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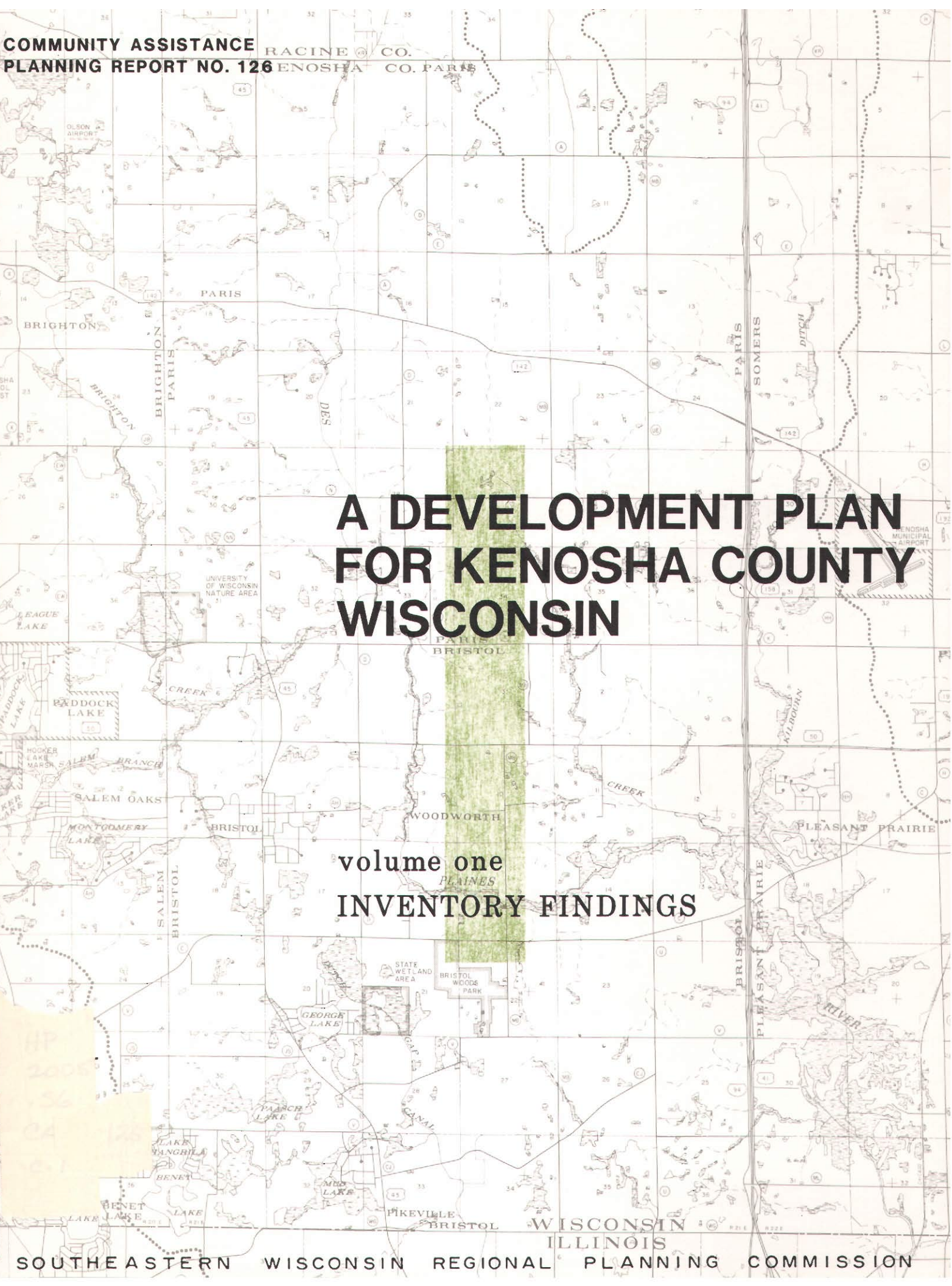

A DEVELOPMENT PLAN FOR KENOSHA COUNTY WISCONSIN

volume one

INVENTORY FINDINGS

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COMMUNITY ASSISTANCE PLANNING REPORT
NUMBER 126

A DEVELOPMENT PLAN FOR KENOSHA COUNTY, WISCONSIN

Volume One
INVENTORY FINDINGS

Prepared by the

Southeastern Wisconsin Regional Planning Commission
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Mr. John R. Collins
Kenosha County Executive
Kenosha County Courthouse
912 56th Street
Kenosha, Wisconsin 53140

Gentlemen:

Wisconsin Counties are authorized under Section 59.97(3) of the State Statutes to prepare comprehensive county development plans, addressing a wide range of physical development concerns. Accordingly, Kenosha County in September 1981 requested the assistance of the Regional Planning Commission in the preparation of such a county development plan. While much planning had already been accomplished for the sound development of the County through various regional, county, and local planning efforts, the County determined that this previous planning work could provide a more effective guide to decision-making if it were brought forward and synthesized into a single, coherent report, constituting the county development plan.

