify potential sites for industrial development and alternative means of financing necessary public improvements and marketing of the sites (i.e. tax increment financing, special assessments, state grants and loans, etc.)

Policy: Support efforts to foster tourism by preserving the scenic beauty of the environment, expanding recreation opportunities, improving tourist attractions, and preparing promotional materials which highlight the attractions of the City.

Policy: Promote better communication and cooperation between the public and private sector.

**COMMERCIAL**

Goal: Encourage the development of commercial land uses in appropriate locations which serve the current and future needs of residents and tourists, are of a character consistent with community design guidelines, and which promote public safety through prevention of traffic hazards and other threats to public health, safety, and general welfare.

Policy: Encourage new commercial development to locate adjacent to existing commercial areas.

Policy: Preserve the quality, vitality, and value of City commercial districts through sign regulations which control the design and location of signs.

Policy: Avoid separate parking lots for each business where feasible and encourage centrally placed parking lots which serve several businesses.

**DOWNTOWN SAUGATUCK**

Goal: Protect and enhance the appearance of downtown Saugatuck and promote design and activities which enhance the festive atmosphere and foster tourism.

Objective: Pursue state and local programs aimed at planning, organizing, and financing downtown improvement projects.

Policy: Continue to promote the preservation and renovation of historic structures and districts in accordance with the Saugatuck Historic District regulations, in order to preserve Saugatuck's historic character.

Objective: Identify alternative solutions to the parking problems and traffic congestion which occur in downtown Saugatuck during the tourist season which do not detract from the unique character of downtown, and do not penalize the community for the rest of the year.

Objective: Explore the possibility of establishing a shuttle bus to transport visitors downtown from an outer parking area.

Objective: Implement parking improvements and expansion through a variety of planned financing approaches including capital improvement programming, public/private partnerships, special assessments, a Downtown Development Authority, and others as appropriate.

Policy: Encourage prospective developers to include off-street parking or alternatives in their site design which help solve existing parking and circulation problems.

Policy: Discourage signs and advertising which are inconsistent with the established character of the downtown area.

Policy: Maintain Butler Street's pedestrian character with attractive landscaping and benches to encourage shopping and social activity, and design improvements to reduce traffic congestion.

Policy: Preserve and expand parks, greenbelts, benches, and landscaping in the downtown area.

**INDUSTRIAL**

*The City has little room for industrial development. The following goals and policies reflect the City's position on industrial growth beyond its borders, or within the City if it expands through annexation in the future.*

Goal: Increase the amount of non-polluting light industry in the area without damaging the environment, spoiling the scenic beauty of the area, or overburdening local roads, utilities, or other public services.

Policy: Encourage new industries to locate in small industrial parks near major transportation routes, and in locations with existing or planned sewer, water, electric, and solid waste disposal services to minimize service costs and negative impacts on other land uses.

Policy: Implement site plan requirements for light industries which incorporate open space, attractive landscaping, and buffering from adjacent non-industrial uses.

Policy: Require the separation of industrial sites from residential areas through buffers made up of any combination of parking, commercial uses, parks, parkways, open space, or farmland.

**HOUSING/RESIDENTIAL**

Goal: Encourage a variety of residential types in a wide range of prices which are consistent with the needs of a changing population and compatible with the character of existing residences in the vicinity.

Policy: Explore alternative measures to reduce housing costs and make home ownership more affordable, such as zoning regulations and other programs which are designed to reduce the cost of constructing new housing.

Policy: Discourage the development of high intensity residential uses along the waterfront.

Policy: Provide land through zoning for apartments, duplexes, and medium density single family residential uses.

Policy: Maintain the present mix of housing types (i.e. single family, multiple family, duplex, etc.).

Policy: Allow only quiet, low traffic, low intensity home occupations in residential areas to preserve their stability and tranquility.

Policy: Provide street lights and sidewalks in residential areas where there is a demonstrated need and according to the ability of residents to finance such improvements.

**SPECIAL ENVIRONMENTS & OPEN SPACE**

Goal: Protect special environments and open spaces, including but not limited to sand dunes, wetlands, and critical wildlife habitat, from the harmful effects of incompatible development activity by limiting the type and intensity of land development in those areas.

Objective: Identify development limitations on special environments through a tiered classification system which classifies these environments based on their value to the ecosystem, unique attributes, the presence of endangered plant and wildlife species, and other characteristics deemed significant.

Objective: Devise regulations for land development in special environments which permit development in a manner consistent with protection objectives and which complement state and federal regulations for special environments.

Policy: Require development projects deemed appropriate in and adjacent to special environments to mitigate any negative impacts on such environments.

Policy: Encourage acquisition of special environments of significant public value by public

agencies or nonprofit conservancy organizations for the purposes of preservation.

**WATERFRONT**

Goal: Protect and enhance the natural aesthetic values and recreation potential of all waterfront areas for the enjoyment of area citizens.

Policy: Promote the preservation of existing open space and natural areas along the Kalamazoo River, Kalamazoo Lake, and Lake Michigan to protect and enhance the scenic beauty of these waterfront areas and permit the continuity of these existing open spaces to remain.

Policy: Some waterfront lands may be developed to meet residential and commercial needs, enhance local tax base, and contribute to paying for local public service costs associated with their use and development, consistent with environmental protection policies in this plan, where such development would contribute to local quality of life.

Policy: Maximize public access, both physically and visually, by acquiring prime waterfront open space whenever feasible.

Policy: Acquire scenic easements wherever public values dictate the maintenance of visual access to the waterfront and the property is not available for purchase.

Policy: Limit the height and intensity of new development along waterfront areas to preserve visual access and the natural beauty of the waterfront for the broader public.

Policy: Preserve street ends which abut water bodies for public access to the water.

Policy: Encourage additional boating related activities, such as transient slips and a municipal marina.

**RECREATION**

Goal: Enhance the well-being of area residents by providing a variety of opportunities for relaxation, rest, activity, and education through a well balanced system of private and public park and recreational facilities and activities located to serve identified needs of the area.

Objective: Identify and explore opportunities to cooperate with other jurisdictions and agencies, including Allegan County and the Department of Natural Resources Recreation Division, on recreation projects which would benefit area residents and strengthen the tourism industry.

Objective: Develop an areawide bikepath through local funds, grants and loans, and capital improvement programming.

Objective: Develop a system of cross-country ski trails together with the Village of Douglas, Saugatuck Township, and other jurisdictions/agencies if possible, through the use of local funds, grants and loans, and capital improvement programming.

Policy: Encourage local government participation in activities designed to enhance the area's seasonal festivals.

Policy: Retain, maintain, and improve all existing publicly owned parks so that they continue to meet the diverse recreation needs of area citizens and tourists.

Objective: Explore the possibility of developing a joint public marina and launch facility where federal and state funding is available to assist with financing such a venture.

**TRANSPORTATION**

Goal: Maintain a safe, effective, and efficient road network and improve roads to promote growth in a way that is consistent with land use goals, objectives and policies.

Goal: Encourage a wide variety of transportation means, such as walking, biking, and public transportation, to meet the diverse needs of area residents.

Policy: Promote pedestrian and bike travel through a coordinated network of bikepaths, trails, and sidewalks.

Objective: Survey the transportation network and identify need for maintenance and improvements.

Objective: Prepare a capital improvement budget for financing transportation maintenance and improvements.

Objective: Prepare a capital improvements program to schedule and prioritize improvements and maintenance.

Objective: Regulate deliveries and keep them off of main streets in the downtown area.

Policy: Promote regularly scheduled, affordable, and dependable public transportation to increase the mobility and quality of life of those who depend on public transportation.

Policy: Maintain the sidewalk system and require developers to provide sidewalks in appropriate locations through subdivision regulations.

Objective: Encourage expansion of the interurban system consistent with municipal means to finance the increased service and an identified public need.

**WATER AND SEWER**

Goal: Insure a safe and adequate water supply for the area, and environmentally sound sewage treatment, which is efficiently provided and cost effective.

Policy: Provide a reliable supply of safe, clean, and good tasting drinking water.

Objective: Devise alternative mechanisms for financing sewer and water expansions which are financially sound and equitable.

Policy: Minimize the potential for groundwater contamination through planning and zoning which is consistent with the capacity and limitations of the land.

Policy: Promote a joint agreement with the Village of Douglas and Saugatuck Township to plan and implement areawide sewer and water service, including full participation by each in the Kalamazoo Lake Sewer & Water Authority.

Objective: Upgrade and provide adequate mains and lines within the existing sewer and water service.

Policy: Insure that the expansion of sewer and water service into an area is consistent with the planned intensity of land use for that area, scheduled when affordable, and implemented when necessary to meet an identified need in the area rather than on a speculative basis.

**POLICE, FIRE, & EMERGENCY SERVICES**

Goal: Provide police, fire, and emergency services consistent with a public need and the ability to finance improvements in the most cost effective manner.

Policy: Explore the feasibility of consolidating police services across the three communities to eliminate overlap in service and expenditures and improve service delivery.

Objective: Evaluate the feasibility of 24 hour medical service which serves all three jurisdictions to be provided by a public or private entity.

**SOCIAL SERVICES**

Goal: Those social services which are efficient to provide at the local level should be provided to meet the needs of area residents.

Objective: Explore the possibility of establishing support programs for older adults through the use of volunteers for assistance with household chores, personal care, and home repair to help them remain independent, shorten hospital stays, and lower health care costs.

Policy: Support efforts to establish community day care center(s) in appropriate locations to provide quality and affordable day care to working parents.

**WASTE MANAGEMENT**

Goal: Insure the safe, effective, and efficient disposal of solid waste and toxic substances.

Policy: Encourage the reduction of solid waste through recycling, composting, and waste-to-energy projects.

Policy: Manage disposal of solid waste and location of solid waste facilities in accordance with the Allegan County Solid Waste Management Plan prepared under PA 641 of 1978.

Objective: Adopt regulations for on-site storage and transportation of hazardous waste which require:

- Secondary containment for on-site storage of hazardous waste;
- No transfer of hazardous waste over open ground;
- Arrangements for inspection of, and monitoring underground storage tanks;
- Existing underground storage tanks must provide spill protection around the fill pipe by 1998 in accordance with 1988 EPA standards.
- All existing underground storage tanks must install leak detection systems within 5 years in accordance with 1988 EPA standards;

Objective: Encourage the development of a biodegradable container ordinance.

**ENERGY**

Goal: Promote site design and building which is energy efficient and encourage energy conservation through good land use planning and wise public building management.

Objective: Prepare energy guidelines or standards which address landscaping, solar access, solar energy systems, sidewalks, subdivision layout, proximity to goods and services, etc., and encourage or implement these through zoning and subdivision regulations.

Objective: Establish an educational program (i.e. "energy awareness week") in cooperation with the local school system.

Objective: Pursue funding or financing techniques to retrofit public buildings to reduce heating and cooling costs.

Objective: Explore the possibility of establishing a low interest, revolving loan fund for retrofitting private homes where improvements would be paid off through savings in heating costs.

# Chapter 2

# DEMOGRAPHICS

## POPULATION SIZE

The City of Saugatuck has grown by 40% since 1950, reaching an estimated 1,090 people in 1986 according to U.S. Census population estimates. The City grew only 5% between 1970 and 1980– slow compared to the 40% increase experienced by the Township. (see Table 2.1).

## SEASONAL POPULATION

The population of the each community in the tri-community area swells during the summer when seasonal residents and tourists return. The 1980 census estimates that 26% (203) of the City's 772 total housing units are vacant, seasonal, and migratory. Nearly all of these (143) are detached single family units. Although 3 or more unit condominiums make up about 23% of the total seasonal units.

An engineering study prepared by Fishbeck, Thompson, Carr & Huber for the Kalamazoo Lake Sewer & Water Authority (KLSWA) estimates that the total tri-community area population is comprised of one-third seasonal residents and two-thirds permanent residents and that the weekend daytime population during the summer is about 2,500 persons. Although sewer and water demand typically grows with population, the study found that demand for sewer and water in the tri-community area increased about 30% between 1980-1986, whereas population increased by an average of 20%. This reflects the impact of the seasonal and tourist population on local services.

## HOUSEHOLDS AND AVERAGE HOUSEHOLD SIZE

Until recently, the average household size in the United States has continued to shrink, due to an aging population, higher divorce rates, postponed marriages, and lower birth rates. In keeping with state and national trends, the average household size in the tri-community area declined, going from 2.98 in 1960 to 2.39 in 1980. The average household size in the City in 1980 was the lowest at 2.0, indicative of the high proportion of "empty nesters" and retirees.

The number of households is an excellent gauge of the demand for land and services. Smaller household size means a greater number of households. If the average household size in 1960 held true today, there would be about 300 fewer individual households in the area. As household size decreases, the additional households create further demand for land, housing, transportation, and public utilities. Although household size has declined substantially over the past few decades, national trends suggest that it will soon cease its decline. Nationwide the average household size has reached a plateau and state demographers predict that Michigan will follow suit.

## AGE DISTRIBUTION

Historical age cohort data is available on a regional basis and a comparison of age cohorts in the tri-community area between 1960 and 1980 reveals a large drop in the proportion of young children, with a corresponding increase in the childbearing cohort (20 to 30 year olds) and 45-54 year olds. The proportion of retirees to the total population, however, has remained

**TABLE 2.1**
**POPULATION (1950-1980)**

| COMMUNITY | 1950 | 1960 | 1970 | 1980 | CHANGE |
|---|---|---|---|---|---|
| Saugatuck | 770 | 927 | 1,022 | 1,079 | 40% |
| Saugatuck Township | 845 | 1,133 | 1,254 | 1,753 | 107% |
| Douglas | 447 | 602 | 813 | 948 | 112% |
| AREAWIDE | 2,062 | 2,662 | 3,089 | 3,780 | 83% |

Source: U.S. Census Bureau

**FIGURE 2.1**

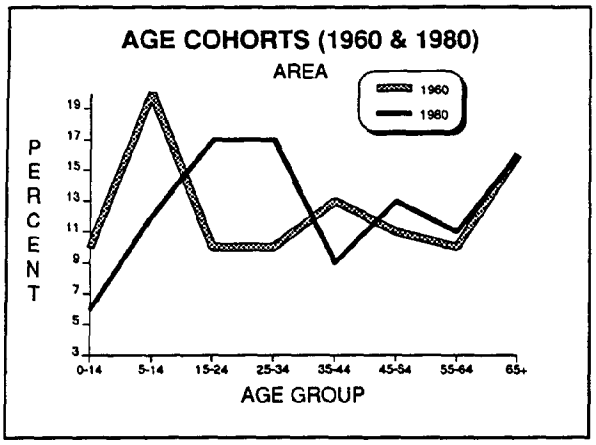



**FIGURE 2.2**

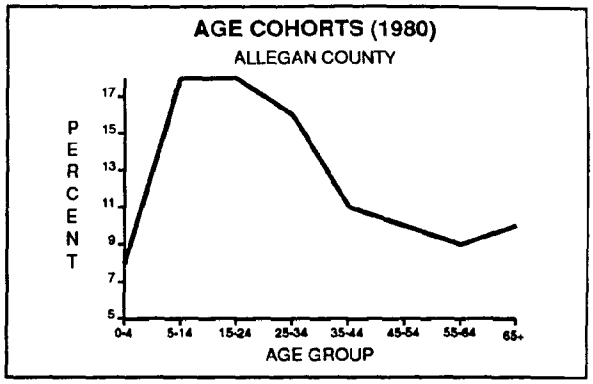
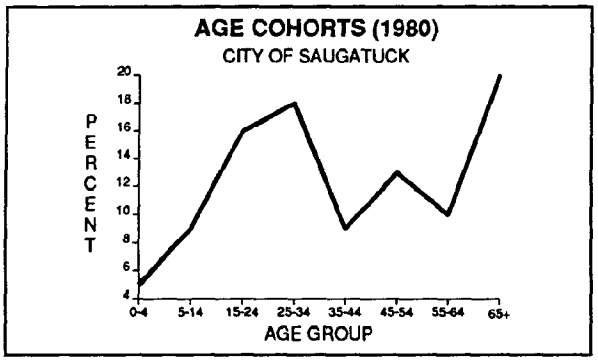



**FIGURE 2.3**




constant (see Figure 2.1). This is out of keeping with statewide trends and suggests that the area has experienced high in-migration of retirees through time. Retirees are attracted by the area's special resort quality, small town character, and scenic beauty.

Figures 2.2 and 2.3 depict the 1980 age cohort distribution in the City, in comparison to Allegan County. The City has a small cohort of infants and toddlers compared to even the County. But its most striking characteristic is its huge cohort of senior citizens relative to other age groups. The City also has a large cohort of 45-54 year olds. In regional terms, the City of Saugatuck comprises 37% of the area's senior population (despite its small size); Saugatuck Township comprises 39%; and the Village of Douglas, 24%.

## EDUCATION

Saugatuck has a well educated citizenry. An analysis of those aged 25 and older in 1980 reveals that 43.6% have completed 1 or more years of college. The City has the highest relative proportion of college graduates in the region (see Figure 2.4). Table 2.2 contains complete information on the educational status of persons 25 years old and over by jurisdiction.

## SCHOOL ENROLLMENTS

The Saugatuck Public School District serves the City of Saugatuck (see Map 2.1). School enrollment data for Saugatuck High School and Douglas Elementary, the two schools which comprise the Saugatuck Public School system, illustrate the impact of areawide demographic trends on the local school system. Between 1973 and 1989, enrollments in the

**TABLE 2.2**
**EDUCATIONAL STATUS**
**PERSONS 25 YEARS OLD AND OVER**

| | SAUGATUCK TOWNSHIP | SAUGATUCK CITY | DOUGLAS | AREA |
|---|---|---|---|---|
| Elementary | 185 | 57 | 73 | 315 |
| 1-3 years HS | 199 | 97 | 84 | 380 |
| 4 years HS | 373 | 276 | 213 | 862 |
| 1-3 years College | 157 | 137 | 123 | 417 |
| 4+ years College | 188 | 196 | 84 | 468 |

**FIGURE 2.4**

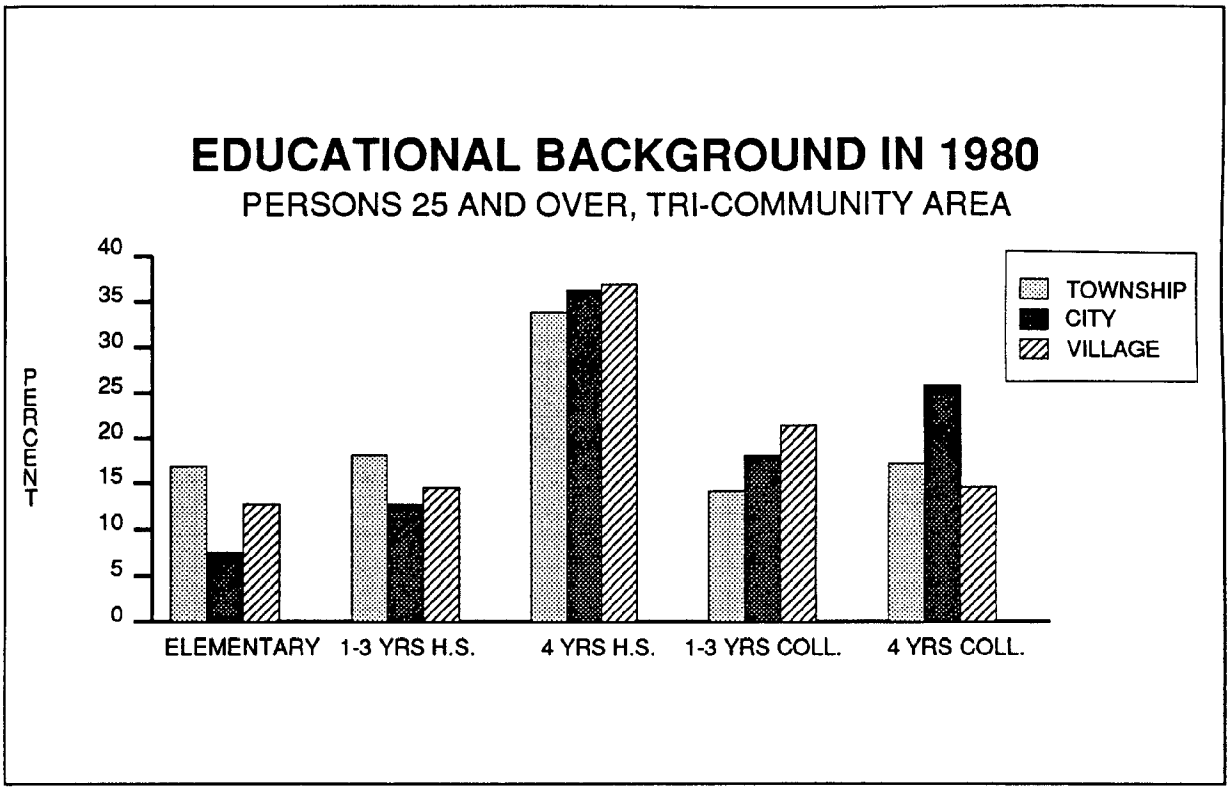
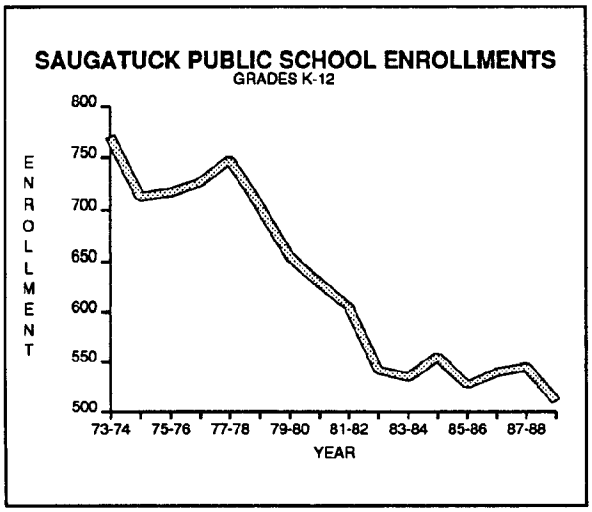



**FIGURE 2.5**



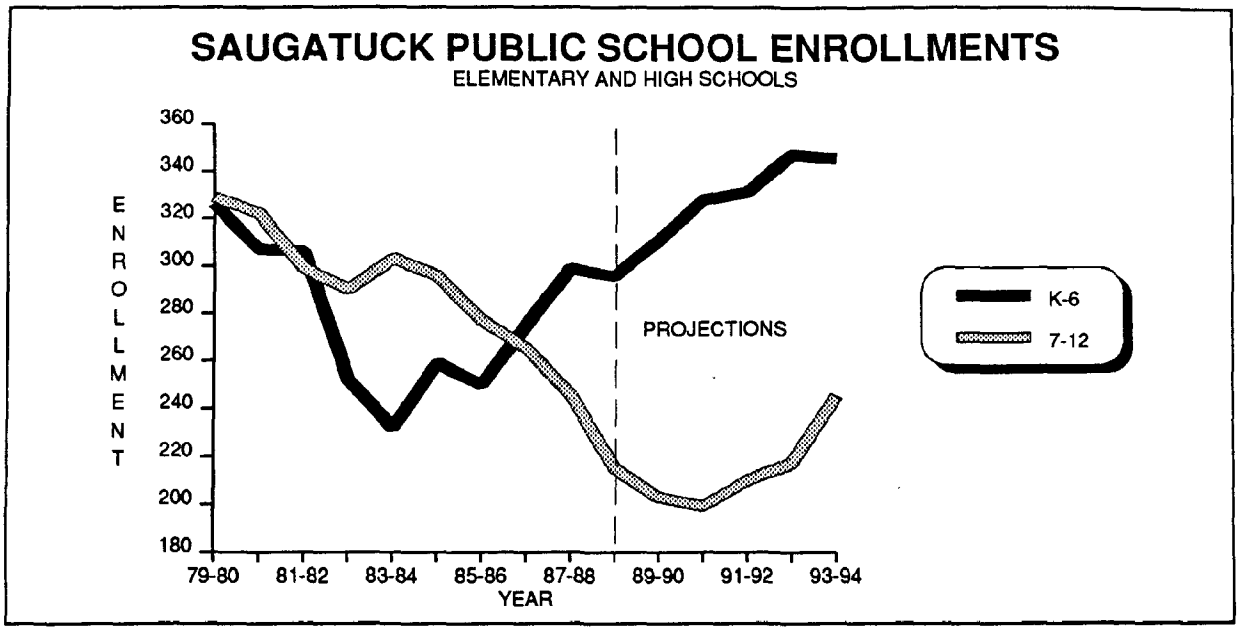

Saugatuck Public School system, grades K-12, have declined by 34% (see Figure 2.5). When divided into elementary and high school enrollments, however, the data reveal a 17% increase in elementary school enrollments since the 1983-84 school year, and a 28% decrease in high school enrollments over the same period (see Figure 2.6). School enrollment data appears in Table 2.3.

Future elementary and high school enrollments were projected by the Saugatuck Public School system. These projections show an upturn in high school enrollments in 1991 with a

**TABLE 2.3**
**SCHOOL ENROLLMENTS**
**SAUGATUCK PUBLIC SCHOOL DISTRICT**

| YEAR | K-6 | 7-12 | TOTAL |
|---|---|---|---|
| 79-80 | 326 | 329 | 655 |
| 80-81 | 307 | 322 | 629 |
| 81-82 | 306 | 299 | 605 |
| 82-83 | 252 | 290 | 542 |
| 83-84 | 232 | 303 | 535 |
| 84-85 | 259 | 296 | 555 |
| 85-86 | 250 | 277 | 527 |
| 86-87 | 275 | 265 | 540 |
| 87-88 | 299 | 246 | 545 |
| 88-89 | 296 | 215 | 511 |

FIGURE 2.6




continued climb in elementary school enrollments (see Figure 2.6). Total projected 1994 enrollments, however, are still 23% less than 1973-74 levels.

**FUTURE TRENDS**

If local demographic trends follow those projected for the county as they have in the past, then the overall proportion of retirees in the area will expand much faster than that of school age children. The Michigan Department of Management and Budget projects that Allegan County's school age population will grow only 3% by the year 2000, while senior citizens will increase by 30%. The area's small cohort of infants and children, large cohort of middle aged to elderly, and high rate of retiree in-migration suggest this will be equally true in the City.

These figures reveal the need to plan for the needs of an aging community, as well as initiate efforts to attract families with children into the area. The impact of demographic trends on the school system could be lessened by the large cohort of individuals in their childbearing years in the Township and the Village, but because couples are having fewer children, school enrollments will probably expand only slightly. The Saugatuck Public School system is not likely to meet its potential capacity for enrollments unless a sequence of events or actions attracts new families with young children into the area. Two key factors will be the availability of affordable housing and nearby employment opportunities. In the meantime, schools must use space and resources efficiently as they experience tighter budgets and small enrollments.

Many of the demographic characteristics shown here have been analyzed based on 1980 census information. These trends should be updated when the 1990 census information is available. Other useful demographic indicators are summarized in Appendix B.

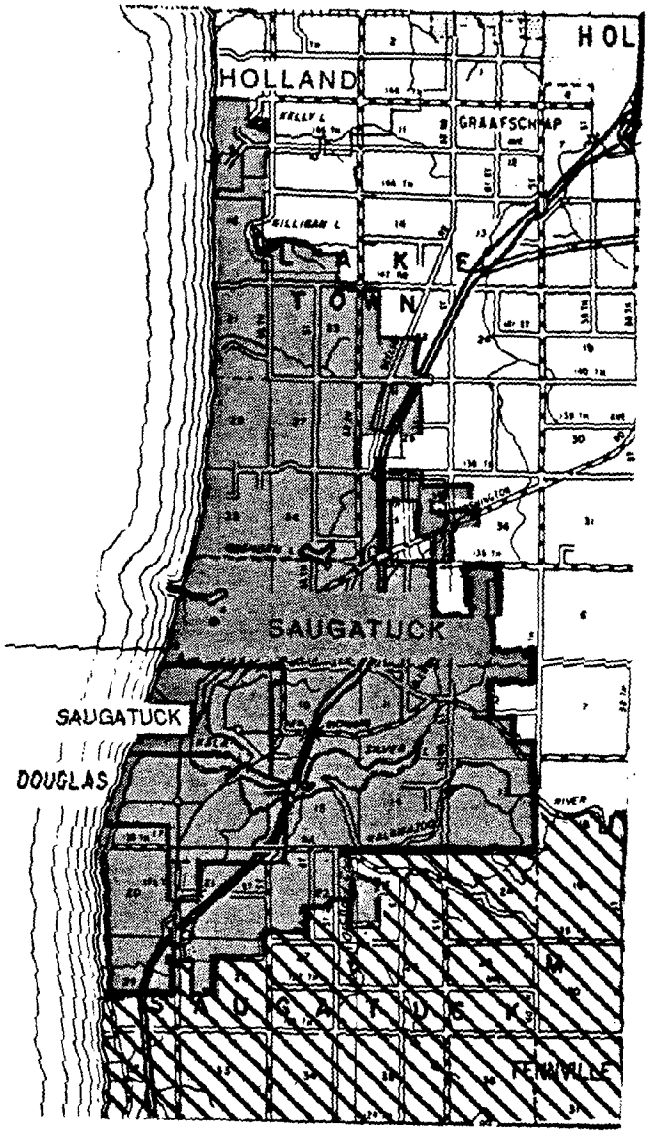
N

# MAP 2.1 PUBLIC SCHOOL DISTRICTS

- Saugatuck
- Fennville
- Hamilton

DATA SOURCE: Respective School Districts

Planning & Zoning Center Inc, Lansing, MI
August 1989



# Chapter 3

# THE ECONOMY

## ECONOMIC BASE

### *Tourism*

Tourism fuels the economy of the tri-community area, with associated boating, restaurant, lodging, and strong retail sectors. Of the three jurisdictions, the City of Saugatuck relies most heavily on tourism. The Village of Douglas has boating and lodging facilities which capitalize on tourism, but its commercial sector is primarily oriented towards local clientele. The Township has a small commercial sector which compliments that of the Village, but it is primarily seasonal residential and rural, with a large agricultural area to the south. Although the City of Saugatuck is seen as the resort center of the area, the entire area benefits from and contributes to the tourist trade.

The area's resort flair is defined by: historic buildings– including quaint bed and breakfast inns; the many festivals; outstanding boating; Oval Beach; downtown Saugatuck; sand dunes; large wetlands abounding with wildlife; orchards and specialty farms; and a scenic location on Lake Michigan encompassing Silver, Goshorn, Kalamazoo and Oxbow lakes, and the Kalamazoo River. The City also has a reputation as a cultural center which serves as an artists' retreat. The Ox Bow Art Workshop and the Red Barn theater add to the area's cultural ambience.

Although it is located in Laketown Township, the Saugatuck Dunes State Park serves as another tourist attraction to the tri-community area. The Park offers no camping and thus many visitors stay in the tri-community area. Visitor counts from the Michigan Department of Resources, Parks Division, reveal that the park has increased in popularity since the 70's. Visitor counts performed by the Parks Division show that 47,463 people visited Saugatuck Dunes State Park in FY 1988 a 300% increase in park attendance since 1979, when it attracted only 11,714 visitors.

**TABLE 3.1**
**IMPACT OF TRAVEL ON ALLEGAN COUNTY, 1986**

| | TOT. TRAVEL EXPENDITURES | TRAVEL GENER. PAYROLL | TRAVEL GENER. EMPLOYMENT | STATE TAX RECEIPTS | LOCAL TAX RECEIPTS |
|---|---|---|---|---|---|
| $/Jobs | $42,413,000 | $7,689,000 | 869 jobs | $2,191,000 | $363,000 |
| % of State Total | .56% | .49% | .62% | .71% | .49% |
| % change 1983-86 | 29.52% | 37.87% | 18.39% | 27.98% | 32.48% |

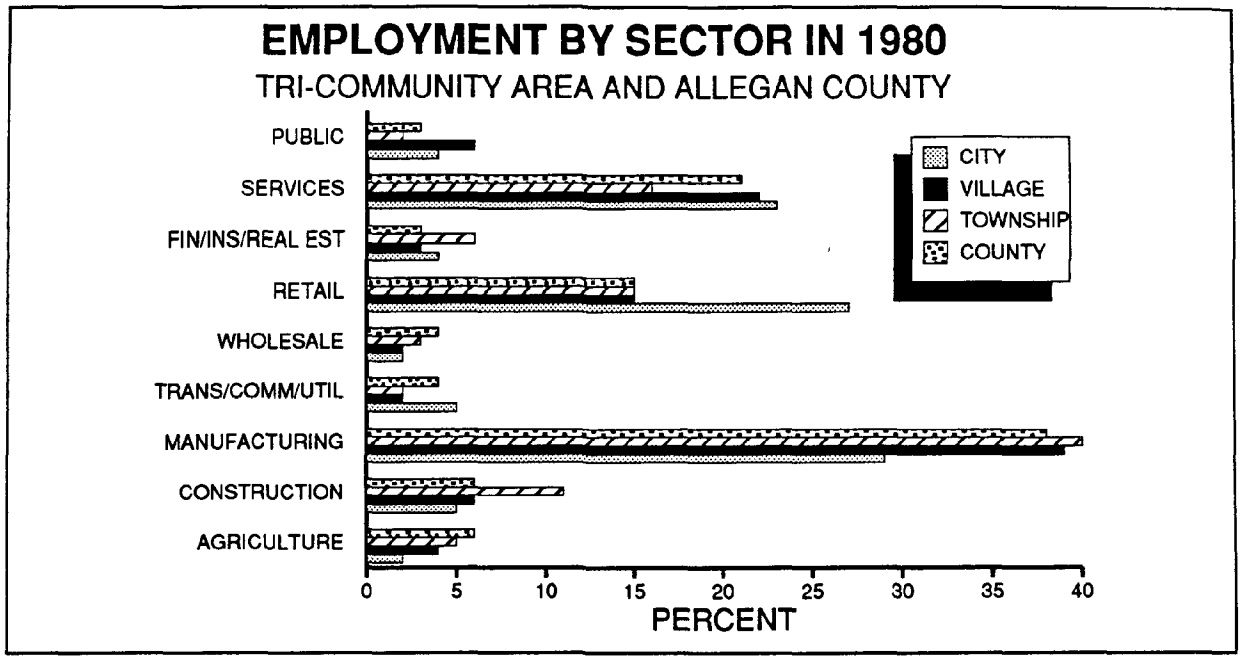
Source: U.S. Travel Data Center, **"The Economic Impact of Travel on Michigan Counties."**

**TABLE 3.2**
**MAJOR EMPLOYERS**

| | PRODUCT/SERVICE | EMPLOYEES |
|---|---|---|
| Hansen Machine | Metal Stampings | 43 |
| Haworth | Office Furniture | 238 |
| Harbors Health Facility | Nursing Home | 78 |
| Enterprise Hinge | Manufacturing | 12 |
| Douglas Marine | Marina | 21 |
| Tafts Supermarket | Supermarket | 32 |
| Paramount Tool Co., Inc. | Machinery | 24 |
| Rich Products | Pies | 85 |

Source: Allegan County Promotional Alliance

FIGURE 3.1




rism generate in the tri-community area? Although current travel and tourism statistics are not available for the tri-community area, studies conducted for Allegan County reveal the tremendous impact of travel and tourism on local economies in the County. This is especially true for Saugatuck-Douglas– the major resort center in the County. A study prepared for the Michigan Travel Bureau by the U.S. Travel Data Center in 1986 found that travellers spent $42.4 million in Allegan County in 1986, generating $7.7 million for payroll, 869 jobs, $2.1 million in state tax receipts, and $363,000 in local tax receipts. This ranks Allegan County 33rd out of Michigan's 83 counties in travel and tourism revenues. Selected data from this study is reproduced in Table 3.1.

### *Manufacturing*

Manufacturing is central to the year-round stability of the area's economy. Although there are few manufacturing firms, they provide a high

**TABLE 3.3**
**EMPLOYMENT BY INDUSTRY - 1980**

| | CITY | VILLAGE | TOWNSHIP | AREA | COUNTY |
|---|---|---|---|---|---|
| TOTAL | 547 | 433 | 689 | 1,669 | 34,025 |
| Agriculture | 9 | 16 | 37 | 62 | 2,041 |
| Construction | 30 | 27 | 75 | 132 | 2,009 |
| Manufacturing | 156 | 169 | 274 | 599 | 13,033 |
| TCU * | 25 | 10 | 17 | 52 | 1,407 |
| Wholesale Trade | 13 | 7 | 20 | 40 | 1,398 |
| Retail Trade | 146 | 67 | 106 | 319 | 5,017 |
| FIRE ** | 21 | 15 | 39 | 75 | 1,126 |
| Services | 125 | 96 | 107 | 328 | 7,105 |
| Public Admin. | 22 | 26 | 14 | 62 | 889 |

* Transportation, Communication, Utilities
** Finance, Insurance, Real Estate

Source: 1980 U.S. Census of Population, General Social and Economic Characteristics.

**TABLE 3.4**
**EMPLOYMENT BY OCCUPATION - 1980**

| | CITY | VILLAGE | TOWNSHIP | AREA | COUNTY |
|---|---|---|---|---|---|
| TOTAL | 547 | 433 | 685 | 1,665 | 34,025 |
| Manag. & Admin | 77 | 34 | 43 | 154 | 2,315 |
| Prof. Technical | 87 | 62 | 74 | 223 | 3,319 |
| Sales | 63 | 24 | 83 | 170 | 2,696 |
| Clerical | 70 | 45 | 74 | 189 | 4,189 |
| Service | 72 | 73 | 73 | 231 | 4,300 |
| Farm, Fishing | 13 | 13 | 43 | 126 | 1,885 |
| Crafts & Repair | 66 | 70 | 144 | 210 | 5,447 |
| Machine Operators | 60 | 90 | 120 | 270 | 6,129 |
| Laborers, Mat. Moving | 39 | 22 | 31 | 92 | 3,745 |

Source: 1980 U.S. Census of Population, General Social and Economic Characteristics.

**TABLE 3.5**
**AVERAGE ANNUAL UNEMPLOYMENT RATE**

| | Tri-Community | County | State |
|---|---|---|---|
| 1982 | 15.2 | 14.8 | 15.5 |
| 1983 | 14.7 | 14.3 | 14.2 |
| 1984 | 10.8 | 10.5 | 11.2 |
| 1985 | 11.3 | 10.9 | 9.9 |
| 1986 | 6.5 | 7.3 | 8.8 |
| 1987 | 5.8 | 5.6 | 8.2 |
| 1988 | 5.2 | 5.1 | 7.6 |

Source: MESC, Bureau of Research & Statistics, Field Analysis Unit

percentage of area jobs. Major area employers are listed in Table 3.2.

**EMPLOYMENT**

Figure 3.1 illustrates 1980 employment by economic sector in each community as compared to the County. Manufacturing employs the most people in each of the three communities. Yet employment in other sectors varies. Twenty-nine percent of Saugatuck's labor force are employed in manufacturing, but retail employment is also very high at 27%. This reveals the dominant nature of the City's retail sector as compared to that of the region (15%) and the County (15%). The area's service sector employs 23% of Saugatuck's labor force. Five percent are employed in transportation, communication, or utilities, and another 5% are employed in construction. Data on employment by industry appears in Table 3.3.

Employment by occupation in 1980 is shown in Table 3.4. The highest proportion of workers in Saugatuck are professional/technical workers, followed by managerial and administrative, service, and clerical workers.

***Average Annual Employment and Unemployment***

Unemployment has declined dramatically with Michigan's economic growth of the late 80's. Table 3.5 reveals average annual unemployment rates in the area since the last statewide recession. (Employment data is not available for individual communities in the tri-community area. The Michigan Employment Security Commission aggregates it for Saugatuck Township, the Village of Douglas, and the City of Saugatuck.) The tri-community area has a slightly higher rate of unemployment than Allegan County, although since 1986 the unemployment rate has dipped below that of the state revealing local or regional economic growth.

Average annual employment in the tri-community area bottomed out in 1986. This reflected the loss of American Twisting, which employed about 20 people, and the burning of Broward Marine (about 100 employees) and Brighton Metal (about 10 employees). Yet in 1987, areawide employment jumped dramatically. During that year Broward Marine reopened its doors; Rich Products, Harbor Health Facilities, Paramount Tools and other area businesses increased employment; a number of small businesses and two restaurants opened; and perhaps most significantly, Haworth Corporation expanded adding two new departments. Contributing to this was the state and regional

FIGURE 3.2

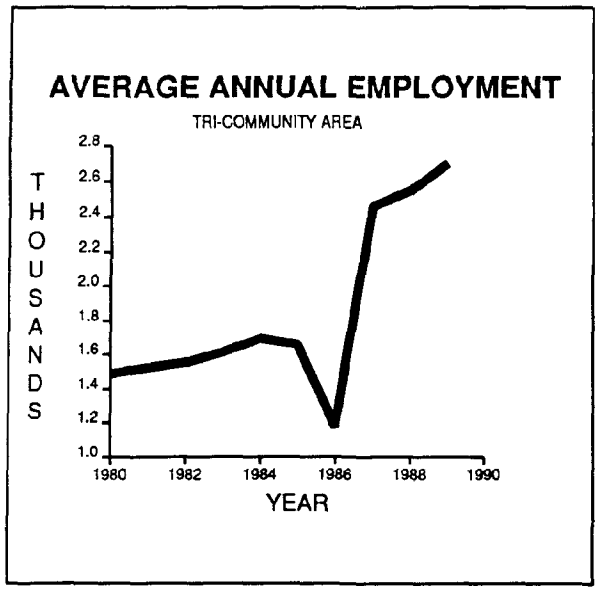
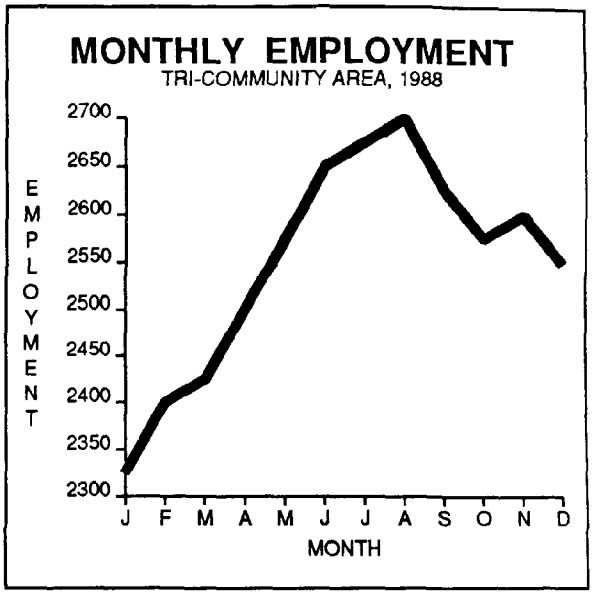



FIGURE 3.3




economic boom, and corresponding increases in construction and spending. Figure 3.2 illustrates this trend.

***Seasonal Employment***

Local employment increases each summer as tourists flood into the tri-community area. Figure 3.3 reveals the impact of tourism on employment in the tri-community area during the summer months.

The high number of jobs created during the summer months are primarily unskilled jobs in the service/retail sector, especially eating and drinking establishments and various other recreation-oriented uses. Figure 3.4 reveals the explosion in summer employment for tourism-related industries in Allegan County. This increase creates a high demand for teenage employees. Tri-community area businesses note the difficulty of filling these jobs, and the need to import seasonal labor. This is yet another impact of the demographic make-up of the area (i.e. the low number of teenage children). New industry and affordable housing in the area could attract families with children who, in turn,

FIGURE 3.4

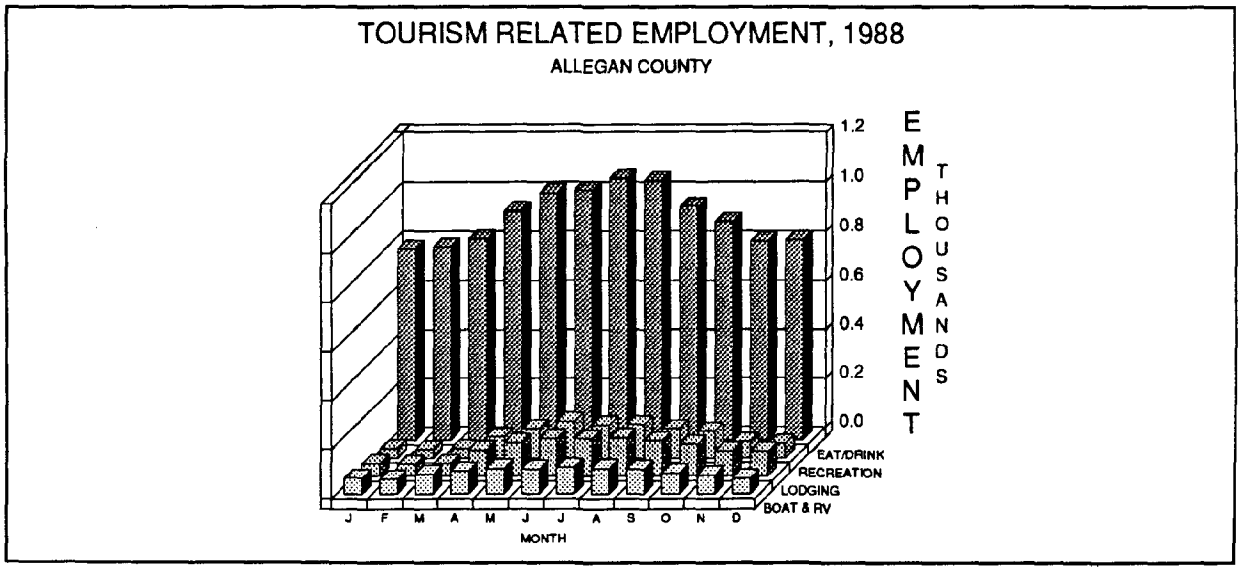
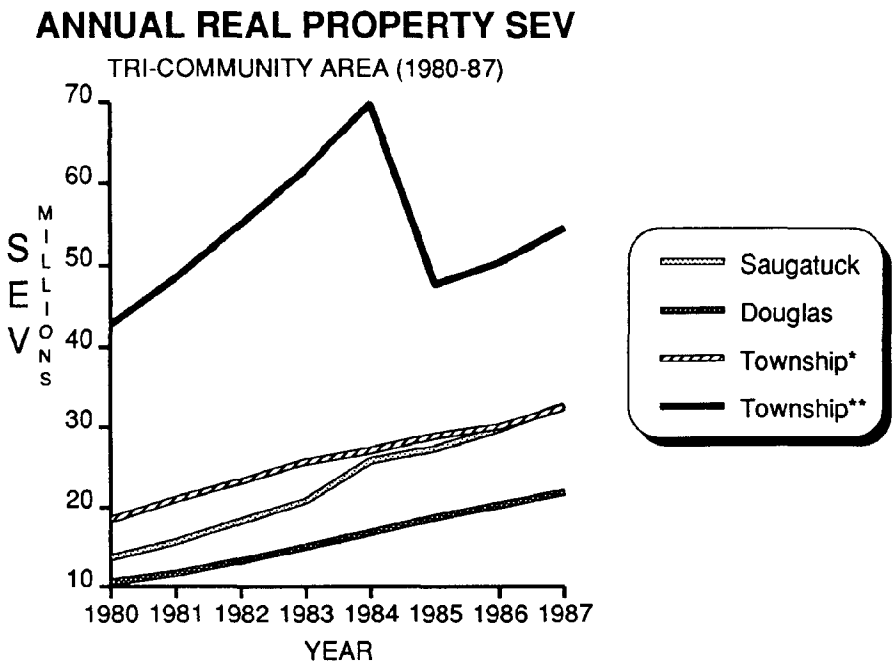


**FIGURE 3.6**




* not including Village(s)

** including Douglas through 1987 and Saugatuck through 1984.

could staff area businesses during peak summer months.

**TAX BASE**

Residential uses make up the bulk of the area's tax base (65%), representing an SEV of $21,167,486. Yet commercial uses comprise *one-third* of the City's real property SEV at $10,677,205. Industrial uses comprise 2% of the tax base, with an SEV of $1,126,200 (See Figure 3.5).

**FIGURE 3.5**

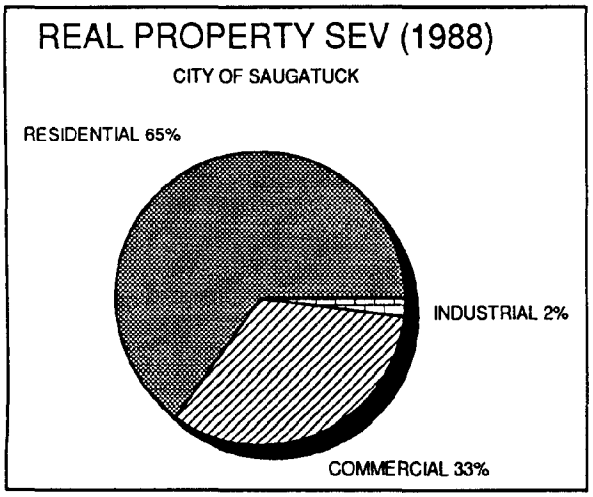



Figure 3.6 illustrates changes in annual real property SEV between 1980 and 1987 for the City of Saugatuck. Saugatuck was also included in the Township's tax base prior to 1985, when it became a city. This explains the sharp drop in SEV for the Township between 1984 and 1985. SEV's are also shown for the Township minus the Village(s). The figure shows a jump in the City's tax base between 1983-84 following incorporation, with a steady increase since then. More complete information on annual SEV's and 1988 breakdowns can be found in Appendix B.