The findings and recommendations of the requested planning effort are presented in a two-volume report. This, the first volume, sets forth the basic planning data essential to the preparation of a viable county development plan, including information regarding the economic and demographic base, the natural resource base, the man-made environment, and pertinent adopted areawide, county, and local plans and land use regulations. The establishment and utilization of such data can in and of itself contribute materially to better decision-making in the County.

The numerous planning programs which have been completed for Kenosha County—including, importantly, the regional transportation, land use, park and open space, water quality management, and airport system plans; the comprehensive plans for the Fox River, Pike River, and Root River watersheds; the comprehensive plan for the Kenosha Planning District; the county farmland preservation plan; and the county overall economic development program plan—address most of the issues which should be considered in any county development plan. The second volume of this report will collate and summarize the key recommendations of these previous planning efforts, extending and detailing those recommendations as may be necessary. The resulting plan, based upon the information presented in this volume, should provide county officials with a sound guide to decision-making concerning the physical development of the County.

The Regional Planning Commission is pleased to have been able to be of assistance to Kenosha County in this important county planning effort.

Sincerely,

Kurt W. Bauer
Executive Director

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Chapter I

INTRODUCTION

Section 59.97(3) of the Wisconsin Statutes authorizes county planning and zoning agencies to prepare "a county development plan...for the physical development of the unincorporated territory within the county and areas within incorporated jurisdictions whose governing bodies by resolution agree to having their areas included in the county's development plan...." The Statutes further indicate that "the development plan may include comprehensive surveys, studies and analyses of the history, existing land use, population and population density, economy, soil characteristics, forest cover, wetland and floodplain conditions, and other human and natural features of the county...." The Statutes also direct that "the plan may identify goals and objectives for the future physical development of the county with respect to: public and private use of land and other natural resources; highways including bridges, viaducts, parkways, and other public ways; parks, playgrounds, hunting and fishing grounds, forests, and other facilities of recreational nature; public buildings and institutions including schools; sanitary and storm sewers, drainage and measures for disposal of refuse and waste; reducing and preventing stream and lake pollution; flood control; public and private utilities including water, light, heat, transportation, pipelines, and other services; industrial and commercial sites; and other factors which will improve the physical and economic situation of the county." Finally, the Statutes also indicate that "the development plan shall serve as a guide for public and private actions and decisions to assure the development of public and private property in appropriate relationships."

The county development plan is thus envisioned as a means of guiding and coordinating the harmonious development of the county. Through the plan, the county and the local units and agencies of government within the county can preserve and enhance existing desirable features; can encourage the most appropriate use of land, water, and other resources consistent with the public interest; and can overcome problems and deficiencies and deal effectively with future requirements for the use and development of the county.

As thus envisioned, a county development plan serves several important and useful purposes. In the formulation of the county development plan, the governing body of the county--the county board--considers and ultimately sets forth a coherent, unified set of general, long-range objectives for the physical development of the county. The development plan draws the attention of the governing body and of the citizens of the county to the major developmental and environmental problems and opportunities, and provides the board members an opportunity to step back from the pressing day-to-day issues to focus their attention and ideas on the future of the county.

The county development plan, once adopted, can materially assist the governing body in making decisions on specific development matters as they arise from day to day, setting those decisions within the framework of a clearly stated

and unified set of long-range objectives. Thus, current issues can be viewed against a clear picture of what has been deemed to be desirable future conditions within the county.

The county development plan also provides the means by which the governing body can both provide guidance and direction to, and receive the counsel of, its staff. Through the development plan, the staff can call attention to developmental and environmental problems in the county and can propose sound solutions to those problems. The plan enables the staff to offer advice in a studied, comprehensive manner, rather than in a piecemeal, ad hoc manner. The governing body's staff can use the plan as a basis for the formulation of needed programs. It is the planning and zoning agency's responsibility to prepare and administer many of the measures intended specifically to carry out the development plan, such as the county zoning ordinance and subdivision control regulations. Since the county development plan itself is not legally binding, it is essential that the necessary implementing tools be prepared to transform the general policies set forth in the plan into regulations and actions which have legal substance. The governing body of the county, through the county development plan, thus helps the planning and zoning agency by giving focus and purpose to the staff's research and design activities, channeling the work of the planning staff toward definite goals directed in the development plan.

Perhaps the most important purpose of the county development plan is to give direction to the private sector concerned with the development of the county. This private sector is comprised of a diverse group of realtors, builders, businessmen, industrial executives, chambers of commerce, taxpayer groups, property owners, and ordinary citizens. The county development plan provides to this diverse group in a formal, documented manner the development policies adopted by the governing body, and thus can serve as a valuable guide to the making of development decisions in the private sector. By reference to the county development plan, private developers can relate their projects to an overall development pattern, and coordinate those private projects with public development proposals. Although implementation of the plan by the private sector is largely voluntary and spontaneous, the plan is apt to have a persuasive influence since private developments often require approval of the governing body at some time, and a developer is better off if his project conforms to, rather than conflicts with, the county development plan.

Finally, the county development plan can serve as a guide for the courts when they are required to rule on any legal challenge to legislation or other public actions which are intended to carry out the plan. Legislative acts which conform to a plan are more likely to be upheld than are those which vary from a plan, or are not based upon any plan at all.

NEED FOR A COUNTY DEVELOPMENT PLAN

The need for a county development plan in Kenosha County may be attributed in part to growth in population and households, and in part to the decentralization of population, households, businesses, and industries within the County. The population of Kenosha County, which stood at about 123,100 persons in 1980, grew by about 34 percent between 1950 and 1960; by 17 percent from 1960 to 1970; and by an additional 4 percent from 1970 to 1980. The number of

households in Kenosha County, however, which stood at 43,100 in 1980, grew by about 35 percent between 1950 and 1960; by about 20 percent between 1960 and 1970; and by about 21 percent between 1970 and 1980. Thus, while the population of Kenosha County grew in total by about 64 percent between 1950 and 1980, increasing from about 75,200 persons to about 123,100 persons, the number of households grew by 96 percent, increasing from about 22,000 in 1950 to about 43,100 in 1980. It should be noted that between 1970 and 1980, while the population of Kenosha County increased by about 5,200 persons--or by about 4 percent--the number of households in the County increased by more than 7,600--or by about 21 percent. This is significant, for it is the household which represents the basic unit of demand for urban land and for many facilities and services, and this continued increase in households is one reason why developmental problems have continued to occur in Kenosha County even though the rate of population increase has slowed considerably in the last decade.

Prior to 1950, urban development within Kenosha County occurred in a relatively compact, centralized pattern primarily in areas located adjacent to the City of Kenosha and to such smaller urban centers in the County as Paddock Lake, Silver Lake, and Twin Lakes. A significant change in the pattern of urban development within Kenosha County occurred subsequent to 1950. Urban development became discontinuous and diffuse, with significant portions of the urban development occurring in rural areas. This new pattern of urbanization in Kenosha County was accompanied by a variety of developmental problems. The expansion of existing urban areas increased the demand for municipal services such as public sanitary sewer and water supply, solid waste collection and disposal, and police and fire protection, demands which smaller communities which were historically rural and farm-oriented were not always well prepared to meet. Outside existing urban service areas, new urban development was served by onsite sewage disposal and private water supply systems. Such development, which is neither truly urban nor rural in nature, can best be described as truly "sub-urban." This type of development in Kenosha County has tended to create scattered and incomplete neighborhoods to which the provision of basic urban services and facilities is difficult and costly, if not impossible. Served by onsite sewage disposal and private water supply systems, such development can create public health and water pollution problems. Located in essentially rural areas, isolated development tends to break up farming areas and to create conflicts between farming operations and residential activities. Such development also tends to exacerbate drainage and flood control problems and transportation problems.

In light of these development trends and related developmental and environmental problems in Kenosha County, and recognizing that a county development plan would assist in addressing these problems in a sound and effective manner, the Director of the Kenosha County Office of Planning and Zoning Administration, in accordance with a work plan adopted by the Kenosha County Board of Supervisors, requested that the Regional Planning Commission assemble the data necessary to prepare a county development plan and, following the collation of such data, assist the County in the actual preparation of the plan.