**INCOME**

According to 1985 census estimates, the City of Saugatuck has the second highest per capita income in the county—although the City has given up first place to Laketown Township since 1979. Table 3.6 shows this comparison. (Per capita income in 1979 was $7,688 for the state and $6,744 for the county; in 1985 it was $10,902 for the state and $9,346 for the county.)

**FIGURE 3.7**

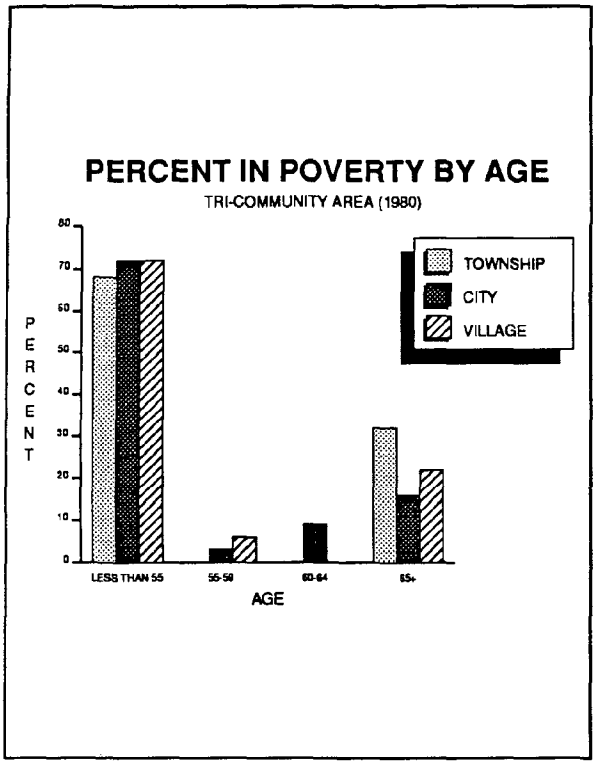



Table 3.7 reveals selected income and poverty characteristics by jurisdiction in the tri-community area. Although the per capita income in the area has been consistently higher than that of the county, the median household income is lower. The median household income is the point at which 50% of the households earn more and 50% earn less. This statistic is more representative of local trends as it is less easily distorted by a few high income wage earners.

Poverty data correspond with median household income. As median income goes up, the proportion in poverty goes down. Although the City has a higher proportion of persons in poverty than the Township, it also has a higher proportion of individuals with earnings 200% or more above the poverty level.

Figure 3.7 depicts the proportion of persons in poverty by age. (The poverty level used by the 1980 census in recording this data was an annual income of $3,778 for those under 65, and $3,689 for those 65 and over.) While some of the City's poor are elderly, the largest number are under 55.

**TABLE 3.6**
**PER CAPITA INCOME ($), ALLEGAN COUNTY (TOP TEN)**

| | 1979 | | 1985 |
|---|---|---|---|
| Saugatuck | 9031 | Laketown Township | 13,013 |
| Laketown Township | 8332 | Saugatuck | 12,631 |
| Holland | 8125 | Holland | 11,608 |
| Gunplain Township | 8074 | Gunplain Township | 10,947 |
| Otsego Township | 7437 | Otsego Township | 10,239 |
| Plainwell | 7396 | Saugatuck Township | 10,228 |
| Saugatuck Township | 7286 | Douglas | 10,150 |
| Allegan Township | 7170 | Fillmore Township | 10,120 |
| Leighton Township | 7051 | Plainwell | 9,886 |
| Fillmore Township | 7015 | Leighton Township | 9,539 |

Source: 1985 Per Capital Income Estimates, U.S. Census Bureau

**TABLE 3.7**
**INCOME & POVERTY CHARACTERISTICS TRI-COMMUNITY AREA (1980)**

| | TOWNSHIP | CITY | VILLAGE | COUNTY |
|---|---|---|---|---|
| Median HH income | 16,412 | 15,182 | 14,963 | 17,906 |
| % in poverty | 7.1% | 8.6% | 11.3% | 8.0% |
| Income 200% of poverty level & above | 74% | 75% | 73% | 71% |

Source: 1980 Census of Population

# Chapter 4

# NATURAL RESOURCES AND THE ENVIRONMENT

## CLIMATE

Weather conditions affect Saugatuck's economic base. Variations in average conditions, especially during the summer months, can cause fluctuations in tourism and outdoor recreation activities, upon which the local economy is dependent. Prevailing winds determine lakeshore and sand dune erosion patterns, which impose limitations on development along the Lake Michigan shore.

Below, in Table 4.1, is relevant climatic information for the area. These conditions generally do not pose limitations on the area's growth except along the Lake Michigan shore, where natural forces can cause rapid and extensive erosion of beaches and sand dunes.

## GEOLOGY

Saugatuck is located on the southwestern flank of the Michigan Basin, which is a bedrock feature centered in the middle of the Lower Peninsula. The sandstone and shale bedrock is overlain by glacial deposits from 50 to 400 feet thick. There are no outcroppings of the bedrock and the proximity of the bedrock to the surface of the ground does not impose limitations for normal excavating or construction. Glacial deposits consist primarily of sandy lakebed deposits east of the Lake Border Moraine, a major physiographic formation which is adjacent to Lake Michigan.

## TOPOGRAPHY

The portion of the City on the east side of the Kalamazoo River (and Lake) has an escarpment, from 20 to 40 feet high, separating two relatively flat areas. The waterfront area, located below the escarpment, extends from the east bank of the river two to four blocks inland. The "hill" area above the escarpment extends further inland past the City limits and into Saugatuck Township. The area on the west side of the Kalamazoo River consists entirely of sand dunes between the river and Lake Michigan, with a narrow strip of flat land along the waterfront. The highest point in this area is Mt. Baldhead, which rises 310 feet above Lake Michigan.

Steep slopes present impressive scenery and pose increased maintenance and construction costs as well as safety risks. This is especially true with unstable landforms such as sand dunes. Generally, slopes exceeding 7% should not be developed intensively, while slopes of more than 12% should not be developed at all because of erosion and storm water runoff problems. On the topographic map (Map 4.1), steep slope areas are indicated by three or more contour lines in close proximity.

## DRAINAGE

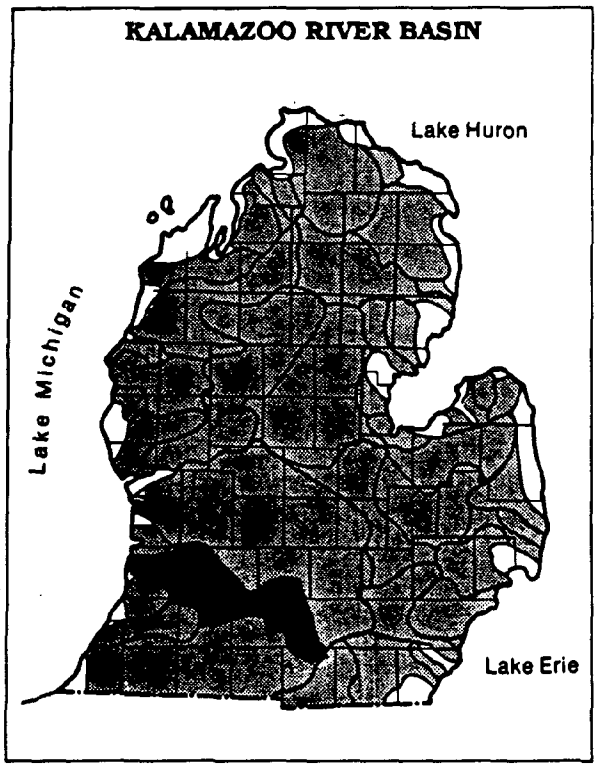
Saugatuck lies within the Kalamazoo River Basin, which begins near Jackson and extends westward into Saugatuck Township, Douglas

**TABLE 4.1**
**SUMMARY OF RELEVANT CLIMATE CONDITIONS**

| CLIMATE VARIABLES | AVERAGE CONDITION | EXTREME CONDITION |
|---|---|---|
| Coldest Months (January-February) | 23.3° F - 25.1° F | -11° F - -35° F |
| Hotest Month (July) | 71.5° F | 96° F - 106° F |
| Annual Average Temperature | 48.3° F | |
| Average Rainfall | 35.7 inches | |
| Average Growing Season | 153 days | |
| Average Annual Snowfall | 79.7 inches | |
| Elevation Above Sealevel | 590 feet | |
| Prevailing Winds | Westerly | |

Source: USDA Soil Survey, Allegan County

FIGURE 4.1




and Saugatuck (see Figure 4.1). Most of the City drains into the Kalamazoo River. The remainder, consisting of the west slope of the sand dunes, drains directly into Lake Michigan. A small area is drained by Goshorn Creek, a short-run stream that flows into the Kalamazoo River. All areas of the City drain fairly well due to adequate slopes and highly permeable soils. An exception to this is the wetland area near Goshorn Creek. Watercourses in Saugatuck are shown in Map 4.2.

**FLOODPLAINS**

Areas adjacent to creeks, streams and rivers are susceptible to periodic flooding that can cause extensive damage to buildings and can pose a substantial threat to public health and safety. The U.S. Army Corps of Engineers has mapped the boundaries of the 100 year floodplain in Saugatuck. Those boundaries are denoted by the shaded areas on Map 4.3 and is the area that would be inundated during an Intermediate Regional Flood. The Federal Flood Insurance Program has established guidelines for use and development of floodplain areas. Those regulations indicate that development in floodplains should be restricted to open space, recreational or agricultural uses. Installation of public utilities and permanent construction for residential, commercial or industrial uses should not occur in floodplain areas.

Several parts of the City are built in the floodplain. Among these are the blocks between Water Street and the Kalamazoo River, a narrow strip along the west bank of the river and an area near the Blue Star Highway bridge. A substantial portion of the undeveloped land in the northeastern corner of the City also lies in the floodplain.

**WETLANDS**

There are several wetlands within the City of Saugatuck. Most are contiguous to or hydrologically connected to Lake Michigan, the Kalamazoo River or Goshorn Creek. Wetlands are valuable in storing floodwaters and recharging groundwater. They are also habitat for a wide variety of plants and animals.

Because wetlands are a valuable natural resource, they are protected by Public Act 203 of 1979. PA 203 requires that permits be acquired from the Michigan Department of Natural Resources (DNR) prior to altering or filling a regulated wetland. The Wetland Protection Act defines wetlands as " *land characterized by the presence of water at a frequency and duration sufficient to support and that under normal circumstances does support wetland vegetation or aquatic life and is commonly referred to as a bog, swamp, or marsh and is contiguous to the Great Lakes, an inland lake or pond, or a river or stream.*"

Regulated wetlands include all wetland areas greater than 5 acres or those contiguous to waterways. Wetlands which are hydrologically connected (i.e. via groundwater) to waterways are also regulated. Activities exempted from the provisions of the Act include farming, grazing of animals, farm or stock ponds, lumbering, maintenance of existing nonconforming structures, maintenance or improvement of existing roads and streets within existing rights-of-way, maintenance or operation of pipelines less than six inches in diameter, and maintenance or operation of electric transmission and distribution power lines.

Permits will not be issued if a feasible or prudent alternative to developing a wetland exists. An inventory of wetlands based on the DNR's land use\cover inventory are illustrated on Map 4.4. Table 4.2 shows the land use\cover codes pertaining to regulated wetlands in the

area. Herbaceous and shrub rangelands may not actually meet the statutory definition of wetland, so on site inspections will be necessary to establish whether a wetland indeed exists in such areas.

## SOILS

A modern soil survey was completed for Allegan County by the USDA Soil Conservation Service in March, 1987. The soil types present in the City of Saugatuck are shown on the map and table in Appendix D. Each soil type has unique characteristics which pose limitations for particular uses. The most important characteristics making the soil suitable or unsuitable for development are limitations on dwellings with basements, limitations on septic tank absorption fields, and suitability for farming. Soil limitations have been classified into three categories, which are described below.

- Slight: Relatively free of limitations or limitations are easily overcome.
- Moderate: Limitations need to be considered, but can be overcome with good management and careful design.
- Severe: Limitations are severe enough to make use questionable.

Large areas of soils in Saugatuck have severe limitations on residential and urban development. The degree of soil limitations reflects the hardship and expense of developing the land.

**TABLE 4.2**
**LAND COVER CODES FOR PROTECTED WETLANDS IN TRI-COMMUNITY AREA**

| CODE | DESCRIPTION |
|---|---|
| 31 | Herbaceous Rangeland* |
| 32 | Shrub Rangeland* |
| 412 | Upland Hardwoods |
| 414 | Lowland Hardwoods |
| 421 | Upland Conifers |
| 429 | Lowland Conifers |
| 611 | Wooded Swanps |
| 612 | Shrub Swamps |
| 621 | Marshland Meadow |
| 622 | Mud Flats |

Source: Michigan DNR Land Cover/Use Classification System

* Wetlands are sometimes, but not always associated with these land cover types.

### *Basement Limitations*

Limitations for dwellings with basements are shown on Map 4.5. Some soils impose severe limitations on basements because of excessive wetness, low strength, excessive slope, or shrink-swell potential. These areas are found primarily in the west side of the City in the sand dunes, which have excessive slopes. The escarpment area, with excessive slope, the large area of open space near the high school, with wetness, and an area north of Allegan and Maple Streets, with wetness and excessive shrink-swell potential, are other parts of the City with severe limitations.

### *Septic Limitations*

Most of the soils in the City of Saugatuck impose severe limitations on septic tank absorption fields because of excessive slope and rapid permeability. The remainder are sand beaches and excavated areas, which are not rated for septic limitations. The permeability of soils in the City ranges from very poorly drained to excessively drained, with most being excessively drained. Map 4.6 shows the septic limitations for the City. This map suggests the need for municipal sewers to accommodate new development in those areas not presently served (east side).

The degree of soil limitations reflects the hardship and expense of developing that land for a particular use. Those soils classified as "severe" have varying degrees of development potential based on the nature of the limitation. Map 4.7 provides this more detailed analysis of severe limitations on septic tank absorption fields. The "severe" soils have been categorized as follows:

A. Sandy, moderate to rapid permeability
B. Rapid permeability, wetness and high water table
C. Wet, ponding, heavier (clay) soils, slow permeability
D. Very wet soils, organics, wetlands, floodplains, unable to support septic fields.

Soils in categories B and D are not able to support septic fields because of extreme wetness. Soils in category A are classified as "severe" by the Soil Conservation Service, however the Allegan County Health Department considers them to have only moderate limitations for septic systems. They can be made suitable for development by increasing the distance between

the septic system and the water table. Soils with moderate and slight limitations also appear on Map 4.7. Soils that are most suitable for development, with respect to basement and septic limitations, are shown on Map 4.8.

### *Standards for Septic Systems*

The Allegan County Health Department has established certain standards for septic systems. These standards apply somewhat different site characteristics when determining the degree of limitations for septic systems, compared to the Soil Conservation Service approach, which focuses on soil types and slope. Below is a review of these standards by development type.

**Single Family Residential**

Before a permit is considered, there must be at least four feet of dry soils between the bottom of the septic system and the water table. In addition, there must be one foot between the existing ground surface and the seasonal water table, and two feet between the existing ground surface and the clay. Special permits will be considered only if the site size is at least two acres and the septic system is put on top of four feet of sand. Residential sites that fail to meet those requirements will not be issued septic system permits.

**All Other Residential, Plus Commercial**

These fall under State guidelines of at least two feet between the existing ground surface and the water table and four feet of dry soil between the bottom of the septic system and the water table. No special permits are issued for these uses.

### *Hydric Soils*

Hydric soils are another limitation on development. They are very poorly drained, saturate easily and retain large quantities of water. Map 4.9 shows where these soils are. In Saugatuck, hydric soils are found near watercourses and correspond to present or former wetlands. There are only two areas of these soils in the City; along Goshorn Creek and north of Campbell Road between River Road and Manchester Lane. Residential, commercial and industrial development in areas containing hydric soils should be discouraged.

## GROUNDWATER

Groundwater is an unseen resource and is therefore particularly vulnerable to mismanagement and contamination. Prior to the 1980's, little was known about groundwater contamination in Michigan, and some startling facts have recently been revealed.

The leading causes of groundwater contamination in Michigan are from small businesses and agriculture. More than 50% of all contamination comes from small businesses that use organic solvents, such as benzene, toluene and xylene, and heavy metals, such as lead, chromium, and zinc. The origin of the problem stems from careless storage and handling of hazardous substances. On paved surfaces where hazardous materials are stored, substances can seep through or flow off the edge of the pavement. Materials can get into floor drains which discharge to soils, wetlands or watercourses.

At present, groundwater is the only tapped source of potable water for the City of Saugatuck, the Village of Douglas and Saugatuck Township. The glacial drift aquifers in the area are especially vulnerable to contamination because of rapid permeability and high water table. In a local example, Douglas' municipal water supply has been contaminated by volatile organic compounds (VOC's), supposedly by an industrial site within the Village. Some areas without municipal sewer and water service are in danger of groundwater contamination because of septic systems, intensive development and a high water table.

Protection of groundwater resources is problematic because of difficulties in locating aquifers. Well depth records indicate the relative location of groundwater at particular points. According to well logs from Michigan Groundwater Survey (MGS) data, well depths near the City of Saugatuck range from 29 ft. to 215 ft., with the municipal well being at 200 ft. Soils most vulnerable to groundwater contamination are found on Map 4.10.

## SPECIAL FEATURES

### *Lake Michigan Shoreline and Beaches*

The Lake Michigan shoreline in Saugatuck is very susceptible to wind and water erosion during storms and high lake levels due to resultant wave action. The current closing of Lakeshore Drive in Douglas and Saugatuck Township due to bluff erosion is a graphic example of the power of wave action. These natural

processes pose hazards to public health and safety. The Shorelands Protection Act of 1970 was enacted to identify areas where hazards exist by designating them and by passage of measures to minimize losses resulting from natural forces of erosion. High risk erosion areas are defined as areas of the shore along which bluffline recession has proceeded at a long term average of 1 foot or more per year. The entire Lake Michigan shoreline in Saugatuck has been designated as a high risk erosion area, with some portions eroding at a rate of 1.7 feet per year. Within the designated area, shown on Map 4.11, alteration of the soil, natural drainage, vegetation, fish or wildlife habitat, and any placement of permanent structures, requires a DNR review and permit, unless the local unit of government has an approved high risk erosion area ordinance; Saugatuck does not.

### *Sand Dunes*

The sand dunes along Lake Michigan on the west side of the City represent a unique and fragile physiographic formation and ecosystem that is very susceptible to wind and water erosion, and destruction due to careless use or development. The dune area which is in the City of Saugatuck and Saugatuck Township has been identified by the Michigan Department of Natural Resources (DNR) as a critical dune area, subject to protection under the Michigan Sand Dune Protection and Management Act, PA 222 of 1976. The designated critical dune area is shown in the shaded region of Map 4.12.

Recent legislation (PA 147 & 148 of 1989) provides for additional protection of critical dune areas. Under these Acts, all proposed commercial or industrial uses, multifamily uses of more than 3 acres, and any use which the local planning commission or the DNR determines would damage or destroy features of archaeological or historical significance must be approved by the State. Single family residential development is to be regulated at the local level. The law prohibits surface drilling operations that explore for or produce hydrocarbons or natural brine as well as mining activities (except in the case of permit renewals). The legislation also imposes certain standards on construction and site design in critical dune areas.

Site design and construction standards for sand dunes should be enhanced at the local level to prevent further deterioration of this fragile environment. Areas needing special attention in such standards are vegetation, drainage and erosion protection.

### WOODLANDS

The wooded areas of the Saugatuck are primarily hardwoods. Large areas of upland hardwoods are found in the sand dune area between the Kalamazoo River and Lake Michigan, and in the undeveloped area in the eastern part of the City. Woodlands in the City are shown on Map 4.13. Mature trees represent a valuable resource in maintaining the aesthetic character of the area, not to mention their overall importance to wildlife and the natural environment. In particular, the wooded sand dunes along the Kalamazoo River and Lake Michigan should be managed to insure their long term existence.

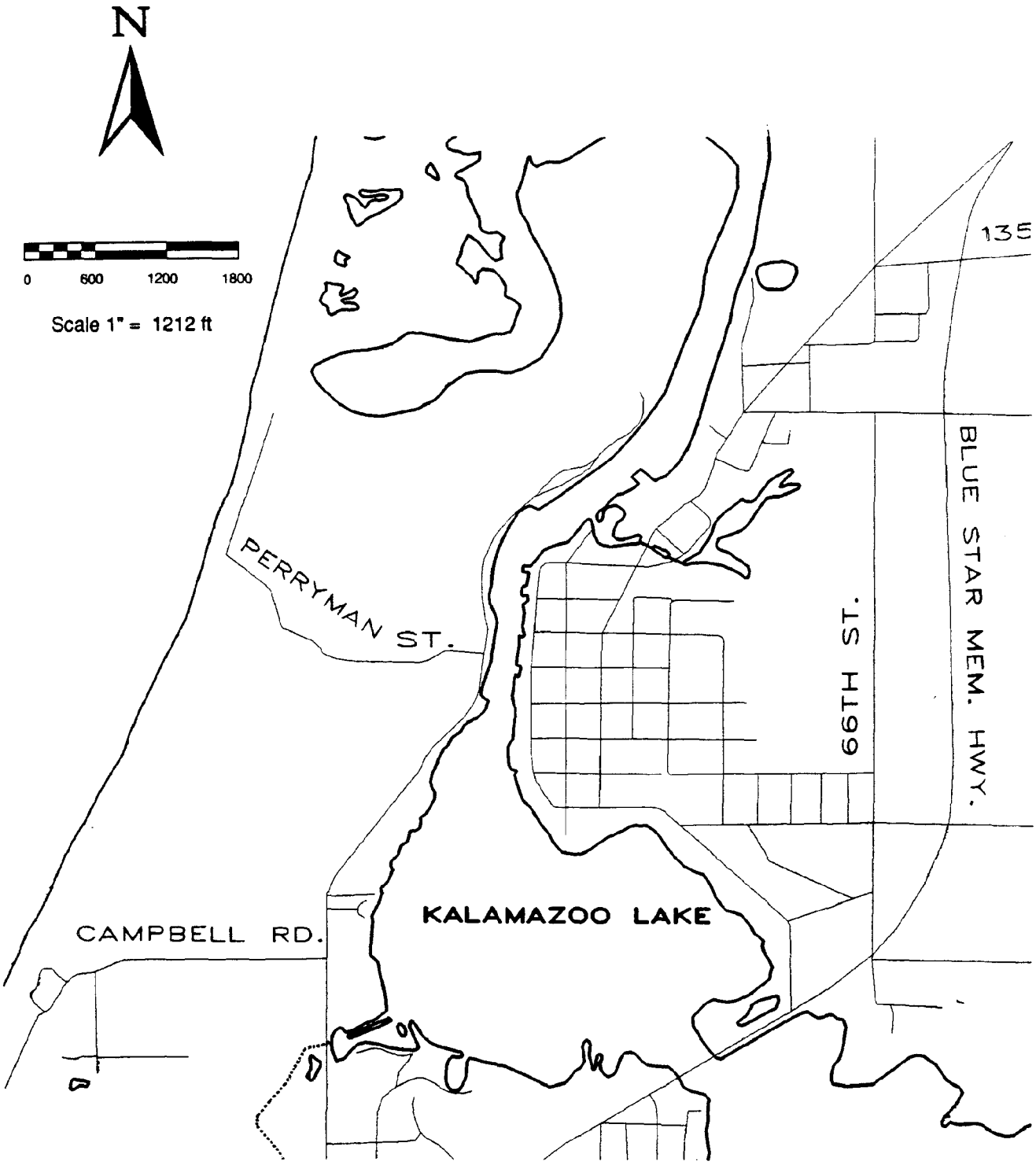
# MAP 4.1 TOPOGRAPHY

Saugatuck

Contour interval is ten feet

Darker lines are 50 foot contours

August 1989 DATA SOURCE: USGS Quadrangle Maps Planning & Zoning Center Inc, Lansing, MI



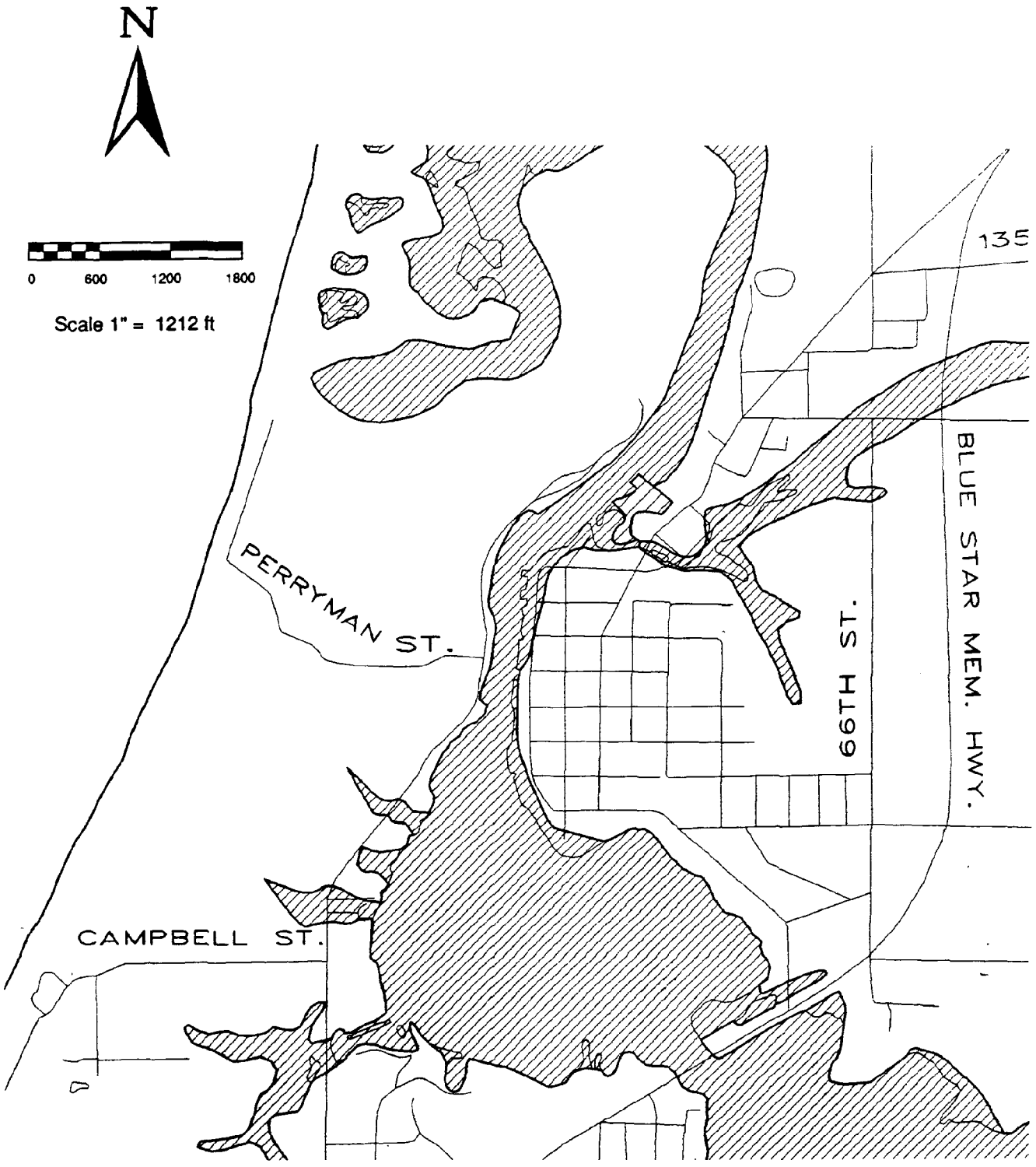

## MAP 4.2 WATERCOURSES

Saugatuck

Lakes, rivers and streams

Drains and intermittent streams

August 1989 DATA SOURCE: MDNR Planning & Zoning Center Inc, Lansing, MI




## MAP 4.3 FLOODPLAINS

Saugatuck

100 Year Flood Area

500 Year Flood Area

August 1989 DATA SOURCE:MDNR

*Planning & Zoning Center Inc, Lansing, MI*

## MAP 4.4 WETLANDS

Saugatuck

- Lowland Hardwood
- Lowland Conifer
- Wooded Swamp
- Shrub Swamp
- Herbaceous Rangeland
- Shrub Rangeland
- Marshland Meadow & Mud Flats

August 1989 DATA SOURCE: MDNR

Planning & Zoning Center Inc, Lansing, MI

## MAP 4.5 BASEMENT LIMITATIONS

Saugatuck

- Severe
- Moderate
- Slight
- Excavated
- Wetland Soils
- Sand Dunes

August 1989 DATA SOURCE: USDA Soil Survey, Allegan County: Planning & Zoning Center Inc, Lansing, MI

## MAP 4.6 SEPTIC LIMITATIONS

Saugatuck

- Severe
- Moderate
- Slight
- Excavated
- Wetland Soils
- Sand Dunes

August 1989

DATA SOURCE: USDA Soil Survey, Allegan County:

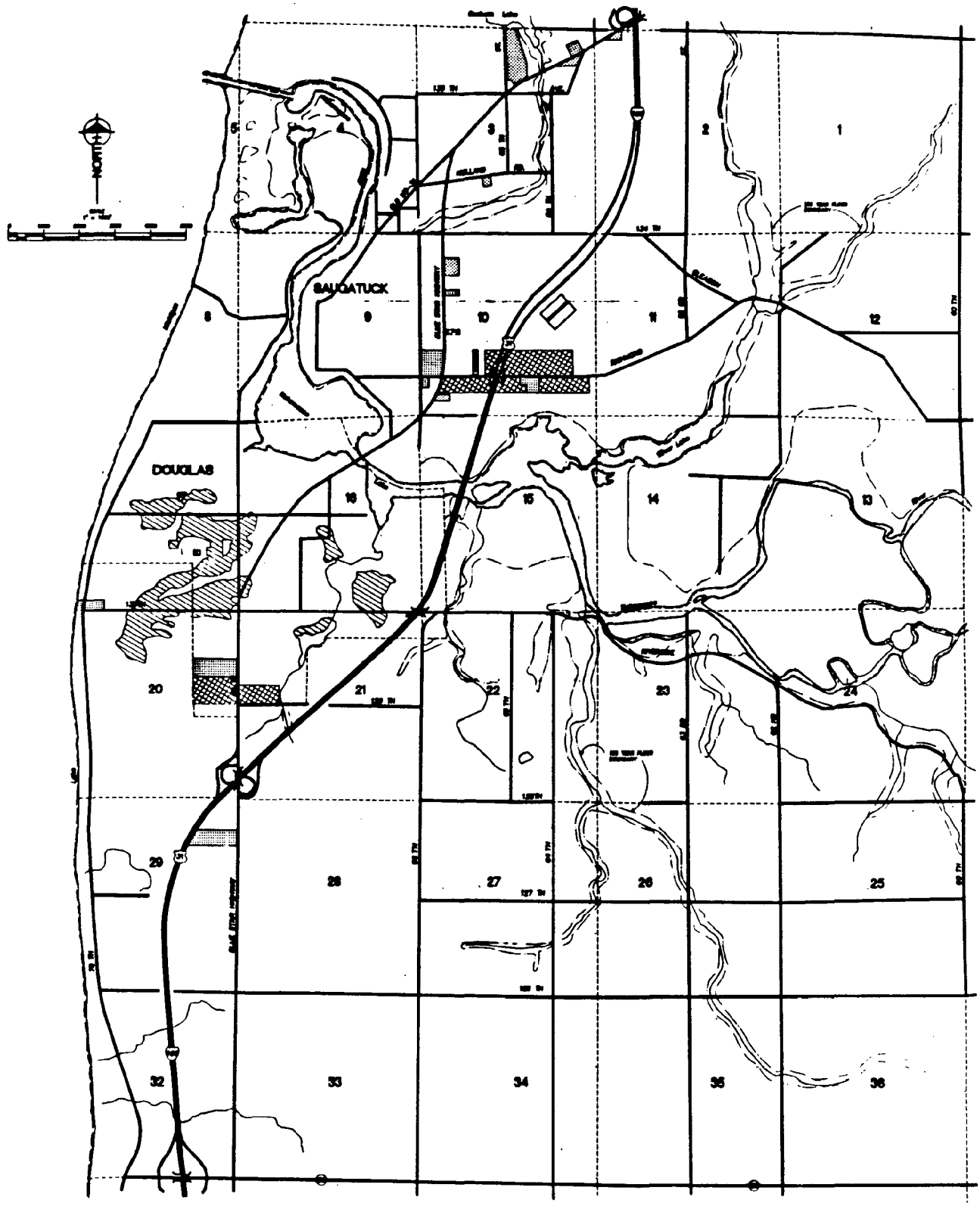
Planning & Zoning Center Inc, Lansing, MI

# MAP 4.7 SEPTIC LIMITATIONS

Saugatuck

- Sandy, moderate to rapid permeability
- Rapid permeability, wetness of highwater table
- Wet, ponding, heavier clay soils,slow permeability
- Moderate Limitations
- Slight Limitations
- Excavated
- Sand Dunes
- Wetland Soils
- Very wet soils, organics, wetlands, floodplains

August 1989 DATA SOURCE: USDA Soil Survey, Alleg. Cnty Hlth Dept Planning & Zoning Center Inc, Lansing, MI




LEGEND

SEPTIC SYSTEM FAILURES OR REPAIRS (A.C.H.D.)

SEPTIC SYSTEM PERMITS DENIED (A.C.H.D.)

LOCATIONS IN PROPOSED SERVICE AREAS THAT DO NOT HAVE SEVERE RESTRICTIONS TO ONSITE SEPTIC SYSTEMS (U.S.D.A. S.C.S.)

# MAP 4.7 A Saugatuck

## ONSITE WASTEWATER TREATMENT LIMITATIONS

FIG. NO. 2

# MAP 4.8 MOST SUITABLE SOILS

Saugatuck

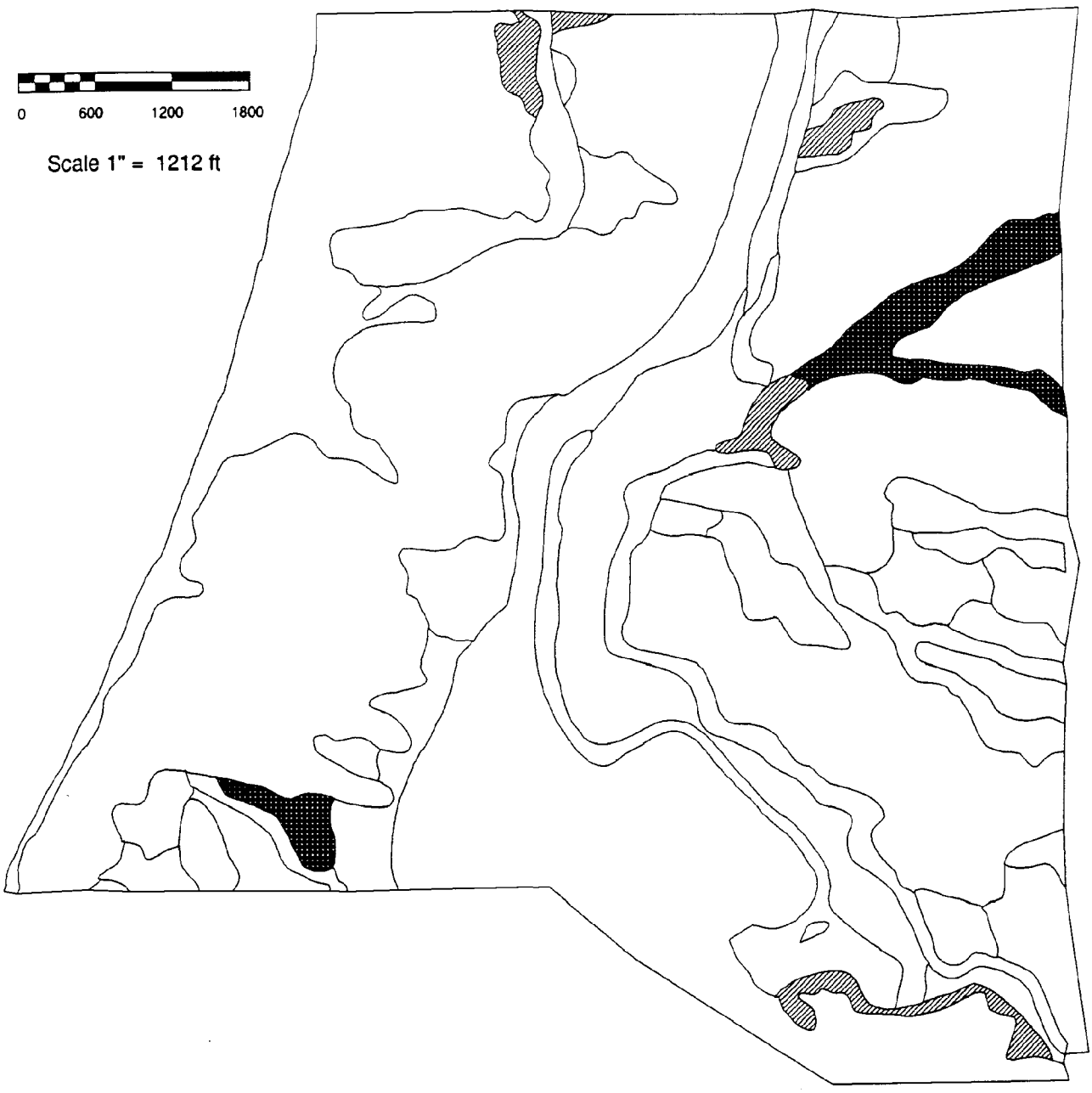
Soils Most Suitable For Development

Excavated Areas

August 1989

DATA SOURCE: USDA Soil Survey, Allegan County

Planning & Zoning Center Inc, Lansing, MI




# MAP 4.9 HYDRIC SOILS

Saugatuck

Hydric Soils

Wetland Soils

August 1989

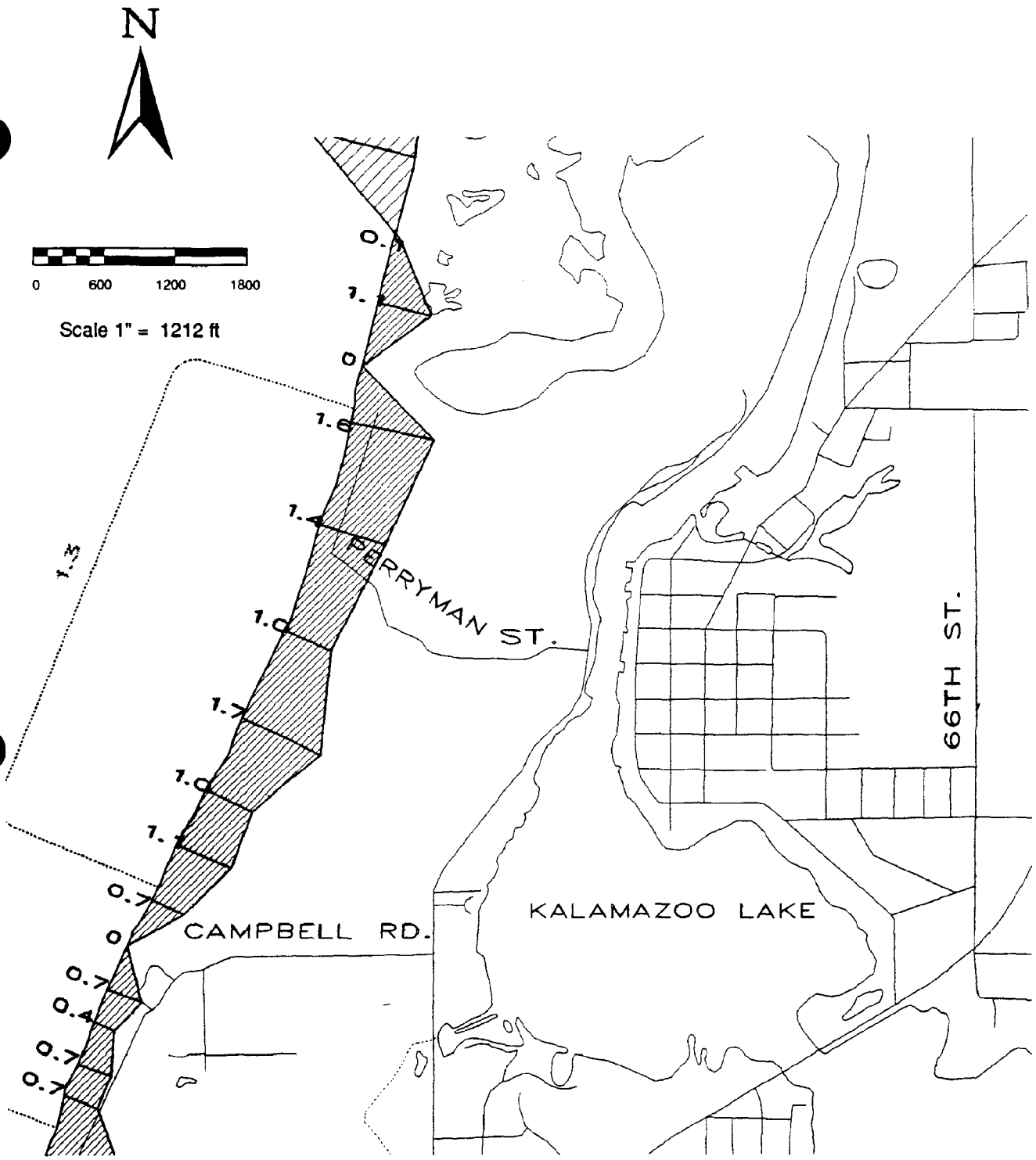
DATA SOURCE: USDA Soil Survey, Allegan County

Planning & Zoning Center Inc, Lansing, MI

## MAP 4.10 GROUNDWATER VULNERABILITY Saugatuck

- Areas most susceptible to contamination
- Excavated Areas
- Wetland Soils

August 1989 DATA SOURCE: USDA Soils Survey & Alleg. Hlth Dept. Planning & Zoning Center Inc, Lansing, MI




# MAP 4.11 HIGH RISK EROSION AREAS

Saugatuck

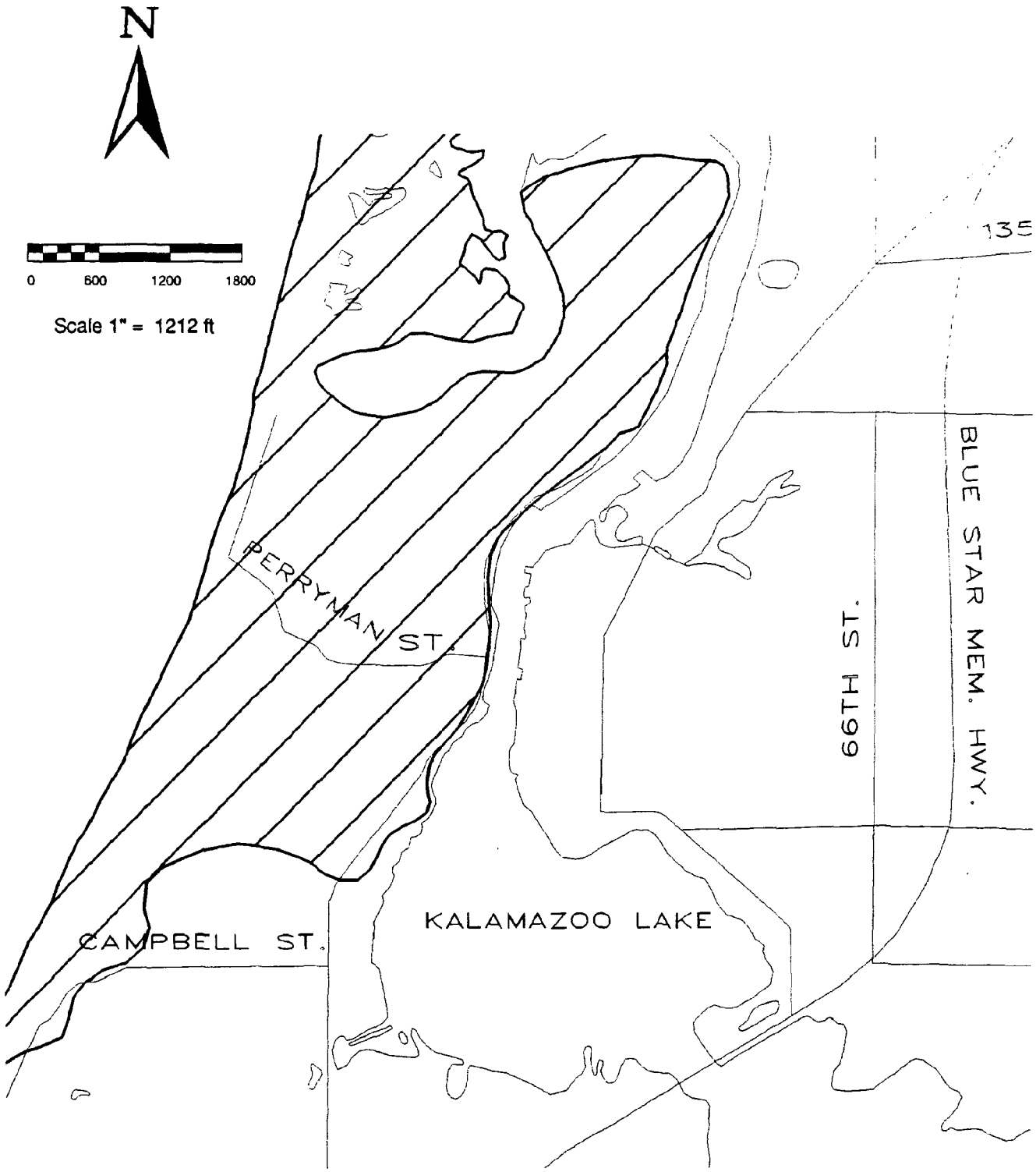
Accretion Area

Recession Area

Numbers indicate accretion/recession rate in feet per year

August 1989 DATA SOURCE: MDNR

Planning & Zoning Center Inc, Lansing, MI




# MAP 4.12 CRITICAL DUNE AREAS

Saugatuck

Critical Dune Areas

August 1989 DATA SOURCE: MDNR

Planning & Zoning Center Inc, Lansing, MI

## MAP 4.13 WOODLANDS

Saugatuck

- Lowland Hardwood
- Upland Hardwood
- Lowland Conifer
- Upland Conifer
- Wooded Swamp
- Shrub Swamp

August 1989 DATA SOURCE: MDNR

Planning & Zoning Center Inc, Lansing, MI

# Chapter 5

# EXISTING LAND COVER AND USE

## LAND USE/COVER DATA SOURCES

Land cover and use refers to an inventory of existing vegetation, natural features, and land use over the entire City (see Map 5.1). This data was obtained in computerized form from the Michigan Resource Inventory System (MIRIS) database, which is maintained by the Michigan Department of Natural Resources (DNR). The data came from photo interpretations of aerial infrared photos by trained interpreters at the West Michigan Regional Planning Commission. The DNR will update this data every 5 years. Land cover and use categories included in the data are explained on the legend to Map 5.1. The wetlands and woodlands maps in Chapter 4 were also derived from this data.

MIRIS data was supplemented by a thorough land use inventory of Saugatuck, conducted in the summer of 1988. The inventory was based on ownership parcels and conducted both on foot and through a "windshield survey". The existing use of every parcel was recorded and evaluated in combination with low-level aerial imagery available from the Allegan County Equalization Department and the MIRIS land cover/use map to prepare the existing (parcel-based) land use map (see Map 5.2). The following description is based on these maps and data sources and the USDA Soil Survey of Allegan County.

Land use by category is shown in Table 5.1. This information was derived from the aforementioned data sources and areas were calculated using CMAP computer mapping software.

The predominant land use in Saugatuck is parks. This is followed by single family residential, commercial and multiple family residential, respectively. Vacant land comprises eighteen percent of the total land area (street ROW's excluded) of the City.