HISTORY OF PLANNING WITHIN KENOSHA COUNTY

Much has been accomplished in the way of planning for the sound development of Kenosha County in the last two decades, both by the County and City, and by the Regional Planning Commission as part of its areawide planning work

programs. Indeed, sound planning practice dictates that county and local plans be prepared within the framework of adopted regional plans. Five of the adopted regional plan elements which were of particular importance to Kenosha County in the formulation of a Kenosha County development plan are: 1) the regional land use plan; 2) the regional transportation system plan; 3) the regional park and open space plan; 4) the regional water quality management plan; and 5) the regional airport system plan.

The adopted regional land use plan, as described in SEWRPC Planning Report No. 25, A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin: 2000, provides for the attainment of specific land use development objectives formulated with the advice and consent of local, state, and federal units and agencies of government. Based upon careful demographic, economic, public financial resource, natural resource, and public utility inventories, analyses, and forecasts, the regional land use plan provides recommendations with respect to the amount, spatial distribution, and general arrangement of the various land uses required to serve the needs of the anticipated future population and economic activity levels of the Region. Particularly important to the preparation of a county development plan were the recommendations of the regional land use plan concerning the preservation of prime agricultural lands; the preservation of primary environmental corridors; and the encouragement of a more compact pattern of urban development. The latter recommendations encourage urban development to occur only in those areas of Kenosha County that are covered by soils suitable for urban use, in areas that can be readily served by centralized public sanitary sewerage, water supply, and transit facilities, and in areas that are not subject to special hazards such as flooding and erosion. These and other aspects of the regional land use plan provide a sound basic framework for the preparation of a county development plan.

The adopted regional transportation system plan presented in SEWRPC Planning Report No. 25 provides recommendations on how the regional land use plan can best be served by highway and transit facilities. It recommends a functional and jurisdictional system of arterial streets and highways to serve the Region through the design year 2000, together with a functional network of various types of transit lines. The regional transportation system plan was developed on the basis of careful quantitative analysis of existing and projected traffic volumes and existing highway and transit system capacity and use. As presented therein, the regional arterial street and highway system plan in its functional and jurisdictional aspects provides another sound basis for the preparation of a county development plan.

The adopted regional park and open space plan as described in SEWRPC Planning Report No. 27, A Regional Park and Open Space Plan for Southeastern Wisconsin: 2000, identifies the park and open space needs of the Region and recommends programs to meet these needs over time. The report includes inventories and analyses of the socioeconomic and natural resource bases; existing outdoor recreation facilities and sites and their use; and existing county and local open space plans and potential park and open space sites. In addition, it discusses the administrative structure of parks and open space plans and the laws and regulations governing the provision of parks and open space in the Region. Park and open space acquisition and development objectives, principles, and standards are set forth in the plan and applied to existing and forecast population levels to identify existing and probable future needs within the Region

for open space, for large, regional, resource-oriented parks, for recreational corridors, and for smaller urban parks, together with attendant recreation facility requirements.

The adopted regional water quality management plan as described in SEWRPC Planning Report No. 30, A Regional Water Quality Management Plan for Southeastern Wisconsin: 2000, sets forth the basic principles and concepts underlying the water quality management program, together with a description of existing man-made and natural resource base features which affect and are affected by water quality; describes existing water quality conditions within the Region and identifies sources of pollution; sets forth recommended water use objectives and supporting water quality standards; analyzes population, economic activity, and land use trends; presents and evaluates alternative plans; and recommends a water quality management plan for the Region. The plan documented in this report consists of a land use and sanitary sewer service element, a wastewater sludge management element, and a water quality monitoring element. Some of the water quality plan recommendations, particularly those related to the delineation of rational sanitary sewer service areas for Kenosha County, are of particular importance to the preparation of a county development plan.

The adopted regional airport system plan as described in SEWRPC Planning Report No. 38, A Regional Airport System Plan for Southeastern Wisconsin: 2010, sets forth recommendations for achieving a safer, more efficient, and more economical air transportation system within the Region. The plan includes definitive recommendations for airport facility construction and operation, including recommendations for runway, taxiway, navigational aid, and associated terminal facility improvements, as well as for the imposition of nonstandard air traffic patterns and aircraft activity restrictions; for airport airspace protection; and for airport area land use for the immediate area surrounding each of the airports included in the airport system plan.

In addition to the regional plan elements discussed, there are three subregional "watershed plan" elements of importance to a Kenosha County development plan. These subregional plans are comprehensive watershed plans for the Root, the Fox, and the Pike River watersheds within Kenosha County and are documented in SEWRPC Planning Reports No. 9, A Comprehensive Plan for the Root River Watershed; No. 12, A Comprehensive Plan for the Fox River Watershed; and No. 35, A Comprehensive Plan for the Pike River Watershed. These watershed plans recommend programs to help protect and restore the environmental quality of these watersheds in Kenosha County, and set forth measures for resolving the serious and costly flooding problems in the watersheds. These plans also set forth a set of water use objectives for the streams within each of the watersheds.

Finally, under contract to the City of Kenosha and the Towns of Somers and Pleasant Prairie, the Commission, through its planning consultant Harland Bartholomew & Associates, completed a comprehensive planning program for the Kenosha Planning District, namely all that area in Kenosha County east of IH 94. This plan is documented in SEWRPC Planning Report No. 10, A Comprehensive Plan for the Kenosha Planning District. The plan includes pertinent inventories and analyses of land use activity and natural resource, economic, and demographic activity in the planning district; sets forth proposals for

future land use, and for transportation facilities and other community facilities and utilities; and recommends the manner in which such proposals can be implemented.

While the Regional Planning Commission has been active for the last two decades in preparing regional and subregional plan elements which affect Kenosha County, Kenosha County itself, within this same period, has been active in preparing plans, studies, and ordinances which would help better promote orderly growth and development within the County.

Kenosha County Planning Efforts

Kenosha County planning and zoning efforts were initiated with the County Board adoption of the first County Zoning Ordinance in November 1959, and the subsequent hiring of its first zoning administrator in December 1959. The responsibilities of the zoning administrator--responding to inquiries from the public with regard to the issuance of zoning permits and accepting applications for rezonings, conditional uses, and requests for variances which the Board of Adjustments reviewed and acted upon--remained basically unchanged for more than a decade. The responsibilities of the county zoning administrator were increased substantially with the county board adoption of a state-mandated shoreland/floodplain zoning ordinance in March 1971 and of a subdivision control ordinance in April 1971. In April 1980, the County Board restructured the County Zoning Office to include planning-related functions in addition to the traditional zoning functions the office had maintained for the previous two decades. Subsequent to this restructuring, the newly renamed "Kenosha County Office of Planning and Zoning Administration," in cooperation with the County Surveyor and Regional Planning Commission, embarked on an ambitious program of large-scale topographic mapping and related control survey work in the County. By March 1985, large-scale topographic maps had been completed or were under preparation for 238 square miles, or about 86 percent of the total area of the County. In addition, 1,089 U. S. Public Land Survey corners, or about 90 percent of all such corners in the County, had been located, monumented, and placed on the State Plane Coordinate System. The large-scale topographic mapping and control survey program is providing much useful information to attorneys, appraisers, land surveyors, and engineers in private practice and to the general public, as well as to state, county, and local officials. Importantly, the program, by providing modern topographic maps of the County, as well as the means for coordinating all land and engineering surveys made within the County, is laying a sound foundation for the eventual modernization of the system of land title and taxation records in the County. Indeed, Kenosha County, with the assistance of the Regional Planning Commission, has completed work on a demonstration project for an automated mapping and associated land records system for the Town of Randall and Village of Twin Lakes. Moreover, the County Board has appropriated funds to extend this system to the Town of Wheatland and a portion of the Town of Salem. Substantial savings of public and private funds should accrue over the years from these programs.

Through County Board adoption of a County Sanitary Code and Private Sewage Disposal Ordinance in 1980, the County Office of Planning and Zoning Administration became responsible for regulating private sewage disposal systems, as required under Section 59.065(1) of the Wisconsin Statutes, as well as for regulating private water supply systems, the spreading of municipal sludge, and the disposal of septic tank and holding tank wastes.

In May 1983, comprehensive revisions to the County Zoning Ordinance and shoreland/floodplain zoning ordinance were adopted by the County Board. Shoreland/floodplain provisions of the Ordinance were effective immediately in the unincorporated areas of the County. Other provisions of the ordinance became effective in those towns which acted to ratify the general zoning provisions of that ordinance. By April 1984, the revised comprehensive county zoning ordinance had been adopted by the Towns of Randall, Somers, Wheatland, and Pleasant Prairie.

In addition to its own work efforts, Kenosha County has contracted with the Regional Planning Commission to complete several planning projects for the County. Two of these projects, one dealing with farmland preservation and one with overall economic development, are especially relevant to the formulation of a county development plan.