**TABLE 5.1**
**EXISTING LAND USE**

| LAND USE | ACRES | % TLAMSROW* |
|---|---|---|
| Residential | | |
| single-family | 174 | 22.45% |
| multi-family | 24 | 3.10 |
| Commercial | 26 | 3.35 |
| Industrial | 2 | 0.26 |
| Institutional | 21 | 2.71 |
| Parks | 249 | 32.13 |
| Boat Storage & Service | 6 | 0.77 |
| Kalamazoo River Wetland | 29 | 3.74 |
| Streets & Roads | 106 | 13.68 |
| Vacant | 136 | 17.55 |
| Commercial/Residential | 2.3 | 0.30 |
| TOTAL | 775 | 100.04% |

* % of total land area minus street ROW's

## RESIDENTIAL

Most of the residential development in Saugatuck is concentrated around the center of the City. Other residential areas are along Campbell Road and along the west shore of Kalamazoo Lake. Most resort and seasonal residential development is located along Kalamazoo Lake and the Kalamazoo River. Single family structures are the predominant residential type. A number of large older homes have been con-

**TABLE 5.2**
**CITY OF SAUGATUCK**
**CONDO PROJECTS SINCE 1980**

| PROJECT | # UNITS |
|---|---|
| Bridges of Saugatuck | 8 |
| Waterside | 6 |
| Saugatuck Shores | 16 |
| East Shore Harbor Club | 46 |
| Bay View + 4 single family | 13 |
| Saugatuck Harbors | 24 |
| Holland & Francis | 6 |
| Windjammer | 8 |
| TOTAL | 127 |

verted to two or three units or bed and breakfast establishments. Multiple family structures are found along Lake Street, in several condominium developments lining the east shore of Kalamazoo Lake, and in other parts of the City. New condominium developments since 1980 are shown on Table 5.2. Apartment complexes in the city include Ridgewood Oaks Apartments and Olde Mill Apartments on Maple Street in the northeast corner of the City, and Harbor View Apartments north of Campbell Road in the southwest part of the City.

**COMMERCIAL**

The major commercial area in Saugatuck is the City Center, which is primarily tourist oriented, with some establishments serving local residents. Businesses include a bank, hardware, furniture, restaurants, drug store, clothing, tourist accommodations and many other tourism related activities. Other commercial activities are scattered throughout the City and along the waterfront. Boat storage and repair facilities represent a different type of commercial use and line the waterfront throughout the City. The largest of these is located between Holland Street and the Kalamazoo River.

**INDUSTRIAL**

Industrial activity in Saugatuck is limited to one site near Culver and Griffith Streets. The site is occupied by Rich Products, which produces food products (fruit pies). Another site on Water Street, formerly occupied by American Twisting Co., is vacant. There are no other occupied industrial sites in the City, nor are any available.

**PLANNING AREAS**

Eight planning areas have been identified within Saugatuck. These planning areas represent portions of the City within which particular land uses or other characteristics give a distinguishable identity or quality. Some people may identify with these areas as "neighborhoods". Following are brief descriptions of existing land use. These descriptions are based on the planning/neighborhood areas depicted on Map 5.3.

***City Center***

The City Center is the most intensely developed area of Saugatuck. It includes the central business district, restaurants and shops, and is the focal point of much of the City's activities. During the summer months, the City Center is heavily used by tourists. Much of the revenue gained locally through tourist expenditures comes from this area. The City Center is known throughout the state for its excellent antique shops and art galleries. The City Hall is an historic building and also serves as a tourist attraction. This area expresses the style, activity, and scenic and architectural qualities that make the City one of the most unique in the region.

Generally, the structures are small, simple, and classical in design. They reflect turn of the century commercial demand for limited and accessible retail space. Unlike most cities, much of the original architecture has survived. The style remains simple, spare, utilitarian and elegant. The atmosphere is informal. The scale is human and pedestrian and compliments the surrounding natural environment without overpowering it. This unique City Center preserves the history of Saugatuck and establishes a sense of comfort and place.

***Center Transition Area***

The area immediately north of the City Center along both sides of Butler Street is occupied by 22 single-family structures. The homes are typically old and large. Some are over a hundred years old, with historic qualities. Many of these homes have become difficult to heat and keep in good repair because of their age and size. The homes are primarily white and wood frame and are in good repair. Most structures are occupied on a year-round basis.

***Water Street Shoreline***

Most development along Water Street is waterfront oriented. This includes public and private marinas, restaurants capitalizing on the waterfront view, tourist attractions offering boat rides, and charter boats. A number of substantial commercial investments along the waterfront have made this area one of the City's most active. There are approximately ten single-family homes, four multi-family structures, including a new twenty-four (24) unit condominium, and transient lodging facilities, the largest of which has forty units.

The water line is almost entirely lined with bulkheads and utilized for boat docks. The waterfront area is a natural extension of the City Center in terms of tourist activity. Tourists visit the shops and galleries in the City Center, then

walk the boardwalk along the water and perhaps eat there. Both areas are closely related in terms of contribution to the City's economic base and tourism orientation.

***Lake Street***

The Lake Street area follows the shoreline of Kalamazoo Lake between Griffith Street and Blue Star Highway. Land uses in this area include approximately 35 single-family homes, several condominium developments, several transient lodging establishments, a marina, some commercial facilities, and the City's largest industry, Rich Products. Many of the single-family homes are seasonal dwellings occupied only during the summer months.

***The "Hill"***

This area is located "on the hill" above the City Center, Lake Street and waterfront areas and consists primarily of single-family homes. The homes are typically 30-60 years old and in good repair. The area is uncongested and is affected by tourist activity only at the fringes, where traffic enters the City along Holland Street, the City's main entrance. This area contains most of the City's permanent (year-round) residents

***Holland Street***

Holland Street is the main entrance into the City from the north. The street is lined with trees and residences and gives visitors a favorable impression as they enter the City. Most of the residents are year-round, although there are some seasonal residences fronting the Kalamazoo River.

***Maple Street***

This area is underdeveloped, except for city-owned utilities (water wells) and approximately eight single-family homes. Additional homes are being built above a deep and scenic ravine which traverses this area. The area contains some wetlands and areas with development limitations. This area is the last substantial tract of vacant property in the eastern part of the city, covering approximately 60 acres. Ownership is in large tracts. There are no recorded subdivisions. Across from Maple Street in Saugatuck Township are commercial uses including warehouses and storage sheds.

***Park Street***

Park Street follows the west bank of the Kalamazoo River. There are approximately 100 single-family structures in this area, most of which are occupied by seasonal residents. Other land uses include tourist lodging facilities and waterfront oriented commercial uses. Approximately twenty new single family homes have been built along Campbell Road.

Much of the area was platted in an uncoordinated and unplanned manner. Many of the plats along Park Street are either long and narrow, or are small in overall square footage. Platted lots range in size from 6,000 square feet to 25,000 square feet.

***Mt. Baldhead***

The Mt. Baldhead area is one of the most unique, scenic, and beautifully preserved mature dune areas along the Lake Michigan shore. Most of the dune area is vegetated, forested and stable. There are some "blow-out" areas free of vegetation through wind disturbance and some areas that have been cleared for recreational purposes. The area is recognized by the Michigan State Department of Natural Resources as an Area of Particular Concern (APC).

The dune area covers approximately 300 acres, 150 acres of which is owned by the Presbyterian Church, 75 acres by the City of Saugatuck, and the remainder in large private holdings. The only development is the Oval Beach Lakefront swimming and recreation area.

The Mt. Baldhead area is an important component of the City's attractive natural environment, and enhances the City Center and the waterfront. With those areas, the forested dunes and Mt. Baldhead complete an attraction that provides unparalleled visual quality, contributing to a vital active tourist economy. Mt. Baldhead is not only an important natural resource for the entire state and country, but also a "display case" for the City itself and therefore has a direct and positive influence on the economic vitality of the community.

## HISTORIC & ARCHAEOLOGICAL FEATURES

Some archaeological sites and historic sites can be found in Saugatuck. Historic and archaeological sites are designated by the Michigan Bureau of History.

***Historic Buildings and Sites***

The Michigan State Register of Historic Sites was established in 1955 to provide official

**TABLE 5.3**
**STATE HISTORIC SITES**

| DESCRIPTION | LOCATION |
|---|---|
| **Saugatuck:** | |
| All Saints Episcopal Church | 252 Grand St. |
| Singapore (Village Hall) | Marker on Village Hall on Butler St. |
| Clipson Brewery Ice House - Twin Gables Hotel (Singapore Country Inn is common name) | 900 Lake St. |
| Horace D. Moore House | 888 Holland St. |
| Warner P. Sutton House (Beachwood Manor) | 736 Pleasant St. |
| Fred Thompson-Willliam Springer House | 633 Pleasant St. |

Source: Michigan Bureau of History

recognition for historic resources in Michigan. Designated historic sites have unique historic, architectural, archaeological, engineering, or cultural significance. There are six State historic sites in Saugatuck, which are listed on Table 5.3. Singapore, Michigan's most famous "ghost town" and once a thriving lumber town, lies buried at the mouth of the Kalamazoo River. A plaque commemorating its existence stands in front of the Saugatuck City Hall.

State historic site designation does not include any financial or tax benefits, nor does it impose any restrictions upon the owner of the property, unlike similar designations under federal law.

### *Historic Districts*

Architecture in the City Center of Saugatuck is generally late nineteenth century Victorian, with some commercial and residential structures built forty years before the Victorian period. The oldest structures are characterized by their wood frames, gabled roofs and false fronts. They are typical of early mercantile establishments and reflect the area's lumber harvesting industry. The later Victorian structures are typical of small towns and are predominantly of masonry construction. While none are larger than two stories, several have large floor areas due to long, narrow floor plans commonly used. Original facades are not elaborate in their architectural detail, however several stylistic elements are present including italianate cornices and brackets, and Greek revival entablatures end pediments. Other particularly interesting features include press-tin ceilings and cornices and lead-glass transoms.

Saugatuck has taken local steps to preserve its historic character and particularly the City Center area. PA 169 of 1970 permits the legislative body of a local government to regulate the construction, demolition and modification of all structures within a designated historic district. The City of Saugatuck has established an historic district within the oldest part of the City. Within this district, construction, demolition and modification of structures must comply with requirements set forth in the zoning ordinance. Historic districts provide a means for the community to protect its historic resources from development pressures. The Saugatuck historic district is shown in Map 5.4.

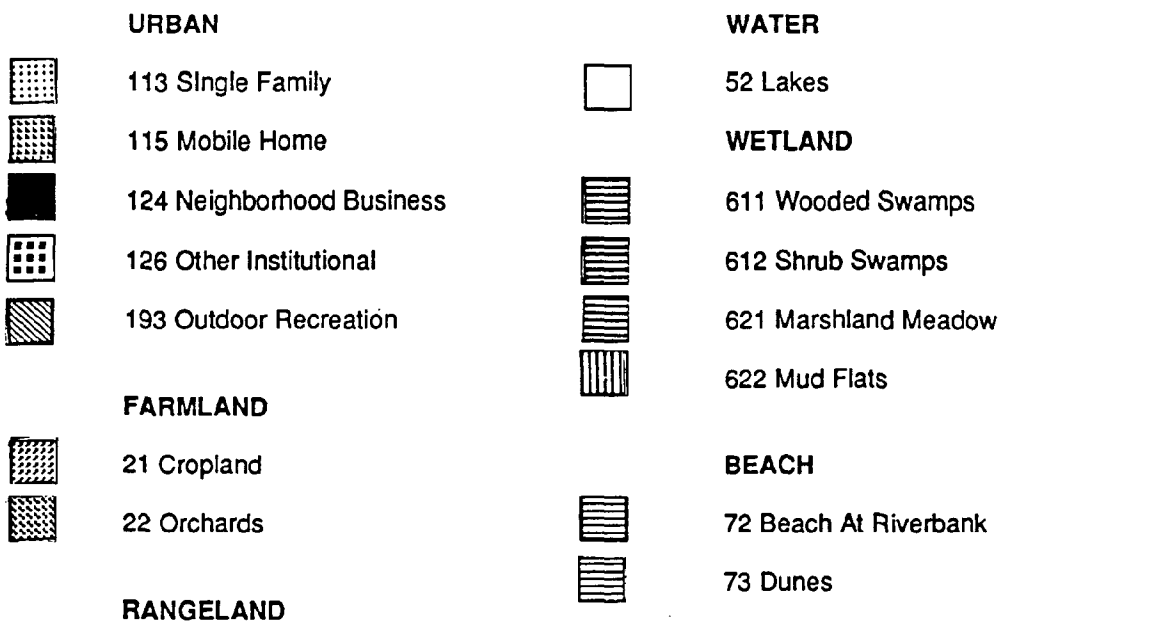
### *Archaeological Sites*

Archaeological sites are of particular scientific value to the fields of anthropology, ecology,and biology and may have historic or ethnic significance as well. There are 120 archaeological sites scattered throughout Saugatuck Township, Saugatuck and Douglas, mostly related to Ottawa and Potawatomi cultures. Their exact locations have not been disclosed by the Bureau of History in order to protect them from exploitation. Recipients of Federal assistance must ensure that their projects avoid damage or destruction of significant historical and archaeological resources. The Michigan Bureau of History reviews these projects to assess their impact on archaeological sites.

The Bureau of History also recommends that those proposing development projects in Saugatuck contact the State Archaeologist to determine if the project may affect a known archaeological site. This is particularly critical given the existence of Indian Burial sites in the area. If an important archaeological site will be affected, archaeologists will negotiate a voluntary agreement to preserve those artifacts. The Bureau of History serves in an advisory capacity and has no legal authority to restrict development rights.

# MAP 5.1 LAND USE/COVER

Saugatuck




August 1989

DATA SOURCE: MDNR

Planning & Zoning Center Inc, Lansing, MI

N

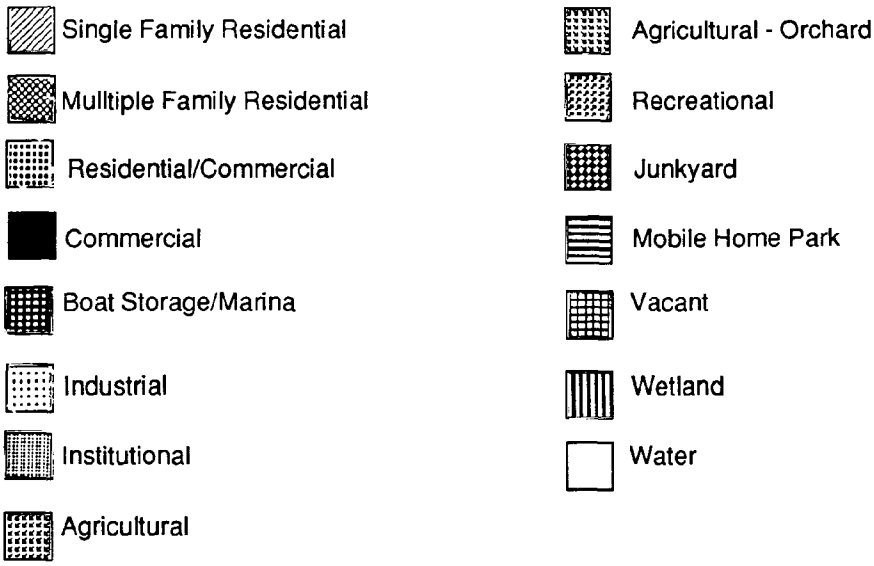
# City of Saugatuck
# LAND USE/COVER

0 600 1200 1800

Scale 1" = 1212 ft

# MAP 5.2 EXISTING LAND USE

Saugatuck




August 1989 SOURCE: PZC Land Use Survey

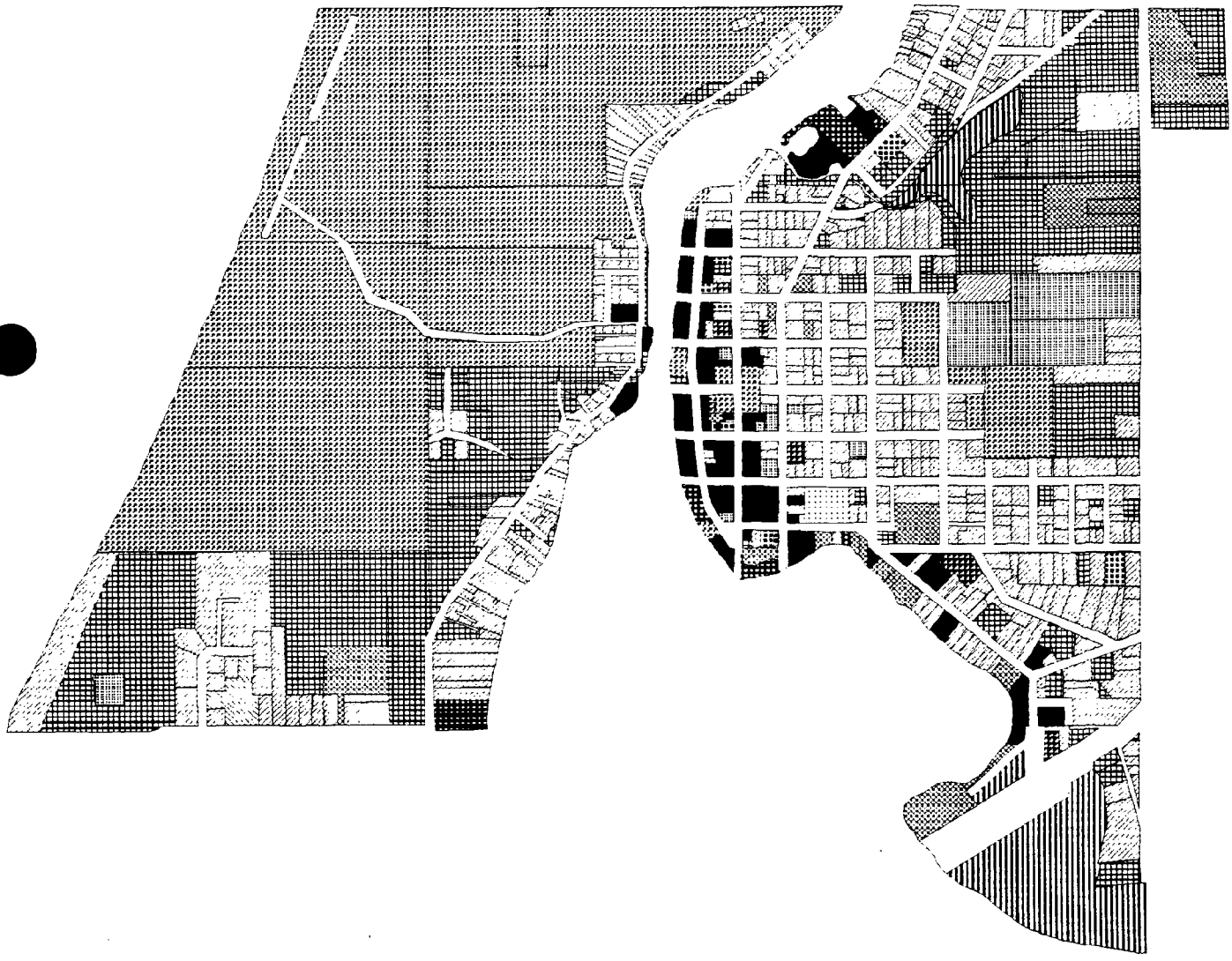
Planning & Zoning Center, Inc, Lansing, MI

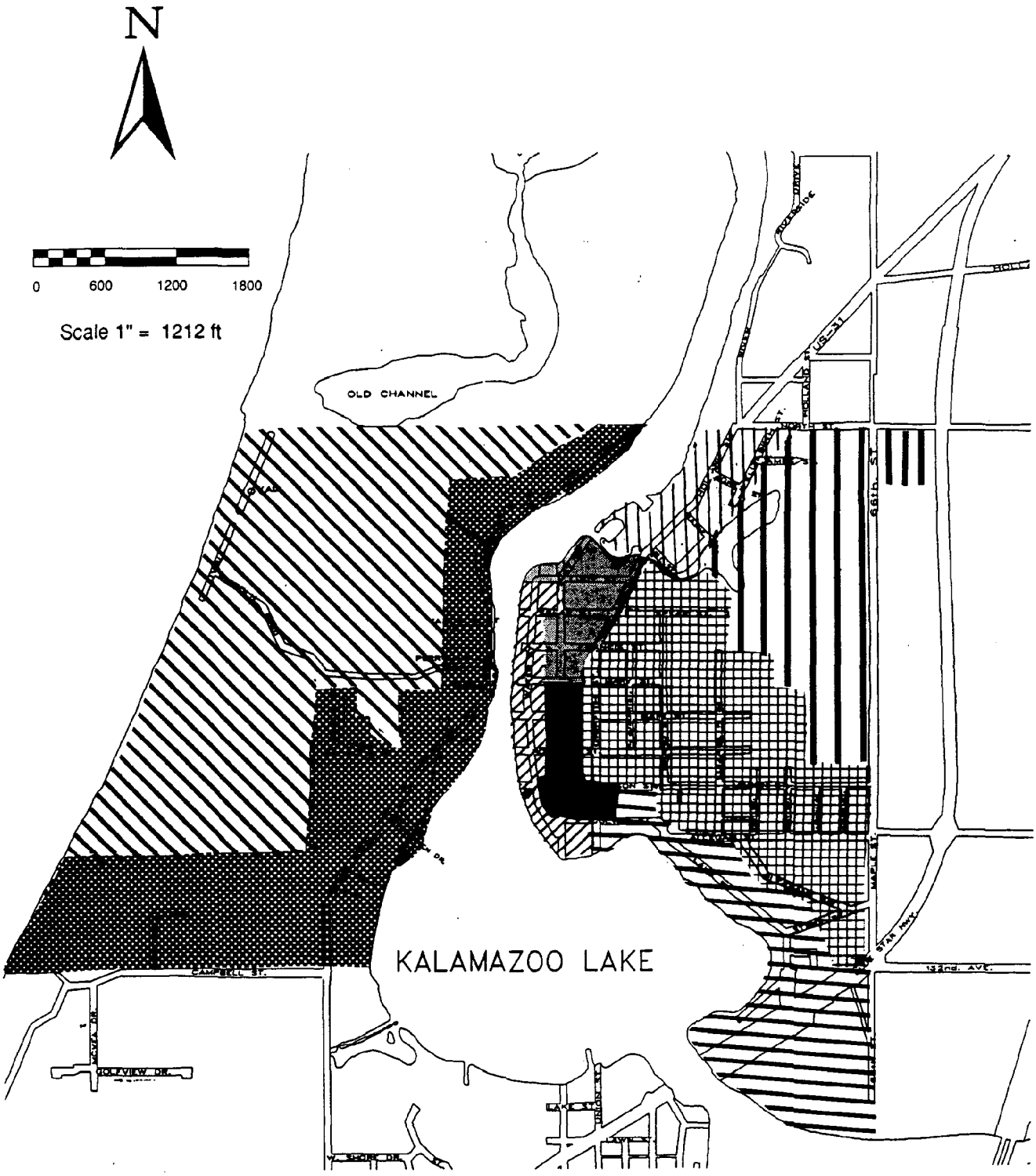
N

# City of Saugatuck
# EXISTING LAND USE

0 500 1000 1500

Scale 1" = 1032'



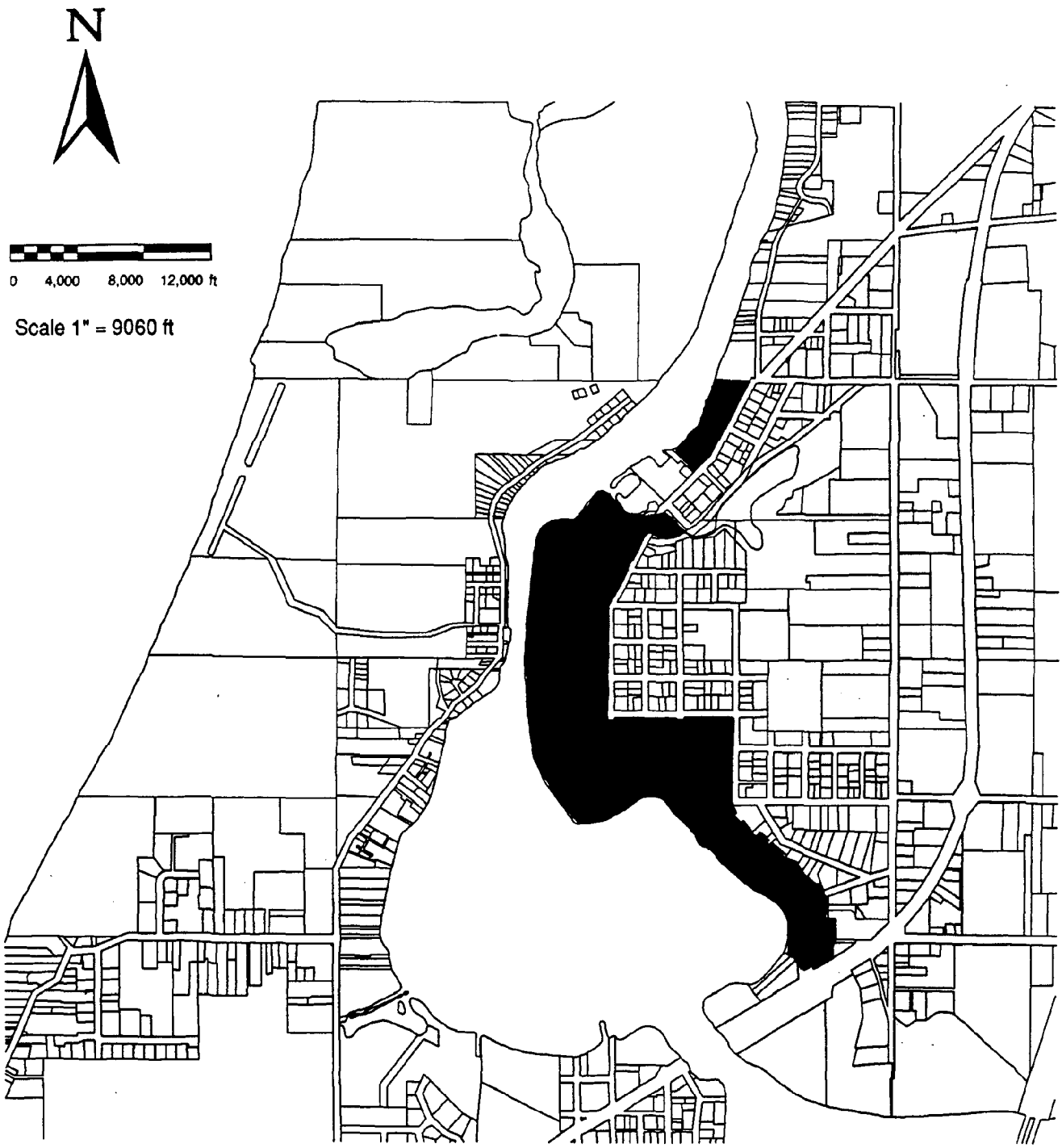



## MAP 5.3 PLANNING AREAS

Saugatuck

- City Center
- Center Transition
- Water Street
- Lake Street
- The Hill
- Maple Street
- Park Street
- Mount Baldhead
- Holland Street

August 1989 DATA SOURCE: Saugatuck Planning Commisssion Planning & Zoning Center Inc, Lansing, MI




# MAP 5.4 SAUGATUCK HISTORIC DISTRICT

Saugatuck

Historic District

August 1989 DATA SOURCE: City Of Saugatuck Ordinances Planning & Zoning Center Inc, Lansing, MI

# Chapter 6

# PUBLIC FACILITIES AND SERVICES

## NON-PARK PUBLIC FACILITIES

A listing of all non-park public facilities in the City of Saugatuck is found on Table 6.1. This includes police and fire stations, municipal government offices, vacant lands and other public facilities. All are found on Map 6.1.

## UTILITIES

### *Sewer and Water*

The Saugatuck-Douglas area sewer and water systems are managed by the Kalamazoo Lake Sewer and Water Authority, which is responsible for operation and maintenance and provides water production and wastewater treatment. Each participating community is responsible for providing and financing their own infrastructure. The KLSWA performs the construction work or contracts it out.

The service areas for the sewer and water systems, shown on maps 6.2 and 6.3, extend only for very short distances into Saugatuck Township. Most of the developed part of the City is served by both water and sewer, and the system is designed to accommodate expansion and addition of new lines.

Numerous engineering studies have been conducted which discuss various alternatives for improvement of utilities. These include using Lake Michigan for the municipal water supply and extending public utilities into the Township. Proposals must take into consideration the permanent population, seasonal population, number of daily visitors, and future industrial flow. Peak periods for public utilities in the area are more pronounced than in typical communities due to the relatively high seasonal and daily visitor population, especially pronounced in the City of Saugatuck.

### *Water System*

The reliability of the water system depends on water supply sufficient to meet peak demands, storage capacity to provide fire flows for sufficient duration, adequate water pressure and distribution system loops. The existing system is deficient with respect to meeting peak demands. The water is not treated, except for chlorination and iron sequestering. Parts of the current water system date back to 1907 in Saugatuck, and to 1914 in Douglas. In addition, the water mains are old, small and substandard, leaks are a problem on older service lines and there may be some unmetered taps. Growth is restricted in areas not serviced by the system and is limited overall at present because of insufficient pumping capacity.

The existing water system also has many dead end lines, which are susceptible to water discoloration and development of tastes and odors due to stagnation. The best arrangement for water mains is the gridiron system, where all primary and secondary feeders are looped and interconnected, and the small distribution mains tie to each loop to form a complete grid. If an adequate number of valves are inserted, only a small 1 block area will be affected in the event of a break. A primary feeder from the Saugatuck wells to the system's primary 12" feeder loop has been installed, and all of the primary 12" feeder loop has been completed, including two river crossings.

In 1984 and 1985, a one million gallon above ground storage tank was constructed, which allowed Saugatuck and Douglas to meet normal and fire protection demands. If Saugatuck Township is included in the system, the storage tank is adequate for fire protection for the near future, but additional capacity is needed if service were extended to the southern portions of the Township.

Recent chemical contamination of the Douglas municipal water supply has led to an overburdening of the City of Saugatuck water system, which is presently serving the entire network and is working at full capacity; 24 hours per day during peak months. This has led to restrictions on non-essential uses such as lawn sprinkling, car and boat washing, and has reduced the minimum reserve needed (600,000 gallons) for fire protection down to 2/3 of the needed amount. A moratorium has been imposed on new development other than one or two family dwellings. The pumping capacity of both wells has dropped due to depletion (drawdown) of groundwater.

**TABLE 6.1**
**(NON-PARK) PUBLIC PROPERTY & PUBLIC FACILITIES INVENTORY**
**CITY OF SAUGATUCK**

| NAME | LOCATION | USE | SIZE * | CONDITION | VALUE |
|---|---|---|---|---|---|
| City Hall | 102 Butler | City offices, council chambers | | Built 1882, remodeled 1989 | $475,000 |
| Maintenance bldg. | 3338 Washington Rd. | Public works | | Built 1985 | $275,000 |
| Sand & salt storage | 3338 Washington Rd. | | | Built 1985 | $25,000 |
| Pump House #1 | Maple St. | Water | | | $65,000 |
| Pump House #2 | Maple St. | Water | | Built 1973 | $80,000 |
| Mt. Baldhead Park | Park St. | Residence | | Remodeled 1978 | $94,000 |
| Butler St. comfort statoin | Butler & Main | Restrooms | | Built 1988 | $97,000 |
| Park St. comfort station | Mt. Baldhead | Restrooms | | Fair | $6,400 |
| Water St. comfort station | Wicks Park | Restrooms | | Fair | $13,000 |
| Beach storage bldg. | Oval Beach | Storage, restrooms, concessison | | Poor | $4,000 |

* Land = acres or square feet (Building = Square feet)

Communications from the Michigan Department of Public Health have demanded that substantial progress be made towards a solution to the water supply problem in the near future. The Health Department has also questioned the usefulness and reliability of both Douglas wells because well #1, which is out of use, is contaminated, and well #2, which is used for emergency purposes only, may become contaminated through further use. As a result, alternatives for additional water sources are currently under review, with Lake Michigan and the City of Holland water system being considered the most viable options. Engineering studies have indicated a cost of nearly $4.5 million for construction of a Lake Michigan water treatment facility which would provide a clean and abundant source of water. A large service area, formed by including large portions of Saugatuck Township, would reduce the per capita cost burden on users. This facility would be capable of pumping 3 million gallons per day, which could serve the needs of all three communities well into the future. This, combined with a desire to retain local control over the water system, makes using Lake Michigan water the favored alternative.

***Sewer System***

Wastewater treatment is provided at a treatment plant located in Section 10 of Saugatuck Township. The facility was constructed by the City of Saugatuck and the Village of Douglas in 1980. The treatment system provides biological and clarification processes for the reduction of BOD (biochemical oxygen demand) and suspended solids, including chemical precipitation for the reduction of phosphorus from fertilizers and detergents. The plant has two aerated lagoons and was designed for incremental addition of lagoons to accommodate increased wastewater flow. The facility was designed for

heavier BOD loading than other facilities its size, in order to accommodate a pie factory, and thus may not need more capacity of that type for many years. The discharge is to the Kalamazoo River on the north side of Saugatuck.

In 1957, many of the storm sewers in the City of Saugatuck were converted to sanitary sewers. This system was expanded in 1979 with PVC pipe, and some improvements were made to the old system. Douglas and Saugatuck merged their facilities in the late 1970's to form the KLSWA. The capacity of the sewer system is sufficient to meet the needs of Saugatuck and Douglas until approximately 2008. The capacity of the wastewater treatment facility would have to re-rated to 1.2 MGD for the Township to use the system until 2008.

The treatment facility was designed for a twenty year planning period through 1998, based on a population tributary of 7,695 and a wastewater flow of 0.75 million gallons per day (MGD). The treatment facility is rated at 0.8 million gallons per day by the Michigan Department of Natural Resources (MDNR). The facility was designed for a peak flow of 2 MGD. The present average flow is 0.4 MGD. A larger flow can be accommodated by increasing hours of operation, provided that the lagoons can treat the sewage well enough. An engineering study in 1987 determined that August (maximum day was Aug. 14) is the month of peak flow for wastewater, with 0.598 MGD. Based on the study, the treatment facility operated at 75% of flow capacity, 55% of BOD capacity, and 30% of suspended solids capacity. Existing effluent quality and treatment efficiency was found to be excellent. Increasing the rated capacity of the facility to 1.2 MGD with two aerated lagoons would accommodate all three jurisdictions through 2008 and possibly beyond. Pursuing this option would require detailed preparation of data accompanied by a formal request to the DNR from the KLSWA. Further capacity could be obtained by adding another aerated lagoon, estimated to cost $900,000 in 1987.

### *Storm Sewers*

There are very few mapped stormwater drains in Saugatuck. Drainage has not been a significant problem in most developed areas because of sandy, high permeability soils and lack of large paved areas. However, there are some problems in low-lying areas. There are suspected to be some stormwater drains, individual residential and business gutters flowing into the sanitary sewer system which need to be removed. Efforts are currently underway to improve stormwater drainage.

### *County Drains*

There is one County drain locted within Saugatuck. The Golf drain follows Goshorn Creek and aids in removal of water from a low lying wetland area in the northeast portion of the City.

### *Gas, Electric and Telephone*

There are no major gas or oil pipelines in Saugatuck. Gas service is provided by the Michigan Gas Utilities Company and approximate locations of gas mains are shown on Map 6.4. Electricity in Saugatuck is provided by Consumers Power Company. Telephone service is provided by General Telephone and Electric Co. (GTE).

## TRANSPORTATION

Transportation facilities within the area include streets and roads and a public transportation system (Interurban). Saugatuck is served by a major Interstate highway (I-196), with access two miles away in Saugatuck Township, and by a State highway (M-89), located four miles to the south in Saugatuck Township. Blue Star Highway, part of the Great Lakes Circle Tour, is the other major highway serving the area. The nearest railroad is the Chesapeake and Ohio R.R., which runs north and south five miles east of the City boundary. Kent County International Airport is within 50 miles and is served by 3 major airlines, with 126 flights per day. Parking is an important issue in the City Center because of the daily and seasonal tourist economy. It is crucial that adequate parking facilities be provided to stimulate and maintain the vital tourism in the City. The area is also served by Greyhound Bus Lines.

### *Streets and Roads*

Streets and roads are classified according to the amount of traffic they carry and the nature of the traffic. Four common categories are local streets, collectors, local arterials, and regional arterials. Local streets typically provide access to residences, with speeds from 20 to 25 mph (Mason St.). Collectors connect local streets to arterials and speeds average 25-35 mph. (Holland St.). Local arterials facilitate larger volumes of traffic which originates and terminates within the area, with a trip length of ten miles or less and an average speed of 35-45

mph. (Blue Star Hwy.). Regional arterials are typically used for high speed through traffic, and access to the roadway is usually limited (I-196). Locations of collectors, local arterials and regional arterials are shown in Map 6.5. Each class of street has an important function in maintaining the efficient flow of traffic and it is essential that adequate transportation facilities exist or can be efficiently provided.

Some up-to-date traffic counts for Blue Star Highway are available. A recent count for Blue Star Highway at two intersections in the Township only considers northbound traffic, missing traffic entering Saugatuck from exit 41 on I-196. Other existing traffic counts for area roads are inadequate for planning purposes. Accurate and up-to-date traffic counts are needed in order to make some decisions pertaining to priorities for road improvements, monitoring of flows, evaluating impacts of proposed new development, and projecting future traffic conditions. Table 6.2 shows what very limited information is presently available from the County Road Commission.

PA 51 of 1951 provides for the classification of all public roads, streets and highways for the purpose of managing the motor vehicle highway fund. The two classifications which pertain to the City of Saugatuck are "Major Street" and "Local Street". These roadways are shown in Map 6.6. Funding is provided to cities and villages for street maintenance and construction based on the number of miles of streets by class, within each community. Saugatuck has 3.03 miles of Major Streets and 8.94 miles of Local Streets under Act 51 designation.

**TABLE 6.2**
**EXISTING TRAFFIC COUNTS**

| DATE | LOCATION | VOLUME |
|---|---|---|
| 4/3/78 | Blue Star & 64th | 5,319 |
| 1959 & 1968 (same count) | 130th E & W of Blue Star | 368 |
| July 1987 (2 different days) | Blue Star & 129th | 10,575<br>8,256 |
| 1969 | Old Allegan, east of Blue Star | 336 |
| 1982 | 130th & 70th, east of Lakeshore Dr. | 285 |
| July 1987 | North 135th at Blue Star (northbound) | 7,018 |
| July 1987 | 129th at Blue Star (northbound) | 6,192 |
| October 1985 | Center at Blue Star | 10,861 |

### *Parking*

The scenic natural setting of Saugatuck, its reputation as a haven for artists, unique commercial and residential character, and its proximity to major metropolitan areas, make it an attractive resort center. With this comes overcrowding of the City Center with automobiles on summer weekends. Several recent studies indicate that most of the congestion occurs in an area along Butler and Water Streets. The downtown area has become saturated and alternative parking facilities have been suggested as a result of those studies. One alternative is a park and ride system, which utilizes a parking lot at the periphery of the City and a shuttle from that lot to the downtown area. The existing Interurban system could be used for such an alternative. This concept, if implemented, could also relieve some of the congestion from the City Center area and make it an even more attractive place to visit. Other alternatives suggested in recent years include construction of additional parking lots or parking ramps, and changes to existing parking spaces, including downsizing and reducing the permitted parking period. Each alternative has proponents and detractors. A mechanism to resolve the current impasse is being sought.

### *Entrances Into the City*

Holland Street to the north and east is the main entrance into the City from the north (from I-196). It is typical for vehicles to enter the City on Holland, then turn onto one of three east-west streets and proceed into the City Center along Butler. Holland is heavily travelled for a two lane residential street and has remained primarily residential from the City limits to Mary Street. A restaurant and the City's largest marina are located along Holland Street. Butler Street serves as the "main street" for the Center City area, with commercial development on both sides of the street. It is heavily travelled during the tourist season.

Lake Street at Blue Star Highway is the City's second major entrance. Traffic volumes result from traffic going to the City Center area and from traffic associated with the industrial use, Rich Products. The industrial location generates a significant amount of truck traffic. The

intersection with Blue Star Highway, while aesthetically pleasing, raises safety questions because of a combination of high speed traffic, poor visibility due to vegetation and curvature of the Highway, and lack of signaling. However, current traffic volumes do not justify further action at this time.

### *Street Conditions*

Many streets in the City are built on an unstable clay base, which causes pavement to crack and deteriorate because of excessive shrink-swell potential. Storm water drainage is also inadequate many places, and water remains along the sides of some roads or runs across the roads, eroding the base and pavement. Recently paved roads, including Elizabeth Street in 1988 and East, West, Takken and Taylor Streets in 1989, have had a sand cushion and underdrains installed. Some roads in the northern and western parts of the city are unpaved, but are not used frequently or only in the summer. In the 1988 Public Opinion Survey, 46% of City respondents rated street maintenance as "poor", while 68% rated street resurfacing as "poor".

### *Interurban*

The Interurban is the area's public transportation system and is funded in part by a 1 mill assessment. The service was started in May 1980 as a two year experimental project and was initially funded at 100% by the State. Following the experimental period, some of the cost burden was borne by the tri-communities through the 1 mill assessment. The system has four buses and in 1988 there were approximately 37,000 riders. A new maintenance facility in Douglas, to be completed in the spring of 1990, is being constructed at a cost of $211,000 entirely with state and federal funds. It is possible that the Interurban could be used to shuttle people to Saugatuck from remote parking facilitates and ease the parking burden there. The Interurban is governed by a board consisting of members from all three communities.

## POLICE, FIRE AND EMERGENCY SERVICES

### *Police*

The City of Saugatuck maintains its own police department, which is housed in the City Hall at 102 Butler Street. The department has two patrol cars and two full time police officers, including the Police Chief. There are also five part-time police officers. Extra demand for services occurs during the summer, particularly during festivals and holidays.

Police protection is also provided by the Allegan County Sheriff Department and the Michigan State Police. The State Police maintains the Saugatuck Team post north of the Township on 138th Avenue in Laketown Township. The facility has one lieutenant, one sergeant, seven troopers and eight patrol cars. The Allegan County Sheriff Department operates a satellite post in Fennville.

### *Fire*

Saugatuck is included in the Saugatuck Fire District. This district is managed by a five member Fire Authority. Saugatuck, Douglas and Saugatuck Township each appoint one person to the board. These three then appoint two other people from the area at large, subject to approval by the three communities involved. The Saugatuck Fire District has 35 volunteer personnel, including the fire chief. There are two fire stations, one located in downtown Douglas (47 W. Center) and another in Saugatuck Township near the intersection of Blue Star Highway and 134th Avenue. The latter is a new building designed to house six vehicles, offices and a meeting room with 9,600 square feet. It is located adjacent to the existing Maple Street facility.

The Fire District maintains eight vehicles and one vessel:

- 1975 Chevy Pumper
- 1981 International Pumper
- 1968 International Pumper
- 1959 Ford Pumper
- 1949 Seagrave Aerial
- 1977 GMC Step Van
- 1985 FWD Tanker
- 1985 Karavan Trailer
- Boston Whaler boat with pump

### *Emergency Services*

Ambulance services are provided by the Fennville Fire District and by Mercy Hospital in Grand Rapids, dispatched from Holland. The Saugatuck Fire District maintains a first responder unit with 11 volunteers because of the distance from ambulance services. The first responder unit appears to average about 10 calls per month.

## SCHOOLS

Saugatuck is served by the Saugatuck school district. The school system operates two

facilities. Douglas Elementary School accommodates grades K through 6, and Saugatuck High School accommodates grades 7 through 12. In addition to being used for educational purposes, the schools also have indoor and outdoor recreation facilities. Enrollment is approximately 550 students.

**OTHER COMMUNITY FACILITIES**

There is more than 97 acres of public land in Saugatuck, most of which is parks (see Chapter 7). Other publicly owned facilities are listed in Table 6.1.

**SOLID WASTE DISPOSAL**

PA 641 of 1978 requires that every county prepare both a short term (5 year) and long term (20 years) solid waste management plan. The plan must be approved by the County Planning Committee, the County Board of Commissioners and by at least 2/3 of the municipalities in the county. The Allegan County Solid Waste Plan dates from 1983 and covers a twenty year planning period. It is presently being updated.

The County generates about 220 tons per day of solid waste and has to rely on landfills outside of Allegan County. Solid waste removal in Saugatuck is handled entirely by private haulers. The waste stream from the County, and thus from the City, is expected to increase due to population and tourist increases brought about by the area's shoreline, natural attractions, and proximity to Grand Rapids.

The Saugatuck area is defined in the Solid Waste Plan and encompasses Saugatuck Township, Saugatuck and Douglas, as well as small portions of the adjoining communities. The Saugatuck area currently generates 11.3 tons of solid waste per day. In some outlying rural areas, 5-10% of the residential waste generated is disposed of or recycled on site. In urban areas, approximately 5% of residential waste is being recycled or scattered by individual efforts. The contributors to the solid waste stream by land use are shown in Table 6.3.

Table 6.4 shows the results of a study conducted by the Northeast Michigan Council of Governments (NEMCOG) in the early 1980's. The study involved counties with both urban and rural characteristics, much like the Saugatuck Township, Saugatuck and Douglas area. Solid waste generated has been broken down into specific categories. The numbers probably do not match the actual breakdown of

**TABLE 6.3**
**TONS GENERATED PER DAY BY LAND USE**

| SOURCE | QUANTITY (PER DAY) |
|---|---|
| Residential | **6.5** |
| Commercial | **2.8** |
| Industrial | **1.8** |
| Other | **0.7** |
| Not Collected | **-0.5** |
| NET TOTAL | **11.3** |

Source: Allegan County Solid Waste Plan

**TABLE 6.4**
**SOLID WASTE COMPOSITION**

| TYPE | POTSW * |
|---|---|
| **Combustible Wastes** | **Percentage (%)** |
| Paper | 44.8 |
| Plastics | 9.2 |
| Wood | 3.5 |
| Yard Wastes | 4.1 |
| Textiles | 4.2 |
| Food Wastes | 11.5 |
| Rubber | 2.2 |
| Misc. Organics | 3.0 |
| TOTALS | 82.5 |
| | |
| **Noncombustible Wastes** | |
| Glass | 5.3 |
| Ferrous | 6.6 |
| Aluminum | 0.8 |
| Other nonFerrous | 0.5 |
| Misc. Inorganics | 4.3 |
| TOTALS | 17.5 |

* Proportion of Total Solid Waste
Source: Allegan County Solid Waste Plan

**TABLE 6.5**
**PER CAPITA WASTE GENERATED**

| USE | QPE * (LBS. PER DAY) |
|---|---|
| Residential | 2.9 |
| Commercial | 5.75 |
| Industrial | 10.6 |
| Average Overall | 4.7 |

* Quantity Per Employee
Source: Allegan County Solid Waste Plan

solid waste components in the tri-community area, but give a rough estimate of the components.

Per capita waste generated from various land uses is shown in Table 6.5.

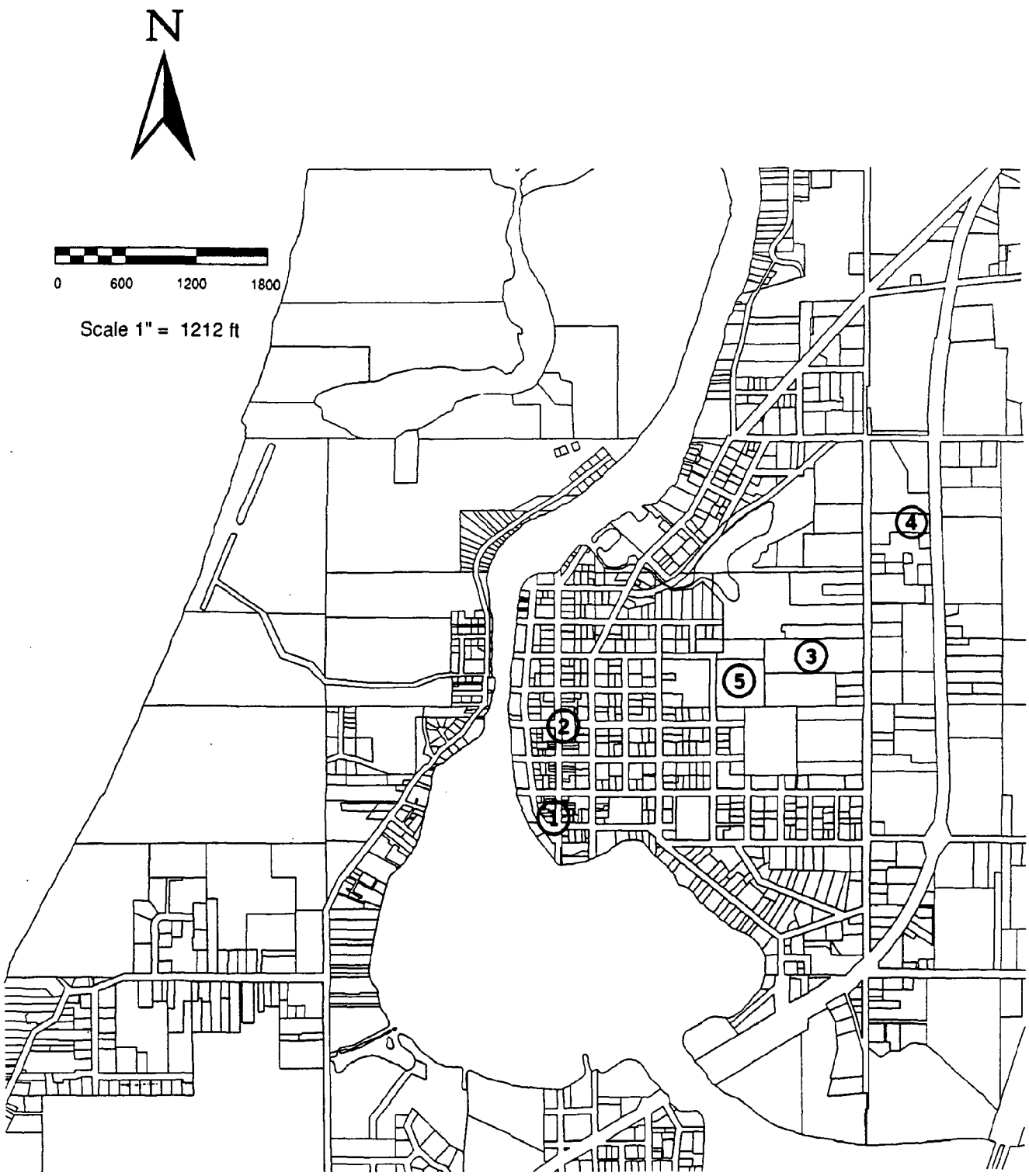
The Allegan County Solid Waste Plan projects that solid waste output for the Saugatuck area will increase by 32% by 2000 to 14.95 tons per day due to projected population increase.