The farmland preservation plan as described in SEWRPC Community Assistance Planning Report No. 45, A Farmland Preservation Plan for Kenosha County, Wisconsin, presents pertinent data on the agricultural and natural resource base of Kenosha County; presents a set of objectives, principles, and supporting standards related to the preservation of agricultural lands, the location of urban growth in relation to such lands, the provision of public facilities and services to support sound rural and urban development, and the preservation of significant natural resources other than agricultural lands; identifies both the amount and spatial distribution of agricultural lands and lands of environmental significance which should be preserved in agricultural and natural, open space uses, respectively; and identifies areas of land use transition, within which existing agricultural lands may be expected to be converted to urban use, and to which urban services will have to be extended. Finally, the report sets forth recommendations for the implementation of the recommended agricultural land preservation plan by local units and agencies of government.

The overall economic development plan as described in SEWRPC Community Assistance Planning Report No. 74 (2nd Edition), Kenosha County Overall Economic Development Program (OEDP) Plan--1986 Update, allows Kenosha County to remain eligible for the financial assistance authorized by the Public Works and Economic Development Act of 1965. This report develops a consensus among public and private economic development practitioners concerning the constraints on, and the potentials for, economic development in the County, and identifies a strategy to improve economic conditions in the County. The OEDP update analyzes pertinent data on the natural and man-made resource base in Kenosha County, including the physical characteristics, population, labor force, economy, and community facilities of the County. The plan document also sets forth a development strategy to help guide and coordinate the efforts of local individuals and organizations concerned with economic development in the County, to help facilitate the creation of employment opportunities, and to foster a stable and diversified county economy.

PREPARATION OF THE KENOSHA COUNTY DEVELOPMENT PLAN

Most of the studies and analyses which the Wisconsin Statutes indicate should be considered in a county development plan have, in fact, been addressed in the numerous planning programs completed to date for Kenosha County, and at a level of detail quite adequate for county planning purposes. This collection

of plan elements, however, does not constitute a readily usable county development plan primarily because such plan elements were published in a number of separate reports, some of which are now out of print, some of which were completed at different points in time, and nearly all of which cover areas larger than the County. Therefore, the plan recommendations are not presented in a single, coherent report which can be readily utilized by the County in day-to-day decision-making.

The process of preparing a viable county development plan was therefore concerned primarily with overcoming these deficiencies. Major staff work efforts required in the formulation of the development plan did not, therefore, involve the collection and analysis of large quantities of new data, or the preparation of new analyses or plans, but concentrated on updating relevant portions of previous plans; refining the plans and studies so that they related directly to Kenosha County; detailing the graphics and plan recommendations so they could be utilized not only by county officials but by local units and agencies of government and individuals within the County; and consolidating all of the updated, refined, and detailed information in one report for ease of use.

SCHEME OF PRESENTATION

The major findings and recommendations of the Kenosha County development plan are presented in a two-volume report. The first volume sets forth the basic planning and engineering data essential to the formulation of a viable county development plan. The establishment and utilization of such data can in and of itself contribute materially to better development decision-making within the County. The second volume, which was prepared following county review of the planning and engineering data presented in Volume One, sets forth development objectives for the County, describes the recommended county development plan, and identifies the important plan implementation measures.

The first volume of the Kenosha County development plan as set forth herein is presented in five chapters. Following this introductory chapter, Chapter II, "The Socioeconomic Base," presents a descriptive analysis of the population characteristics and economic base of the County. Demographic data include population size, distribution, age and sex composition, and household composition. Economic data include characteristics of the labor force, personal income levels, and the structure of the Kenosha County economy. Chapter III, "The Natural Resource Base," includes a descriptive analysis of the natural resource base elements of Kenosha County, including woodlands, wetlands, and wildlife habitat areas; lakes, streams, and rivers and their associated shorelands and floodlands; and such natural resource-related elements as existing parks and recreation facilities, potential parks, and historic sites. Agricultural resources, being closely linked to the underlying resource base, are also considered in this chapter. Chapter IV, "The Man-Made Environment," identifies the existing man-made features of the County, including the existing land use pattern and the supporting transportation and public utility network, as well as the existing community facilities and services. Chapter V, "Adopted Plans and Land Use Regulations," describes in greater detail the areawide, county, and local plans which have been prepared for the County, and describes the existing body of land use controls, including zoning, official mapping, and land subdivision controls, which regulate the use of land in the County. Chapter VI, "Summary," the final chapter of Volume One, summarizes the inventory findings of the report.