The goals and objectives of the plan focus on reducing the waste stream through separation and recycling, using private haulers for waste collection, recovering energy from the solid waste stream and providing the public with opportunities to develop solutions for solid waste disposal problems. A recycling center is currently in operation on Blue Star Highway adjacent to I-196 and exit 41. The center is partially funded by Saugatuck, Douglas and Saugatuck Township and is very well used. Allegan County Resource Recovery maintains the facility, which collects newspapers, plastics, glass, aluminum and brown paper bags. Pickup of metal appliances and tires is also possible by contacting the center. The recycling center was started in 1984.

State regulations prohibit operation of a new landfill on:

- Land considered by the DNR to be a State recognized unique wildlife habitat.
- Land in the 100 year floodplain.
- Prime agricultural lands.
- A DNR designated and officially mapped wetland.
- So close to an historic or archaeological site that it can be reasonably expected to produce unduly disturbing or blighting influence with permanent negative effect.
- In a developed area where the density of adjacent houses or water wells could be reasonably expected to produce undue potential for groundwater contamination.

Due to the presence of wetlands in the City (Map 4.4), critical dune areas (Map 4.12), land in the 100 year floodplain (Map 4.3), and areas susceptible to groundwater contamination (Map 4.10), not much is left for potential landfill sites. Furthermore, most of those sites which may be environmentally suitable for landfills have already been developed. Thus it not possible for a landfill to be located within existing City boundaries.



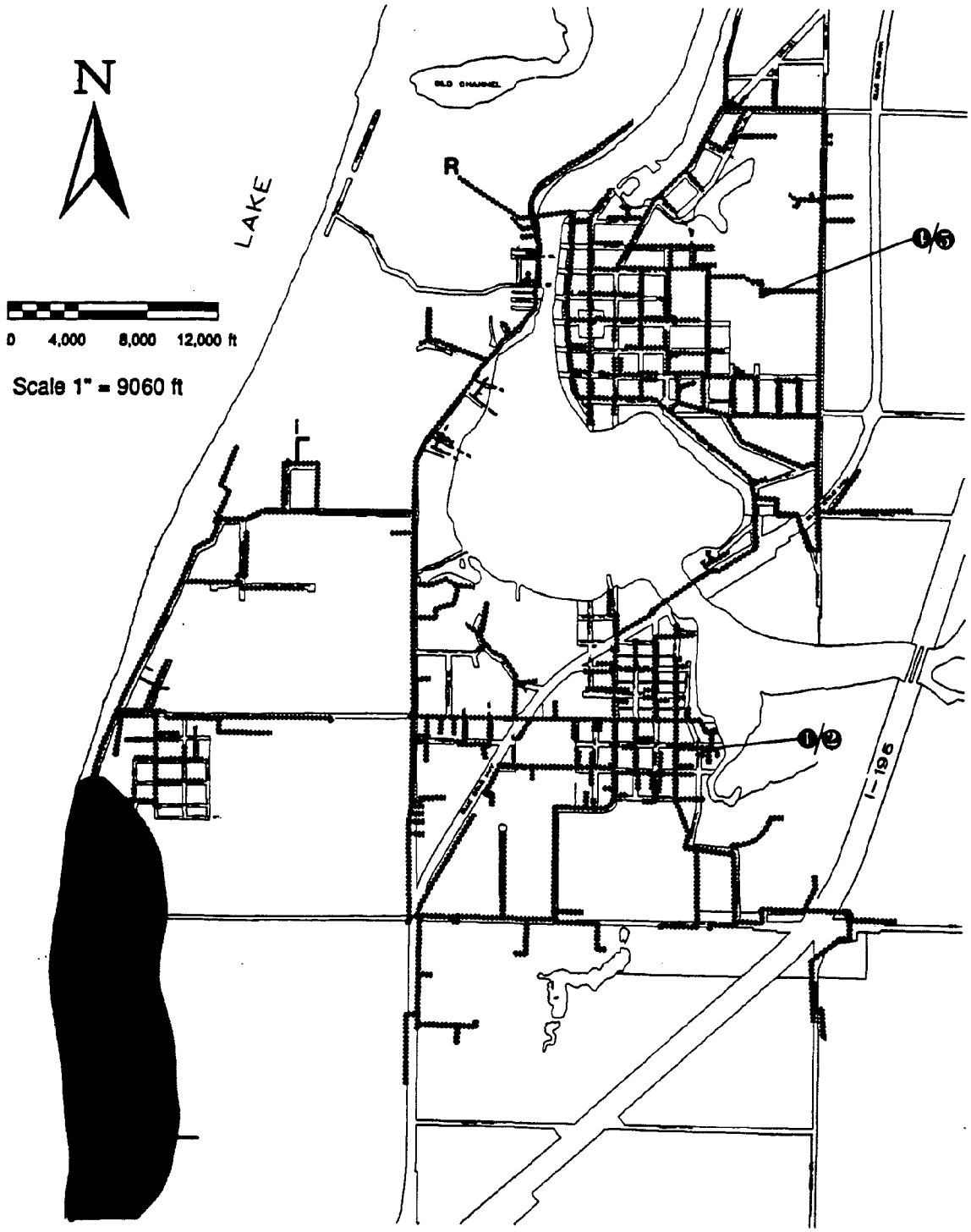

## MAP 6.1 PUBLIC FACILITIES

Saugatuck

1) City Hall 2) Public Restrooms 3) Waterwell 4) Fire Station 5) Saugatuck High School

August 1989

Planning & Zoning Center Inc, Lansing, MI




## MAP 6.2 WATER SYSTEM

Saugatuck

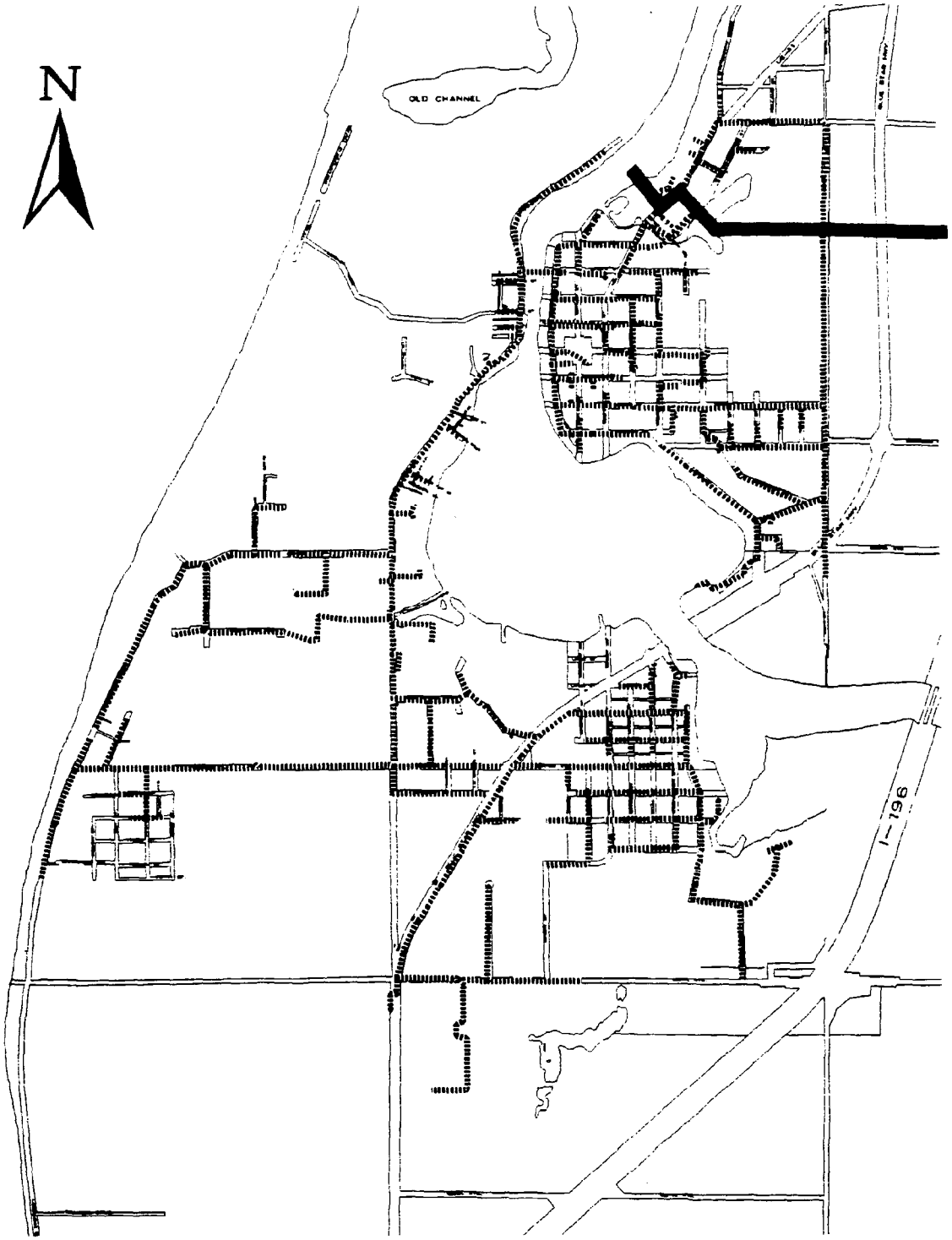
Water Mains

R Reservoir

Proposed Water Intake & Treatment area

Existing Well Locations

August 1989 DATA SOURCE: Williams & Works, Inc. Grand Rapids Planning & Zoning Center Inc, Lansing, MI



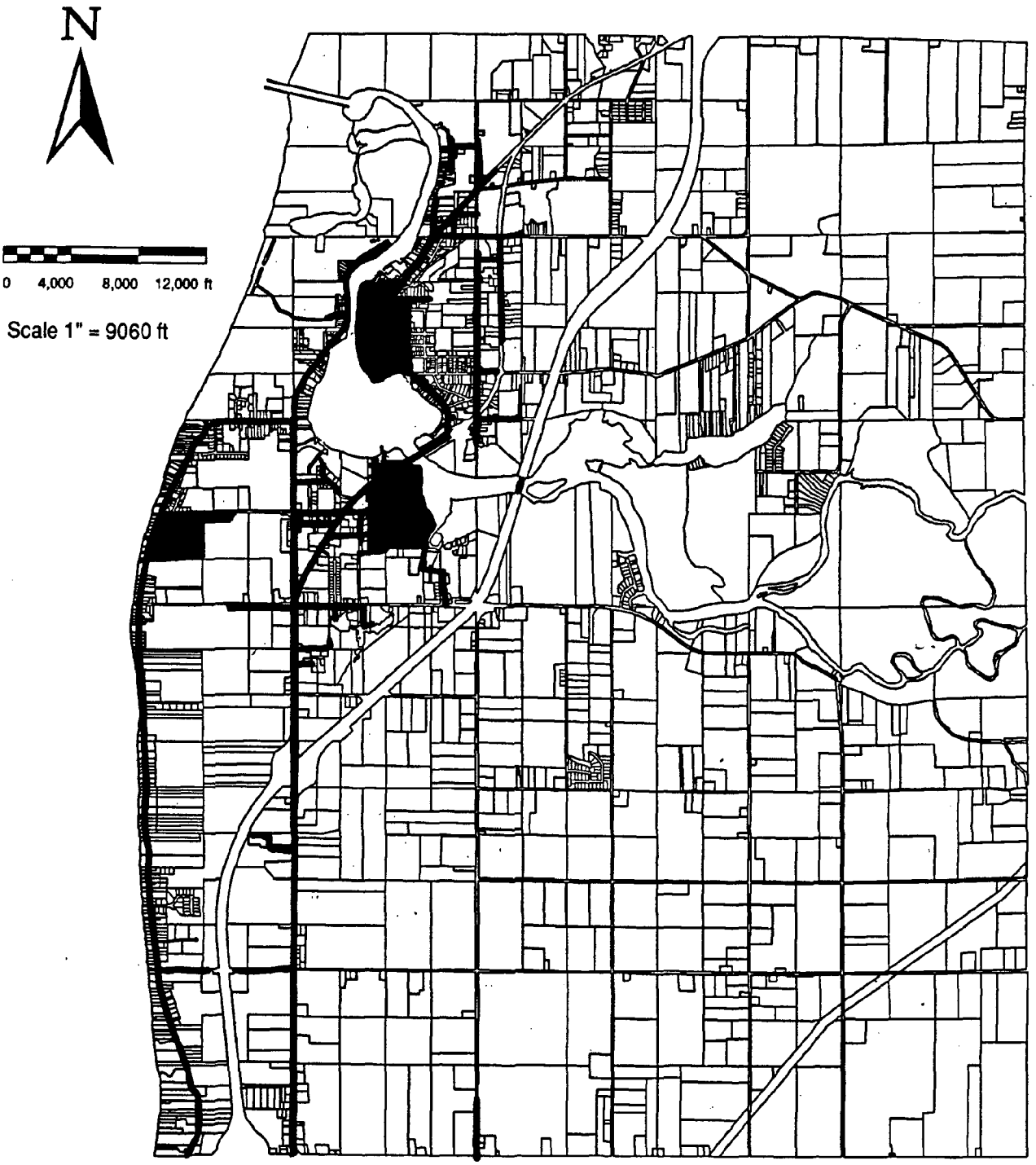

# MAP 6.3 SEWER SYSTEM

Saugatuck

Sewer Lines

Discharge Line

August 1989 DATA SOURCE: Williams & Works, Inc. Grand Rapids Planning & Zoning Center Inc, Lansing, MI




# MAP 6.4 GAS MAINS

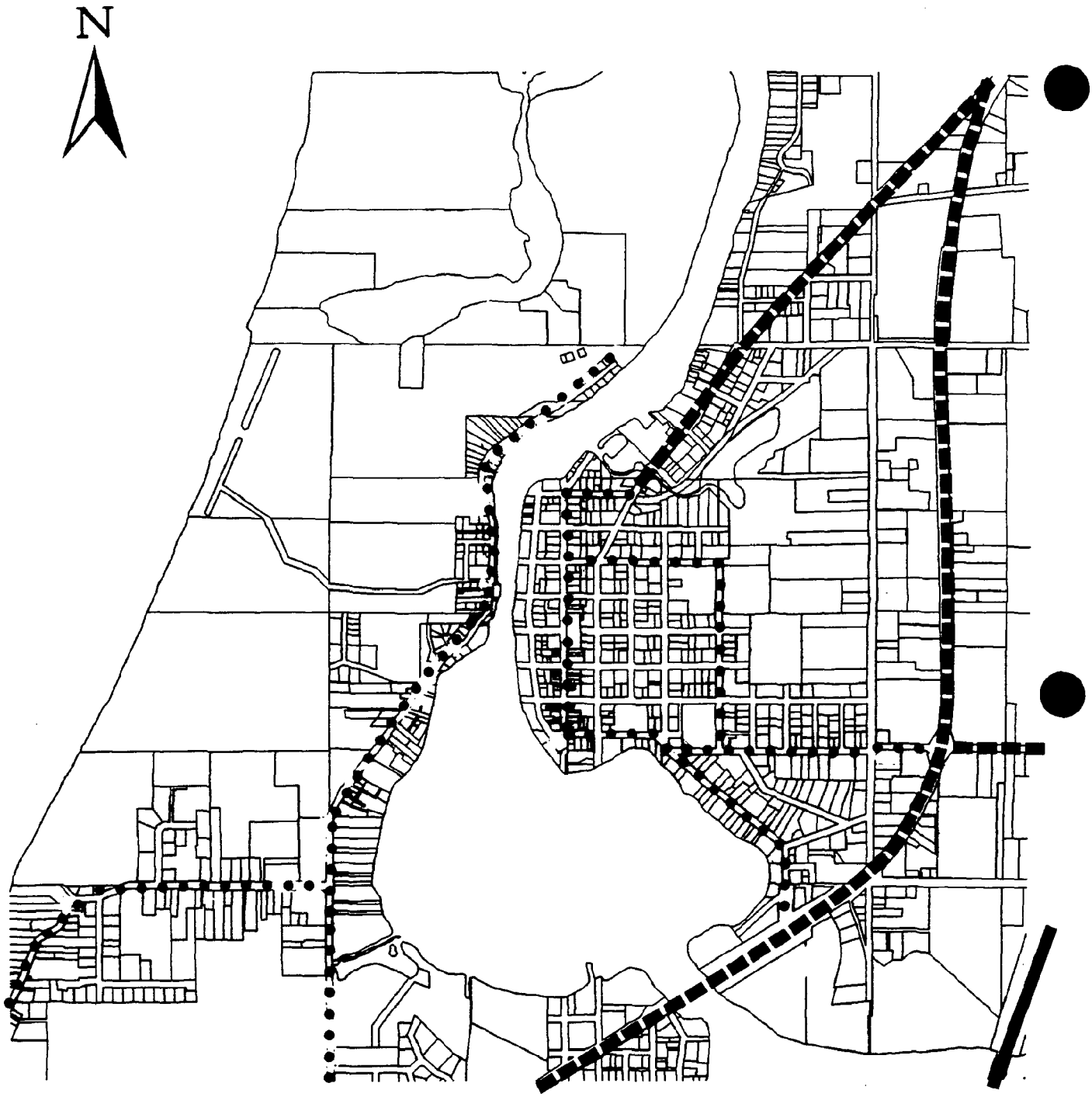
Saugatuck

Gas Mains

August 1989

SOURCE:Michigan Gas Utilities Company

Planning & Zoning Center Inc., Lansing,MI



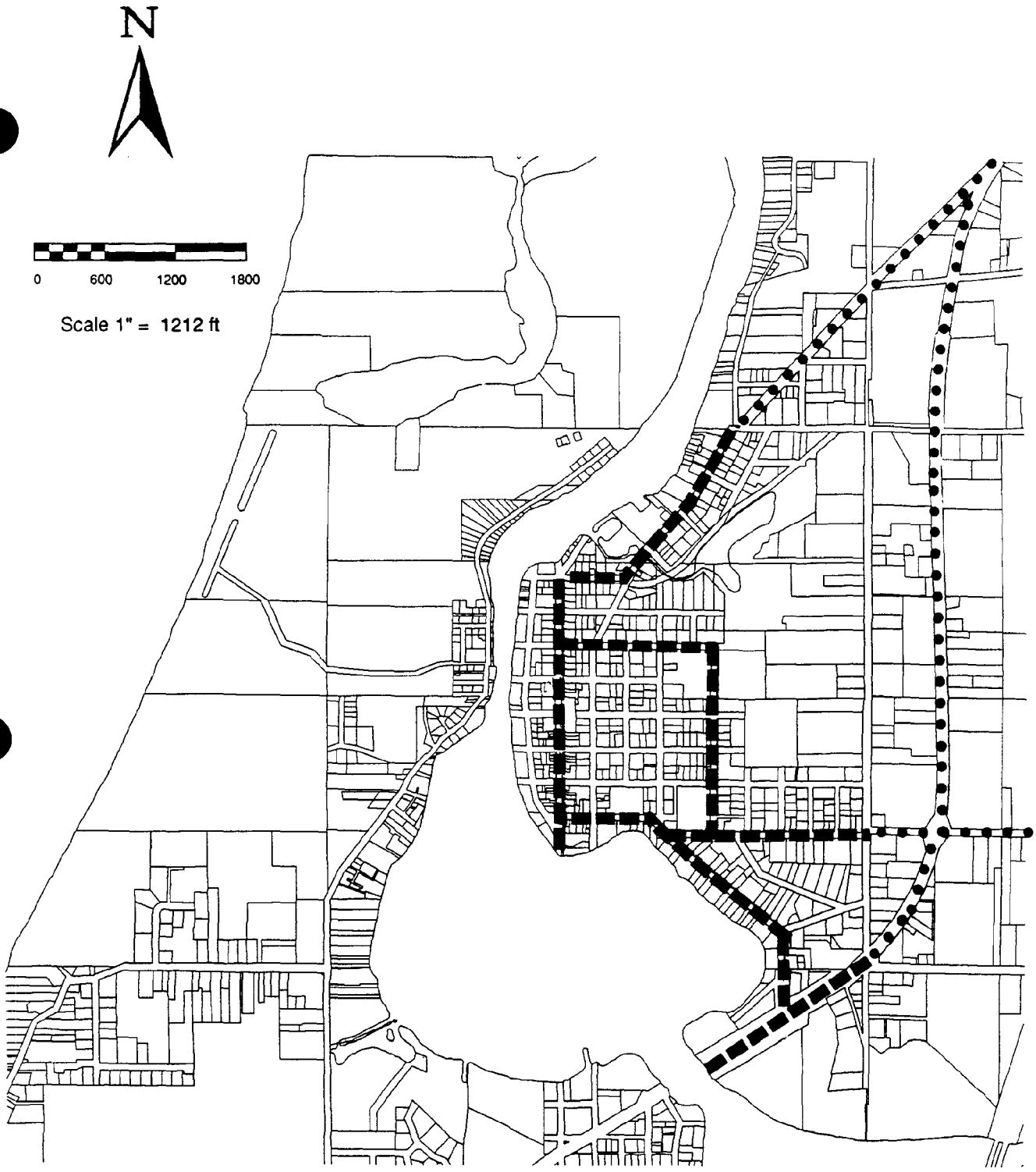

## MAP 6.5 STREET CLASSIFICATIONS

Saugatuck

- Regional Arterials
- Local Arterials
- Collectors
- Local Streets

August 1989 DATA SOURCE: PZC

Planning & Zoning Center Inc, Lansing, MI




# MAP 6.6 ACT 51 ROADS

Saugatuck

Major Street

County Primary

August 1989 DATA SOURCE: MDOT

Planning & Zoning Center Inc, Lansing, MI

# Chapter 7

# RECREATION AND OPEN SPACE

Parks, recreation, and open space are essential to the quality of life of area residents, and are an important component of the local tourist economy. They enhance property values, as well as physical and psychological well-being. Parks and open space define the character of each area community, create the scenic atmosphere which stimulates tourism, and provide the basis for popular local leisure activities.

Recreation needs are regional in nature and plans must view local recreational offerings as part of a regional recreational system. Local governments, schools, private entrepreneurs, the County, and the State each have a central role in serving local and regional recreational needs.

## ADMINISTRATIVE STRUCTURE

The City of Saugatuck's parks are maintained by the City through its Department of Public Works. Park planning is done by a committee of three City Council members, who are overseen by the City Manager and the full Council.

Douglas parks are maintained by the Village's Department of Public Works under the Village Council's Parks and Buildings Committee, which reports to the Village Council.

The Township formed a Township Park and Recreation Commission in November 1970, which is an independent governmental entity charged with provision of parks and recreational programs to area citizens. The Commission has six elected members, and is staffed by a part-time maintenance person. Representatives from both Douglas and the Township may be elected to sit on the Commission. The Commission completed the Saugatuck - Douglas Area Parks and Recreation Plan in February of 1985 and updates the plan periodically. Revision of the plan is currently underway.

Allegan County prepares and periodically updates a countywide parks and recreation plan. County parks are administered by a ten-member County Parks and Recreation Commission whose members include the Chairs of the County Road Commission, the County Planning Commission, the County Drain commissioner, two County Commissioners, and five members appointed by the County Board of Commissioners. The Commission meets on the first Monday of each month. It sometimes provides financial assistance for local recreational efforts which advance the County Recreation Plan.

## AREAWIDE RECREATIONAL OPPORTUNITIES

Recreation can be separated into four main categories: physical, social, cognitive, and environmentally related recreation. The former category focuses on sports and various physical activities. Social recreation looks at social interaction. Cognitive recreation deals with cultural, educational, creative, and aesthetic activities. Environmentally related recreation requires the natural environment as the setting or focus for activity. Each of these categories in some way relates to the others.

### *Physical Recreation*

Intramural athletics are popular for children and young adults in the area and are offered through the summer recreation program. Activities include softball, baseball, rocket football, volleyball, bowling and others (see Table 7.1). The elementary school has a newly expanded playground and Kid's Stuff Park. Playgrounds are also found at River Bluff,

**TABLE 7.1**
**SUMMER RECREATION PROGRAMS**

| ACTIVITY | 1989 PARTICIPANTS |
|---|---|
| T-ball for kids | 40 |
| Little League | 46 |
| Pony League | 19 |
| Slow-pitch softball | 10-18 |
| Fast pitch softball (girls) | 27 |
| Semi-competitive softball (boys) | 15-20 |
| Rocket football | 57 |
| Swimming: beginner, advanced beginner, intermediate, swimmer, basic rescue & advanced lifesaving | 66 |

**TABLE 7.2**
**INVENTORY OF OUTDOOR RECREATION**

| Location | Size (acres) | Ball Diamonds | Tennis Courts | Picnic Tables & Grills | Playground | Parking Area | Trails | Boat Launching | Swimming | Rest Room | Shelter Buildings | Natural Areas | Water Access | Changing Rooms | Concession Stand | Skating | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. River Bluff | 27 | | | X | X | X | X | | | X | | X | X | | | | |
| 2. Sundown | .4 | | | X | X | | | | | | | | | | | | |
| 3. Amalanchier | 4 | | | | | | X | | | | | X | X | | | | |
| 4. Douglas Beach | 1.4 | | | | | X | | | X | X | | | X | | | | |
| 5. H. Beery Field | 1.2 | X | X | | X | | | | | X | | | | | | X | |
| 6. Schultz Park | 20 | X | X | X | X | X | X | X | | X | X | | X | | | | |
| 7. Union St. Launch | - | | | | | | | X | | | | | | | X | | |
| 8. Center St. Launch | - | | | | | | | X | | | | | | | | | |
| 10. Village Square | 2.5 | | X | | X | | | | | X | | | | | | X | |
| 11. Wicks Park | .5 | | | | | | | | | X | | | X | | | | X |
| 12. Willow Park | - | | | X | | | | | | | | | | | | | |
| 13. Cook Park | .5 | | | X | | | | | | | | | | | | | X |
| 14. Spear St. Launch | - | | | | | | | X | | | | | | | | | |
| 15. Mt. Baldhead | 51 | | | X | | X | X | | | X | X | X | | | | | X |
| 16. Oval Beach | 36 | | | X | | X | X | | X | X | | X | | | X | | |
| 17. Tallmage Woods | 60* | | | | | | X | | | | | X | | | | | |
| 18. Old "Airport" | 154 | | | | | | | | | | | | | | | | X |
| 19. Elementary Sch. | 8.6 | X | | | X | | | | | | | | | | | | |
| 20. High School | | | X | | | X | | | | | | | | | | | X |
| 21. St. Peter's | | | | | | | | | | | | | | | | | X |
| 22. 63rd St. Launch | - | | | | | | | X | | | | | | | | | |
| 23. West Wind KOA | 12 | X | X | X | X | X | | | X | | | | X | | | | X |
| 24. Blue Star Hiway Roadside Park | | | | X | | | | | | | | | | | | | |
| 25. Riverside Park | | | | | | | | | | | | | | | | | |

Sundown, Schultz, and Beery Parks and the Douglas Village Square. Aerobic fitness classes are offered at the High school. Walking, hiking, biking, boating, golfing, swimming, and cross country skiing are also popular, and enjoyed by a wide range of age groups.

### *Social Recreation*

A variety of local clubs and activities provide social recreation for people of all ages. Festivals, community education programs, and intramural sports provide an opportunity to socialize. Senior citizens activities are organized through the New Day Senior Citizens Club of Douglas, the High School, the Masonic Hall, and various area clubs.

### *Cognitive Recreation*

The tri-community area is rich in cognitive recreational pursuits. Festivals, art workshops, local theater, historic districts, an archaeological site, summer day camp, and community education programs provide cultural, educational, and aesthetic enjoyment. The Saugatuck Women's Club, Rubenstein Music Club, the Oxbow, Douglas Garden Club, and the Douglas Art Club are among the local clubs which organize cultural activities.

### *Environmentally Related Recreation*

Area lakes, the Kalamazoo River, and state and local parks provide area citizens with unique outdoor recreation opportunities. They provide a location for a variety of outdoor activities including boating, fishing, swimming, nature study, camping, hiking, cross country skiing, and nature walks. These areas also serve the cognitive needs of area citizens and tourists by their scenic beauty and relaxing affect. In fact, the most valued attribute of area water bodies and open space to area citizens, as identified in the 1988 Public Opinion Survey, is not physical recreation, but the scenic view they provide.

## RECREATION INVENTORY

Map 7.1 identifies parks and recreational facilities in the tri-community area. Table 7.2 contains an inventory of these outdoor recreation facilities. There are also two eighteen hole and one nine hole golf courses in the area. This is much higher than typical for such a small population (the standard is 1 golf course per 50,000 people), and reflects the impact of tourism on local recreational facilities. A discussion of the size, condition, and planned improvements for selected area parks is shown in Table 7.3.

Proposed recreation projects contained in the Saugatuck-Douglas Recreation Plan are listed in Table 7.4. Table 7.5 includes a schedule of other planned park and open space acquisitions and improvements.

## RECREATIONAL NEEDS AND USAGE

The 1988 Public Opinion Survey highlighted those recreational facilities which residents feel are inadequate in the tri-community area. Table 7.6 lists these by jurisdiction.

### *Non-Motorized Trails and Bike Paths*

Residents placed highest priority on additional bike paths, cross country skiing routes, and hiking trails. These needs are currently served by non-motorized trails in the Oval Beach/Mt. Baldhead area. The 1985 Saugatuck - Douglas Parks and Recreation Plan, identified bicycle trails as a high priority and prepared a schedule of capital improvements to achieve this objective. These improvements have not been implemented to date.

In 1984, the Saugatuck Township Park and Recreation Commission developed a list of recommended bike paths in the tri-community area. Those recommended for Saugatuck are shown below in order of priority:

- Park Streets from Campbell to Perryman.
- Oval Beach road.

Those recommended for Douglas are shown below in order of priority:

- Center Street from Tara to Lake Shore Drive.
- Ferry Street from Center to Campbell Road.
- Lake Shore Drive from Campbell Road to the Village limits.

A path on Blue Star Highway from the bridge to Center Street, which was the Village's first priority, has already been completed.

Those bike paths recommended in order of priority for Saugatuck Township are:

- Lake Shore Drive from 130th Avenue to M-89.
- Holland Streets from Saugatuck to the Y.
- Old Allegan Road from Blue Star Highway to 60th St.
- Blue Star Highway from 129th Ave. to M-89.

The regional bike path system would connect with Saugatuck's chain link ferry to afford bicyclists east/west access. This connection runs down Holland Street and across Francis Street to the waterfront and will be served by inner city streets, without the need for additional right of way. At this juncture, bicyclists may ride the chain link ferry to Saugatuck's eastern border. Once on Saugatuck's eastern side, bicyclists could follow Saugatuck's proposed bike path system down through Douglas and south out of the Township. Bike path right of way would also extend north to Goshorn Lake along Washington Road, thereby connecting with Laketown Township. Another future extension could extend the system east along Old Allegan Road into Manlius Township. This is a scenic route, although somewhat hilly.

Bicyclists wishing to pass through Saugatuck and on south through Douglas would need additional right of way from Lake Street to the bridge, thereby connecting with the Douglas bike path network. Douglas in turn would extend its bike path south on Blue Star Highway to connect with the Township system.

Map 7.2 shows this proposed regional bike path network.

### *Waterfront Open Space*

A survey of waterfront usage revealed that the most popular waterfront activity is viewing. The second most popular use varied by water-

**TABLE 7.3**
**PARKLAND INVENTORY**

| NAME OF PARK | LOCATION | USES | SIZE | CONDITION | PLANNED IMPROVEMENTS TYPE/YEAR |
|---|---|---|---|---|---|
| ***Douglas*** | | | | | |
| Beery Field | Center & Main Sts. | baseball, playground, picnic | pressbox-220 sq.ft., dugouts-350 sq.ft., land-52,000 sq.ft. 1 acre | pressbox & washroom poor; otherwise good | None |
| Douglas Beach | Lakeshore Dr. | public beach & picnic | beach-36,400 sq.ft. nearly 1 acre, bathhouse-280 sq.ft. | Fair | None |
| Schultz | 130th & Kalamazoo River | softball, picnic, playground, launch ramp | pavillion-1326 sq.ft., land- 20 acres | Good | Acquisition/'89 |
| Union St. Launch Ramp | Union St. at Kal. River | launch ramp, picnic area | 66'x120' | Good | None |
| ***Saug. Twp.*** | | | | | |
| River Bluff | Kal. River above I-196 bridge; access from Old Allegan Rd. | hiking, picnic, boaters stop, nature study, swinging & sandbox | 27 acres | newly installed entry road & picnic area. New dock & picnic shelter | pad for dumpster/'89, more flowers/'89, toilet improvements/1990-92 |
| Sundown | Lake MI Bluff at 126th Ave. | picnics, watching lakes & sunsets, scenic turnout | 66'x150' | Very poor | new fence; needs landscaping/1989-1992 |
| Blue Star | Blue Star Hwy. south of Skyline Restaurant | picnics, resting for travelers | 30'x200' | new flowers; needs new bollards & fence repairs | fence work/1989, bollards/1989-90 |
| Center St. Park | Eastern end of Center at Kalamazoo River | canoe launching, picnics, scenic viewing | 3 acres | Poor | additional docking, public restrooms, gazebo |
| ***Saugatuck*** | | | | | |
| Village Square | Butler & Main Streets | tennis courts, drinking fountain, playground, benches, restrooms | 2.5 acres | Good | |
| Wicks Park | Waterfront between Main & Mary Streets | bandstand, boardwalk, benches, fishing, restrooms | 1/2 acre approx. | Good | |
| Willow Park | Waterfront at Butler & Lucy | viewing area, benches | 132 ft | Good | |
| Cook Park | Waterfront on Water Street | picnic tables | 132 ft. | Good | |
| Boat Ramp | Spear Street streetend | boat launch | 66 ft. | Good | |

**TABLE 7.3** (continued)
**PARKLAND INVENTORY**

| NAME OF PARK | LOCATION | USES | SIZE | CONDITION | PLANNED IMPROVEMENTS TYPE/YEAR |
|---|---|---|---|---|---|
| Mt. Baldhead Park | Park Street | picnic shelter, tables, restrooms, hiking trails, parking, stairway to observation deck on top of dune, two observation decks on river | 51 acres | Good | |
| Oval Beach Park | Lake Michigan | beach house, concession stand, parking, picnic area, BBQ grills, viewing deck, stairs to beach, observation deck, nature trails | 36 acres | Good | new concession stand & restrooms/1990 |
| Tallmadge Woods | | current use restricted | 100 acres | Good | |

body. Swimming was the primary use of Lake Michigan, powerboating for Lake Kalamazoo and Silver Lake (which also is popular for fishing), and nature study was the most popular for Kalamazoo River due to its large connecting wetlands and wide array of wildlife– including a large population of Great Blue Herons which have established a rookery in the area.

In accordance with usage, the overwhelming majority of residents in Saugatuck cited preservation of existing waterfront open space and increased access to the waterfront as their highest waterfront need. Acquisition of land and provision of access to Lake Michigan was given highest priority for the waterfront. Open space along Lake Kalamazoo and the Kalamazoo River were also given high priority by the majority of respondents, although the response was higher in the Village (64-69%) and Township (62%) than in the City of Saugatuck (48-50%). A large number of respondents also called for additional boat launching facilities.

### *Parks*

Respondents were asked how frequently they used various local parks and the overwhelming majority responded "never". Oval Beach is used most frequently of the area parks by residents of each jurisdiction, and is used most heavily by City residents. Douglas Beach is also frequently used. Wicks, Schultz, and Beery park are more frequently used by City and Village residents, than those in the Township.

It is important to note that survey responses reflect the usage characteristics of older adults. The average age of survey respondents was 54 to 56 years old. As the age of respondents increases, park usage tends to decrease– especially for parks which specialize in active sports. This reveals the need to orient recreation plans to the recreational needs of older adults. Thus, bike paths, waterfront open space/access, hiking trails, and cross country ski trails should probably receive precedence in future recreation enhancement projects, over more active park facilities like ball diamonds.

### *Senior Citizens Center*

Senior citizens in the area have been lobbying for a senior citizens center to serve the social and recreational needs of the area's elderly population. Saugatuck's survey results do not reflect support for a senior center. Only 25% of City residents called for a senior center– surprising, given the high proportion of seniors in the City's resident population.

**TABLE 7.4**

**PROPOSED RECREATION PROJECTS**
**TRI-COMMUNITY AREA**

| PROPOSED PROJECT | LOCATION |
|---|---|
| **VERY HIGH PRIORITY** | |
| Willow Park preservation and improvement | Downtown Saugatuck on the river |
| Acquire extensive land areas | Lake Michigan Shoreline |
| New dug outs - football field | Saugatuck High School |
| Renovation of playground equipment | Douglas Elementary School |
| Convert weight room to storage & coach's offices | Saugatuck High School |
| Remodel Wicks Park restrooms | On river in Saugatuck |
| Acquire land to access to Oxbow Lagoon | North of Oval Beach Park |
| **HIGH PRIORITY** | |
| Acquire and improve land for marina and park | Douglas riverfront near bridge |
| Boat launching facility | City of Saugatuck |
| Develop bicycle trails | Entire area |
| Purchase park parcel on hill | In Saugatuck |
| Acquire additional land for River Bluff Park | Adjacent to River Bluff in Township |
| Construct additional public restrooms | Downtown Saugatuck |
| Clear and develop Moore's Creek | Near Amalanchier Park in Saugatuck Township |
| Rehabilitate tennis courts | Village Square Park - Saugatuck |
| Update Village Square Park | Village Square Park - Saugatuck |
| Expand and improve Howard Schultz Park | Village of Douglas |
| Riverside Park equipment & improvements | Village of Douglas |
| **MEDIUM** | |
| Expand underground sprinkling system | Village Square Park - Saugatuck |
| Acquire land and develop tot lots | All areas |
| Develop archery range | River Bluff Park - Township |
| Beach House rehabilitation | Saugatuck Oval Beach |
| Acquire land for neighborhood park | Campbell Road area - Saugatuck & Douglas |
| Construct concession stand | Saugatuck High School Athletic Field |
| **LOW** | |
| Teen Recreation Center | Downtown Saugatuck |
| Install lighting for tennis courts | Schultz Park |
| Develop non-motorized trail | Schultz Park |
| Lighting for tennis courts | Village Square Park - Saugatuck |
| Construct additional locker rooms | Saugatuck High School |

Source: Saugatuck - Douglas Area Parks and Recreation Plan, Feb. 1985.

**RECREATION AND LOCAL SPENDING**

In terms of priorities for spending current tax dollars, 42-48% of respondents in the tri-community area felt that parks and recreation are a high priority. Waterfront improvement was rated high by City respondents. Senior programs were given low local spending priority in the City, despite the high average age of respondents.

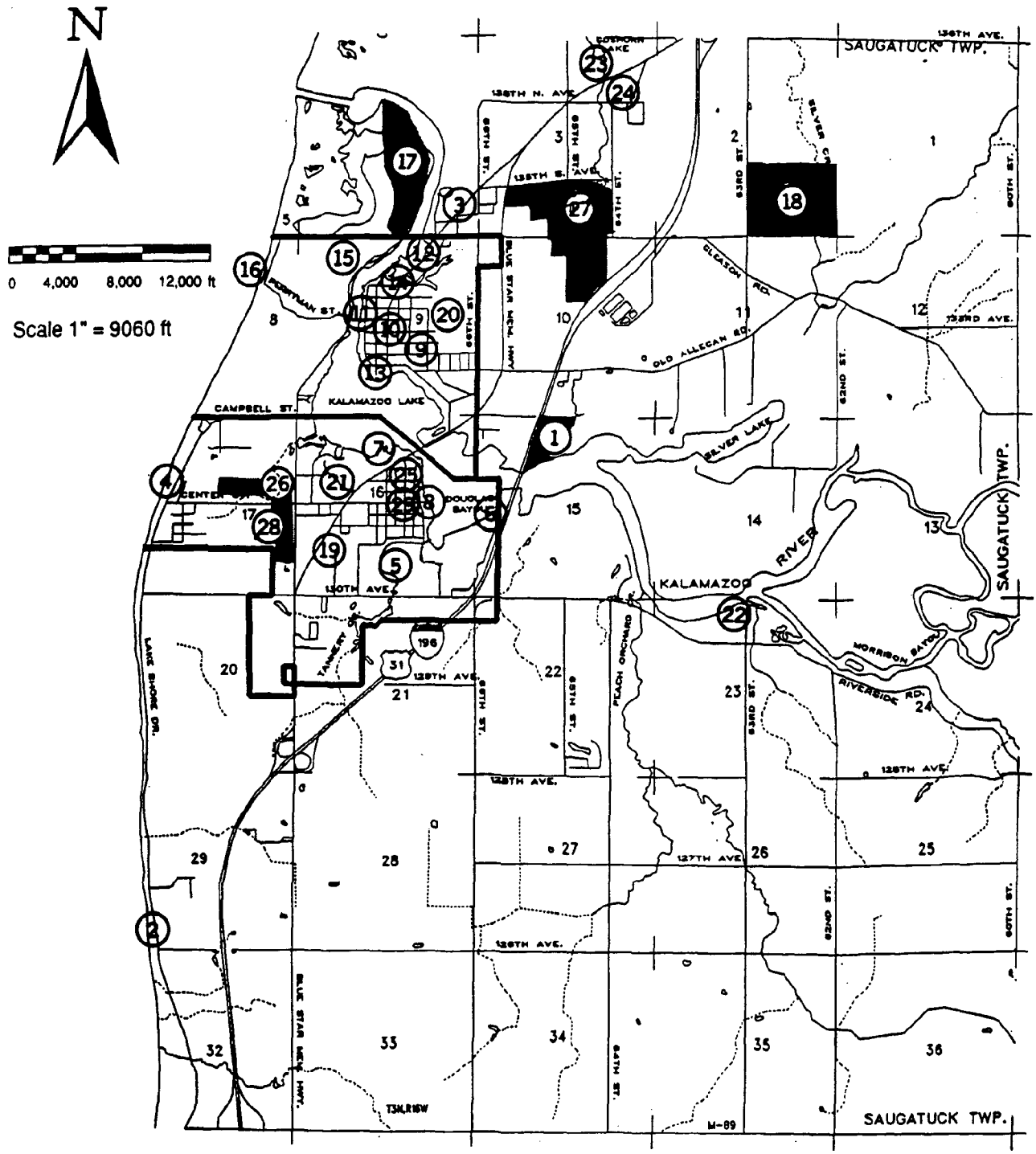
Although they would like to have them, most respondents would not support a community recreation center, a senior center, or a community pool if it meant an increase in general property taxes.

**TABLE 7.5**
**PLANNED ACQUISITIONS/IMPROVEMENTS TO PARKS AND OPEN SPACES**

| NAME | LOCATION | USE | SIZE | CONDITION | ACQUISITION COST ($) | IMPROVEMENT FINANCING |
|---|---|---|---|---|---|---|
| Esther McSic property | East side Union St. - Kal. Lake, North of Blue Star (Douglas) | Public open space | 124,000 sq.ft. (portion under water) vacant | Marshy | 185,000 | DNR Land Trust |
| Ruth McNamara property | Land locked end of Schultz Park (Douglas) | Park | 132,000 sq.ft. (vacant) | Dry | NA | NA |
| Vacant Lot | Blue Star & Main St. (Douglas) | Future park | land 18,000 sq.ft.; nearly 1/2 acres | Dry | 65,000 | NA |
| Old Saugatuck Airport | SE 1/4 Section 2 (Saugatuck) | Currently forestry management, possible future recreation | 154 acres | | | |

**TABLE 7.6**
**RECREATION NEEDS IN THE TRI-COMMUNITY AREA**
**1988 PUBLIC OPINION SURVEY**

| CITY | VILLAGE | TOWNSHIP |
|---|---|---|
| Bike paths (68%) | Lake MI open space (70%) | Lake MI open space (67%) |
| Hiking trails (62%) | Lake Kal. open space (69%) | Bike paths (64%) |
| Cross-country ski trails (62%) | Bike paths (67%) | Lake Kal. open space (62%) |
| Lake MI open space (61%) | Kal. River open space (64%) | Kal. River open space (62%) |
| Lake Kal. open space (50%) | Parks (50%) | Cross-country ski trails (60%) |

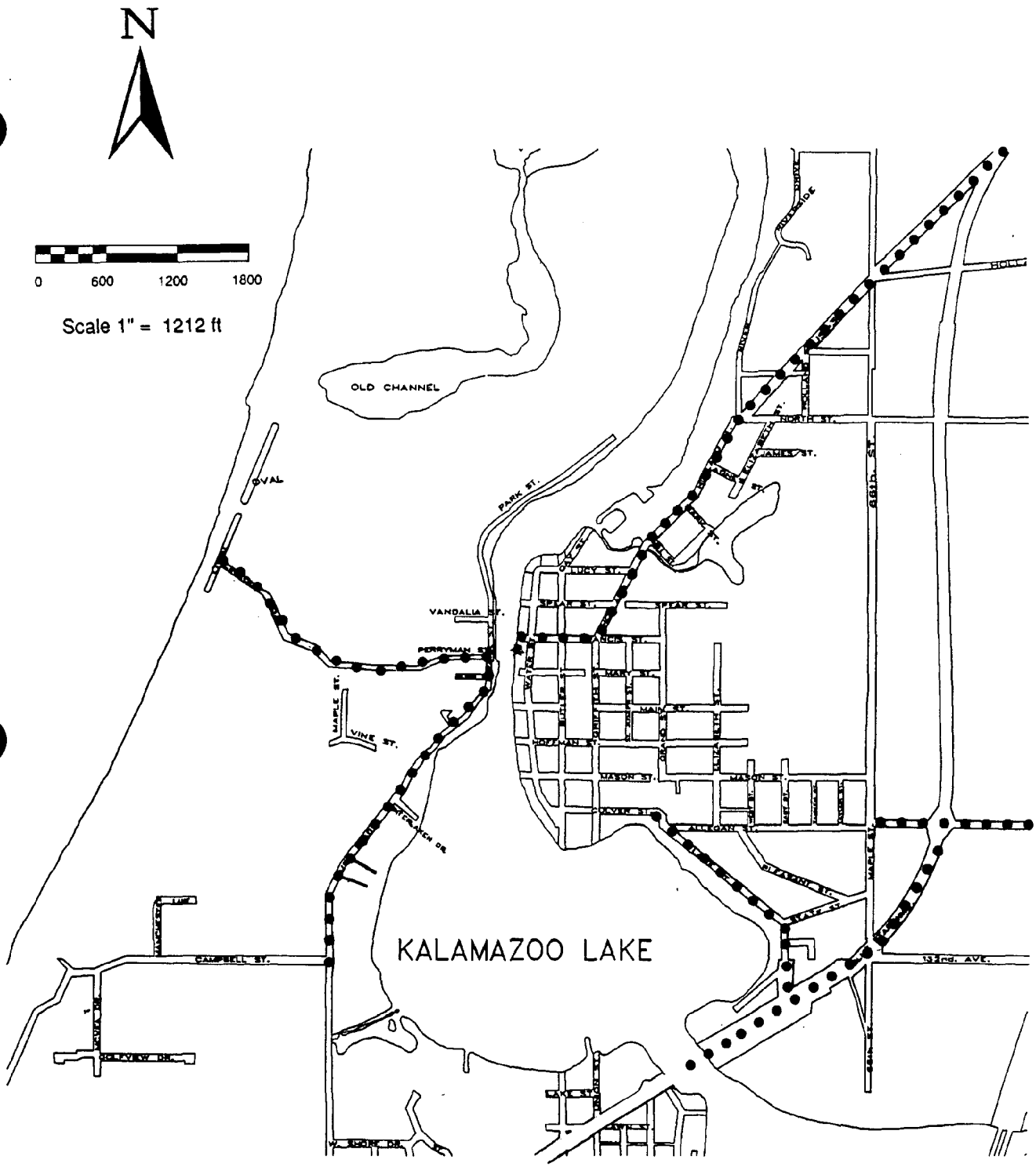



# MAP 7.1 OUTDOOR RECREATION SITES Saugatuck

1) - 25) See Chapter 7, Table 7.2

26) West Shore Golf Course 27) Clearbook Golf Course 28) Mi-Ro Golfcourse 29) Center Street

August 1989 DATA SOURCE:Saug. - Doug. Parks & Rec. Plan, 1985 Planning & Zoning Center Inc, Lansing, MI




## MAP 7.2 PROPOSED BIKE PATHS

Saugatuck

Proposed Bike Paths

Chain Link Ferry

August 1989 DATA SOURCE: Saugatuck Township Park and Recreation Commission Planning & Zoning Center Inc, Lansing, MI

# Chapter 8

# WATERFRONT

Saugatuck was the first settlement in Allegan County. Its natural protected harbor along the Kalamazoo River and proximity to Lake Michigan gave it a ready means of water transport—essential to the commerce of the day. Throughout its history, land use activities along the Lake Michigan shoreline and the riverfront have continued to dominate the economic life of the tri-community area. Lumbering, boat building, basket making, fruit transport, and even large Great Lakes passenger boats have, at different times, relied upon the River connection. Tourists have always been attracted to the area, but tourism is now the number one economic activity. Today's waterfront activities are dominated by tourist and pleasure craft needs, especially sailboats, powerboats, charter fishing boats and other tourist boats. Consequently, how the waterfront is used will be of crucial importance to the future of the tri-community area.

The primary issues concerning proper future use of the waterfront involve competition between economic development and environmental protection. Waterfront lands represent the highest value lands in the tri-community area, and local officials are therefore concerned about the potential tax base associated with use of waterfront lands. In order to finance the service needs of local residents, the tri-communities must balance taxable and nontaxable land uses. This presents a dilemma. Although waterfront lands have high revenue generating potential, a major attraction of both the Lake Michigan and Kalamazoo River waterfronts is their scenic, natural shorelines composed of forested sand dunes and large wetland areas. Should these natural areas be greatly damaged or destroyed through inappropriate development, then the *"goose that laid the golden egg"* will be dead.

It is essential that the natural beauty of the waterfront be maintained along the Lake Michigan shoreline, the Kalamazoo River from the channel to Saugatuck, and from the Blue Star Highway bridge inland. Limited additional development along the waterfront on Lake Kalamazoo and the Douglas side of the bayou east of Blue Star Highway may be both desirable and necessary. However, such development must be undertaken carefully to maintain the delicate balance between economic development and environmental protection.

It is both necessary and possible to manage the waterfront for a variety of purposes. Yet it is always difficult to manage for multiple uses. Some individuals value land management to retain the necessary habitat for birds, fish and wildlife. Others feel it should be managed to maximize surface water use, or for intensive waterfront dependent activities like ship building or power generation. Based on some of the technical data presented below, existing use information, citizen opinions, and the goals and objectives presented at the beginning of this Plan, the waterfront in the tri-community area can, and should, be managed to accommodate a wide range of land uses and activities.

This Plan seeks to define a balance between competing uses. It places protection of the natural environment as first and foremost in making future land use decisions along the Lake Michigan and Kalamazoo River waterfronts. The ultimate goal is to minimize disruption of the natural environment so that new development is in harmony with the environment, rather than in conflict with it. Some destruction of the limited remaining wetland areas along Lake Kalamazoo is only justified where the public benefits of particular projects are very great (e.g. a public marina or additional public access to the waterfront).

**Watersheds of the Kalamazoo River Basin**

The Kalamazoo River extends from south of Homer in Hillsdale and Jackson Counties to its outlet at Lake Michigan in Saugatuck Township (see Figure 4.1). With the exception of lands adjoining Lake Michigan (which drain directly into the Lake) and a small area in the southeast corner of Saugatuck Township, all land in the tri-community area is part of the Kalamazoo River Basin.

Eight small watershed areas lie within the tri-community area and discharge into Lake Michigan via the Kalamazoo River (see Map 8.1). These include Goshorn, Peach Orchard, Tan-

nery, Silver and "Cemetery" Creeks, as well as the Morrison Bayou at the eastern end of the Kalamazoo River as it enters the Township. Most of Douglas and Saugatuck also drain separately into the Kalamazoo River and Lake Kalamazoo. Slopes in the area are generally less than 10 percent though locally they may be in excess of 20 percent. Runoff erosion is taking place in the highlands, contributing sediment to back-swamp areas and Lake Michigan.

Monthly (exceedance) flows for the Kalamazoo River, based on a 1649 square mile drainage area near Fennville (#0410B500, T2n, R14W, NE 1/4 Sec 5), were averaged from measurements taken between 1929 to 1985 by the Hydrologic Engineering Section, Land and Water Management Division, MDNR. Estimates based on these measurements were then prepared for the larger drainage area of 2060 square miles at the mouth of the Kalamazoo River (T3N, R16W, Sec 4, Saugatuck Township).

Ninety-five percent and fifty percent exceedance flows are shown in Table 8.1. These are flows exceeded 95% or 50% of the time. The lowest 95% exceedance flow in Fennville (nearly drought level) was measured during August at 410 cfs, and is estimated to be 520 cfs at the mouth of the Kalamazoo River. The 50% exceedance flow in Fennville ranged from a low of 860 cfs during the summer months to 2010 cfs during April. Corresponding estimates for the mouth of the Kalamazoo River ranged from 1070 cfs during the summer months to 2510 cfs during April.

The 100 year discharge is estimated at 15,400 cfs at the mouth of the Kalamazoo River, and 12,500 cfs at the Fennville gage.

**TABLE 8.1**
**KALAMAZOO RIVER**
**EXCEEDANCE FLOWS (1929-85)**
**MONTHLY AVERAGE**
**CUBIC FT/SECOND**

| | FENNVILLE | | RIVER MOUTH | |
|---|---|---|---|---|
| | 50% | 95% | 50% | 95% |
| January | 1350 | 710 | 1690 | 890 |
| February | 1400 | 790 | 1750 | 990 |
| March | 1950 | 1010 | 2430 | 1260 |
| April | 2010 | 1040 | 2510 | 1300 |
| May | 1600 | 830 | 2000 | 1040 |
| June | 1250 | 630 | 1560 | 790 |
| July | 970 | 480 | 1210 | 600 |
| August | 860 | 410 | 1070 | 520 |
| September | 860 | 480 | 1070 | 600 |
| October | 980 | 520 | 1220 | 650 |
| November | 1210 | 650 | 1510 | 810 |
| December | 1300 | 750 | 1620 | 940 |

Source: Hydrologic Engineering Section, Land and Water Resources Division, Michigan Department of Natural Resources.

**PRIMARY ECOSYSTEMS**

The tri-community area has three basic ecosystems, two of which parallel the waterfront. The first ecosystem is comprised of hardwoods holding the sand dunes in place along the Lake Michigan shoreline. These woodlots are inhabited by small game such as fox squirrels, rabbits, raccoons, deer, wild turkey, and opossums. This ecosystem is comprised of fauna common to most of Michigan, but its balance is easily upset by the disruption of its shallow organic soils. Any ground cover that is damaged or removed should be quickly replaced with cover that will hold and prevent sand from blowing or rapid wind erosion may occur. Michigan's most famous ghost town, Singapore, once a thriving lumber town, lies beneath these shifting sands near the mouth of the channel.

The second ecosystem is the marsh-wetland ecosystem that covers the area along the Kalamazoo River, Silver Lake and Goshorn Lake, and the connecting tributaries. This area is covered with marsh grasses, low shrubs, poplar trees, spruces, some white pine, and other softwoods. The cover is inhabited by common Michigan marsh dwellers such as frogs, turtles, ducks, blackbirds, and snakes. The marsh ecosystem is also populated by muskrat, mink, mallard duck, black duck, teal, wood duck, blue heron, Canadian geese, and mute swans. Golden eagle and osprey used to frequent the area. The marsh ecosystem is very sensitive to changes in water quality and disruption of vegetation. Great care must be taken to limit siltation and disruption to vegetation when working in this ecosystem.

The third ecosystem covers the rest of the Township and is predominantly agricultural/forest with birds and wildlife common to this dominant ecosystem in Michigan.

The entire Saugatuck/Douglas area is designated as an area of particular concern by the DNR. Areas of particular concern are those having scarce resources, unusual scenic beauty, unusual economic value, recreational attractions, or some combination of the above. They are only located in coastal areas. Altering the

environment in an area of "particular concern" could have a significant impact on the quality of coastal and Great Lakes waters.

## WATER QUALITY

The Kalamazoo River watershed includes many types of land uses and the River flows through several large developed urban areas including Kalamazoo and Battle Creek. When it reaches the tri-community area, the quality of this water is not good. Despite the water quality problem, the River from about one-half mile downstream from the Hacklander Public Access Site (in Section 23), has been designated as a "wild-scenic river" under Michigan's Natural River Act, Public Act 231 of 1970. Land use restrictions have been imposed to retain its natural character within 300 feet of the River's edge.

The basic water management goal is the elimination of the pollution threat to surface and groundwater resources. The Kalamazoo River is designated by the DNR to be protected for recreation (partial body contact), intolerant fish (warm water species), industrial water supply, agricultural and commercial uses. Downstream from the Kalamazoo Lake, the river is protected for cold water anadromus fish species (trout and salmon). Kalamazoo Lake and Goshorn Lake are designated to be protected for recreation (total body contact), and intolerant fish (warm water species). These water management objectives are nearly ten years old, but there have been no concerted efforts to update them and carry them out. A push to revise the objectives is underway statewide, but it could be years before any action plans are carried out for the Kalamazoo River.

1988 Public Opinion Survey results reveal that citizens in the tri-community area feel that the water quality of the Kalamazoo River and Lake is poor to very poor (58%-70%), Lake Michigan is rated fair to good (31-50%), and most respondents familiar with the water quality of Silver Lake felt that it was fair. The majority of respondents who are familiar with these water bodies, feel that the water quality of Lake Michigan and Silver Lake has deteriorated slightly in recent years, and Kalamazoo River and Kalamazoo Lake has deteriorated slightly to greatly. Most respondents who reside in Saugatuck, however, felt that the water quality has stayed about the same.

Basic water quality data on the River appears in Table 8.2 for selected months in 1978,

**TABLE 8.2**
**KALAMAZOO RIVER WATER QUALITY**

| | FECAL | PHOSPHOROUS | | NITROGEN | SEDIMENTS | | HEAVY METALS | |
|---|---|---|---|---|---|---|---|---|
| | COLIFORM | TOTAL | ORTHO | NO2 NO3 | | | LEAD | MERCURY |
| | PER 100 ML | MG/L | MG/L | MG/L | MG/L | TONS/DAY | MG/L | MG/L |
| **Fennville** | | | | | | | | |
| 1/27/88 | – | .05 | .01 | 1.4 | 5 | 29 | – | – |
| 5/18/88 | – | .04 | <.01 | 0.5 | 26 | 102 | <5 | <.1 |
| 7/28/88 | 28 | .08 | <.01 | 0.67 | 17 | 30 | – | – |
| 9/21/88 | 96 | .07 | .02 | 0.64 | 39 | 202 | <5 | <.1 |
| **Saugatuck** | | | | | | | | |
| 3/19/86 | – | .08 | .02 | 1.6 | 21 | 161 | <5 | <.1 |
| 6/25/86 | 200 | .11 | .02 | 0.88 | 13 | 102 | – | – |
| 9/11/86 | 200 | .14 | .01 | 0.39 | 21 | 103 | <5 | <.1 |
| **Saugatuck** | | | | | | | | |
| 1/10/78 | 120 | .07 | NR | 1.7 | 9 | 27 | – | <.5 |
| 5/1/78 | – | .12 | NR | 0.34 | 20 | 123 | 20 | <.5 |
| 7/20/78 | 69 | .12 | NR | 0.54 | 15 | 26 | 10 | .5 |
| 9/11/78 | – | .15 | NR | 0.00 | 28 | 72 | – | – |

NR = Not Reported
Source: USGS Water Resource Data For Michigan, Water Resources Division, U.S. Geologic Survey.

1986, and 1988. The sampling point was moved from Saugatuck to Fennville in 1987. This data reveals an increase in sedimentation and a decline in heavy metals. It also shows an increase in fecal coliform (intestinal bacteria) levels to 200/100 ml at the former testing site in Saugatuck—the maximum level permitted under rule 62 of the MDNR Water Resources Commission General Rules of 1986. Phosphorous and certain nitrogen levels have not changed appreciably in the past ten years.

The Kalamazoo River between Calkins Dam and Lake Michigan has been designated an Area of Concern in the 1988 Michigan Nonpoint Source Management Plan (MNSMP), due to contamination of fish from PCB's. The primary source of contamination was identified as PCB contaminated sediments upstream in the Kalamazoo River and Portage Creek. These sediments continue to erode, resuspend, and dissolve PCB's into the water column where they are transported downstream.

Due to the presence of PCB's, advisories are in effect for consumption of fish caught in the Kalamazoo River or Lake Michigan. The advisory warns against any consumption of carp, suckers, catfish, and largemouth bass taken from the Kalamazoo River downstream from the Morrow Pond Dam to Lake Michigan and Portage Creek downstream from Monarch Millpond. Limited consumption of other species (no more than one meal per week) is considered safe for all except nursing mothers, pregnant women, women who intend to have children, and children age 15 and under.

In Lake Michigan limited consumption of Lake Trout 20-23", Coho Salmon over 26", Chinook Salmon 21-32", and Brown Trout up to 23" is considered safe for all except nursing mothers, pregnant women, women who intend to have children, and children age 15 and under. Individuals should not consume carp, catfish, or Lake Trout, Brown Trout, or Chinook which fall outside of the acceptable size for limited consumption.

To address the PCB problem, the MNSMP has devised a Remedial Action Plan with the goal of reducing human exposure to acceptable levels (1:100,000) and thus reducing fish tissue concentration to a maximum .05 mg/kg and reducing water column levels to .02 ng/l. Actions taken to address the problem include: strict controls on direct discharges of PCB's; a feasibility study of remedial alternatives; funding through State Act 307 to take remedial action at three sites; and legal action and negotiations with private parties at two other sites (see MNSMP, November 7, 1988, p. 328).

Efforts initiated in the '70's to identify and require extensive treatment of pollutants prior to their dumping into the River will continue to slowly improve the quality of the water. As the nutrients like phosphorus and nitrogen are removed from wastewater entering the River, less new plant life will be stimulated and more oxygen will be available for fish.

One of these efforts is the Michigan Water Resources Commission Act, which requires all discharges into the water to have discharge permits. In addition, the Federal Water Pollution Control Act established the National Pollutant Discharge Elimination System (NPDES) permit program. Under these laws, any public or private facility which will emit any point-source discharge into the water must first receive a NPDES discharge permit. The permit program sets forth limitations and monitoring requirements to protect water quality and meet treatment standards, and establishes strong enforcement actions for violations. The Surface Water Quality Division, MDNR, administers NPDES permits. NPDES permits issued in the tri-community area are shown on Table 8.3.

However, sedimentation and nonpoint sources of pollution will remain a problem. In contrast to pipes that discharge directly into a waterbody, nonpoint sources of pollution include those pollutants that do not originate from a single point—such as fertilizer and pesticide runoff from farmers fields and petroleum based pollutants that wash off parking lots and roadways. The most obvious pollutants are the physical litter and debris that are carelessly dumped into the River or Lake and which typically wash up along the shore.

Michigan's 1988 Nonpoint Pollution Assessment Report concluded that 99% of Michigan's watersheds have at least one waterbody with a non-point source pollution problem. In-place contamination and atmospheric deposition were listed as the primary non-point sources of pollution for the Kalamazoo River.

Stronger efforts to improve water quality will have a positive affect on tourism, recreation, and future growth and development of the tri-community area. All sources of pollution affect water quality, and hence the utility of the water resource. While the tri-community area must rely on outside agencies to enforce pollution control laws upstream, some efforts can be undertaken by Saugatuck, Douglas and Saugatuck Township to improve water quality

**TABLE 8.3**
**NPDES PERMITS ISSUED IN THE TRI-COMMUNITY AREA**

| PERMIT RECIPIENT | ADDRESS | DISCHARGE | LOCATION | EXPIRATION DATE |
|---|---|---|---|---|
| Culligan | 201 Culver St., Saugatuck | processed wastewater | Kalamazoo Lake via storm sewers | 1991 |
| Kal. Lake Water & Sewer Authority | 340 Culver St., Saugatuck | treated municipal waste | Kalamazoo River outfall 001 | 1990 |
| Kalamazoo Lake Groundwater Purge | 6449 Old Allegan Rd., Saugatuck Twp. | 900,000 gal/day purged groundwater, purgable halocarbons | Kalamazoo River outfall 001 | 1993 |
| Rich Products | 350 Culver St., Saugatuck | 12,000 gal/day non-contact cooling water & cooling tower blowdown | Kalamazoo River via storm sewer | 1990 |

Source: MDNR Surface Water Quality Division

**TABLE 8.4**
**LAKE MICHIGAN LAKE LEVELS**

| YEAR | LOWEST EL FEET A.S.L. | MONTH | HIGHEST EL FEET A.S.L. | MONTH | DIFFERENCE IN FEET | DIFFERENCE IN INCHES |
|---|---|---|---|---|---|---|
| 1977 | 578.00 | February | 578.57 | July | .57 | 6.84 |
| 1978 | 578.12 | March | 579.01 | October | .89 | 10.68 |
| 1979 | 578.31 | February | 580.02 | April | 1.75 | 20.52 |
| 1980 | 578.92 | December | 579.77 | July | .85 | 10.20 |
| 1981 | 578.51 | February | 579.43 | July | .92 | 11.04 |
| 1982 | 578.17 | March | 579.02 | April | .85 | 10.20 |
| 1983 | 578.85 | February | 580.08 | July | 1.25 | 15.00 |
| 1984 | 579.02 | February | 580.23 | July | 1.21 | 14.52 |
| 1985 | 579.57 | February | 580.84 | June | 1.27 | 15.24 |
| 1986 | 580.36 | February | 581.62 | October | 1.26 | 15.12 |
| 1987 | 578.96 | December | 580.65 | January | 1.69 | 20.28 |
| 1988 | 578.10 | December | 579.04 | May | .94 | 11.28 |

Source: **The Michigan Riparian**, May 1989

and prevent further pollution within the tri-community area. These will be discussed further later in this Chapter.

**LAKE LEVELS**

The natural level of the Great Lakes goes through periodic changes that are based predominantly on rainfall and evaporation within the entire Great Lakes Basin. Since a century peak in 1986, Lake Michigan has steadily fallen to its current level of around 578 feet (see Table 8.4).

The Kalamazoo River, Kalamazoo Lake and Lake Michigan are interconnected. Thus, water levels on the River and Lake Kalamazoo are largely dependent on Lake Michigan water levels. Consequently, land uses adjoining the waterfront should be based on the vagaries of fluctuating Lake Michigan water levels. This has not always been done as was evident by extensive shore erosion and flooding during the last high water period.

When water levels are high "no-wake" zones, which are always in effect from the channel to Mason Street in Saugatuck, are extended

to cover all of the Kalamazoo Lake shoreline and parts of the River east of Blue Star Highway (see Map 8.2). When a "no-wake" speed is in effect, then all motor boats and vessels must limit speed to a slow no-wake speed when within 100 feet of:

- rafts, except for ski jumps and ski landing floats;
- docks;
- launching ramps;
- swimmers;
- anchored, moored or drifting boats; and
- designated no-wake zones.

This means a speed slow enough that the wake or wash of the boat creates a minimum disturbance. Owners and operators are responsible for damage caused by wakes.

**HARBOR**

Map 8.3 is the existing harbor map (June 1987) distributed by the National Oceanic and Atmospheric Administration. It depicts water depth for the shoreline along Lake Michigan, and the River through Kalamazoo Lake. Channel depth is maintained by periodic dredging to a depth of 13 feet to Main Street in Saugatuck. (Dredging at the mouth of the channel is to begin in July 1990 and be completed in the Fall of 1990.) The depth then drops to 20-27 feet for the next 500 feet. Between that point and Tower Marine, the water depth is about 7 feet. Most of the rest of Lake Kalamazoo varies between 1 and 4 feet in depth with not more than 2 feet being the most common. The Douglas shoreline, east of Blue Star Highway is only 1-2 feet in depth except for a small area running NW-SE from the center of the bridge and connecting to the Point Pleasant Yacht Club.

This natural harbor is the principal attraction for nautical tourists which flock to the area during summer months when the marinas are used to capacity. Hundreds rent dockage by the season. Many live on their boats for weeks on end. The demand for dockage appears to be greater than the supply, despite the huge number of slips available (see Map 8.4). In 1976 there were 8 marinas with approximately 800 slips. In 1989, there are 26 legally operating marinas with 966 slips. There are about half dozen marinas without current permits and these contain over 30 more slips. There are also a number of slips maintained by private residences for their own personal use.

Marina permits are required for any commercial activity, so as few as two slips could require a marina permit if they are rented. Permits are issued for a three year period by the DNR. On peak summer weekends the number of boats on the lake could be twice to thrice the normal level. This presents one of the most serious problems jointly facing the tri-community area– how to deal with surface water use conflicts.

The Lake has a total surface water area of 184 acres. Acreage available for recreational boating is dramatically reduced by the dockage which extends into the Lake hundreds of feet and by the shallow water at the edge to about 133 acres. Yet, on summer weekends the River is a constant highway of boats moving in and out of the Lake. Recreational sailing, fishing, swimming, sailboarding and water skiing are limited by all of the motorboat traffic. However, during the week, other water surface activities can go on without much interference.

**MARINE SAFETY**

The Allegan County Sheriff's Department, Marine Safety Division, maintains strict control of the waterways. The Department has 8 marine officers. Normally, two officers patrol by boat, but three to four officers patrol during holidays and special events. Officers patrol in a 27 foot Boston Whaler with two 150 horsepower outboard motors. This boat is equipped for Lake Michigan rescue, and has a noise meter which monitors the 86 decibel noise limit.

From Memorial Day to Labor Day officers put in 635 hours of patrol duty on Kalamazoo River and Kalamazoo Lake. One hundred and ten hours were spent patrolling Lake Michigan. Most patrols occur between Friday and Sunday, and about half of the Department's budget goes to patrolling the Saugatuck area.

In the summer of 1989, 189 tickets were issued on Kalamazoo River and Kalamazoo Lake, 11 were issued on Lake Michigan, 276 warnings were issued, 10 complaints were received, and 6 boating accidents occurred. The Department also conducted 378 safety inspections. The most common violations are inadequate life preservers on board and lack of current registration.

The Department notes that slow/no wake, and hazardous violations were down in the summer of 1989. The most common surface water use conflicts identified by the Sheriff's Department include sailboat and motorboat conflicts and complaints over the noise and attitude of jet

skiers. Conflicts between sailboats and motorboats are most common on Saturday.

**EXISTING LAND USE**

Existing land use is described in detail in Chapter 5. All land uses along the waterfront are oriented to the water. The bulk of the waterfront in the Township from the channel to the City is developed as single family residential. The City and Village waterfronts are predominantly residential and marina. The balance of the waterfront, which lies in the Township, is in a natural state with some areas of residential development (such as along Silver Lake). Many commercial establishments (mostly motels and restaurants) are also located here. Except for the Broward Boat Company near the channel, there are no industrial activities along the waterfront. A number of small parks are located along the waterfront, but there are few public access sites and, except for Shultz Park, these provide little space for transient parking.

**CONFLICTS/PROBLEMS**

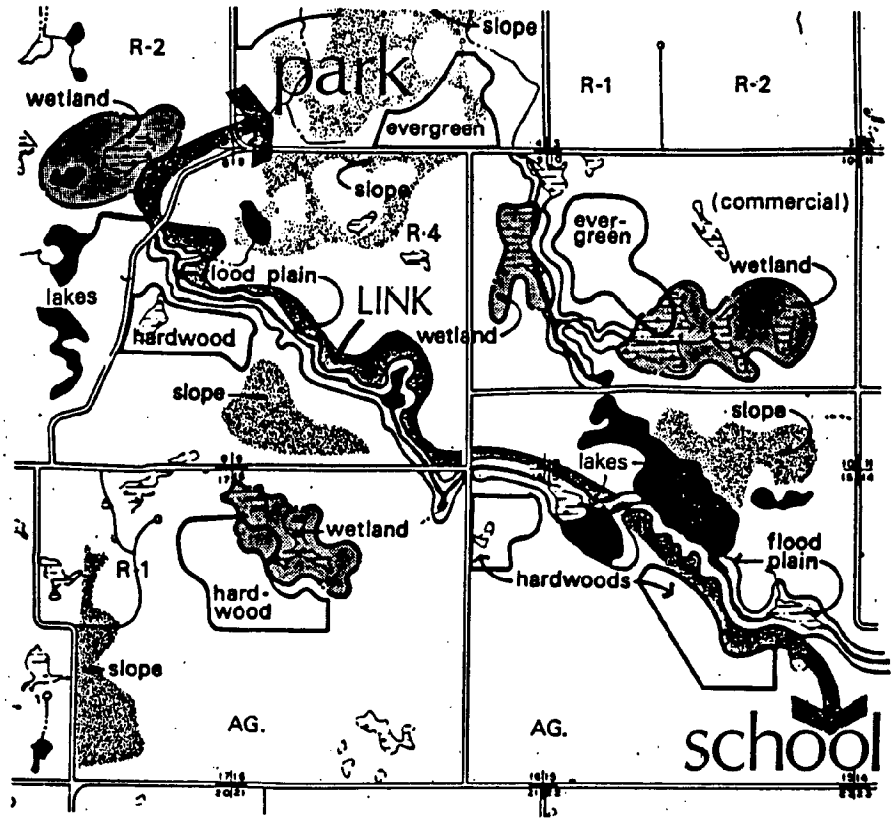
At an interjurisdictional meeting on water front issues on November 1986, five key issues were identified:

- high water and its impacts
- development and acquisition of public lands along the waterfront;
- limiting the intensity of shoreline development;
- preserving the scenic character of the shoreline environment retaining visual access to, of the
- surface water use conflicts.

Each of these remain important issues as shown in the 1988 Public Opinion Survey.

**FIGURE 8.1**

**LINKAGE PLAN**




Source: **Conserve Oakland County's Natural Resources: A Manual for Planning & Implementation,** Department of Public Works, Oakland County, MI, September 1980.

### *High Water*

When Great Lakes water levels are high, erosion along the Lake Michigan shoreline increases. The impacts of erosion are clear along Lakeshore Drive, where part of the road has been washed away. Many high value homes will be threatened by additional erosion in this area.

Erosion along the River and Lake Kalamazoo also increases with higher Lake Michigan water levels. Many bulkheads and similar shore protection devices were installed to minimize the effects of the most recent high water level. Raising some of the land and structures would be necessary if lake levels remained high for lengthy periods. On the positive side, the south shore of Lake Kalamazoo becomes more attractive to marina development when water levels are high since it is very shallow in this area. Likewise, when water levels are below average, some existing dockage is unusable.

Fluctuating lake levels are part of a natural system. The costs and implications of trying to artificially manage the entire Great Lakes Basin to maintain even Lake levels is not known, but waterfront land use decisions in the tri-community area should be made based on the assumption that Lake Michigan water levels cannot be artificially maintained.

### *Acquisition and Development of Public Lands Along the Waterfront*

Two types of public lands are needed along the waterfront. One is parkland/open space and the other is a public marina. Existing open space along the waterfront should be preserved (see Map 8.5). Several street ends provide needed relief from structures along the shoreline. These public open spaces are generally well managed, and efforts should be initiated to ensure that they are not lost. Existing parks along the shoreline should also be linked together, and with other inland parks, by pedestrian and bicycle paths whenever the opportunity arises (see Figure 8.1).

The lack of parkland along the Lake Michigan shoreline is most acute for Township residents, and somewhat less severe for Village residents. Outside of purchasing and developing new land for parks, the tri-communities should consider establishing a separate park and recreation authority responsible for maintaining all parks presently owned by the three communities. The benefit would be providing access to Oval Beach by Village and Township residents and spreading the fiscal responsibility for maintenance across more taxpayers. This would also make it more feasible to acquire additional park space as needed. Because residents of three jurisdictions would benefit, grant requests would probably be more favorably reviewed.

Public marina space is also needed as there are only three public access sites along Lake Kalamazoo and the River presently, and two are too far inland for most daily boaters. The third is a street end in Saugatuck and has no adjacent parking. Private marinas provide transient berthing opportunities, but there is considerable demand for more. By having a facility to attract more transient boaters, the three communities would be gaining additional tourist income.

The three most logical places for such a facility are: 1) immediately adjacent to the Blue Star Highway bridge in Douglas and extending to the existing launch facility adjacent to the Kewatin; 2) converting the Center Street maintenance facility in Douglas to a public marina; 3) at some distant time (or if the opportunity arose) by replacing the Rich Products office building in Saugatuck with a public marina and accompanying parking. Alternatively, if adjacent parking could be secured, the street end next to Gleason's in Saugatuck could be a good public access point.

While the public opinion survey did not reflect overwhelming support for a public marina, there appears to be demand for such a facility from persons outside the tri-community area. Its long term economic benefits may well justify its cost, especially if state or federal funds could be secured to help pay for it.

### *Limiting the Intensity of Development*

The primary future development of waterfront lands in the City will be redevelopment of existing parcels. In the Village it will focus on further development along the South Shore of Lake Kalamazoo. In both areas it will be critical that new development is neither so dense, nor so high as to block existing public views of the waterfront or further "wall" the Lake with structures. Recommendations to prevent this are included in Chapter 10. It will be critical that all three communities agree to a common approach to waterfront development, embody that in land use plans, and then implement those plans. To some extent, uniform densities, setbacks, and height regulations will be valuable, especially around Lake Kalamazoo.

Additional development around Silver Lake needs to remain at a very low density in keeping

with the septic limitations of the land and the limited recreational value of this shallow waterbody. The eastern end of the Kalamazoo River should likewise receive little new development in keeping with its Natural River designation.

***Retaining Visual Access, Aesthetics and the Character of the Area***

As has been emphasized throughout this Plan, the natural beauty of the waterfront has much to do with the attraction of the tri-community area. Local development regulations should be reviewed and revised if necessary, to insure that new development complements, rather than detracts from this natural beauty. Old vessels should not be permitted to lie beached along the shoreline, because this also detracts from the beauty and character of the waterfront.

Several vistas have public values that deserve protection. These include the entry into and exit from Lake Michigan on the Kalamazoo River, the view from Mount Baldhead, the view of Kalamazoo Lake from both ends, and approaches to the Kalamazoo River Bridge. The public opinion survey strongly supports the provision of additional open space along Lake Kalamazoo and the Kalamazoo River and demonstrates that the primary use of the area's water bodies is viewing. Yet, recent development pressures have led to overbuilding of condominiums along the waterfront, shutting off all public viewing of the lake from existing rights-of-way.

Any future development along the channel should be set back sufficiently to maintain the broad open views that are presented to boat travelers entering or leaving the Kalamazoo River. The view from the top of Mount Baldhead should be improved by careful selective pruning of dead or dying trees blocking good views of Saugatuck and Lake Kalamazoo. The curve going northbound on Blue Star Highway in Douglas just before crossing the bridge is the only good panorama of Kalamazoo Lake. A public turnoff, the acquisition of a scenic easement, or the concentration of new development on the western portion of those undeveloped lands should be initiated to protect that important view. In addition, the land adjacent to the west side of the bridge in Douglas should be selectively pruned to improve the view to travelers crossing the bridge (northbound) until a public marina could be established there.

***Surface Water Use Conflicts***

Resolution of surface water use conflicts will require more planning and a uniform approach to regulation. Most important is establishing the carrying capacity of Lake Kalamazoo and the River to the channel mouth. Carrying capacity refers to the physical capacity and intrinsic suitability of lands (and water) to absorb and support various types of development (or use). Such an analysis is typically performed by an inventory of existing surface water use during weekdays and peak weekends. Data is then examined in terms of the size of the waterbody and its capacity to assimilate various mixes of use. Such an analysis would probably reveal some, but not much excess capacity for new boat slips, because any number of boaters can access Kalamazoo Lake from Lake Michigan.

Without an analysis of carrying capacity, the amount of new boat slip development and related surface water use conflicts are difficult to evaluate. Some time or surface zoning could be established in conjunction with the DNR if desired. For example, water skiing, jet skiing, fishing, sailing, etc, could be limited to particular parts of Lake Kalamazoo or Silver Lake or to particular times of the day. Another option could be a harbor patrol paid for by all three governmental units. More information is necessary to establish the need for regulation. If surface water use is regulated, each unit of government would need to agree to a common regulatory approach.

Surface water use conflicts will grow more acute on Lake Kalamazoo if existing dockage is extended much further into the Lake. Such extensions should not be permitted as the surface area available for various recreational uses will be too drastically reduced. Existing no-wake zones should also be more rigorously enforced.

**RECOMMENDATIONS TO GUIDE FUTURE USE**

In seeking to balance economic development with environmental protection, the concept of carrying capacity should be a major consideration. If the carrying capacity of land or water is exceeded, then activities cannot be undertaken without unacceptable impacts on users, the environment, or both. Impacts can include increased trip times, decreased safety, pollution, loss of open space, and many other considerations. The key is prevention of overuse by limiting intensity of use on adjoining lands and regulating surface water use.

Environmental protection must be a leading principle in making future land use decisions along the waterfront. Environmentally sensitive areas such as sand dunes, wetlands, high risk erosion areas, floodplains, and key woodlands should be protected from unnecessary destruction. Development should complement rather than destroy these areas and their values. By doing so the environmental quality of the air and water will be improved, wildlife habitat will be preserved, scenic values will be protected, and the character of the area will be maintained. Some new intensive shoreline development will be desirable and necessary, but the balance should not be disproportionately on the side of new tax base as it has been for the past decade.

Opportunities to enhance the waterfront should be seized. Parks and open spaces should eventually be linked with other public places. Additional access to the waterfront should be acquired when available, and existing access via street ends and parks should not be lost through neglect or inaction. A new public marina should be constructed if resources are available and the cost could be spread among local citizens and other users (such as through grants or user fees). Visual access from public thoroughfares and walkways should be maintained in all new waterfront development.

Protection mechanisms, like the Natural River designation, should be recognized for the ancillary benefits they bring to the community. A local "Friends of the River" organization could be instituted to annually adopt and clean up the shoreline to remove floating debris, other waste, and downed timber that become lodged there. A special effort to maintain the character of Lakeshore Drive along the Lake Michigan shoreline should also be initiated.

A comprehensive stormwater management plan and wetlands protection plan should be instituted as part of a broad water quality protection program that is based on the small watersheds that feed the Kalamazoo River Basin. The Soil Conservation Service should be asked to assist in preparing nonpoint pollution guidelines to help guide farmers in land management practices that help keep the River clean.

## NEED FOR INTERGOVERNMENTAL COOPERATION

Each of these recommendations requires a strong degree of intergovernmental cooperation. Watercourses, like the environment, do not respect jurisdiction boundaries. Their future quality and desirability depends on all governmental units through which they flow playing an active and supportive role in protecting and improving water quality. To advance this goal, the jointly appointed waterfront committee should be reinstituted or its responsibilities shifted to the Joint Planning Committee which helped fashion this Plan.

## MAP 8.1 WATERSHEDS

Saugatuck

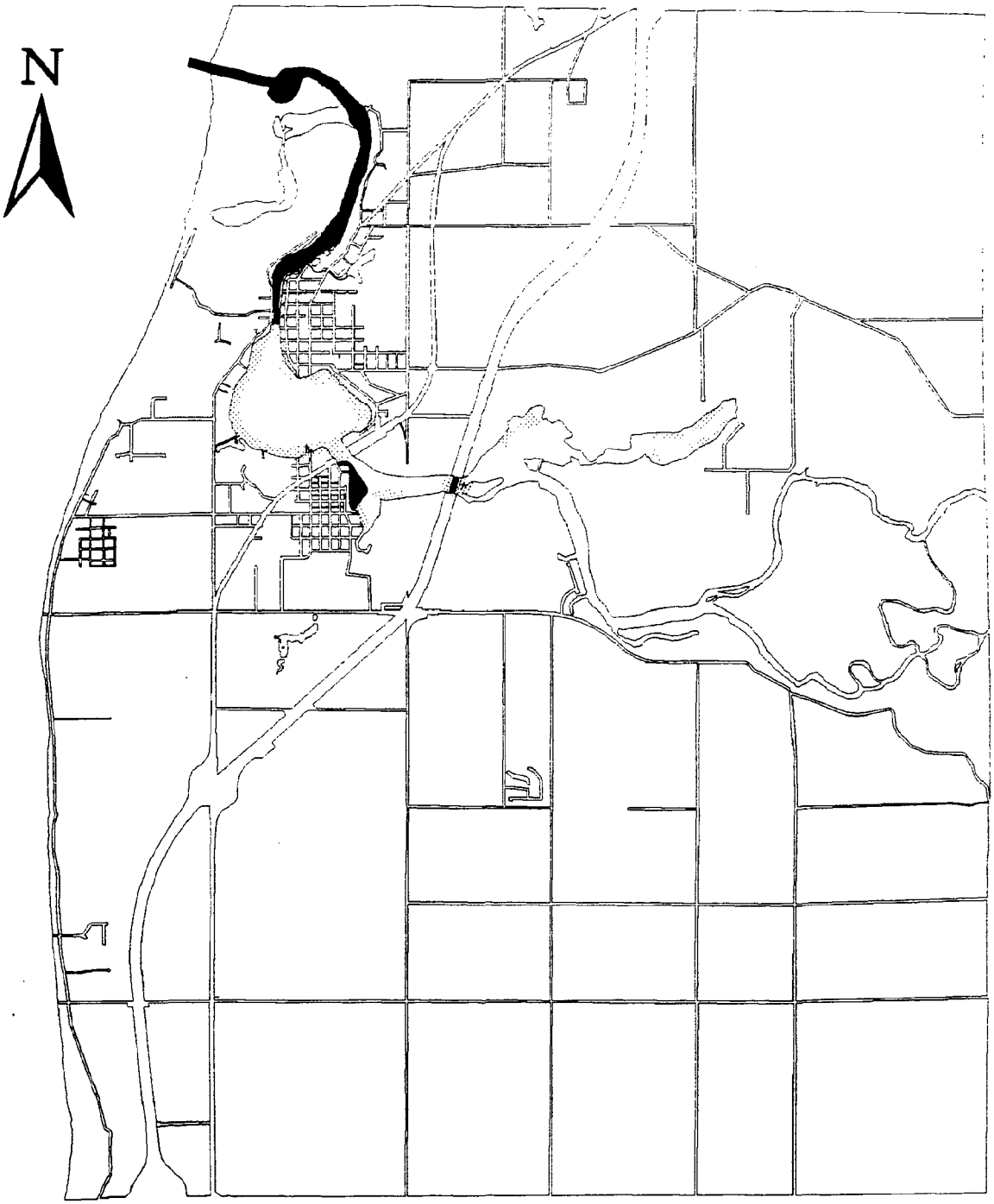
Kalamazoo River Basin Boundary

Creeks & Drains

Small Watershed Areas:

1) Douglas 2) Tannery Creek 3) Peach Orchard Creek 4) Kalamazoo/Morrison Bayou 5) Ash Drain 6) Silver Lake Creek 7) Goshorn Creek 8) "Cemetery" Creek 9) River Bluff-Indian Creek 10)Saugatuck

August 1989 DATA SOURCE:Allegan County Drain Commission Planning & Zoning Center Inc, Lansing, MI



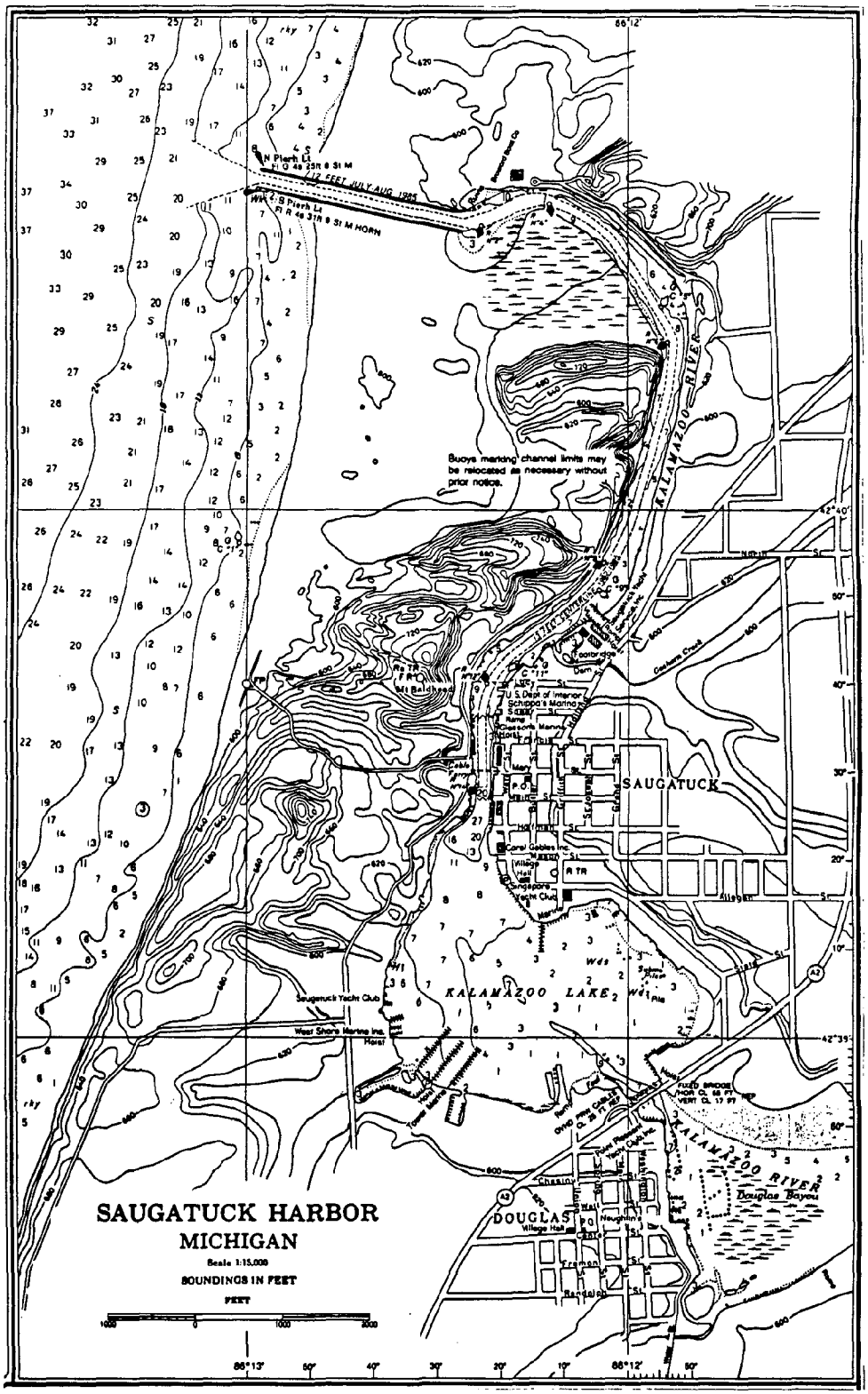

## MAP 8.2 NO-WAKE

Saugatuck

No-Wake Area

Additional No-wake Area During Periods Of High Water

August 1989 DATA SOURCE: Tri-Community Waterfront Committee Planning & Zoning Center Inc, Lansing, MI




# MAP 8.3 SAUGATUCK HARBOR

# MAP 8.4 MARINAS

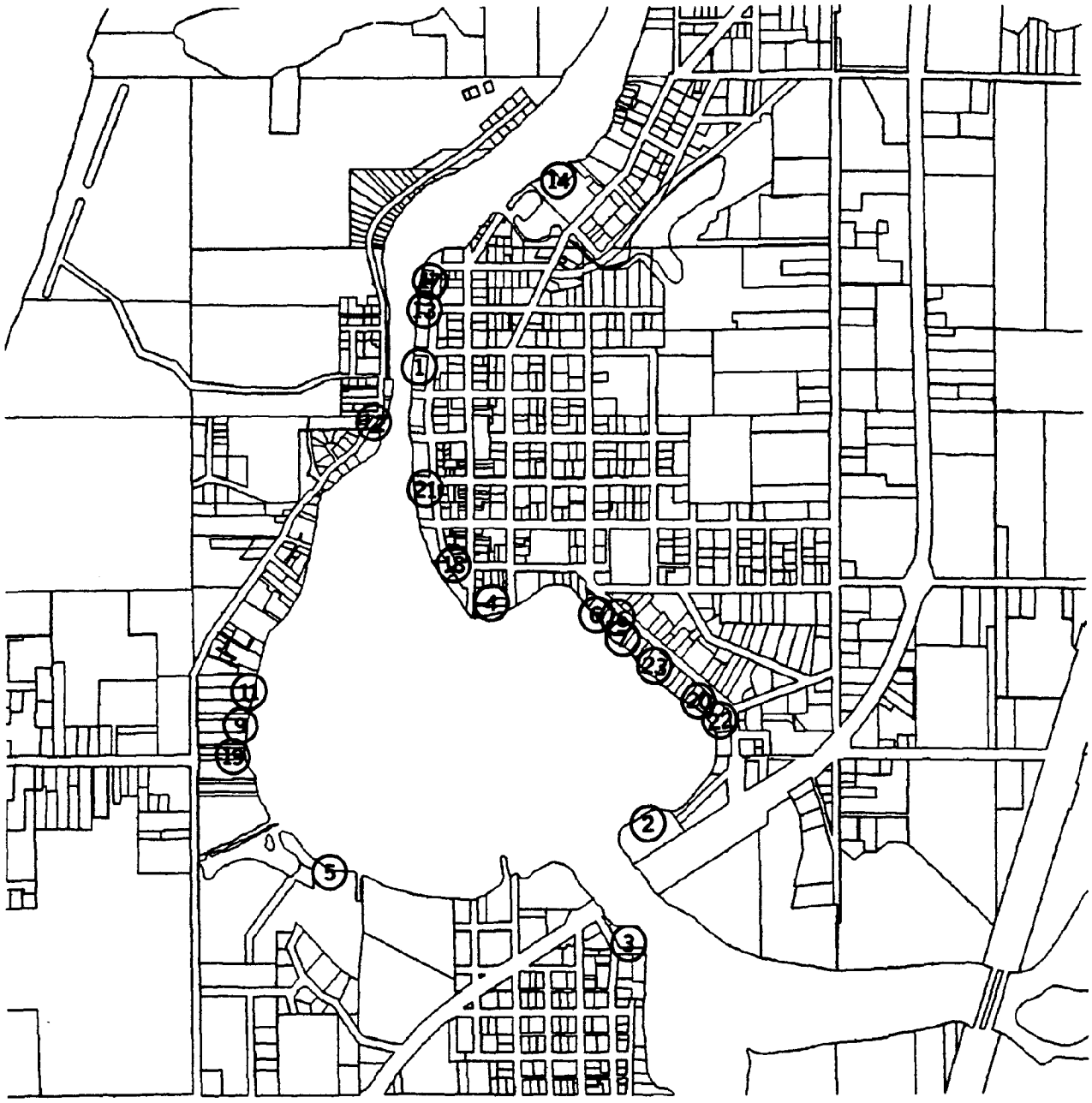
Saugatuck

1. Ship & Shore Motel/Boatel (0)
2. East Shore Harbor Club (64)
3. Pointe Pleasant Yacht Club (14)
4. Sergeant Marina (63)
5. Tower Marina (322)
6. Skippers Cove (12)
7. Water Side Condo (12)
8. Naughtins Marina (37)
9. Saugatuck Yacht Club (16)
10. Deep Harbor Deve, Inc. (46)
11. South Side Marina (24)
12. Casa Loma (11)
13. Gleasons Marina (9)
14. Saugatuck Yacht Co. (81)
15. Walkers Landing (22)
16. Windjammer Condo Association (12)
17. Schippas Marina (10)
18. Singapore Yacht Club (50)
19. West Shore Marine Inc. (57)
20. Bridges Of Saugatuck (8)
21. Coral Gables (50))
22. V & L Properties (10)
23. Back Bay Marina (12)
24. Southside Marina (24)