Chapter II

THE SOCIOECONOMIC BASE

INTRODUCTION

Proper planning for the growth and development of Kenosha County requires an understanding of the socioeconomic base of the County. Accordingly, demographic data pertaining to the size and distribution of the resident population and to such population characteristics as age, sex, educational attainment, marital status, and household composition are presented in the first section of this chapter. Data pertaining to the size and characteristics of the labor force, personal income levels, and the structure of the economy of the County are presented in the second section of this chapter.

DEMOGRAPHIC BASE

Historical Population Trends

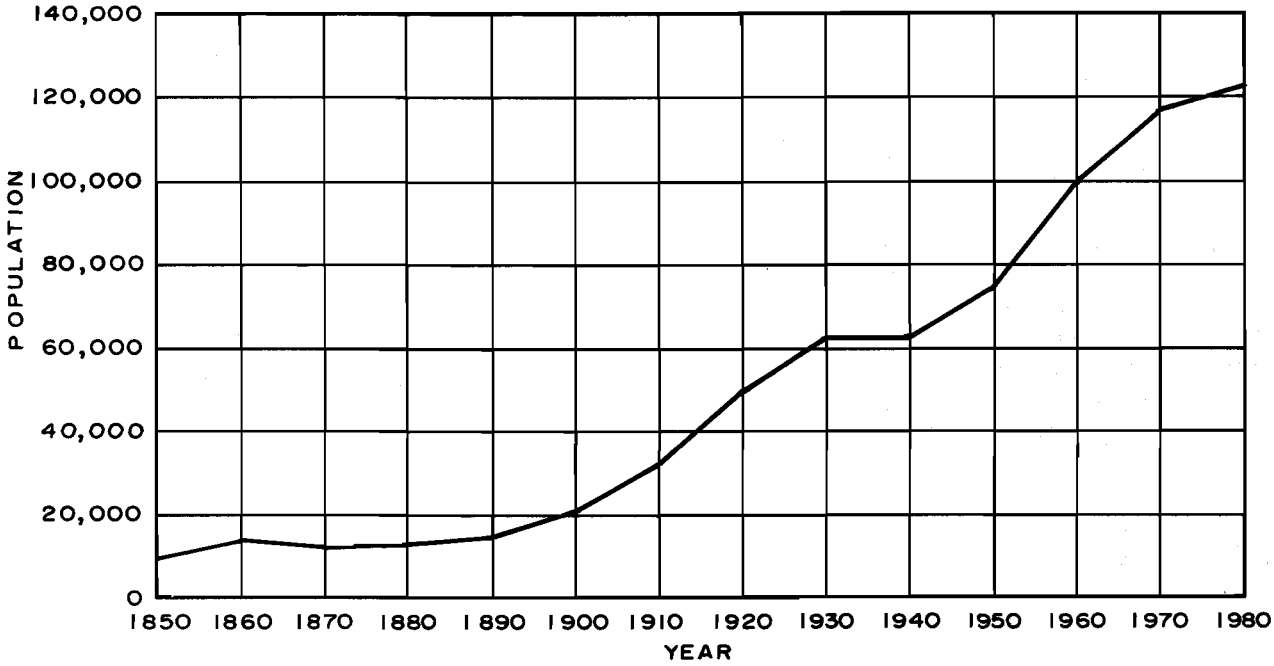
In 1980, the resident population of Kenosha County was 123,137 persons, representing almost 3 percent of the population of the State and about 7 percent of the population of the Southeastern Wisconsin Region. The Kenosha County population ranked ninth among the 72 counties in the State in 1980.

As indicated in Figure 1 and in Table 1, in 1850, the year in which the federal census of population first reported data on Kenosha County, the County contained 10,734 inhabitants. By 1900, the population of the County had approximately doubled to 21,707; by 1920, the population had more than doubled to 51,284; and by 1960 the population had again approximately doubled to 100,615 inhabitants. Between 1960 and 1970, the county population increased by 17,302 persons, or 17.2 percent--greater than the relative population increases for the Region, State, and nation during that decade. Population growth in the County slowed considerably between 1970 and 1980, however, when the county population increased by 5,220 persons, or 4.4 percent--greater than the relative increase for the Region, but less than the relative increase for the State and nation during that time.