Total Number Of Permitted Marina Boat Slips In Area.....966

August 1989 DATA SOURCE:DNR

Planning & Zoning Center, Inc, Lansing, MI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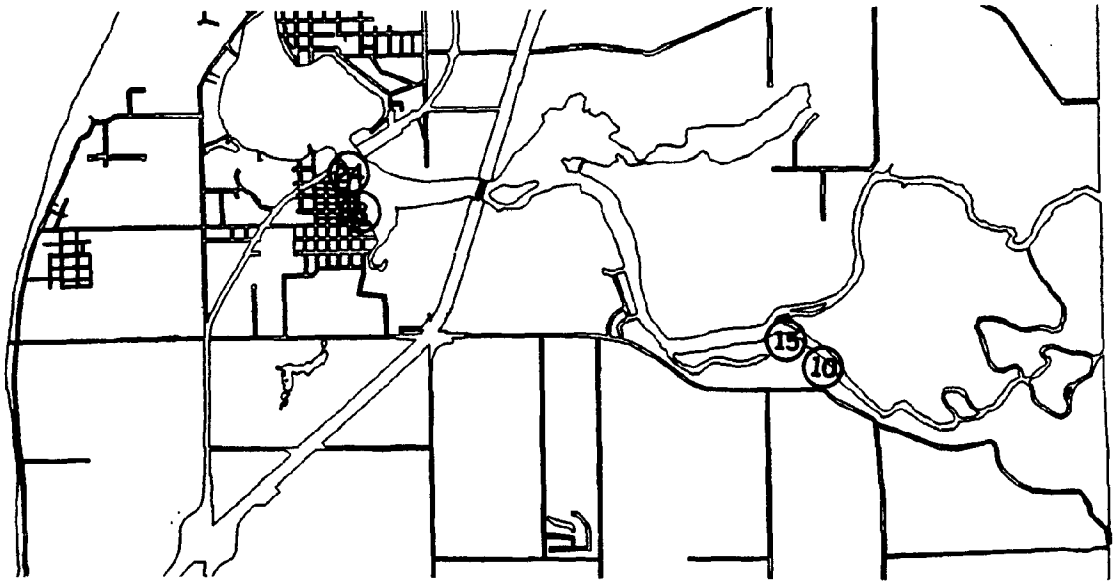
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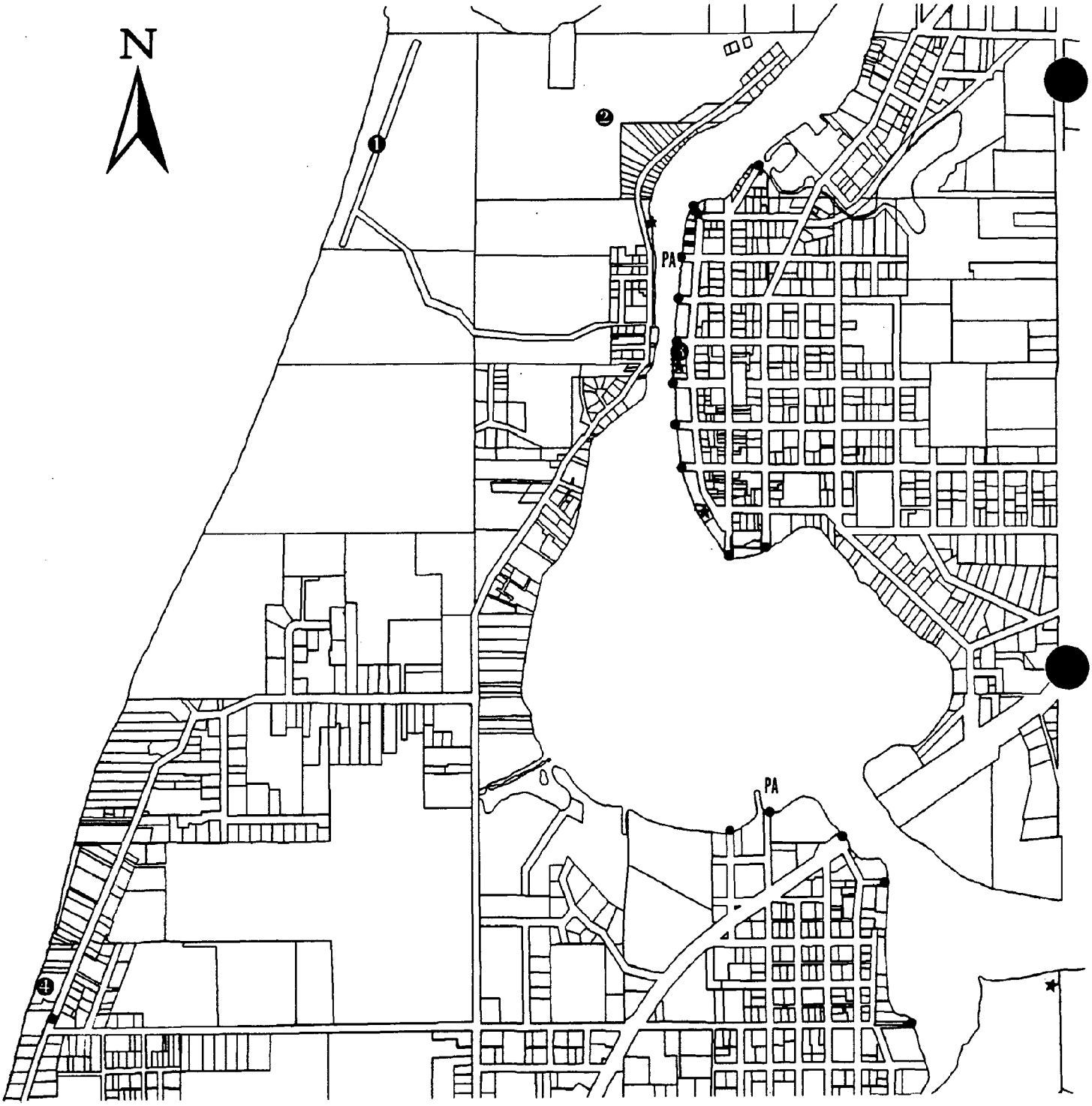



## MAP 8.5 STREET ENDS/ PARKS

Saugatuck

Street/Road Ends

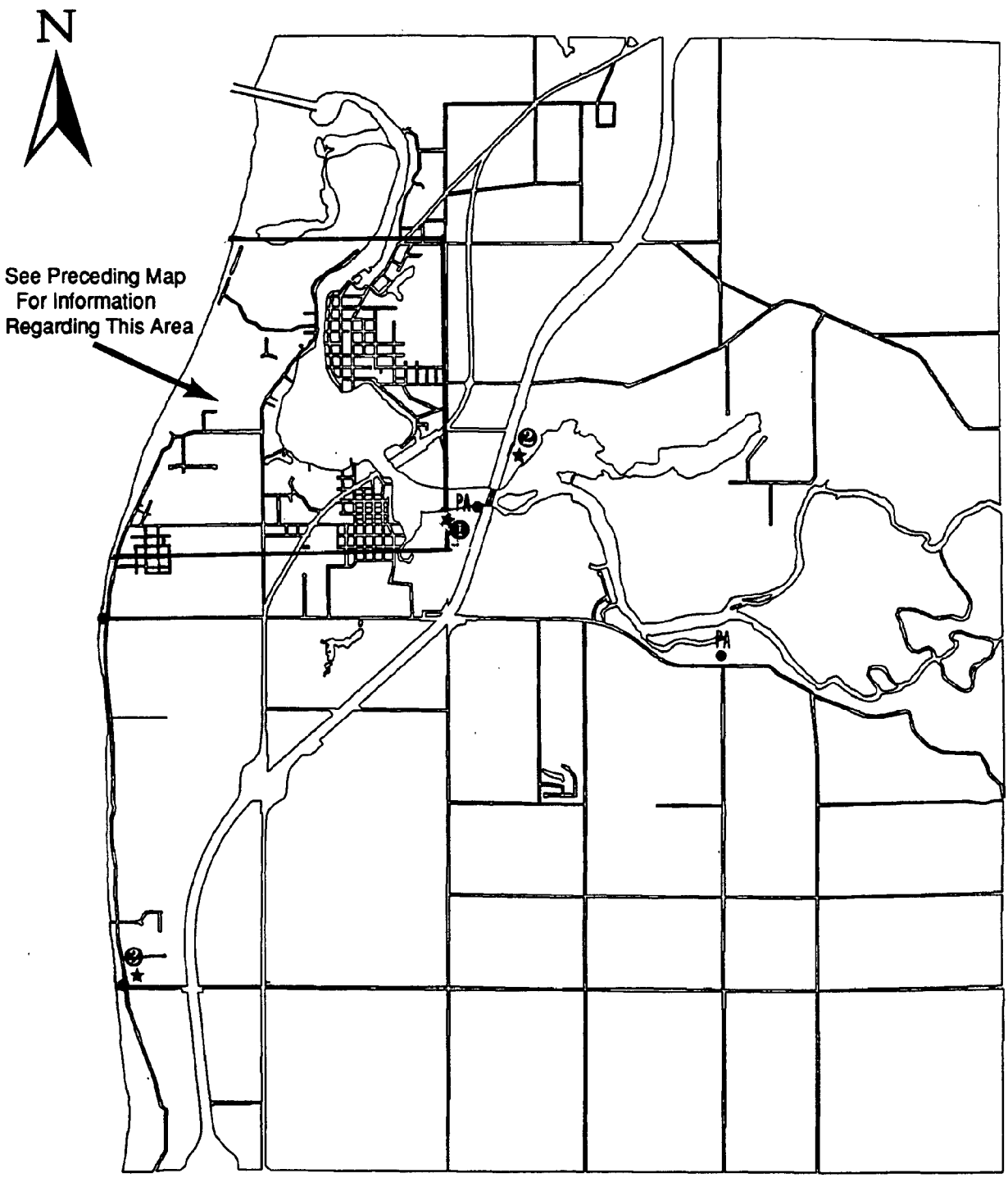
Parks

PA Public Access

1) Oval Beach 2) Mount Baldhead 3) Chain Link Ferry 4) Douglas Beach

August 1989

Planning & Zoning Center Inc, Lansing, MI




## MAP 8.5 A STREET ENDS/ PARKS

Saugatuck

- Street/Road Ends
- PA Public Access
- Parks
  1) Shultz Park 2) River Bluff Park
  3) Sundown Park

August 1989

Planning & Zoning Center Inc, Lansing, MI

# Chapter 9

# GROWTH AND DEVELOPMENT TRENDS

Growth and development trends reflect past settlement patterns in a community and provide a basis for estimating future development patterns. Growth rates are one aspect of change. These show which areas are growing at a faster rate. Residential construction permits show where most of this residential development is taking place and provide insight into residential preferences.

Population trends may be used to project future population, which is used to estimate future land use needs and settlement patterns in a community. And finally, a "build out" scenario may be created based upon the vacant or buildable sites in an area to get an idea what the area might look like if it were developed according to current zoning and use requirements. A more complete discussion of these issues is included below.

## GROWTH RATES

The City went from a 19% growth rate in the 60's to only 6% in the 70's. The City's slowing growth rate is due in part to a shrinking supply of vacant or developable land and in part to a higher proportion of seasonal residents and elderly in small households.

In terms of actual numbers, the areawide population nearly doubled between 1950 and 1980, when it reached a total of 3,780 people. The Township gained over half of these new residents. About 28% of the 1980 population resided in the City of Saugatuck.

**TABLE 9.1**
**RATE OF POPULATION CHANGE**

| COMMUNITY | 1950-60 | 1960-70 | 1970-80 |
|---|---|---|---|
| Saugatuck | 20% | 10% | 6% |
| Saugatuck Twp. | 34% | 11% | 40% |
| Douglas | 35% | 35% | 17% |
| AREAWIDE | 29% | 16% | 22% |

## RESIDENTIAL CONSTRUCTION

Building permit data reveal development trends in Saugatuck since 1980. Most of Saugatuck's growth has taken place along the lakeshore in the form of multiple family condominiums (see Map 9.1). The City has seen the development of eight condominium projects containing 127 individual units since 1980, and only 10 single family homes in this period. Aside from new construction, the number of additions, extensions, and other improvements was high.

## MIGRATION

Migration is a strong component of population growth throughout the County. Allegan County experienced net in-migration of 3.03% between 1983 and 1987—the eighteenth highest rate of in-migration in the state. Many of these immigrants are retirees. Figure 9.1 reveals migration patterns of senior citizens in the region over the past three decades. It reveals an explosion of retiree migration into Allegan County since 1970.

Between 1980 and 1985, the rate of retiree migration into the County continued to climb, reaching 2.17 compared to -0.26 for the state as a whole.

## POPULATION PROJECTIONS

Future population for the City of Saugatuck was projected based on the 1970 to 1980 population trend, rather than long term trends, due to recent changes in the rate of population growth described above. A composite straight-line trend can be projected by applying logorithms to determine the ratio of change based on the 1970 to 1980 trend. Table 9.2 illustrates these results.

Thus if current trends continue, the area can expect about 1800 more people in 2010 than in 1980. Only 15% of this growth is expected to occur in the City. Sixty-four percent is projected to take place in the Township, and 21% in the Village. Due to its greater availability of land, the Village will eventually overtake the City in terms

FIGURE 9.1

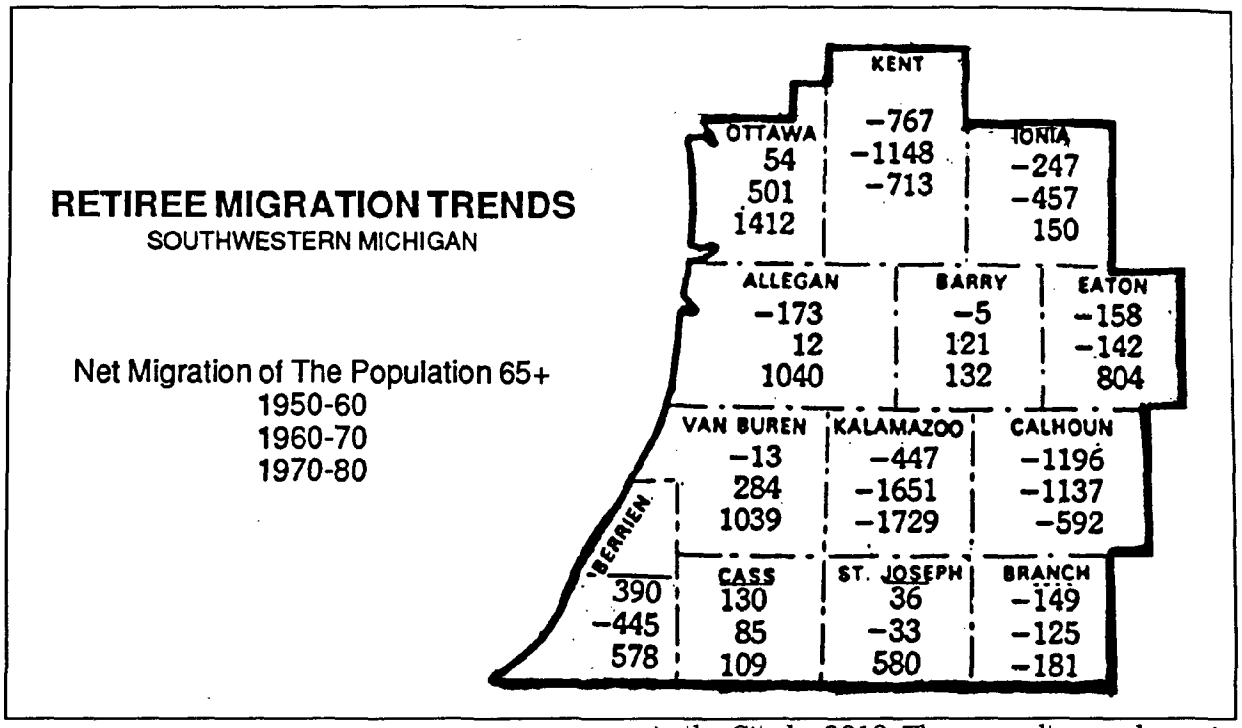
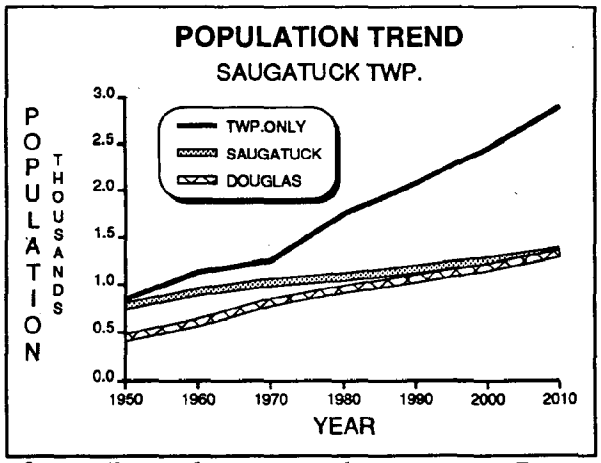



FIGURE 9.2




of overall population growth, as seen in Figure 9.2.

**PROJECTED LAND USE NEEDS: 2010**

To determine the impact of this population growth on residential land use, future population is translated into new households. This is done by applying the average household size for each community to the projected population in 2010 and then subtracting 1980 households. The result is an estimated 139 new households in the City by 2010. These results are shown in Table 9.3.

Future demand for land by these new households may be estimated by looking at land subdivision trends and current settlement patterns or zoned densities. Zoned densities are roughly equivalent to those of the Village. Based on this information, Saugatuck can expect about 40% of its new households to settle in low density residential areas, 40% in medium density, and 20% in high density.

This translates into the conversion of 24 acres into low density residential use, 14 acres in medium density residential, and about 3 acres would be developed at higher densities as apartments or clustered units. This would leave a maximum of 94 acres of residentially zoned land available for development. Tables 9.4 - 9.6 show this projection of current trends.

**BUILD OUT SCENARIO**

The projections shown above are only estimates based on current trends. Yet any number of events could alter these trends. For example, Saugatuck's attraction as a center for tourism could continue to grow, fostering greater in-migration of retirees and others searching for an alternative lifestyle. The City could reach an annexation or other development agreement

with the Township and add to its existing supply of land. The Township could provide sewer and water service and attract a higher proportion of the area's projected households.

But based on current trends and land availability, how much more development could the City accommodate? This exercise, called a "build out" scenario, provides an estimate of the buildable capacity of the City under currently zoned densities. Acres were estimated based on vacant or developable land by zoned use and density/minimum lot size. These results are shown for each jurisdiction in Table 9.7. Redevelopment potential was considered for under utilized parcels along the waterfront on Lake Street. (Township estimates do not include existing agricultural areas.)

This information can be translated into a population estimate by first dividing the developable acres by the minimum lot size in that zoning district to determine the number of households which could occupy the parcel(s). The new households are then multiplied by the average household size for that community to derive a population estimate.

The City has an estimated 135 acres zoned residential available for development. Under current zoning, this translates into about 330 new households, or 600 new residents. Actual future land use projections predict that only about 41 acres of land will be transformed into residential use by the year 2010. Yet development proposals are already underway which could bring the City very close to its current residential build out capacity. No land is available for industrial expansion in the City, and only about 3 acres could be developed for commercial use.

**POLICY IMPLICATIONS**

Without an annexation or other development agreement with the Township (i.e. PA 425 agreement, or consolidation into a single unit of government), the City will soon reach its build out capacity. A policy implication of the shrinking supply of land is the lack of affordable housing. As the land supply shrinks, the price of housing increases. This hurts not only young people who would like to remain in the area, but also elderly residents on low to moderate fixed incomes. The cost of housing in the City has reached a point where many parents can no longer expect that their children could afford to buy a home in the City. In the public opinion survey, City respondents felt that detached single family homes in the $50-70,000 range are most needed now (52.6%). The second highest need expressed was for low income housing (40.2%).

In terms of strategies to achieve affordable housing, 43.6% of City respondents favored low-

**TABLE 9.2**
**PROJECTED POPULATION**
**1970-1980 TREND**

| COMMUNITY | 1970 | 1980 | 1990 | 2000 | 2010 |
|---|---|---|---|---|---|
| Saugatuck | 1,022 | 1,079 | 1,163 | 1,254 | 1,352 |
| Saugatuck Township | 1,254 | 1,753 | 2,074 | 2,454 | 2,904 |
| Douglas | 813 | 948 | 1,061 | 1,187 | 1,328 |
| AREAWIDE | 3,089 | 3,780 | 4,298 | 4,895 | 5,584 |

**TABLE 9.3**
**PROJECTED NUMBER OF HOUSEHOLDS**

| COMMUNITY | POP. 2010 | HH SIZE | # HHs | 1980 HHs | NEW HHs |
|---|---|---|---|---|---|
| Saugatuck | 1,352 | 2.00 | 676 | 537 | 139 |
| Saugatuck Township | 2,904 | 2.69 | 1,080 | 633 | 447 |
| Douglas | 1,328 | 2.44 | 544 | 391 | 153 |
| AREAWIDE | 5,584 | | 2,300 | 1,561 | 739 |

**TABLE 9.4**
**PERCENTAGE OF POPULATION BY DENSITY TYPE**

| COMMUNITY | LOW | MEDIUM | HIGH |
|---|---|---|---|
| Saugatuck Twp. | 80% | 10% | 10% |
| Saugatuck | 40% | 40% | 20% |
| Douglas | 5% | 70% | 25% |

**TABLE 9.5**
**NEW HOUSEHOLDS BY DENSITY TYPE**

| | HOUSEHOLDS | | | |
|---|---|---|---|---|
| COMMUNITY | LOW | MED. | HIGH | TOTAL |
| Saugatuck | 56 | 56 | 28 | 139 |
| Douglas | 8 | 107 | 38 | 153 |
| Saugatuck Twp. | 358 | 45 | 45 | 447 |
| AREAWIDE | 421 | 207 | 111 | 739 |

Totals are based on unrounded figures.

**TABLE 9.6**
**FUTURE RESIDENTIAL LAND NEEDS**

| | ACREAGE* | | | |
|---|---|---|---|---|
| COMMUNITY | LOW | MED. | HIGH | TOTAL |
| Saugatuck | 24 | 14 | 3 | 41 |
| Douglas | 4 | 26 | 4 | 34 |
| Saugatuck Twp. | 205 | 13 | 10 | 228 |
| AREAWIDE | 234 | 53 | 17 | 303 |

*times 1.25 (20% allowance for rights-of-way)
Totals are based on unrounded figures.

**TABLE 9.7**
**AVAILABLE ACREAGE BY LAND USE TYPE**

| | ACREAGE | | |
|---|---|---|---|
| COMMUNITY | COMM. | IND. | RES. |
| Saugatuck | 3 | 0 | 135 |
| Douglas | 33 | 49 | 197 |
| Saugatuck Twp. | 155 | 22 | 5,950 |
| TOTAL ACRES | 191 | 71 | 6,282 |

**TABLE 9.8**
**POPULATION 2010: BUILD OUT SCENARIO UNDER ZONING IN EFFECT**

| COMMUNITY | ADDITIONAL HOUSEHOLDS | AVERAGE HH SIZE | ADDITIONAL POPULATION | PRESENT POPULATION | TOTAL POPULATION |
|---|---|---|---|---|---|
| Saugatuck | 330 | 2.00 | 660 | 1,079 | 1,739 |
| Douglas | 1,139 | 2.44 | 2,779 | 948 | 3,727 |
| Saugatuck Twp. | 16,413 | 2.69 | 44,151 | 1,753 | 45,904 |
| AREAWIDE | 17,882 | | 47,590 | 3,780 | 51,370 |

ering the minimum square footage requirement of housing (now 1040) to make housing more affordable, while 35% opposed. The current standard, while slightly higher than that of Douglas or the Township, is still not excessive. In terms of density and minimum lot size, 55% felt that new housing should be at a lower density than along the Lake Kalamazoo waterfront, revealing dissatisfaction with waterfront condominium development. Most (65%) felt that residential density should be the same as that on "the hill", which is about 5 units per acre.

Another policy implication is that as available land for commercial use is occupied, pressures increase for conversion of residential areas adjacent to the downtown for commercial use. Residents and officials wish to preserve the mixed use character of the Lake Street and Water Street districts, while preventing further conversion of the historic homes to the northeast of Water Street, and protecting the residential integrity of "the hill". In the Public Opinion Survey, most City respondents agreed, saying that new commercial development was needed (59.1%), but should take place in small shopping centers along Blue Star Highway and at the freeway interchanges, rather than in downtown Saugatuck or downtown Douglas.

The high seasonal and weekend population has also created pressures for the downtown. Parking appears to be the number one problem, although 72% of survey respondents felt it is only a problem during the summer months. City officials are currently exploring alternative solutions to the problem. Most City respondents felt that demolishing the old public works building

for parking was the most acceptable solution, but this building has been sold to private developers.

The greatest problem caused by the lack of room for industrial expansion is the lack of corresponding job opportunities. The domination of the commercial/retail sector in Saugatuck has created a large number of low paying service jobs, especially in the summer, but few high paying jobs with the potential for year round employment. This problem requires a regional solution. Industrial expansion must either occur in the Village or Township. One strategy is to pursue a joint agreement with the Village and/or Township to pool resources and develop an industrial park—a costly endeavor for either the Village or City to undertake alone.

Land scarcity also has environmental and aesthetic consequences. If development were to proceed under the build out scenario, then the northeast and west side of the City will gradually develop into low and medium density residential. If not properly managed, this could destroy the wooded area abutting Kalamazoo Lake and the dunes. High density development could also take place along Kalamazoo Lake in the southern portion of the Lake Street mixed-use district.

These projected development trends are problematic in light of the 1988 Public Opinion Survey which revealed that the vast majority of respondents have the following preferences:

- maintain the scenic, small town/rural character of the area;
- preserve open space along the waterfront;
- protect the environment by prohibiting development of dunes and wetlands.
- prevent the development of more waterfront condominiums (90% of City respondents).

These results suggest the need to explore alternatives for preserving the City's wooded areas, wetlands, and lakefront open space (or views) while allowing for environmentally-sensitive development in or adjacent to these areas. They also reveal the need to explore solutions to the lack of affordable housing for area residents. The City's land scarcity will make provision of affordable housing in the City very difficult, therefore the City's alternatives could include consideration of a joint agreement with the Village and/or Township for a mutually beneficial area housing project. A similar strategy would expedite development of an industrial park to attract, and better manage, industrial growth in the area. Commercial growth to serve the needs of area residents, will probably take care of itself.

Policies to achieve the public's development objectives are included in Chapter 1, and the Future Land Use Plan in Chapter 10. Regulatory tools, such as zoning, subdivision regulations, and site plan review must be amended to insure consistency with this plan and the comprehensive plan of each jurisdiction.

# Chapter 10

# FUTURE LAND USE

Future land use arrangements are difficult to predict accurately and guide precisely to achieve the desired result reflected in the goals, objectives, and policies in Chapter 1. Yet, they are critically important to the future quality of life in the City of Saugatuck. Therefore, something more than goals and policies is needed. A generalized depiction of future land use arrangements represents one consistent implementation of adopted land use goals, objectives, and policies. This is typically embodied in a future land use map and plan.

The future land use map accompanying this chapter (see Map 10.1) seeks to anticipate community land use needs for 20-30 years. These future land use arrangements have been formulated based on information in the preceding chapters. These arrangements are based on analysis of existing land use, impacts of area trends, projected future land use needs if current trends continue, and a strong emphasis on the relationship of land use activities to the natural resource base. All proposals are intended to be consistent with the goals, objectives, and policies presented in Chapter 1 (which were created with substantial public input).

Many factors could intervene that would require either a substantial reevaluation of certain arrangements, or the entire plan. For example, if a large mixed use development (e.g. 1000 single family units plus some commercial) were built or if a large single employer would enter the scene (e.g. an auto manufacturing facility) then land use arrangements in this plan must be reexamined.

A few key planning and design principles were used to evaluate alternative land use arrangements. With slightly different trends and projections, application of the same principles could lead to different conclusions and different land use arrangements. However, these differences would be related to the amount of particular land uses more than their location or relative relationships to adjoining uses. Likewise, there are many areas in which alternative land use arrangements would be satisfactory providing they remained in keeping with these basic planning principles. Consequently, it is crucial that this plan be regularly reviewed and updated at least once each five years to insure its continued relevance in planning for future land use needs.

## PLANNING AND DESIGN PRINCIPLES

Future land use arrangements were determined based on compatibility with surrounding land uses, natural capacity of the land for particular uses, and necessary infrastructure improvements.

The following planning and design principles are the technical foundation (or rationale) in support of the proposed land use arrangements graphically depicted on Map 10.1. Map 10.1 depicts generalized land use, which is partially reflected through mapping of zoning districts. The planning principles listed above are implemented primarily through zoning regulations and applied during the site plan review process. These principles are consistent with the goals, objectives, and policies in Chapter 1 and should remain the basis for reviewing any subsequent changes to the proposed Future Land Use Map.

These planning principles are:

- Protection of Public Health and Safety
- Conservation of Natural Resources
- Environmental Protection
- Minimizing Public Service Costs
- Efficiency and Convenience in Meeting Land Use Needs
- Insuring Compatibility Between Land Uses (Nuisance Prevention)

Often a land use decision based on one principle also advances another. For example, prevention of filling or construction on floodplains protects public health and safety, conserves natural resources, protects the environment, and minimizes public service costs (especially for relief efforts). It may also create a valuable buffer or open space between uses and hence help insure compatibility.

### *Protection of Public Health and Safety*

Key situations in which this principle is applied include:

- avoiding construction in areas which present natural hazards. In the City these in-

clude areas too close to the Lake Michigan shoreline at high risk from erosion from coastal wave action; floodplains; saturated soils and wetlands; soils not well suited for support of foundations or safe disposal of septic wastes; and steep slopes.
- avoiding construction in areas with soils contaminated by hazardous and/or toxic waste.

### *Conservation of Natural Resources*

Failure to consciously protect nonrenewable natural resources exposes a community to unbridled destruction of those resources which are the foundation for an area's character and quality of life. Conservation of natural resources usually focuses on: land, water, minerals, certain soils (such as prime farmland), wetlands, sand dunes, areas supporting an abundance and diversity of wildlife, and unique forested lands. Areas where the land and the water meet are the most important. Indiscriminate land subdivision frequently reduces the size or alters the shape of land, thereby compromising the resource value and production potential of those lands. These changes also reflect lost opportunities—usually higher public service costs and gradual degradation of an area's tourism potential.

### *Environmental Protection*

This principle aims at preventing pollution, impairment, or destruction of the environment. While there is considerable overlap with natural resource conservation issues, environmental protection measures focus primarily on air and water quality, and the impact of activities where the water meets the land. Environmental quality is best preserved by planning for appropriate land use activities in and near sensitive environmental areas, and managing development accordingly. This usually means insuring conformance with all applicable federal, state and local environmental regulations.

### *Minimizing Public Service Costs*

Public service costs may be minimized by encouraging new land uses where existing infrastructure is not used to capacity and where expansion can be most economically supplied. This also results in compact settlement patterns, prevents sprawl, and is usually favored by taxpayers because it results in the lowest public service costs both for construction and maintenance.

### *Efficiency and Convenience in Meeting Land Use Needs*

To be efficient in meeting future land use needs, communities must make better use of existing infrastructure and plan for infrastructure expansion in a manner which keeps the costs low and does not create huge areas where infrastructure will not be fully used for many years. It also means locating future land uses so that travel between activity centers is minimized. For example: building schools, neighborhood commercial activities, day care facilities, fire and police protection, etc. near the residential areas they serve. This saves municipal costs on initial road construction and future maintenance, reduces everyone's gasoline expenditures, and conserves fossil fuel supplies for future use.

### *Insuring Compatibility Between Land Uses*

A central objective of land use planning is to locate future land uses so that they are compatible with one another. This prevents future nuisance situations between adjacent land uses, such as loud sounds, ground vibrations, dust, bright lights, restricted air flow, shadows, odors, traffic, and similar impacts. A few obvious examples of incompatible land uses include factories, drive-in establishments, or auto repair facilities adjacent to single family homes. With proper planning, land uses can be tiered to buffer impacts and orderly development can occur. Examples include: commercial service establishments on highway frontage with backlot wholesale, storage, or office uses abutting a residential area; or single family residential uses adjacent to park and recreation areas.

## COMMUNITY CHARACTER

When applying the above planning principles to new development proposals, one of the key considerations is compatibility with the character of existing development in an area. To describe the character of Saugatuck, many descriptive words and phrases come to mind, among them: quiet, friendly, clean, small, aesthetically pleasing, bountiful natural assets, and good location. Several Public Opinion Surveys in the past three years have revealed the following four factors as among the most important reasons why people like Saugatuck: friendly people, attractive/beautiful surroundings, low crime rate and small town atmosphere. There is a very strong identification on the part of the residents with the character of their City.

Saugatuck can be described as being both a resort residential and year-round residential community which is primarily dependent upon the tourist trade it has built throughout this century. Most residents would like it to remain like a small village.

**DEVELOPMENT**

Almost all of the land in private ownership in Saugatuck is developed. The exceptions are some large parcels in the northeast and southwest corners of the City. Of these the land currently used as a church camp adjacent to the publicly owned Mt. Baldhead area poses the most potential concern. This area contains heavily wooded sand dunes which are a major asset to the region and should not be developed. The City should initiate steps to insure that these lands are not subjected to more intensive development. A conservation easement is a good tool to consider using to accomplish this task. Outright public acquisition, and then leaseback for camp purposes is another.

The most likely development proposals the City will face in the next two decades (unless annexation occurs), will be redevelopment of existing properties. This is already occurring on a small scale with individual cottages being replaced with larger, year round homes. It will accelerate (if permitted) into replacement of cottages with large densely packed condominiums along the waterfront as has already occurred on Lake Street. Without proper land development regulation, the character of the community could be significantly changed. Walling off the waterfront will not advance that goal. With regard to new residential development, affordable single-family homes and apartments were the preferred types, with waterfront condos (90% opposition) and mobile homes (71% opposition) receiving the highest response as not being needed. More industrial development in the area was supported by nearly 36% of those responding but 22.6% strongly disagreed. Yet 42.2% of the respondents favored spending tax dollars to stimulate economic development. The need for more commercial development in small shopping centers was supported by almost half of the respondents. City residents prefer this new development along Blue Star Highway, especially within the Village of Douglas.

**TOURISM**

A strong tourist oriented character is something that most Saugatuck residents have come to accept. Yet the increased activity and congestion that go with successful tourism are characteristics which are directly opposed to the existing small town atmosphere. This is one of the reasons why solving a very difficult summertime parking problem has been so vexing for the City.

**YEAR ROUND EMPLOYMENT/INDUSTRIAL DEVELOPMENT**

Historically, Saugatuck has had very little industrial development and has been primarily a community with residential and commercial development. This situation has reduced the potential for year round employment and has made the attraction of new families into Saugatuck more difficult. The significance of this trend is that the City could become even more seasonal and retirement oriented than it already is. This in turn would further reduce the capacity of existing commercial businesses to operate year round and further hinder the delivery of certain services such as education. Some new industrial development is both needed and desirable. However, there is no good location for it in the City, and the existing industrial facilities do not represent the best use of their present locations. As a result, the City must a maintain strong effort in conjunction with Douglas and Saugatuck Township to attract new industry into the area, even if it is not located in Saugatuck.

**BLENDING THE RESORT AREAS WITH THE YEAR ROUND COMMUNITY**

There will probably always be a division within the community between resort and seasonal areas and year-round areas. Recognizing the importance of each and fair representation of both in community decision making will be an ongoing challenge in making future land use and infrastructure decisions. Achieving and maintaining a balance will be the key to long term success. The existing commercial and residential areas are quite well separated and the demarcation lines are fairly clear. It will be important that they remain essentially where they are as far as new commercial activity, or the necessary balance may be lost.

The mapping of future land use is a logical extension of the goals and policies stated in this Plan. Land use is the primary purpose for which a parcel of land is occupied. This Plan is designed to promote orderly development and ensure that appropriate areas are available for all classes of land uses anticipated to be needed within the City during the planning period (roughly 20 years) based on existing trends. The future land use plan promotes orderly development in a number of other ways. Home owners can invest in their properties with protection from the intrusion and congestion of undesirable uses in the neighborhood. Overcrowding can be avoided. The City and utility companies can adequately plan for the services needed in (re)developing areas and ensure that adequate land has been reserved within the City for all necessary uses.

Each of the major classes of future land use are described below. Descriptions of planning areas or neighborhoods are also provided to supplement the general land uses depicted on Map 10.1. These specific descriptions correspond to the planning areas depicted on Map 5.3.

## FUTURE LAND USE

### *Conservation and Recreation Areas*

This category embodies environmentally sensitive or "conservation" areas, as they are referred to here, and existing parks and recreational resources in the City which were identified on the existing land use map. Conservation areas include sand dunes, wetlands, floodplains, streams, creeks and drains, the Kalamazoo River, Lake Kalamazoo, and areas at high risk of erosion along Lake Michigan. These areas present severe limitations for development and are proposed for very limited future development in keeping with their fragility and importance in buffering Lake Michigan storms, filtering and storing water during periods of flooding, draining stormwater from land, providing habitat for a wide range of plants and animals, and for their wide ranging open space values.

Saugatuck's water resources, sand dunes, and other natural assets make it a desirable place to live. Destroying these resources would destroy the essential qualities which continue to attract residents and tourists to the area. Therefore, future actions and policies to protect the natural environment will be of utmost importance. These lands should be managed to remain as near to their natural state as possible. Only when other more important public purposes demand it, should these lands be altered or converted to permit another use. The City zoning ordinance should be amended to include better conservation of these natural resource areas.

**Mount Baldhead:** This large critical dune area with a mixture of open sand and rolling forested dunes should remain in its present state without any substantial alteration. Since most of this area is in public ownership, that is feasible. However, the church camp property could at any time be sold to the private sector and divided into 2 acre lots and converted to about 50 single family homes under existing zoning regulations. State dune regulations may result in a lower overall density, but residential development of this area is not appropriate. The City should initiate a conservation easement or other contractual, deed restriction, or covenant to insure that this land remains substantially in its present open space use.

The Mt. Baldhead/Park St. area also contains a large woodlot of upland hardwoods. These trees stabilize the dunes and are a central element of Saugatuck's scenic character. As such, it is essential that they be preserved for future generations. This can be achieved either through a conservation easement—where the land is acquired by a nonprofit conservancy or public agency—or through a woodlot or tree preservation ordinance. A woodlot ordinance is recommended as it views the forest as a whole, rather than tree by tree. The woodlot ordinance would include regulatory provisions to maximize preservation of trees while allowing limited residential development (usually through a transfer of development rights and flexible zoning approach.)

### *Low Density Residential*

This area, which encompasses the Park Street planning area, should continue to be used predominantly for low density single family homes. The sand dunes, steepness of the terrain, limited access, heavy woodlands and significant floodplain, argue against any higher density development. Most of this area is an identified "critical dune area" which must meet stringent DNR requirements or, at local option, local zoning regulations which are approved by the DNR. Any new development should be clustered at a density not greater than one unit per five acres. Density will vary within this area however, in recognition of a large number of

existing developed lots in the Perryman-Park Street area. However, the new state dune regulations may result in prohibitions against expansions and/or replacements of existing structures which may become damaged, due to the relatively high density of existing development in this area.

Smaller undeveloped lots should be permitted to be used only when combined with existing adjacent lots (if under the same ownership) or via a special review procedure to minimize environmental impacts and impacts on adjoining uses. Existing zoning in this area should be reexamined to consider enlarging the minimum lot size requirement for undivided areas and to insure conformance with new state dune regulations.

Single family residential development should be encouraged in this district, because it is compatible with existing uses and demand for scenic, waterfront parcels.

### *City Center Residential*

This dominant residential area in the City is comprised of that area known as "the hill" and most of the Holland Street planning area. These areas have different needs and are addressed in more detail below.

**The Hill:**This area represents the older more established neighborhood immediately surrounding the City Center. It is on an escarpment east of downtown that rises suddenly, providing scenic relief and a natural barrier. Housing density generally ranges between three and five units per acre. There are not many undeveloped lots in this area, except on land with some soil limitations.

Recommendations for this area are as follows:

- Maintain an average density of three or four dwelling units per net acre while maintaining a minimum lot size of 8712 square feet.
- All new housing development should be required to hook into the City water and sewer system.
- All new development should be encouraged to maintain an architectural theme that complements, rather than detracts from existing housing in the area.
- No commercial activity should be permitted in this residential neighborhood. Bed and breakfast activity is probably not appropriate in this area, except along Griffith street.

**Holland Street:** The large residential lots fronting on the River and the marina activity are presently compatible due primarily to the large open spaces with mature trees. However, any pressure which may arise to increase the intensity of waterfront activity in this area or the intensity of commercial development should probably be resisted. The marina and associated activities are separately illustrated on Map 10.1 as "harborfront".

The riverbank rises sharply and provides a remarkable natural green wall to boats entering from the channel. It also makes riverfront access difficult without complex stairways, elevators, or similar devices which would be difficult to install without negatively impacting on the character of the area. Many lots are irregularly shaped with poor access, narrow width, and would not be suited for more traffic. Nor are they adequately sized to accommodate additional parking.

The residential lots on the east side of Holland Street are a more uniform size and shape, and for the most part, contain well maintained older homes. New development should only be residential and should be designed to be compatible with the architectural character of existing homes in the area.

### *Medium Density Residential*

The medium density category represents the highest density of residential development in the City. It is found in condominium development along Lake Kalamazoo and in one development overlooking the Lake on the hill. Future medium density development should be restricted to these same areas. it should not exceed 8 units per acre.

### *City Center Commercial*

This is the original commercial area of the City. It has gradually been transformed into a commercial shopping area predominantly oriented to the day tourist. Businesses face a substantial challenge in trying to meet all expenses and generate a profit in just the summer months. This is most evident each spring as several new businesses open shop. Several actions are necessary to encourage the continuation of the kind of commercial mix which is mutually supportive.

First, the existing historic character of the City Center should be maintained. The historic preservation ordinance is designed to do this, but some structures have been modified incon-

sistent with the code (and perhaps prior to the adoption of the code). New regulations may be necessary to insure new structures are architecturally harmonious. Structures that are relatively new but architecturally inconsistent should be modified, as the opportunity presents itself, to improve their harmony with the character of the district.

Second, the key to long term success of this area is to maintain the proper balance of tourist, versus general business activity.

Third, the public open space in this area needs to be retained and maintained. It is central to the small town character of the City.

Fourth, in conjunction with the Water Street area, a better solution to parking problems must be found for the summer months. Professional assistance should be sought. Options should not include the establishment of a multi-level parking structure in the downtown or near the waterfront.

Fifth, the City and the business community need to promote a harmonious working relationship that is based on commitment to a long range course of action. A progressive alliance should be encouraged (see Chapter 12).

Downtown Saugatuck will continue to serve as the major center for commercial tourist activities in the region. But expansion of commercial uses outside of the downtown area presently zoned for commercial use should be discouraged, and appropriate measures should be adopted to mitigate impacts of the city center on adjoining residential areas.

***Institutional***

This category comprises existing institutional uses, including churches, public utilities, government offices, and schools. Public facilities (i.e. schools, utilities, and offices) have the capacity to meet public service needs for the planning period of this plan.

***Water Street***

This waterfront planning area identified in Chapter 5 is not shown as a single entity on the future land use map because of the clear distinctions in use that occur there– distinctions which are incorporated into other future land use designations, such as city center commercial, conservation/recreation, and harborfront. Water Street runs along Saugatuck's central eastern shore and presents an interesting mix of public and private open space, residential, commercial, and marine oriented activities.

Yet, the area also deserves some attention as a general planning area because of certain trends which could alter its character. The existing trend towards conversion of single family homes in the area to commercial or bed and breakfast use is appropriate, provided the architectural character of the area remains in harmony. Every opportunity to prevent the establishment of new "modern" designs and eliminate existing ones should be seized. Likewise, wherever possible, the original elegance of buildings in this area should be restored.

Public access should be preserved where possible. The existing boardwalk is a special asset which should remain open to public access, and as the opportunity presents itself, could be expanded further throughout this area and into the Lake Street area. Change in the use of existing street ends should be carefully scrutinized, and public access insured in any event.

***Mixed Residential***

This designation describes the future of much of the Lake Street planning area (to the south) and the Center Transition planning area (which adjoins the downtown commercial area). It is characterized by a mixture of residential and commercial uses.

**Lake Street:** This area has a high potential for negative future change. The market for waterfront condominiums remains fairly strong along the West Michigan shoreline. It is often profitable to purchase waterfront property, remove an existing residence and redevelop as condominiums. Several such conversions have already occurred (at the western end of Lake Street and between Griffith and Butler) to the detriment of public values. In particular, public access to and viewing of the waterfront has been lost, and a canyon has been created by the high structures now lining this part of the shoreline. To prevent further loss of Saugatuck's character, this area must receive more specific zoning treatment than under existing zoning regulations– which treat it as a predominantly commercial area, rather than a predominantly residential area.

A strong effort should be made to concentrate any new large structures which may be proposed only on the north side of Lake Street, tucked close to the ridgeline so they do not block the view of residents on the hill. If they are put on the south side, they should have large amounts of open space on either side to insure a public view of the Lake.

If more intensive development is desired and can be adequately managed, the City should consider establishing a bulkhead line from Griffith to Blue Star and thereby increase the dockage area. This should be done only if a common walkway were established that is open to public access for the entire length and if such action would not result in overcrowding of Lake Kalamazoo at the time it were implemented. Such a proposal should include a means to deal with increased traffic, parking and boat launching. If this idea were implemented, it may not be desirable to maintain the historic district designation in this area, as many existing structures would likely be removed consideration could be given to identifying this area as "harborfront" and permitting a mix of marina, commercial, and residential uses.

The area east of Blue Star Highway should not be intensively developed due to the extensive wetlands in this floodplain.

**Center Transition Area:** This area north of the City Center presents a real challenge to local land use regulations. There is some pressure to convert these large residential structures into commercial use, but the market isn't sufficient to justify this and it would dramatically alter the area's overall residential character. Therefore, existing municipal policy allowing limited commercial activity as accessory to the primary residential use of the properties on North Butler should continue to be carefully administered. Conversion of entire structures to commercial use should not be permitted.

Additional bed and breakfast establishments in this area would be appropriate. The northeast portion of this area has characteristics more in keeping with the residential area on "the hill" and should be maintained in concert with the recommendations described for that area.

### *Harborfront*

The marina area along Holland Street is the only area categorized as harborfront at the adoption of this plan because of its special orientation to the water. However, further changes along Water and Lake Streets as previously described could also warrant classification of these areas as "harborfront".

### *Industrial*

This category applies to the small industrial area in the City, which is currently occupied by Rich Products. Although commercial rather than industrial use is the best use of these properties in the long term, Rich Products is a strong, local company and a major employer, and without a public effort to relocate it in comparable facilities elsewhere, this plan encourages its continuance.

The City encourages expansion and continued improvement of the industrial area under development in Douglas—especially an industrial park which could provide jobs and bolster the economy of the entire tri-community area. Industrial parks are an excellent way to manage future industrial growth. Although they have broad, long-term public benefits (including lower service costs, fewer nuisance impacts, better design, and less environmental impact), industrial parks require a large short-term investment in land and public services. Therefore, it is crucial that studies be conducted to insure that the park could be competitive with others in the area.

The Michigan Department of Commerce maintains an inventory of industrial parks through the Statewide Site Network. Only certified industrial parks will be included on this list, and thereby be able to effectively compete for new industries. To be certified, industrial parks must be at least 40 acres, a site plan for the park must be approved, soil borings must be conducted, infrastructure must be completed, utilities must be installed 300 feet into the park, and protective covenants must be established. The City supports future efforts to create an industrial park within the tri-community area, provided it targeted nonpolluting, light industrial and office activities that were compatible with the tri-community area.

### *Planned Unit Development (PUD)*

The PUD designation is recommended for most of the Maple Street planning area. This is the only major area of the City on the east side of the River which is not fully developed. Extensive soil limitations, wetlands, some floodplains, and forested acreage characterize this area. The area's two wells provide the primary source of groundwater for the City (and presently for Douglas as well). The area contains some multifamily development and is well suited for more multifamily development, provided it is carefully sited, or single family development on large lots.

The natural characteristics of the land make it especially well suited for planned unit development. Good site design could cluster units, while keeping the overall density equal to or less than the adjoining City Center residential

area. The City should consider requiring that all subdivisions and multi-family development projects be designed as a PUD in this area, provided that existing PUD provisions in the zoning ordinance are revised to remove some problematic provisions. PUD can allow flexibility in site design and housing density, thereby increasing open space, preserving natural features of the site, and enhancing the quality of the development project—to the benefit of both developers and the community. This concept can also encourage innovative design and efficiency in providing public services.

Design flexibility under PUD is typically accomplished through density transfers, according to a predetermined regulatory scheme, and comprehensive site plan requirements and design standards. In this way, buildings may be clustered through mixtures of housing types such as detached houses, townhouses, and apartments. This mixture of housing types creates fine housing opportunities for various groups without negatively affecting adjoining land uses.

**ENTRY POINTS**

There are three major entry points into the City of Saugatuck. (See Map 10.2). They are:

- from Lake Michigan on the Kalamazoo River
- from Blue Star Highway at the Kalamazoo River Bridge
- from Blue Star Highway onto Washington Road/Holland Street

At the present time, the entries from Lake Michigan and over the Kalamazoo River provide an aesthetic and inviting entry into the City. The public opinion surveys reflected citizen concern about the appearance of properties along Blue Star Highway. The old entry sign/intersection at Holland Street/Washington and Blue Star Highway is especially bad. The situation is further harmed by signs along I-196 which fail to inform southbound travelers at exit # 36 that they can access Saugatuck (only Ganges is mentioned).

First impressions are very important in the tourism industry. Attractive entryways help entice tourists into the community and leave a positive impression to encourage future visits. The entry points represent the community and should reflect those qualities which make the area special. Fortunately, these design problems are easily overcome, and with only minimum public investment. A special joint effort to develop alternatives for improving the entry points into all three communities should be initiated. In addition, new land developments in these areas (or changes to existing ones) need to be carefully reviewed to insure that changes enhance (and do not further detract from) the positive image and character that should exist in these areas.

**CITY-WIDE RECOMMENDATIONS**

***Residential***

Residential use will continue to be the predominant developed land use in the City. The challenge in the next twenty years will be maintaining the older housing stock and ensuring that the growing ranks of part-time residents and absentee owners do not result in housing deterioration. Equally important will be efforts to blend new development with the older character of existing land uses.

Within Saugatuck, there will be pressure to remove existing homes along the waterfront and replace them with higher density condominiums. Condominium development that greatly diminishes the public view of the waterfront should not be permitted, especially along Lake Street. Additionally, the height of new construction should not exceed 25-30 feet along the waterfront. It would be better to place taller, higher density development back "into the hill" and leave the shoreline open.

Another residential issue relates to affordable housing. The City, like many communities in Michigan, is faced with an affordable housing crisis. If the Saugatuck School District is to survive with the same breadth of programming and quality it has today, then affordable housing must be available for families. In terms of new construction, affordable housing typically means homes of about 1,000-1,200 square feet, on smaller than average lots, and priced at not more than $70,000. Some public incentives or write-downs are typically necessary to achieve this. The only housing of this type being built in the area is on large lots in rural parts of the Township.

More apartments and temporary housing for summer workers could be provided in selected areas throughout the City. But unlike Douglas and some areas of Saugatuck Township, the City has little acreage well suited for the higher density development typically associated with affordable housing. For this reason, the City supports the construction of affordable housing within Douglas or Saugatuck Township, and may cooperate on such a venture

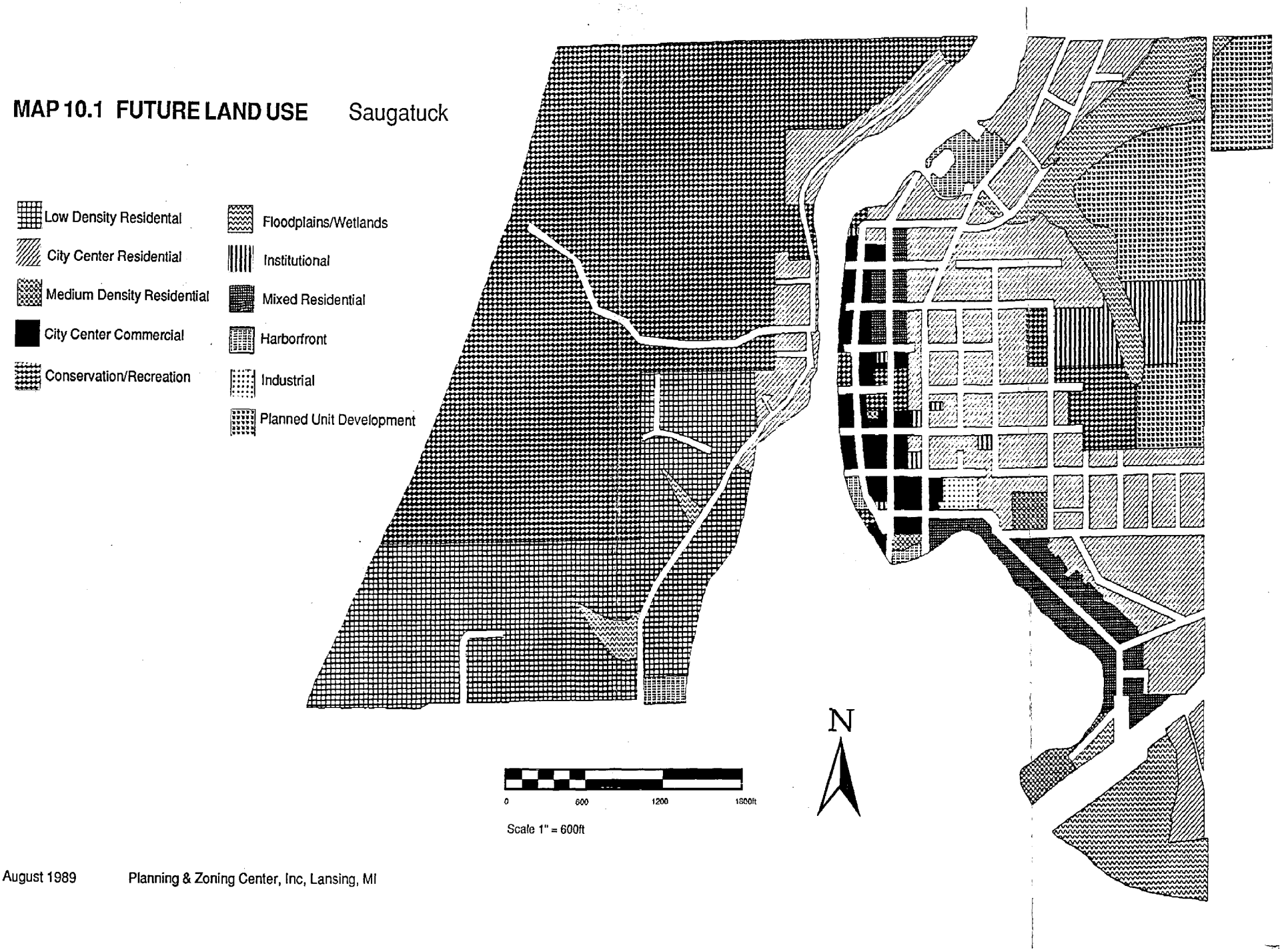
where feasible and where mutual benefits are clear.

***Other Recommendations***

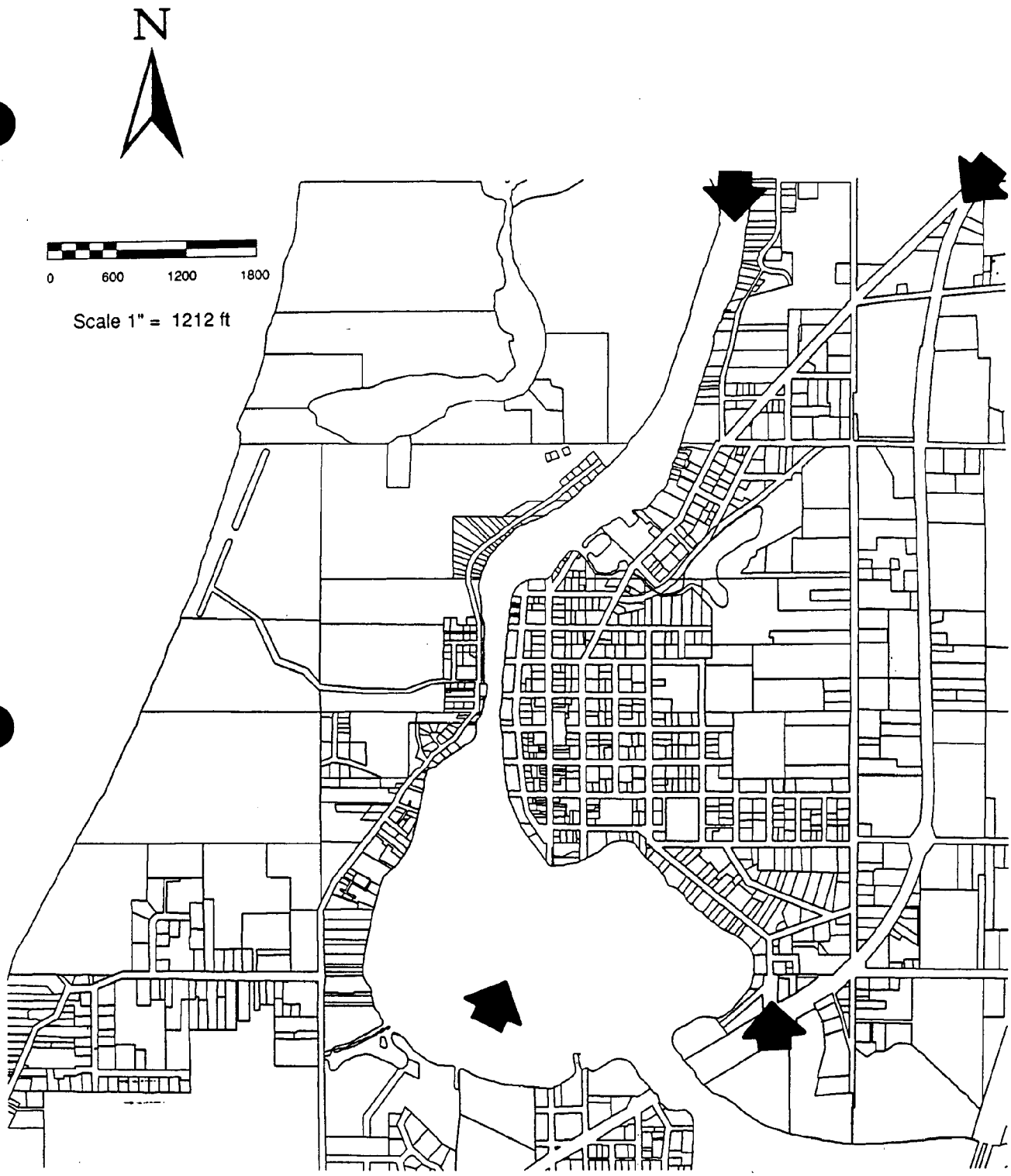
The following recommendations are important to maintaining the character of the City and improving its present function and hence should be implemented as a part of the future land use plan.

- The maintenance and replanting program recently prepared for the aging trees throughout the City should be consistently implemented.
- Sidewalk repairs, replacement, and installation are badly needed in some blocks.
- Curb, gutter and street repair/repaving should be performed on a scheduled periodic basis consistent with an adopted capital improvements plan. New curbs at intersections with sidewalks should all be sloped to accommodate handicapper and bicycle access.
- A network of bicycle paths should be encouraged. This network should complete a regional network and inner city streets which connect the routes should be marked, but no additional right-of-way is necessary at these junctures.

## MAP 10.1 FUTURE LAND USE Saugatuck




August 1989 Planning & Zoning Center, Inc, Lansing, MI




## MAP 10.2 ENTRY POINTS

Saugatuck

Entry Points

August 1989 DATA SOURCE: City Of Saugatuck Ordinances Planning & Zoning Center Inc, Lansing, MI

# Chapter 11

# INTERGOVERNMENTAL COOPERATION

By itself this plan has no legal regulatory force but rather, serves as a foundation upon which regulatory measures are based. The two primary land use regulatory documents which are also the principal means of implementation of this plan, are the zoning ordinance and subdivision control regulations. These regulatory instruments are described in the next chapter.

However, effective integration of this Plan will also require an ongoing commitment to intergovernmental cooperation with Douglas and Saugatuck Township. In particular, the Joint Plan prepared concurrently with this one should be implemented as steadfastly and also kept current with comprehensive reviews at least once each five years.

It will also be very important to make every effort to keep Douglas and Saugatuck Township officials informed of proposed changes to this Plan or any of its regulatory instruments (such as zoning) and to encourage their input prior to such a change being made. Likewise, those jurisdictions should be encouraged to reciprocate with proposals and an opportunity for review by the City of Saugatuck prior to action on any change which may impact on the City. A copy of this Plan and any amendments to it will be filed with the clerk of each of these jurisdictions, as well as with the County Clerk, the County Planning Commission, the County Economic Growth Alliance, the West Michigan Regional Planning Commission, and Department of Natural Resources.

Ongoing efforts to consolidate additional public services such as police and possibly public works should be continued where mutually beneficial. Kalamazoo Lake Sewer & Water Authority has functioned well and should continue to strengthen its efforts.

# Chapter 12

# STRATEGIES FOR IMPLEMENTATION

## PRIMARY IMPLEMENTATION TOOLS

### *Relationship to Zoning*

The City of Saugatuck has a zoning ordinance adopted pursuant to the City-Village Zoning Act, PA 207 of 1921. The intent of that ordinance is to regulate the use of land to provide for orderly growth and development and allow the integration of land uses without creating nuisances. The zoning ordinance defines land use districts and regulates height, bulk, use, area of lot to be covered, and open space to be preserved within each district.

Because the Zoning Enabling Act requires the zoning ordinance be based upon a Plan and this Plan, prepared by the Planning Commission, has been prepared to guide future land use decisions, the zoning ordinance should be revised to reflect this Plan's new goals, policies, and future land use proposals. However, the zoning district map and the future land use map (10.1) will not be identical. The zoning map typically reflects existing land use (where it is desirable to continue it) and small areas zoned for more intensive use then at present. The future land use map (on the other hand) reflects land use arrangements at some future time. (See Section 10.10, p. 245-250, **Michigan Zoning & Planning**, 3rd Ed., by Clan Crawford, ICLE, Ann Arbor, 1988).

The City should continue to maintain a formal site plan review process. Through this process applicants, in order to obtain zoning approval, must submit plans which clearly indicate how their development proposals will change and affect both the parcel of land being developed as well as surrounding properties. It is recommended that all commercial and industrial development, as well as all subdivisions, multiple family housing, planned unit developments, and other development requiring more than five (5) parking spaces, undergo site plan review.

In addition, the zoning ordinance and fee structures should be amended to permit the City to require developers of new commercial and industrial uses and all proposed multi-family developments to pay into an escrow fund to be used for payment of professional review fees by engineers, planners and attorneys (if necessary). Unused escrowed dollars would be returned.

### *Relationship To Plans/Zoning In Adjacent Jurisdictions*

The land use proposals in this plan were carefully prepared with an eye to ensuring compatibility with those of Douglas and Saugatuck Township. Equal care should be taken in the future to seek and receive comment on proposals that are on or near a border from an adjoining jurisdiction. Failure to do so will only insure future conflict over adjacent land uses, or the provision of new public services.

### *Relationship to Subdivision Regulations*

The City of Saugatuck should adopt subdivision regulations if the remaining undeveloped land is to be platted as opposed to developed under PUD provisions. The enabling legislation that permits the enactment of such regulations is Public Act 288 of 1967, also known as the Subdivision Control Act of 1967. This Act allows a community to set requirements and design standards for streets, blocks, lots, curbs, sidewalks, open spaces, easements, public utilities, and other associated subdivision improvements. With the implementation of a subdivision ordinance there is added assurance that development will occur in an orderly manner. The City of Saugatuck should consider amending its subdivision and zoning regulations to prohibit the establishment of lots which would be unbuildable under existing state or local regulations (such as lots which are wholly within a protected wetland).

### *Relationship to Capital Improvements*

In its basic form, a CIP is a complete list of all proposed public improvements planned for a 6 year period (the time span may vary), including costs, sources of funding, location, and priority. The CIP outlines the projects that will replace or improve existing facilities, or that will be necessary to serve current and projected land use development within a community.

Advanced planning for public works through the use of a CIP assures more effective and economical capital expenditures, as well as the provision of public works in a timely manner. The use of capital improvements programming can be an effective tool for implementing the comprehensive plan by giving priority to those projects which have been identified in the Plan as being most important to the future development and well being of the community. The City Planning Commission should develop a formal capital improvement program.

### *Land Use & Infrastructure Policies*

A strong effort will be necessary to coordinate future capital improvement decisions and land use policies with adjoining units of government. As a result, proposed policy changes should be circulated for comment early. Likewise, proposed capital improvement programs should be prepared with adequate time for review and comment by the adjoining jurisdictions.

### *Community Participation And Education*

In order to gain the support, acceptance, and input of area residents for future planning, ongoing efforts should be continued to provide information to them, and involve them in the planning process. The importance of their role in that process should be emphasized. Public acceptance will make the implementation of plans much easier and public input makes plans better and more responsive to local needs.

## SPECIAL AREA & FINANCING TECHNIQUES

### *Building and Property Maintenance Codes*

BOCA (Building Officials and Code Administrators International, Inc.) is the basic building code adopted by the City to regulate construction methods and materials. The adoption and enforcement of a building code is important in maintaining safe, high quality housing and in minimizing deteriorating housing conditions which contribute to blight within neighborhoods. This should be continued.

The City should consider adopting a basic property maintenance code to regulate blighting influences which result from failure to properly maintain property and structures. A standard code such as the BOCA Basic Housing - Property Maintenance Code or a locally developed code could be adopted.

### *Community Development Block Grant Program*

The Community Development Block Grant program was authorized under Title I of the Housing and Community Development Act of 1974. The Act had the effect of combining several federal categorical grants such as Urban Renewal and Model Cities into one. Grants under the program must principally benefit low and moderate income families.

In Michigan there are two categories of eligible applicants: entitlement and non-entitlement. Entitlement communities, by meeting specific eligibility criteria, are given grant funds outright without having to compete for them. Non-entitlement applicants must compete for grant funds by applying through the Michigan Small Cities Community Development Block Grant Program. The City of Saugatuck is not an entitlement community. Therefore, it must apply through the Small Cities Program.

Operation of the Michigan CDBG Program is the responsibility of the Michigan Department of Commerce with central program administration by the Department's Office of Federal Grant Management (OFGM). The Department of Commerce has entered into an agreement with the Michigan State Housing Development Authority (MSHDA) assigning administrative responsibilities for the housing component of the program.

In the housing area, samples of grant eligible activities include:

- Home Improvement Programs
- Rental Rehabilitation Programs
- Weatherization and Energy Conservation
- Home Repair for the Elderly
- Public Improvement in conjunction with targeted housing activity (limited to 25 percent of grant request)
- Housing Related Services
- Housing for the Homeless.

The maximum grant amount is $250,000. By applying and obtaining a Small Cities Block Grant, the City alone, or in concert with Douglas and Saugatuck Township could establish a housing rehabilitation program which would help preserve housing throughout the area.

The CDBG program also has the following categories of assistance:

- Base Industrial Loan program helps financially viable businesses needing financial assistance for growth, modernization, or expansion. Limit $750,000).
- Commercial Retail Loan program is for commercial, services, tourism, and other

non-residential projects; and minority owned and retail projects in distressed communities. Limit $400,000.

- Public Infrastructure Assistance program funds public improvements for the location and expansion of public infrastructures. Limit $750,000.
- Downtown Development program provides financing to assist businesses in the redevelopment of the downtown area. Limit $500,000 or $300,000 for infrastructure improvement.
- Communities in Transition program funds community development activities, such as public sewer and water systems, parks, bridges, roads, and comprehensive redevelopment planning. Limit $400,000.
- Emergency Community Assistance program funds communities experiencing an imminent and urgent threat to public health, safety, or welfare which occurred within 90 days of application. Limit: $500,000.

### *Downtown Development Authority - Act 197 of 1975*

This Act permits a city, village, or township to establish a nonprofit development corporation called a Downtown Development Authority (DDA) with broad powers, including those of taxation and bonding, to focus on revitalization and development within established "downtown" boundaries.

The Act gives an authority broad powers with regard to the planning and development of the downtown district. It may engage in downtown planning, promote housing and public facility developments, and economic development projects. Operating revenues may be raised through public and private contributions or through properties the DDA may control. With the approval of the municipal governing body, an ad valorem tax may be levied on real and tangible personal property within the downtown district. Capital financing may be raised in a number of ways:

- A DDA may issue revenue bonds. These, with municipality approval, may be secured by *"the full faith and credit"* of the municipality.
- A DDA can request the municipality to borrow money and issue notes in anticipation of collected taxes.
- A DDA, with municipality approval, may create a *"tax increment financing plan"* in which it devotes projected increases in future tax revenues from increased assessed valuation in the project area - *"captured assessed value"* - for repayment of debts incurred in making selected public improvements. Revenue bonds are issued in anticipation of future revenue.

### *Michigan State Housing Development Authority (MSHDA) Programs*

To help preserve Michigan's older existing housing, Public Act 130 was passed in 1977 to allow MSHDA to begin a home improvement loan program that offers reduced interest rates to eligible low and moderate income families. MSHDA has created the Home Improvement, Neighborhood Improvement and Community Home Improvement Programs (HIP/NIP/CHIP). To get a loan, residents should apply to one of the banks, savings and loans, or credit unions that take part in HIP/NIP/CHIP.

### *Land and Water Conservation Fund*

The Land and Water Conservation Fund (LWCF) grant program was authorized by Public Law 88-578, effective January 1, 1965. The purpose of the program is to provide federal funds for acquisition and development of facilities for outdoor recreation. The LWCF Program is administered jointly by the National Park Service, U.S. Department of the Interior, and the Michigan Department of Natural Resources.

All political subdivisions of the state, including school districts, are eligible to participate in the program. Eligible projects include:

1. Acquisition of land for outdoor recreation, including additions to existing parks, forest lands, or wildlife areas.

2. Development including, but not limited to such facilities as: picnic areas, beaches, boating access, fishing and hunting facilities, winter sports areas, playgrounds, ballfields, tennis courts, and trails.

For development grants, the applicant must have title to the site in question. The minimum grant allowable is $10,000 and the maximum grant allowable is $250,000.

For all grant proposals, the amount of the grant cannot exceed more than 50 percent of the total project cost.

### *Michigan Natural Resources Trust Fund*

The Kammer Recreational Land Trust Fund Act of 1976 (Public Act 204) was passed by the Michigan Legislature and signed by the Gover-

nor on July 23 1976. This Act created the Michigan Land Trust Fund. The program provided funds for public acquisition of recreational lands through the sale of oil, gas, and mineral leases and royalties from oil, gas, and mineral extractions on state lands.

On November 6, 1984, Michigan residents cast their vote in favor of Proposal B. This constitutional amendment created the Michigan Natural Resources Trust Fund (MNRTF), Public Act 101 of 1985, which officially replaced the Michigan Land Trust Fund on October 1, 1985. MNRTF assists state and local governments (including school districts) in acquiring land or rights to land for recreational uses, protecting land because of its environmental importance or scenic beauty, and developing public recreational facilities.

Any individual, group, organization, or unit of government may submit a land acquisition proposal, but only units of government may take title to and manage the land. Only units of government may submit development proposals. All proposals for local grants must include a local match of at least 25 percent of the total project cost. There is no minimum or maximum for acquisition projects; for development projects, the minimum funding request is $15,000, the maximum is $375,000.

### *Costal Zone Management Fund*

The Land & Water Management Division of the Department of Natural Resources offers grants for the purpose of planning, designing, and carrying out low-cost projects to improve Great Lakes shorelines and connecting waterways. The City recently received approval of a $50,000 CZM grant to improve its parking facilities at Oval Beach.

### *The Recreation Bond Fund*

The Recreation Bond Fund draws from bonds approved by voters in 1988. It calls for money to be spent on DNR and local recreation facilities in four categories:

**Recreation infrastructure**: such as ballfields, tennis courts, beaches and other shoreline areas, boat launches, trails, picnic areas, historic structures, playgrounds, roads, parking, restrooms, etc., which are not less than 15 years old;

**Waterfront recreation**: such as fishing piers, boardwalks, boat launches, marinas, amphitheaters, landscaping, and shoreline stabilization;

**TABLE 12.1**

**RECREATION FACILITIES & THEIR MINIMUM NUMBER OR SIZE NECESSARY TO ACHIEVE MINIMUM POINTS**

| RECREATION FACILITY | MINIMUM SIZE |
|---|---|
| Bicycle Trail | 1 mile |
| Playground | 3 pcs. of play equipment |
| Swimming Beach | 50 feet |
| Boat Launch | 5 parking spaces |
| Campground | 10 campsites |
| Non-motorized Trail | 1/2 mile |
| Cross-country Ski | |
| Hiking | |
| Nature | |
| Horse | |
| Fishing Access | 50 feet |
| Fishing Piers | 1 |
| Nature Area | 10 acres |

NOTE: Points are not to be awarded separately for cross-country ski trails, nature trails, and hiking trails. These trails are to be considered as one facility.

Source: DNR, **Michigan's 1987-88 Recreation Action Program Guidebook.**

**Community recreation**: playgrounds, sportsfields, community centers, senior centers, fishing sites, and trails for the handicapped;

**Tourism-enhancing recreation**: including campgrounds, boating facilities, historical sites, recreational conversion of abandoned rights-of-way, and fishing access.

In its statewide inventory of recreational facilities, the DNR has identified Allegan County as deficient in a number of recreational facilities. Those relevant for the tri-community area include deficiencies in bicycle trails, fishing access, fishing piers, boat launches, campgrounds, nature areas, hiking trails, nature trails, cross country ski trails, picnic areas, and playgrounds. Allegan County communities with proposals for such projects will get funding priority over similar projects proposed in non-deficient counties. Table 12.1 includes the minimum number or size of selected recreation facilities to be considered toward bond funding.

Grant requests may not exceed $750,000 and may not be less than $15,000. Applicants must match bond funds with 25% of the total project cost, not including other state grants or legislative appropriations. Bond money will only be allocated to projects on sites controlled by

public agencies. In the tourism category, priorities are given to projects which: create new and innovative recreation-related tourism attractions; involve partnerships between the public and private sector; and projects for which feasibility studies have been conducted which demonstrate local, regional, and statewide economic benefits.

The City has received preliminary approval of a $62,500 recreation bond fund grant for improving the beachhouse facilities at Oval Beach.

***Recreation Improvement Fund***

The Recreation Improvement Fund was created from State fuel tax revenue. About $750,000 per year is being targeted for development of non-motorized trails (hiking, bicycle, cross-country, and nature trails). No application forms or criteria have yet been prepared, but the Recreation Division is encouraging local governments to submit proposals based on local determination of need, location, and financing.

***Local Facility Development Grants***

These grants come from a number of funding sources and are available for planning, design, or development of local recreational facilities. The Village of Douglas received $11,000 through this program in FY 1987-88 for improvement of its boat launch site on Kalamazoo Lake.

***Land Acquisition Grants***

Land acquisition grants are available for projects aimed at open space preservation; park creation or expansion; acquisition of environmental resources such as sand dunes, woodlots, or wetland areas; waterfront access sites; and many other land acquisition projects intended for (passive or active) recreational purposes.

***Waterways Fund***

The Waterways Division of the Department of Natural Resources offers grants for the purpose of developing public boating facilities. The emphasis is on creating boat access sites and supporting facilities.

***Road Funds***

In 1987, three acts were passed to provide a new source of revenue for cities, villages,and county road commissions. The Transportation Economic Development Fund (Act 231 of 1987, as amended), the Road Construction and Improvement Act (Act 233 of 1987), and the Local Road Improvements and Operation Revenue Act (Act 237 of 1987, as amended). The acts will be in effect for five years, when they will be reviewed for continuation by the legislature.

The Local Road Improvements and Operation Revenue Act authorizes county road commissions to impose a vehicle registration fee and use these funds for road improvements. This Act has had little utility, however, because the fee must be approved by a public vote. Michigan voters in 3 counties rejected proposed fees in the November 1988 election. Many counties chose not to even put it on the ballot, fearing the same result.

The Road Construction and Improvement Act (Act 233) provides funding through the transportation economic development fund only to rural counties (less than 400,000 population) with a national lakeshore, national park, or in which 34% or more of the land is commercial forest land. Then a portion of the remaining funds are available for use for county, city, and village street improvements.

The Transportation Economic Development Fund allocates money for the purposes of bringing county roads to all season highway standards. This is important because heavy trucks can only travel regularly on all season roads.

The Transportation Economic Development Act also offers counties, cities, and villages the opportunity to compete for additional funding on special projects with economic development objectives. This competitive grant is awarded by the State Highway Commission. Qualified project categories are listed below:

(a) Economic development road projects in any of the following targeted industries: agriculture or food processing; tourism; forestry; high technology research; manufacturing; office centers solely occupied by the owner or not less than 50,000 square feet occupying more than 3 acres of land.

(b) Projects that result in the addition of county roads or city or village streets to the state trunk line system.

(c) Projects for reducing congestion on county primary and city major streets within urban counties.

(d) Projects for development within rural counties on county rural primary roads or major streets within incorporated villages and cities with a population of less than 5,000.

**PUBLIC WORKS FINANCING**

In addition to using general fund monies, it is often necessary for a community to bond to raise sufficient funds for implementing substantial public improvements. Bonding offers a method of financing for improvements such as water and sewer lines, street construction, sidewalks, and public parking facilities. Common municipal bond types include:

1. General Obligation Bonds - full faith and credit pledges, the principal amount borrowed plus interest must be repaid from general tax revenues.

2. Revenue Bonds - require that the principal amount borrowed plus interest be repaid through revenues produced from the public works project the bonds were used to finance (often a water or sewer system).

3. Special Assessment Bonds - require that the principal amount borrowed plus interest be repaid through special assessments on the property owners in a special assessment district for whatever public purpose the property owners have agreed (by petition or voting) to be assessed.

**TAX INCENTIVES**

The state law permitting communities to provide property tax incentives for industrial development is Act 198. This Act allows a community to provide tax abatements as an incentive for industrial firms which want to renovate existing or build new facilities.

**ADDITIONAL RECOMMENDATIONS**

***Other Planning & Economic Development Assistance***

The City Planning Commission should maintain regular communication with the County Planning Commission, with the West Michigan Regional Planning Commission, and with the Allegan County Community Growth Alliance. These organizations should be encouraged to continue their County and region-wide planning and economic development efforts and to share relevant materials with the City. Likewise a copy of this Plan should be forwarded to each of these agencies when adopted.

***Pro-Business Alliance***

One way to strengthen Saugatuck's economic development potential is to establish a pro-business exchange in City government (or jointly with Douglas and Saugatuck Township) modelled after the Michigan Bell Business Retention and Expansion Program. (Saugatuck is not eligible for participation in the Michigan Bell Business Retention and Expansion program because it is not in a Michigan Bell service area.) A pro-business exchange creates an atmosphere of cooperation which benefits both the business and the community.

The role of a pro-business exchange is to assist existing businesses in finding solutions for their problems (i.e. inadequate parking, expansion or relocation needs, etc.) and help make new businesses feel welcome. The exchange would work with area businesses to determine their needs and appoint an ombudsman to inform new businesses of local services and contacts. Businesses are often not aware of the services available to them or who to contact for more information. A brochure could be prepared which identifies who to contact for information on zoning, construction, planning, utilities, and taxation. The brochure could also identify permit fees, tax and utility rates, and transportation, delivery, freight, health, and financial services available in the area.

***Poverty***

The changing economy, higher health care costs, higher literacy and skills requirements for employees, and inflation have seriously hurt the nation's poor, including the elderly on fixed incomes. Social security benefits are the only retirement income for about two-thirds of all American retirees, and an estimated one million Michigan residents have no private or public health insurance.

The poor are often overlooked in community development efforts, yet they are the group most in need of public assistance. Over eight percent of the City's residents were living below the poverty level in 1980. That's an annual income of less than $3,778 for those under 65, and $3,479 for those 65 and over.

The City should continue to monitor the number of people in poverty through the census counts and work with local churches and nonprofit groups to assist them through food drives, temporary shelters, or other needed services.

***Collection of Traffic Count Data***

A more detailed analysis of street and road needs should be undertaken. However, doing so is limited by the lack of any systematic and

recent traffic count information. The tri-community jurisdictions would greatly benefit from jointly purchasing the necessary equipment and undertaking specific traffic counts on a regular basis. The cost and training associated with this is minimal compared to the benefit.

***Downtown Saugatuck***

Downtown Saugatuck has a parking problem during the summer months. Low cost solutions have been difficult to find. However, discretionary tourist visits are likely being lost on peak days due to limited parking. Expert analysis is needed. Solutions should not include the establishment of above ground parking structures that significantly alter the character of the area.

***Public Open Space Acquisition***

Programs to acquire public open space along the water should be initiated. One option is to create a local nonprofit land conservancy. There are several very effective ones operating in Michigan. Priority should be given to building a trust fund for acquisition and maintenance or tying into existing ones by the Nature Conservancy and similar organizations.

***Periodic Updating and Revisions***

As these additional studies are undertaken the Plan should be updated to reflect the new information. At a minimum the plan should be comprehensively reviewed and updated at least once every five years.

***Managing Growth and Change***

The key to successfully managing future growth and community change is integrating planning into day-to-day decision making and establishing a continuing planning process. The only way to get out of a reactionary mode (or crisis decision making) is by planning and insuring the tools available to meet a broad range of issues are current and at hand. For that reason it will be especially important that the recommendations of this Plan be implemented as the opportunity presents itself (or revised as circumstances dictate).

Many new tools may be made available to local governments over the next few years to manage the growth and change process. It will be a challenge to City officials to pick from among the new tools, those that will provide greater choice over local destiny and quality of life.

# APPENDIX A

## References

# REFERENCES

*Listed below are some of the key reports, studies, plans, and data sources which were used as references in the preparation of this plan. Other data sources are referenced throughout the plan.*


**DEMOGRAPHICS**

U.S. Census, **Current Population Reports**, East North Central 1986 Population and 1985 Per Capita Income Estimates for Counties and Incorporated Places, Series P-26, No. 86-ENC-SC *(also referenced for economic data).*

U.S. Census of Population and Housing, 1980—Summary Tape File 3A (microfiche) for Saugatuck, Saugatuck Township, the Village of Douglas, and Allegan County.

**HISTORY**

Joe Armstrong and John Pahl, **River & Lake: A Sesquicentennial History OF Allegan County, Michigan**, published by the 1835 Committee, 1985.

**MASTER PLANS**

**Saugatuck Township General Development Plan**, prepared for Saugatuck Township by Williams & Works, Inc., 1975.

**Village of Douglas Land Use Plan**, prepared by the Village of Douglas Planning Commission with the assistance of the West Michigan Regional Planning Commission, adopted November 19, 1986.

**Land Use—Village of Saugatuck**, prepared by the Saugatuck Planning Commission with the assistance of the West Michigan Regional Planning Commission, 1979.

**NATURAL RESOURCES**

Michigan Resource Inventory System Database, Department of Natural Resources.

**Soil Survey of Allegan County, Michigan**, United States Department of Agriculture, Soil Conservation Service, March 1987.

**OWNERSHIP**

**Land Atlas and Plat Book**, Allegan County, Michigan, Rockford Map Publishers, Inc., 1987-1989.

**Saugatuck Township Plat Book**, Township Treasurer's Office, Saugatuck, Township.

**RECREATION**

**A Parks and Recreation Plan for Allegan County, Michigan**, prepared for Allegan County by Williams & Works, Inc., 1986.

**Saugatuck-Douglas Area Parks and Recreation Plan**, prepared by the tri-community area Parks and Recreation Commission, with the assistance of the Saugatuck Public School District, February 1985.

SOLID WASTE

**Allegan County Solid Waste Plan**, prepared for the Allegan County Board of Commissioners and the Michigan Department of Natural Resources by the Allegan County Planning Commission, P.A. 641 solid Waste Planning Committee, and the West Michigan Regional Planning Commission, September 1983.

ECONOMY

**Real and Personal Property SEV, 1980-88**, Michigan Department of Treasury, State Tax Commission.

**The Economic Impact of Travel on Michigan Counties**, prepared for the Michigan Travel Bureau by the U.S. Travel Data Center, July 1988.

**Travel and Tourism in Michigan: A Statistical Profile**, First Edition, Research Monograph #1, Michigan State University, Travel, Tourism and Recreation Resource Center, 1986.

Michigan Employment Security Commission, Bureau of Research & Statistics, Detroit, Michigan.

UTILITIES

**A Feasibility Study on the Utilization of a Single Ground Storage Reservoir, Saugatuck-Douglas Water System**, prepared for Kalamazoo Lake Sewer & Water Authority by Holland Engineering, Inc., January 18, 1983.

**Facilities Plan for Wastewater**, prepared by Williams & Works, April 1976.

**Saugatuck Township Area Utility Service Study**, prepared by Fishbeck, Thompson, Carr & Huber, Inc., March 1988.

**Village of Douglas Water Supply Contamination Problem Evaluation and Recommendations**, Wolverine Engineers & Surveyors, Inc., July 1, 1987.

**Village of Saugatuck Streets and Public Utilities Condition Report**, May 1984.

**Waterworks Reliability Study for Kalamazoo Lake Sewer and Water Authority**, prepared by Fishbeck, Thompson, Carr, & Huber, Inc., March 1987.

ZONING

**City of Saugatuck Zoning Ordinance**, as amended through October 1989.

**Saugatuck Township Zoning Ordinance**, as amended through October 1989.

**Village of Douglas Zoning Ordinance**, as amended through October 1989.

# APPENDIX B

## Demographic, Economic, and Housing Data

A. DEMOGRAPHIC CHARACTERISTICS

1. Age Cohorts (Raw Data)

| | Saugatuck | Douglas | Saug. Twp. | Area | County |
|---|---|---|---|---|---|
| under 1 | 13 | 23 | 25 | 61 | 1496 |
| 1-2 | 15 | 11 | 26 | 52 | 2560 |
| 3-4 | 21 | 17 | 56 | 94 | 2544 |
| 5 | 3 | 19 | 24 | 46 | 1289 |
| 6 | 11 | 6 | 29 | 46 | 1332 |
| 7-9 | 30 | 36 | 20 | 86 | 4274 |
| 10-13 | 47 | 59 | 106 | 212 | 5989 |
| 14 | 6 | 14 | 47 | 67 | 1522 |
| 15 | 17 | 15 | 23 | 55 | 1642 |
| 16 | 18 | 23 | 32 | 73 | 1758 |
| 17 | 15 | 18 | 34 | 67 | 1666 |
| 18 | 19 | 14 | 4 | 37 | 1392 |
| 19 | 13 | 16 | 51 | 80 | 1403 |
| 20 | 24 | 22 | 34 | 80 | 1402 |
| 21 | 14 | 18 | 21 | 53 | 1230 |
| 22-24 | 50 | 60 | 78 | 188 | 4267 |
| 25-29 | 106 | 84 | 107 | 297 | 6706 |
| 30-34 | 92 | 72 | 166 | 330 | 6503 |
| 35-44 | 101 | 106 | 142 | 349 | 9306 |
| 45-54 | 136 | 82 | 265 | 483 | 7820 |
| 55-59 | 59 | 48 | 108 | 215 | 3927 |
| 60-61 | 21 | 17 | 8 | 46 | 1172 |
| 62-64 | 27 | 30 | 75 | 132 | 1882 |
| 65-74 | 138 | 85 | 110 | 333 | 5151 |
| 75-84 | 57 | 49 | 104 | 210 | 2555 |
| 85+ | 26 | 4 | 17 | 47 | 767 |

Source: U.S. Census of Population and Housing, 1980--Summary Tape File 3A, item 15. Detroit, MI, tel. 313-354-4654.

2. Age Cohorts (Aggregated and Percent Comparisons)

| Age | Saugatuck | Douglas | Saug. Twp. | Area | County |
|---|---|---|---|---|---|
| 0-4 | 49 (4.5) | 51 (5.4) | 107 (6.3) | 207 (5.5) | 6,600 (8.1) |
| 5-14 | 97 (9.0) | 134 (14.1) | 226 (13.2) | 457 (12.2) | 14,406 (17.7) |
| 15-24 | 170 (15.8) | 186 (19.6) | 277 (16.2) | 633 (16.9) | 14,760 (18.1) |
| 25-34 | 198 (18.4) | 156 (16.5) | 273 (15.9) | 627 (16.8) | 13,209 (16.2) |
| 35-44 | 101 (9.4) | 106 (11.2) | 142 (8.3) | 349 (9.3) | 9,306 (11.4) |
| 45-54 | 136 (12.6) | 82 (8.6) | 265 (15.5) | 483 (12.9) | 7,820 (9.6) |
| 55-64 | 107 (9.9) | 95 (10.0) | 191 (11.2) | 393 (10.5) | 6,981 (8.6) |
| 65+ | 221 (20.5) | 138 (14.6) | 231 (13.5) | 590 (15.8) | 8,473 (10.4) |

Source: (same as above, 1960 and 1980).

3. Change in Age Cohorts from 1960-1980 - Tri-Community Area

| Age | 1960 M/F | 1960 | 1980 M/F | 1980 | Change 1960-80 |
|---|---|---|---|---|---|
| 0-4 | 121/140 | 261 (9.8) | 113/94 | 207 (5.5) | -20.7% |
| 5-14 | 274/249 | 523 (19.6) | 233/224 | 457 (12.2) | -12.6% |
| 15-24 | 133/146 | 279 (10.5) | 325/308 | 633 (16.9) | 126.9% |
| 25-34 | 129/139 | 268 (10.1) | 337/290 | 627 (16.8) | 134.0% |
| 35-44 | 170/166 | 336 (12.6) | 170/179 | 349 (9.3) | 3.9% |
| 45-54 | 142/147 | 289 (10.9) | 239/244 | 483 (12.9) | 67.1% |
| 55-64 | 115/163 | 278 (10.4) | 192/201 | 393 (10.5) | 41.4% |
| 65+ | 196/232 | 428 (16.1) | 231/359 | 590 (15.8) | 37.9% |

Source: (same as above, 1960 and 1980).

4. Place of Birth

| | Saugatuck | Douglas | Saug. Twp.* | Area | County |
|---|---|---|---|---|---|
| Michigan | 615 (56.9) | 577 (60.9) | 990 (57.8) | 2182 (58.3) | 63,771 (78.2) |
| Another State | 422 (39.1) | 320 (33.8) | 598 (34.9) | 1340 (35.8) | 15,934 (19.5) |
| Born Abroad | 5 (0.4) | 2 (0.2) | - | 7 (0.2) | 227 (0.3) |
| Foreign Born | 37 (3.4) | 49 (4.4) | 124 (7.2) | 210 (5.6) | 1,623 (2.0) |

* Some individuals not accounted for.
Source: (same as above), item 33.

5. Place of Residence - 1975 (Persons 5 years old and over)

| | Saugatuck | Douglas | Saug. Twp. | Area | County |
|---|---|---|---|---|---|
| Same House | 503 (48.6) | 423 (47.9) | 984 (59.5) | 1910 (53.4) | 44,575 (59.3) |
| Same County | 187 (18.0) | 156 (17.6) | 144 (8.7) | 487 (13.6) | 15,428 (20.5) |
| Another County | 228 (22.0) | 198 (22.4) | 244 (14.7) | 670 (18.7) | 10,923 (14.5) |
| Another State | 117 (11.3) | 103 (11.6) | 280 (16.9) | 500 (14.0) | 3,962 (5.2) |
| Abroad | - | 8 (0.9) | - | 8 (0.2) | 241 (0.3) |

Source: (same as above), item 34.

6. Household Characteristics

| | Saugatuck | Douglas | Saug. Twp. | Area | County |
|---|---|---|---|---|---|
| Total HHs | 537 | 391 | 633 | 1561 | 27,282 |
| Ave. HH size | 2.00 | 2.44 | 2.69 | 2.39 | 2.95 |
| 2 parent fam. | 219 | 222 | 411 | 852 | 19,520 |
| Female HH head | 41 | 31 | 28 | 100 | 1,911 |

Source: (same as above), items 10 and 20

7. Marital Status

| | Saugatuck | Saug Twp | Douglas |
|---|---|---|---|
| Single | 262 (28.1%) | 325 (23.9%) | 177 (23.2%) |
| Married | 467 (50.1%) | 849 (62.5%) | 449 (58.8%) |
| Separated | 25 (2.7%) | 28 (2.1%) | 16 (2.1%) |
| Widowed | 107 (11.5%) | 75 (5.5%) | 66 (8.7%) |
| Divorced | 72 (7.7%) | 82 (6.0%) | 55 (7.2%) |

Source: (same as above), item 26.

B. HOUSING STOCK

1. Structure Type

| | Saugatuck | Douglas | Saug Twp. | Area | County |
|---|---|---|---|---|---|
| Total units | 772 | 529 | 850 | 2,151 | 31,864 |
| Year Round Units | 569 | 406 | 734 | 1,709 | 28,985 |
| 1 in Structure | 385 | 290 | 636 | 1,311 | 23,190 |
| 2 in Structure | 49 | 20 | 32 | 101 | 1,001 |
| 3 and 4 in Struct | 68 | 16 | - | 84 | 583 |
| 5 or more | 60 | 40 | - | 100 | 1,199 |
| Mobile Homes | 7 | 40 | 66 | 113 | 3,012 |
| Vacant, Seasonal, & Migratory | 203 | 123 | 116 | 442 | 2,879 |
| 1 in Structure | 150 | 108 | 106 | 364 | 2,250 |
| 2 in Structure | 6 | 11 | 5 | 22 | 51 |
| 3-4 in Structure | 18 | 4 | - | 22 | 57 |
| 5 or more | 29 | - | - | 29 | 153 |
| Mobile Home/Trailer | - | - | 5 | 5 | 368 |

Source: U.S. Census of Population and Housing, 1980--Summary Tape File 3A, item 102/103. Detroit, MI, tel. 313-354-4654

2. Year Structure Built - Year Round Units

| | Saugatuck | Douglas | Saug Twp. | Area | County |
|---|---|---|---|---|---|
| 1975-80 | 36 (6.3) | 22 (5.5) | 72 (9.8) | 130 (7.6) | 3568 (12.3) |
| 1970-74 | 19 (3.3) | 46 (11.3) | 116 (15.8) | 181 (10.6) | 4326 (14.9) |
| 1960-69 | 51 (9.0) | 81 (19.9) | 133 (18.1) | 265 (15.5) | 4458 (15.4) |
| 1950-59 | 73 (12.8) | 32 (7.9) | 99 (13.5) | 204 (11.9) | 3647 (12.6) |
| 1940-49 | 56 (9.8) | 36 (8.9) | 68 (9.3) | 160 (9.4) | 2507 (8.6) |
| Pre 1940 | 334 (58.7) | 189 (46.5) | 246 (33.5) | 769 (45.0) | 10479 (36.2) |

Source: (same as above), item 109.

3. Occupancy

| | Saugatuck | Douglas | Saug Twp. | Area | County |
|---|---|---|---|---|---|
| Total Units | 772 | 529 | 850 | 2,151 | 31,864 |
| Owner occupied | 334 (43.2) | 271 (51.2) | 531 (62.4) | 1,136 (52.8) | 22,271 (69.8) |
| Renter occupied | 205 (26.5) | 117 (22.1) | 117 (13.7) | 439 (20.4) | 4,961 (15.5) |

Source: (same as above), item 97.

C. ECONOMIC CHARACTERISTICS

1. Type of Employment

| | Saugatuck | Douglas | Saug Twp. | Area | County |
|---|---|---|---|---|---|
| Private Wage/Salary | 402 (73.5) | 333 (76.9) | 492 (71.4) | 1227 (73.5) | 26697 (78.5) |
| Federal Gov. | 7 (1.3) | 1 (0.2) | 11 (1.6) | 19 (1.1) | 308 (0.9) |
| State Gov. | 21 (3.8) | 25 (5.8) | 2 (0.3) | 67 (4.0) | 775 (2.3) |
| Local Gov. | 49 (9.0) | 33 (7.6) | 56 (8.1) | 138 (12.0) | 3022 (8.9) |
| Self Employed | 68 (12.4) | 40 (9.2) | 92 (13.4) | 200 (12.0) | 2977 (8.7) |
| Unpaid Family Worke | - | 1 (0.2) | 17 (2.5) | 18 (1.0) | 246 (0.7) |

Source: (same as above), item 67.

2. Real Property SEV - 1988

| | Saugatuck | Twp/Douglas | Area | County | County (% ) |
|---|---|---|---|---|---|
| Residential | 21,167,486 | 43,730,725 | 64,898,211 | 604,509,215 | 66.2 |
| Commercial | 10,677,205 | 9,402,800 | 20,080,005 | 101,799,772 | 11.1 |
| Industrial | 779,150 | 1,126,200 | 1,905,350 | 50,272,956 | 5.5 |
| Agricultural | N/C | 2,661,790 | 2,661,790 | 153,232,546 | 16.8 |
| Developmental | N/C | 430,733 | 430,733 | 3,251,687 | 0.4 |

Source: Michigan Department of Treasury, State Tax Commission, 1988.
Lansing, MI, tel. 517-373-1091.

3. Total Annual Real Property SEV - 1980-88

| Year | Saugatuck | Douglas | Saug Twp.* | Saug. Twp.** | Area |
|---|---|---|---|---|---|
| 1980 | 13,709,600 | 10,560,200 | 18,482,350 | 42,752,150 | 42,752,150 |
| 1981 | 15,682,000 | 11,723,580 | 21,042,164 | 48,447,744 | 48,447,744 |
| 1982 | 18,314,033 | 13,341,647 | 23,287,428 | 54,943,108 | 54,943,108 |
| 1983 | 20,855,000 | 15,101,800 | 25,691,300 | 61,648,100 | 61,648,100 |
| 1984 | 25,831,436 | 16,848,894 | 27,155,345 | 69,835,675 | 69,835,675 |
| 1985 | 27,382,650 | 18,756,700 | 28,922,650 | 47,679,350 | 75,062,000 |
| 1986 | 29,737,980 | 20,321,283 | 30,023,509 | 50,344,792 | 80,082,772 |
| 1987 | 32,727,560 | 21,957,626 | 32,464,745 | 54,422,371 | 87,149,931 |

* not including Villages.
** including Saugatuck and Douglas through 1984 and Douglas only after 1984.
Source: Michigan Department of Treasury, State Tax Commission, 1988.
Lansing, MI, tel. 517-373-1091

4. Annual Average Employment -Tri-Community Area

| Year | Ave. Emp. |
|---|---|
| 1980 | 1,491 |
| 1981 | 1,527 |
| 1982 | 1,555 |
| 1983 | 1,613 |
| 1984 | 1,695 |
| 1985 | 1,656 |
| 1986 | 1,175 |
| 1987 | 2,461 |
| 1988 | 2,550 |
| 1989 | 2,700 |

Source: Michigan Employment Security Commission, Field Analysis Unit.
Detroit, Michigan, tel. 313-876-5427.

5. Persons in Poverty by Age

| | Saugatuck | Douglas | Saug Twp. | Area | County |
|---|---|---|---|---|---|
| Less than 55 | 67 | 77 | 83 | 227 | 5181 |
| 55-59 | 3 | 6 | - | 9 | 281 |
| 60-64 | 8 | - | - | 8 | 206 |
| 65+ | 15 | 24 | 39 | 78 | 1127 |

Source: U.S. Census of Population and Housing, 1980--Summary Tape File 3A, item 93.
Detroit, MI, tel. 313-354-4654.

# APPENDIX C

## Public Opinion Survey Responses

# CITY OF SAUGATUCK

PUBLIC OPINION SURVEY
RESULTS

**PAUL HARRIS: ASSISTANT RESEARCH DIRECTOR**

## RESPONSE RATE

WE SENT 726 SURVEYS FROM OAKLAND UNIVERSITY USING THE MAIL LABELS FROM THE CITY. WE RECEIVED (as of 11/29/88) 372 SURVEYS FROM THIS MAILING, PRODUCING A RESPONSE RATE OF 51.2 PERCENT. IN ADDITION, WE RECEIVED 11 RENTER SURVEYS WHICH WERE DISTRIBUTED BY THE TOWNSHIP. THE TOTAL NUMBER OF SURVEYS USED IN THE FORTHCOMING ANALYSES IS: 383.

## COMMUNITY VALUES

**Q.1**: Importance of things people look for in a community.

NOTE: ORIGINAL RESPONSES HAVE BEEN COLLAPSED
1 & 2= NOT IMPORTANT, 4 & 5= IMPORTANT, 3= HAS BEEN OMITTED

| | NOT IMPORTANT | IMPORTANT |
|---|---|---|
| small town atmosphere | 5.9% | 85.4% |
| quiet town | 16.8% | 70.3% |
| friendly people | 3.3% | 94.3% |
| attractive/beutiful surroundings | 2.7% | 94.0% |
| good place to raise children | 31.6% | 57.8% |
| traditional values | 34.9% | 49.0% |
| religious opportunities | 36.2% | 46.2% |
| freedom to be myself | 13.2% | 75.9% |
| chance to get involved in local org's | 35.3% | 37.9% |
| low crime rate | 4.4% | 91.0% |
| good school system | 14.1% | 64.0% |
| low tax rates | 6.9% | 78.3% |
| close to larger cities | 20.4% | 54.7% |
| convenient shopping opportunites | 27.4% | 49.4% |
| availability of good housing | 19.0% | 53.9% |
| family in the area | 56.6% | 25.5% |
| job in area | 40.8% | 43.9% |
| water based recreation nearby | 14.6% | 66.4% |
| not industrialized | 23.7% | 46.9% |

**Q.2:** How has the community changed.

| | CHECKED |
|---|---|
| better place to live | 32.8% |
| stayed about the same | 43.2% |
| worse place to live | 24.0% |

**Q.3:** As the area grows and changes, which best describes Saugatuck.
1= small village, 2= bedroom community, 3= Holland suburb, 4= Small city

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| community as is | 67.5% | 7.4% | 1.1% | 24.0% |
| community as would like it to be | 65.3% | 11.7% | 2.7% | 20.3% |
| community as think it will be | 19.7% | 19.1% | 21.8% | 39.4% |

**Q.4:** How would you rate the communites on the following.

NOTE: ORIGINAL RESPONSES HAVE BEEN COLLAPSED
1 & 2= POOR, 4 & 5= GOOD, 3= HAS BEEN OMITTED

| | POOR | GOOD |
|---|---|---|
| business climate | 26.6% | 27.4% |
| churches | 8.4% | 68.2% |
| community events | 28.4% | 47.5% |
| entertainment | 41.7% | 36.8% |
| general appearance | 10.9% | 71.9% |
| housing | 34.1% | 25.2% |
| job | 63.8% | 9.3% |
| location | 4.6% | 93.0% |
| medical care | 45.4% | 27.7% |
| recreation | 12.2% | 67.6% |
| restaurants | 24.5% | 58.8% |

| Q.4: cont | POOR | GOOD |
|---|---|---|
| roads | 43.1% | 34.5% |
| schools | 10.5% | 62.6% |
| senior citizen services | 26.0% | 38.8% |
| shopping | 43.0% | 39.0% |
| social services | 47.4% | 15.4% |
| taxes | 65.7% | 18.2% |

## COMMUNITY PROBLEMS

Q.6: Problems faced by the communities, how important are they to you.

NOTE: ORIGINAL RESPONSES HAVE BEEN COLLAPSED
1 & 2= NOT A PROBLEM, 4 & 5= PROBLEM, 3= HAS BEEN OMITTED

| | NOT A PROBLEM | PROBLEM |
|---|---|---|
| violent crime | 88.0% | 5.3% |
| property crime | 73.6% | 13.9% |
| vandalism | 73.3% | 12.8% |
| teens w/ nothying to do | 31.8% | 49.6% |
| drugs | 29.2% | 44.3% |
| alcohol | 28.8% | 49.1% |
| unemployment | 50.8% | 21.7% |
| new job opportunities | 19.9% | 52.5% |
| housing shortages | 33.5% | 38.1% |
| public recreation | 66.5% | 22.9% |
| too much development | 50.8% | 36.8% |
| not enough development | 63.1% | 22.6% |
| lack of health care... | 35.2% | 55.2% |
| trafic safety | 65.0% | 18.7% |
| parking daowntown Saug. | 32.0% | 65.8% |
| skateboards/bikes downtown Saug. | 56.1% | 22.0% |
| run down property | 60.2% | 27.6% |
| litter downtown area | 66.5% | 18.5% |
| litter along blue star Hwy. | 61.1% | 21.5% |
| appearance of bus. along Blue | 54.7% | 32.5% |
| congestion at oval beach | 66.6% | 12.2% |
| quality oval beach facilities | 57.4% | 25.7% |
| access to waterbodies | 60.5% | 24.3% |
| local schools | 65.1% | 4.4% |
| city gov't services | 44.5% | 40.5% |
| county gov't services | 28.6% | 27.0% |
| leadership elected officials | 35.4% | 42.5% |
| inadequate taxes | 60.6% | 12.4% |
| inadequate local planning | 33.1% | 53.4% |
| inadequate local development | 37.9% | 45.0% |
| erosion & flodding | 47.6% | 39.4% |
| contamination driking water | 21.6% | 46.5% |
| water quality | 22.4% | 57.0% |
| wetlands | 43.0% | 35.7% |
| sand dunes | 40.4% | 38.4% |
| other env. destruction | 37.5% | 18.2% |
| inad. senior programs | 46.9% | 23.6% |
| erosion along lakeshore Dr. | 14.4% | 74.1% |
| inad. water supply | 35.2% | 40.5% |
| inad. sewer service | 47.1% | 21.3% |
| snowmobiling on public roads | 57.6% | 16.0% |

## SHOPPING & SERVICES

**Q.8:** Where do you go most often for the following things.
1= Saugatuck, 2= Holland, 3= close to work, 4= better service,
5= more choice, 6= lower cost

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| appliances | 29.7% | 46.6% | 7.1% | 2.4% | 3.0% | 11.3% |
| auto/truck sales | 0.0% | 68.0% | 9.1% | 3.6% | 13.9% | 5.4% |
| auto /truck services | 16.0% | 56.3% | 8.1% | 3.0% | 11.1% | 5.4% |
| bakery goods | 78.1% | 14.1% | 6.3% | 0.0% | 0.9% | 0.6% |
| banking | 77.4% | 11.3% | 8.6% | 0.0% | 1.8% | 0.9% |
| beautician/barber | 73.7% | 10.4% | 9.3% | 5.4% | 0.6% | 0.6% |
| books | 37.1% | 31.3% | 7.7% | 3.8% | 17.6% | 2.6% |
| car wash | 51.1% | 41.5% | 5.6% | 0.0% | 0.0% | 1.9% |
| clothing | 14.0% | 42.9% | 12.5% | 3.0% | 24.7% | 3.0% |
| day care | 85.9% | 9.8% | 2.2% | 2.2% | 0.0% | 0.0% |
| dept. store | 0.6% | 56.1% | 12.8% | 1.8% | 27.3% | 1.5% |
| dry cleaners | 42.5% | 49.2% | 4.8% | 0.0% | 1.0% | 2.6% |
| family restaurants | 64.7% | 30.2% | 1.2% | 0.0% | 3.0% | 0.9% |
| fancy restaurants | 38.6% | 39.8% | 5.0% | 2.8% | 12.9% | 0.9% |
| fast food | 2.0% | 79.3% | 5.3% | 0.0% | 13.3% | 0.0% |
| flower shop | 74.7% | 15.7% | 4.4% | 0.0% | 4.4% | 0.7% |
| furniture | 15.3% | 34.3% | 10.6% | 0.6% | 29.6% | 5.6% |
| groceries | 56.2% | 37.9% | 2.7% | 0.0% | 0.9% | 2.4% |
| hardware | 71.4% | 24.6% | 2.6% | 0.0% | 0.9% | 0.6% |
| laundromat | 86.7% | 10.7% | 2.7% | 0.0% | 0.0% | 0.0% |
| lawn & garden sup. | 38.1% | 47.3% | 4.3% | 0.0% | 4.9% | 5.5% |
| lumber | 64.9% | 20.9% | 4.1% | 3.4% | 5.1% | 1.7% |
| medical services | 36.5% | 43.8% | 10.8% | 3.8% | 5.2% | 0.0% |
| movies | 0.0% | 90.3% | 3.3% | 0.0% | 6.4% | 0.0% |
| pharmacy | 77.1% | 15.8% | 3.3% | 0.6% | 1.5% | 1.8% |
| sporting goods | 8.3% | 66.4% | 7.3% | 0.7% | 11.1% | 6.2% |

**Q.10:** Approve or disapprove of future commercial development.

NOTE: ORIGINAL RESPONSES HAVE BEEN COLLAPSED
1 & 2= DISAPPROVE, 4 & 5= APPROVE, 3= HAS BEEN OMIITED

| | DISAPPROVE | APPROVE |
|---|---|---|
| in small shopping centers | 26.8% | 47.5% |
| in one large shopping center | 48.9% | 24.5% |
| in downtown Saug. | 53.9% | 37.8% |
| in downtown Douglas | 51.0% | 37.3% |
| in scattered commercial areas | 45.9% | 30.6% |
| in strip commercial areas | 67.6% | 17.9% |
| nowhere | 59.1% | 10.8% |

**Q.11:** Where should new commercial development occur.

NOTE: ORIGINAL RESPONSES HAVE BEEN COLLAPSED
1 & 2= DISAPPROVE, 4 & 5= APPROVE, 3= HAS BEEN OMIITED

| | DISAPPROVE | APPROVE |
|---|---|---|
| along North Blue Star Hwy. | 25.4% | 59.4% |
| along South Blue Star Hwy. | 17.9% | 69.8% |
| along Butler St. in Saugatuck | 56.3% | 24.9% |
| along Water St. in Saugatuck | 50.8% | 29.5% |
| along Lake St. in Saugatuck | 58.8% | 22.7% |
| along M-89 outside of Fennville | 31.6% | 37.1% |
| at freeway interchanges | 16.2% | 60.6% |

## DOWNTOWN

**Q.12:** What are your priorities for Saugatuck's downtown.

NOTE: ORIGINAL RESPONSES HAVE BEEN COLLAPSED
1 & 2= LOW PRIORITY, 4 & 5= HIGH PRIORITY, 3= HAS BEEN OMITTED

| | LOW PRIORITY | HIGH PRIORITY |
|---|---|---|
| additional public restrooms | 83.9% | 7.2% |
| benches for pedestrians | 51.2% | 36.6% |
| control truck traffic | 36.0% | 48.0% |
| dress up store fronts | 48.8% | 40.8% |
| flowers & landscape | 34.7% | 55.1% |
| historic preservation | 22.5% | 64.6% |
| resident oriented businesses | 27.1% | 43.3% |
| more parking | 25.4% | 70.5% |
| tourist oriented businesses | 51.3% | 26.1% |
| new lighting | 45.6% | 38.4% |
| offices | 60.5% | 18.7% |
| reduce car traffic | 49.0% | 31.3% |
| restaurants | 53.1% | 35.1% |
| shopping | 47.1% | 38.5% |
| waterfront retail businesses | 59.1% | 26.0% |
| waterfront wholesale business | 83.6% | 6.1% |
| waterfront boat services | 45.6% | 40.9% |
| waterfront park | 35.6% | 52.7% |

**Q.13:** Do you feel there is a parking problem other than between Memorial Day and Labor Day in downtown Saugatuck.

yes= 24.8% no= 72.2% uncertain= 2.4%

**Q.14:** Which of the following options do you prefer for providing additional parking downtown.

NOTE: ORIGINAL RESPONSES HAVE BEEN COLLAPSED
1 & 2= DISAGREE, 4 & 5= AGREE, 3= HAS BEEN OMITTED

| | DISAGREE | AGREE |
|---|---|---|
| demolish old public works build. | 32.6% | 50.6% |
| aquire add. public property | 47.5% | 38.4% |
| leave problem for downtown bus. | 61.5% | 25.6% |
| create partnership... | 32.6% | 38.8% |

## INDUSTRIAL DEVELOPMENT

**Q.16:** Does the area need more industrial development.
(1= strongly disagree to 5= strongly agree)

1= 22.6%, 2= 11.2%, 3= 9.9%, 4=16.4%, 5= 35.9%

## RESIDENTIAL DEVELOPMENT

**Q.17:** What type of residential development is needed in Saugatuck.
(1= needed now, 2= needed later, 3= not needed, 4= don't know)

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| apartments | 37.1% | 22.0% | 30.0% | 10.9% |
| attached single... | 29.5% | 18.7% | 38.5% | 13.3% |
| detached single...(50-70) | 52.6% | 11.7% | 29.5% | 6.1% |
| detached single...(70+) | 33.7% | 17.7% | 36.2% | 12.4% |
| waterfront condos | 4.8% | 2.5% | 90.4% | 2.2% |
| low income housing | 40.2% | 4.5% | 48.9% | 6.4% |
| mobile homes | 4.9% | 8.6% | 71.4% | 15.1% |
| seniors housing | 30.1% | 14.1% | 38.1% | 17.7% |

**Q.18:** Would you favor lowering the min. square footage to make housing more affordable. (1= strongly disagree to 5= strongly agree)

1= 29.8%, 2= 13.8%, 3= 21.4%, 4= 6.2%, 5= 28.7%

**Q.19:** New housing should be built at a density that is...
(1=higher than, 2= lower than, 3= same as, 4= uncertain)

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Saug. waterfront of Lk.Kal. | 4.8% | 55.0% | 33.9% | 6.2% |
| on the hill in Saugatuck | 21.4% | 23.6% | 50.5% | 4.5% |
| in downtown Saugatuck | 5.8% | 32.9% | 53.1% | 8.2% |
| in downtown Douglas | 22.8% | 9.7% | 39.1% | 28.4% |
| the shore of Lk. MI | 16.7% | 22.2% | 45.7% | 15.4% |
| agr. areas Saug. twp. | 42.7% | 5.5% | 14.7% | 37.2% |

## RECREATION

**Q.20:** Type of additional recreational facilities are needed in the Saugatuck area.

NOTE: ORIGINAL RESPONSES HAVE BEEN COLLAPSED
1 & 2= LOW PRIORITY, 4 & 5= HIGH PRIORITY, 3= HAS BEEN OMIITED
6= TOO FEW TO LIST

| | LOW PRIORITY | HIGH PRIORITY |
|---|---|---|
| basketball courts | 51.3% | 14.8% |
| bike paths | 16.7% | 68.0% |
| boat launching ramps | 33.1% | 45.0% |
| camping | 45.4% | 32.1% |
| community center | 42.0% | 33.6% |
| cross country ski trails | 25.0% | 61.5% |
| fitness center | 35.4% | 33.9% |
| golf course | 59.9% | 18.1% |
| hiking trails | 27.0% | 62.4% |
| horseback trails | 51.5% | 18.2% |
| ice rink | 46.4% | 37.7% |
| Lk. front open space(Lk. MI) | 25.6% | 60.7% |
| Lk. front open space(Lk.Kal) | 31.8% | 49.7% |
| public Marinas | 39.4% | 36.9% |
| private marinas | 60.3% | 10.6% |
| movie theater | 43.9% | 37.7% |
| neighborhood playgrounds | 60.0% | 20.4% |
| parks | 46.1% | 41.1% |
| picnic areas | 49.7% | 31.3% |
| raquetball courts | 72.4% | 5.2% |
| riverfront open space(Kal river) | 28.8% | 48.6% |
| senior citizen center | 30.0% | 24.5% |
| shuffle board | 58.9% | 17.0% |
| softball fields | 62.2% | 16.6% |
| swimming pool(s) | 46.9% | 36.7% |
| tennis courts | 53.0% | 23.7% |

## WATERFRONT DEVELOPMENT & SURFACE WATER QUALITY

**Q.21:** Which of the following best desribe your use (s) of nearby water bodies. (VALUES REPRESENT PERCENT CHECKED)

| Description | KR | KL | LM | SL |
|---|---|---|---|---|
| viewing | 78.9% | 76.5% | 82.8% | 24.0% |
| swimming | 6.3% | 6.8% | 68.7% | 4.7% |
| sunbathing | 8.1% | 6.8% | 56.9% | 4.2% |
| fishing(boat) | 18.3% | 12.0% | 33.7% | 6.8% |

| Q.21: cont. | KR | KL | LM | SL |
|---|---|---|---|---|
| fishing(shore) | 18.0% | 7.05 | 7.8% | 1.0% |
| nature study | 28.2% | 24.8% | 34.7% | 10.4% |
| sailing | 11.7% | 17.2% | 35.2% | 3.4% |
| windsurfing | 3.4% | 6.8% | 18.8% | 3.7% |
| waterskiing | 10.2% | 12.5% | 21.7% | 8.9% |
| powerboating | 24.8% | 31.1% | 39.7% | 14.6% |
| scuba diving | 1.0% | 0.5% | 8.4% | 0.5% |
| waterfowl hunt. | 7.8% | 1.0% | 1.3% | 4.2% |
| ice fishing | 4.2% | 5.2% | 0.8% | 6.8% |
| ice skating | 0.5% | 4.4% | 1.0% | 2.1% |
| cross country ski. | 10.2% | 9.1% | 12.5% | 5.5% |
| snowmobiling | 2.6% | 1.6% | 2.9% | 2.1% |
| iceboating | 1.3% | 2.9% | 0.8% | 1.6% |
| other | ----- | ----- | ----- | ----- |
| I dont use it | 6.0% | 5.0% | 3.1% | 22.7% |

**Q.22:** Which term best describes your opinion of the present water quality of the following water bodies.

| | KR | KL | LM | SL |
|---|---|---|---|---|
| very good | 3.3% | 3.4% | 17.5% | 2.1% |
| good | 6.7% | 5.0% | 32.0% | 8.9% |
| fair | 15.2% | 20.4% | 30.2% | 21.7% |
| poor | 32.1% | 28.5% | 9.2% | 17.8% |
| very poor | 31.2% | 33.1% | 4.0% | 8.5% |
| don't know | 11.5% | 9.6% | 7.1% | 40.9% |

**Q.23:** Based on your experience in recent years the water quality of the following water bodies has.

| | KR | KL | LM | SL |
|---|---|---|---|---|
| improved greatly | 10.3% | 11.0% | 10.6% | 7.9% |
| improved slightly | 16.8% | 13.6% | 19.9% | 9.5% |
| stayed the same | 30.6% | 32.2% | 35.8% | 25.0% |
| deteriorated slightly | 17.6% | 18.9% | 20.8% | 5.9% |
| deteriotated greatly | 12.4% | 12.3% | 5.9% | 2.6% |
| don't know | 12.4% | 12.0% | 7.0% | 49.0% |

**Q.24:** Indication of feeling about the adequacy of the following facilities on each water body.

NOTE: ORIGINAL RESPONSES HAVE BEEN COLLAPSED
1 & 2= INADEQUATE, 4 & 5= ADEQUATE, 3= HAS BEEN OMITTED

| DESCRIPTION | KR | | KL | | LM | | SL | |
|---|---|---|---|---|---|---|---|---|
| | INAD | ADQ | INAD | ADQ | INAD | ADQ | INAD | ADQ |
| boat launch | 45.3 | 33.2 | 43.1 | 34.0 | 33.8 | 16.2 | 17.3 | 12.7 |
| boat slips(r) | 21.1 | 41.9 | 20.2 | 45.6 | 23.5 | 17.5 | 19.6 | 24.9 |
| boat slips(c) | 9.2 | 56.9 | 9.1 | 64.3 | 20.6 | 20.6 | 13.7 | 27.5 |
| marinas | 18.9 | 55.9 | 19.6 | 60.3 | 20.7 | 24.7 | 16.6 | 22.5 |
| swim.beaches | 26.2 | 36.9 | 28.6 | 32.8 | 14.9 | 77.3 | 11.4 | 20.4 |
| boat service | 18.7 | 42.0 | 14.7 | 46.9 | 19.4 | 27.6 | 9.7 | 21.8 |
| pumpout facil. | 24.5 | 35.3 | 18.4 | 37.6 | 19.4 | 18.8 | 12.5 | 18.0 |
| fish cleaning | 29.2 | 33.0 | 28.7 | 33.1 | 20.3 | 19.2 | 17.2 | 17.8 |
| camp grouds | 39.0 | 26.3 | 41.5 | 27.7 | 51.7 | 17.2 | 39.3 | 17.7 |
| parks | 26.9 | 45.0 | 26.3 | 48.7 | 28.7 | 52.0 | 32.3 | 17.7 |
| public rest. | 32.7 | 39.6 | 30.1 | 42.3 | 45.8 | 28.9 | 22.8 | 19.9 |
| other pub. acc. | 37.0 | 20.0 | 35.8 | 17.9 | 33.3 | 25.7 | 27.0 | 18.9 |
| des boat morn | 44.9 | 26.8 | 44.4 | 25.9 | 36.4 | 21.4 | 28.2 | 19.9 |
| des no wake | 27.2 | 49.0 | 25.7 | 47.8 | 13.1 | 42.3 | 17.8 | 37.8 |

**Q.25:** Should the City actively cooperate in the construction of an areawide marina. (1= strongly disagree to 5= strongly agree)

1= 33.6%, 2= 13.8%, 3= 11.9%, 4= 8.9%, 5= 31.7%

## OTHER LAND USE QUESTIONS

**Q.26:** Do you think summertime festivals are good for the Saugatuck area.

yes= 76.8%, no= 11.1%, uncertain= 11.6%

**Q.27:** Which, if any, of the following types of "home occupations" do you favor being permitted in residentially zoned areas.

NOTE: ORIGINAL RESPONSES HAVE BEEN COLLAPSED
1 & 2= OPPOSE, 4 & 5= FAVOR, 3= HAS BEEN OMITTED

| | OPPOSE | FAVOR |
|---|---|---|
| bed & breakfast | 28.4% | 67.3% |
| hairdressers/barbers | 44.8% | 40.2% |
| music lessons | 6.7% | 84.4% |
| dance lessons | 11.3% | 76.7% |
| accounting/tax prep. | 13.0% | 72.1% |
| law offices | 34.3% | 43.9% |
| medical offices | 44.6% | 42.6% |
| adult foster care | 36.8% | 42.5% |
| day care | 26.6% | 49.4% |
| "avon", "amway" | 34.1% | 49.5% |
| typing services | 13.0% | 71.2% |
| dressmaking/alt. | 9.3% | 78.3% |
| ceramics | 39.8% | 37.0% |
| clothing boutiques | 60.8% | 22.0% |
| bakery | 66.9% | 19.5% |
| pizzaria | 70.9% | 16.3% |
| small engine repair | 59.0% | 20.1% |
| antique sales | 48.2% | 37.8% |

**Q.28:** What are your priorities for Blue Star Highway.

NOTE: ORIGINAL PRESPONSES HAVE BEEN COLLAPSED
1 & 2= LOW, 4 & 5= HIGH, 3= HAS BEEN OMITTED

| | LOW | HIGH |
|---|---|---|
| better lighting | 30.9% | 51.8% |
| uniform sign controls | 31.3% | 52.3% |
| improve traffic flow | 32.5% | 48.0% |
| add a center turn lane | 23.2% | 50.8% |
| install public sewer | 27.1% | 41.2% |
| install public water | 30.3% | 38.7% |
| improve drainage | 31.8% | 35.0% |
| improve appearance | 23.0% | 66.8% |
| create commercial strip | 43.4% | 37.3% |
| more tourist orientated bus. | 58.5% | 28.3% |
| more shopping | 34.5% | 41.1% |
| more industry | 29.3% | 49.8% |
| more personal services | 38.0% | 47.9% |
| more auto services | 42.5% | 35.4% |
| more offices | 35.3% | 38.0% |
| fast food rest.s | 40.1% | 50.0% |
| drive thru businesses | 40.0% | 40.4% |
| no changes | 61.1% | 19.2% |

| Q.28: cont. | LOW | HIGH |
|---|---|---|
| better lane striping | 22.9% | 62.3% |
| resurfacing | 13.0% | 65.3% |
| uniform speed limit | 34.6% | 56.6% |
| bike bath | 22.4% | 69.9% |
| more trees | 33.7% | 48.4% |

## ENVIRONMENTAL PROTECTION

**Q.29:** What limitations, if any, should be imposed on development in each of the following areas.
(1= no new development, 2= very low density, 3= moderate density)
(4= No special regulation)

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| forested sand dunes | 81.0% | 12.2% | 3.8% | 1.9% |
| open sand dunes | 84.4% | 10.4% | 1.6% | 2.5% |
| wetlands & swamps adjoining | 73.1% | 16.2% | 6.4% | 4.2% |
| wetlands & swamps inland | 70.6% | 12.7% | 13.3% | 3.4% |
| along the Kal. river | 39.0% | 32.8% | 19.5% | 8.8% |
| along Kal. lake | 39.0% | 31.9% | 21.5% | 7.6% |
| along Lk. MI | 34.8% | 43.6% | 16.8% | 4.8% |
| along Silver Lk. | 35.3% | 28.2% | 24.5% | 12.1% |

## PUBLIC SERVICES

**Q.30:** How would you rate the following local public services.

NOTE ORIGINAL RESPONSES HAVE BEEN COLLAPSED
1 & 2= POOR, 4 & 5= GOOD, 3= HAS BEEN OMITTED

| | POOR | GOOD |
|---|---|---|
| ambulance | 33.9% | 30.7% |
| animal control | 42.0% | 14.9% |
| building inspections | 37.0% | 24.1% |
| fire protection | 6.8% | 71.0% |
| first responder unit | 6.7% | 69.7% |
| Inturban bus | 6.5% | 73.8% |
| land use planning | 65.6% | 13.5% |
| library | 17.9% | 65.2% |
| other City Hall services | 37.4% | 31.0% |
| parking in downtown | 64.9% | 9.7% |
| park maintainace | 25.9% | 55.7% |
| playground equip. | 29.8% | 38.3% |
| police protection | 17.2% | 53.2% |
| property assessment | 49.9% | 24.6% |
| public boat launches | 45.5% | 22.7% |
| schools K-6 | 6.8% | 63.3% |
| schools 7-12 | 9.1% | 58.0% |
| schools- community ed. | 10.5% | 60.8% |
| sewer service | 20.8% | 53.5% |
| snow removal | 8.7% | 61.3% |
| storm drainage | 25.6% | 35.6% |
| street lighting | 32.2% | 35.4% |
| street maintainance | 46.2% | 22.2% |
| street resurfacing | 68.2% | 9.3% |
| water service | 24.9% | 41.0% |
| waterfront maintenance | 31.6% | 28.0% |
| zoning enforcement | 46.0% | 23.7% |

**Q.31:** What are your priorities for how the City spends your tax dollars.

NOTE: ORIGINAL RESPONSES HAVE BEEN COLLAPSED
1 & 2= LOW, 4 & 5= HIGH, 3= HAS BEEN OMITTED

| | LOW | HIGH |
|---|---|---|
| preventing crime | 8.5% | 82.9% |
| enforcing ordinances | 16.9% | 58.9% |
| traffic enforcement | 27.0% | 53.4% |
| fire protection | 1.1% | 91.8% |
| ambulance service | 10.4% | 72.9% |
| water supply | 7.1% | 86.1% |
| sewer service | 8.3% | 83.9% |
| street repair | 2.3% | 78.7% |
| park & recreation | 31.6% | 48.3% |
| improve parking downtown | 37.6% | 40.8% |
| senior programs | 41.1% | 22.5% |
| improve City appearance | 23.2% | 55.4% |
| plan for future | 13.3% | 79.7% |
| waterfront improvement | 24.8% | 56.2% |
| interurban bus | 39.6% | 41.1% |
| economic development | 23.1% | 42.2% |

**Q.32:** How frequently do you use the following services.
(1= never, 2= less than 1 time/month, 3= one time/month)
(4= one time/week, 5= more often)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| recycling center | 79.2% | 8.7% | 8.7% | 3.4% | 0.0% |
| interurb. bus service | 66.9% | 27.0% | 0.6% | 1.4% | 4.1% |
| river bluff park | 64.8% | 26.4% | 4.5% | 0.6% | 3.7% |
| Saug-Doug library | 34.9% | 46.4% | 12.0% | 3.4% | 3.4% |
| oval beach | 9.8% | 28.2% | 21.1% | 18.4% | 22.5% |
| Douglas beach | 68.7% | 17.9% | 7.5% | 0.8% | 5.0% |
| sun down park | 84.7% | 10.8% | 3.1% | 0.8% | 0.6% |
| shultz park | 64.5% | 26.2% | 3.7% | 3.4% | 2.3% |
| Saug Dunes St. park | 52.8% | 26.8% | 13.1% | 1.1% | 6.1% |
| beery field | 78.2% | 12.1% | 2.5% | 2.8% | 4.2% |
| wicks park | 51.8% | 22.4% | 8.3% | 12.2% | 5.3% |
| other parks | 67.4% | 18.0% | 11.4% | 1.2% | 2.1% |
| City Hall services | 30.8% | 38.7% | 21.5% | 6.0% | 3.0% |

**Q.33:** If it meant an increase in general property taxes, which of the follwing services do you think Saugatuck should increase or add.

| | CHECKED |
|---|---|
| police protection | 17.5% |
| fire protection | 13.8% |
| better St. maintenance | 37.3% |
| more parking | 28.7% |
| better water quality | 48.8% |
| better sidewalk | 25.6% |
| sidewalk snow removal | 10.4% |
| new street lighting | 16.7% |
| more flowers & trees | 20.9% |
| community Rec. center | 18.8% |
| seniors center | 11.5% |
| industrial park | 14.9% |
| drainage control | 9.4% |
| trash collection | 23.5% |

**Q.33:** cont.

| | CHECKED |
|---|---|
| combined maint. garage | 7.8% |
| economic development | 10.7% |
| 24hr. medical service | 34.2% |
| community pool | 25.1% |

**Q.34:** Which of the following statements is closet to your position on government services and property taxes.

| | CHECKED |
|---|---|
| nice to have better services, but... | 63.0% |
| I would like better government services,... | 13.1% |
| local government tries to do to much,... | 15.0% |
| other | 8.9% |

**Q.35:** Place a check before each of the follwing City boards/ commissions at which you have attended a meeting in the last 2 years.

| | CHECKED |
|---|---|
| city council | 52.5% |
| planning commision | 38.1% |
| zoning board of appeals | 21.4% |
| board of review(taxes | 17.5% |
| school board | 8.6% |
| Saug twp. fire district | 5.2% |
| interurban trans. system | 5.2% |
| Kal. Lk. water & Sewer Auth. | 12.5% |

**Q.36:** How responsive do you feel these parts of local government are to Saugatuck citizens.

NOTE: ORIGINAL RESPONSES HAVE BEEN COLLAPSED
1 & 2= NOT RESPONSIVE, 4 & 5= RESPONSIVE, 3= HAS BEEN OMITTED

| | NOT RESPONSIVE | RESPONSIVE |
|---|---|---|
| city council | 50.0% | 29.1% |
| planning commision | 44.7% | 31.0% |
| zoning board of appeals | 39.3% | 23.6% |
| board of review(taxes) | 49.8% | 13.0% |
| school board | 21.5% | 39.9% |
| Saug. twp. fire district | 3.5% | 57.4% |
| interurban trans. system | 22.5% | 37.8% |
| Kal. Lk. water & Sewer Auth. | 33.5% | 31.6% |

**Q.37:** Should the City adopt a policy of consolidating services with other governmental units.

yes= 58.0%, no= 7.5%, uncertain 34.5%

**Q.38:** If yes, what services should be consolidated.

NOTE: THESE VALUES CORRESPOND TO THE PERCENT WHO ANSWERED "YES" ABOVE

| | CHECKED |
|---|---|
| sewer | 52.2% |
| water | 54.0% |
| strorm water | 37.1% |

**Q.38:** cont.

| | CHECKED |
|---|---|
| police | 50.1% |
| street & roads | 44.4% |
| parks & summer Rec. | 41.8% |
| planning | 44.1% |
| zoning | 44.9% |
| building permits | 30.5% |
| city manager | 28.5% |
| comb. vehical maint. | 36.8% |
| other | |

**Q.39:** Should the City of Saugatuck, the Village of Douglas, and the Township of Saugatuck consolidate into a single unit of government.

yes= 52.8%, no= 47.2%

## BACKGROUND INFORMATION

**Q.40:** Are you a registerd voter.

yes= 85.4%, no= 14.6%

**Q.41:** How many years have you resided in the City of Saugatuck.

| | CHECKED |
|---|---|
| less than 1 | 2.1% |
| 1- 5 | 15.2% |
| 5 - 10 | 21.1% |
| 10-20 | 29.1% |
| more than 20 | 32.5% |

**Q.42:** How many more years do you think you will stay in the Saugatuck area.

| | CHECKED |
|---|---|
| less than one | 3.9% |
| 1 - 3 | 5.6% |
| 4 - 10 | 20.8% |
| more than 10 yrs | 69.6% |

**Q.43:** How many months of each year do you typically reside in the Saugatuck.

60.8% responded that length of stay is 12 months
9.5% responded that length of stay is less than 6 months

**Q.44:** Please check each of the following that apply to you.

| | CHECKED |
|---|---|
| residential property owner | 94.0% |
| renter | 3.4% |
| own or manage a business in area | 11.7% |

**Q.45:** Which of the following best represents where you live.

| | CHECKED |
|---|---|
| on the dunes/bluff along Lk. MI | 2.7% |
| on the dunes along Kalamazoo Lake | 0.5% |
| elsewhere along Kalamazoo Lake | 16.3% |
| along Kalamazoo River | 12.2% |

**Q.45:** cont.

| | CHECKED |
|---|---|
| along Silver Lake | 0.0% |
| elswhere along the Kal. river | 2.2% |
| on hill in Saug. | 45.3% |
| else. in Saug. | 16.8% |
| near downtown Doug. | 1.4% |
| else. in Doug | 1.1% |
| in Arg. area of Saug. twp. | 0.5% |
| else. in Saug. twp. | 0.0% |

**Q.46:** What is the highest level of education you have finished.

| | CHECKED |
|---|---|
| less than high school | 1.1% |
| high school graduate | 12.3% |
| some college | 18.6% |
| associate's or technical degree | 1.6% |
| college graduate | 36.7% |
| grad. or prof. degree | 29.6% |

**Q.47:** Please provide the following information abouteach person that normally lives in your household.

| | |
|---|---|
| AVERAGE AGE OF RESPONDENTS | 54.32 |
| SEX OF RESPONDENTS | |
| male | 63.3% |
| female | 36.1% |
| EMPLOYMENT STATUS OF RESPONDENTS | |
| employed | 67.3% |
| not employed | 32.7% |
| COMMUNITY | |
| Douglas | 7.5% |
| City of Saugatuck | 44.0% |
| Saug. Township | 0.5% |
| Holland | 24.1% |
| other | 23.7% |
| PERCENT OF RESPONDENTS RETIRED | 38.3% |

# APPENDIX D

## Soil Types - Tri-Community Area

# SOIL TYPES - TRI-COMMUNITY AREA

| SOIL TYPE AND SLOPE | SOIL NUMBER | LIMITATIONS FOR SEPTIC TANK ABSORPTION FIELDS | LIMITATIONS FOR DWELLINGS WITH BASEMENTS |
|---|---|---|---|
| **CATEGORY A - SANDY, RAPID PERMEABILITY, LOW WATER TABLE** | | | |
| Chelsea loamy fine sand, 0-6% | 44B | SE4 | SL |
| Chelsea loamy fine sand, 6-12% | 44C | SE4 | MD1 |
| Chelsea loamy fine sand, 12-18% | 44D | SE1, SE4 | SE1 |
| Chelsea loamy fine sand, 18-30% | 44E | SE1, SE4 | SE1 |
| Oakville fine sand, 0-6% | 10B | SE4 | SL |
| Oakville fine sand, 6-18% | 10C | SE4 | MD1 |
| Oakville fine sand, 18-45% | 10E | SE1, SE4 | SE1 |
| Oakville fine sand, loamy substratum, 0-6% | 53B | SE3, SE5, SE4 | SL |
| Urban land - Oakville complex, 0-6% | 72B | SL | SE4 |
| **CATEGORY B - SANDY, RAPID PERMEABILITY, HIGH WATER TABLE** | | | |
| Brady sandy loam, 0-3% | 19A | SE3 | SE3 |
| Covert sand, 0-4% | 57A | SE3, SE4 | MD3 |
| Matherton loam, 0-3% | 22A | SE3, SE4 | SE3 |
| Metea loamy fine sand, 1-6% | 27B | SE4, SE5 | SL |
| Metea loamy fine sand, 6-12% | 27C | SE4, SE5 | MD1 |
| Morocco fine sand, 0-3% | 70A | SE3, SE4 | SE3 |
| Morocco-Newton complex, 0-3% | 15B | SE3, SE4 | SE3 |
| Pipestone sand, 0-4% | 26A | SE3, SE4 | SE3 |
| Thetford loamy fine sand, 0-4% | 51A | SE3 | SE3 |
| Tedrow fine sand,0-4% | 49A | SE3, SE4 | SE3 |
| **CATEGORY C - WET, HEAVY, SLOW PERMEABILITY** | | | |
| Blount silt loam, 1-4% | 41B | SE3, SE5 | SE3 |
| Capac loam, 0-6% | 16B | SE3, SE5 | SE3 |
| Capac-Wixom complex, 1-4% | 21B | SE3, SE5 | SE3 |
| Glynwood clay loam, 1-6% | 8B | SE5, SE3 | MD3, MD2 |
| Glynwood clay loam, 6-12% | 8C | SE5, SE3 | MD1, MD2, MD3 |
| Kibbie fine sandy loam, 0-3% | 33A | SE3 | SE3 |
| Marlette loam, 6-12% | 14C | SE5 | MD1 |
| Marlette loam, 12-18% | 14D | SE1, SE5 | SE1 |
| Marlette loam, 18-35% | 14E | SE1, SE5 | SE1 |
| Marlette-Capac loams, 1-6% | 75B | SE3, SE5 | SL |
| Metamora sandy loam, 1-4% | 42B | SE5, SE3 | SE3 |
| Rimer loamy sand, 0-4% | 28A | SE3, SE5 | SE3 |
| Seward loamy fine sand, 1-6% | 60B | SE5, SE3 | SL |

| SOIL TYPE AND SLOPE | SOIL NUMBER | LIMITATIONS FOR SEPTIC TANK ABSORPTION FIELDS | LIMITATIONS FOR DWELLINGS WITH BASEMENTS |
|---|---|---|---|
| **CATEGORY D - VERY WET SOILS, ORGANICS, FLOODPLAINS** | | | |
| Adrian muck | 6 | SE6, SE4 | SE6, SE10 |
| Algansee loamy sand, protected, 0-3% | 73A | SE3, SE4 | SE8, SE3 |
| Aquents and Histosols, ponded | 50 | | |
| Belleville loamy sand | 48 | SE6, SE5 | SE6 |
| Brookston loam | 17 | SE6 | SE6 |
| Belleville-Brookston complex | 64 | SE6, SE5 | SE6 |
| Cohoctah silt loam, | 29 | SE3, SE8 | SE8, SE3 |
| Cohoctah silt loam, protected | 65 | SE6 | SE8, SE6 |
| Colwood silt loam | 30 | SE6 | SE6 |
| Corunna sandy loam | 36 | SE6, SE5 | SE6 |
| Dune land and beaches | 4 | | |
| Glendora loamy sand | 2 | SE6, SE3, SE4 | SE8, SE3 |
| Glendora loamy sand, protected | 74 | SE6, SE4 | SE8, SE6 |
| Granby sandy loam | 39 | SE6, SE4 | SE6 |
| Houghton muck | 5 | SE6, SE5 | SE6, SE10 |
| Martisco muck | 67 | SE8, SE6, SE5 | SE8, SE6 |
| Napolean muck | 47 | SE6 | SE6, SE10 |
| Newton mucky fine sand | 69 | SE6, SE4 | SE6 |
| Palms muck | 7 | SE11, SE6 | SE6, SE10 |
| Pewamo silt loam | 45 | SE5, SE6 | SE6 |
| Sebewa loam | 23 | SE4, SE6 | SE6 |
| Sloan silt loam | 62 | SE8, SE3, SE5 | SE8, SE3 |
| **CATEGORY E - WELL DRAINED LOAM AND LOAMY FINE SAND** | | | |
| Ockley loam, 6-12% | 12C | MD1 | MD2, MD1 |
| Ockley loam, 12-18% | 12D | SE1 | SE1 |
| Ockley loam, 18-30% | 12E | SE1 | SE1 |
| Riddles loam, 6-12% | 63C | MD1 | MD1, MD2 |
| Tekenink loamy fine sand, 6-12% | 31C | MD1 | MD1 |
| Tekenink loamy fine sand, 12-18% | 31D | SE1 | SE1 |
| Tekenink loamy fine sand, 18-35% | 31E | SE1 | SE1 |
| **CATEGORY F - WELL DRAINED LOAM AND LOAMY FINE SAND** | | | |
| Ockley loam, 1-6% | 12B | SL | MD2 |
| Oshtemo-Chelsea complex, 0-6% | 11B | SL | SL |
| Oshtemo-Chelsea complex, 6-12% | 11C | MD1 | MD1 |
| Oshtemo-Chelsea complex, 12-18% | 11D | SE1 | SE1 |
| Oshtemo-Chelsea complex, 18-35% | 11E | SE1 | SE1 |
| Riddles loam, 1-6% | 63B | SL | MD2 |
| Tekenink loamy fine sand, 2-6% | 31B | SL | SL |

**UNCLASSIFIED SOILS**

| | |
|---|---|
| Aquents, sandy and loamy | 34 |
| Pits | 18 |
| Udipsamments | 66 |

## KEY FOR LIMITATION CODES

SEVERE LIMITATIONS:

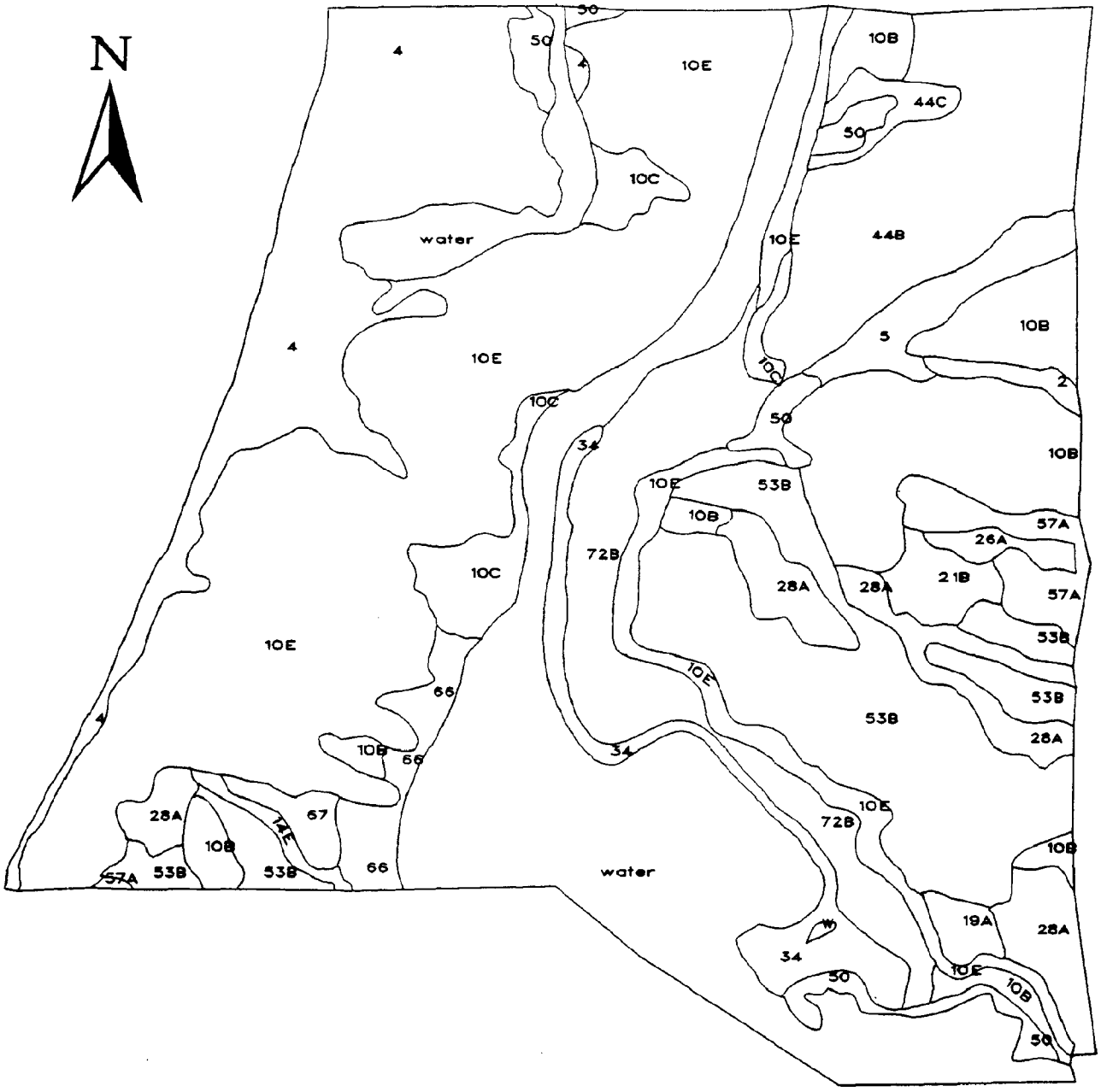
| | |
|---|---|
| SE1 | SLOPE |
| SE2 | SHRINK-SWELL |
| SE3 | WETNESS |
| SE4 | POOR FILTER |
| SE5 | PERCS SLOWLY |
| SE6 | PONDING |
| SE7 | CUTBANKS CAVE |
| SE8 | FLOODING |
| SE9 | EXCESSIVE HUMUS |
| SE10 | LOW STRENGTH |
| SE11 | SUBSIDES |

MODERATE LIMITATIONS:

| | |
|---|---|
| MD1 | SLOPE |
| MD2 | SHRINK-SWELL |
| MD3 | WETNESS |

SLIGHT LIMITATIONS:

| | |
|---|---|
| SL | SLIGHT LIMITATIONS |




# SAUGATUCK
# SOIL TYPES

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