Table 2 and Maps 1 and 2 provide insight into the distribution of population within Kenosha County and recent changes in that distribution. Between 1970 and 1980, minor civil divisions west of IH 94 generally experienced more rapid population growth than those east of IH 94. East of IH 94, the population of the Town of Pleasant Prairie and the Town of Somers increased by 5.7 percent and 6.2 percent, respectively, while the population of the City of Kenosha decreased slightly, by 1.4 percent. Map 2 indicates that, east of IH 94, population decreases between 1970 and 1980 occurred primarily in the central portions of the City of Kenosha, while population increases occurred on the periphery of the City and in portions of the Towns of Somers and Pleasant Prairie. In 1980, the combined population of the City of Kenosha and the Towns of Pleasant Prairie and Somers totaled 98,112 persons, or 79.7 percent of the

Figure 1

TOTAL POPULATION IN KENOSHA COUNTY: CENSUS YEARS 1850-1980



Source: U. S. Bureau of the Census and SEWRPC.

total county population, compared with 98,094 persons, or 83.2 percent of the county population, in 1970, and 85,325 persons, or 84.8 percent of the county population, in 1960.

West of IH 94, six minor civil divisions--the Villages of Paddock Lake, Silver Lake, and Twin Lakes and the Towns of Bristol, Randall, and Wheatland--experienced population increases of more than 30 percent between 1970 and 1980. The Town of Salem population also increased, by 13.3 percent. The population of the Town of Brighton remained virtually unchanged between 1970 and 1980, and the population of the Town of Paris decreased by 7.6 percent. In 1980, the combined population of the nine minor civil divisions located west of IH 94 totaled 25,025, or 20.3 percent of the total county population, compared with 19,823 persons, or 16.8 percent of the county population, in 1970, and 15,290 persons, or 15.2 percent of the county population, in 1960.

Urban and Rural Composition: The composition of the population of Kenosha County as measured in terms of urban and rural place of residence has changed dramatically since 1850, as shown in Table 3 and Figure 2. In 1850, the population of the County was approximately 68 percent rural and 32 percent urban. By 1910, this relationship had nearly reversed, with about 35 percent of the population being rural and 65 percent urban. By 1930, only about 21 percent of the county population was rural and about 79 percent was urban. Between 1930 and 1950, the rural population of the County increased to slightly more than one-fourth of the total population, and this ratio remained relatively constant between 1950 and 1980. A significant change, however, has occurred in the type of residents living in rural areas of the County. As indicated in Table 3, the population residing on farms has declined substantially, from about 12 percent of the total population in 1940 to about 1 percent in 1980, while the rural

Table 1

TOTAL POPULATION IN KENOSHA COUNTY, THE REGION, WISCONSIN, AND THE UNITED STATES: CENSUS YEARS 1850-1980

Year	Kenosha County		Region [a]		Wisconsin		United States	
	Population	Percent Change from Preceding Time Period	Population	Percent Change from Preceding Time Period	Population	Percent Change from Preceding Time Period	Population	Percent Change from Preceding Time Period
1850	10,734	--	113,389	--	305,391	--	23,191,876	--
1860	13,900	29.5	190,409	67.9	775,881	154.1	31,443,321	35.6
1870	13,147	-5.4	223,546	17.4	1,054,670	35.9	38,448,371	22.3
1880	13,550	3.1	277,119	24.0	1,315,497	24.7	50,155,783	30.4
1890	15,581	15.0	386,774	39.6	1,693,330	28.7	62,947,714	25.5
1900	21,707	39.3	501,808	29.7	2,069,042	22.2	75,994,575	20.7
1910	32,929	51.7	631,161	25.8	2,333,860	12.8	91,972,266	21.0
1920	51,284	55.7	783,681	24.2	2,632,067	12.8	105,710,620	14.9
1930	63,277	23.4	1,006,118	28.4	2,939,006	11.7	122,775,046	16.1
1940	63,505	0.4	1,067,699	6.1	3,137,587	6.8	131,669,587	7.2
1950	75,238	18.5	1,240,618	16.2	3,434,575	9.5	151,325,798	14.9
1960	100,615	33.7	1,573,614	26.8	3,951,777	15.1	179,323,175	18.5
1970	117,917	17.2	1,756,083	11.6	4,417,821	11.8	203,302,031	13.4
1980	123,137	4.4	1,764,919	0.5	4,705,767	6.5	226,545,805	11.4

[a] The Southeastern Wisconsin Region comprises Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha Counties.

Source: U. S. Bureau of the Census and SEWRPC.

Table 2

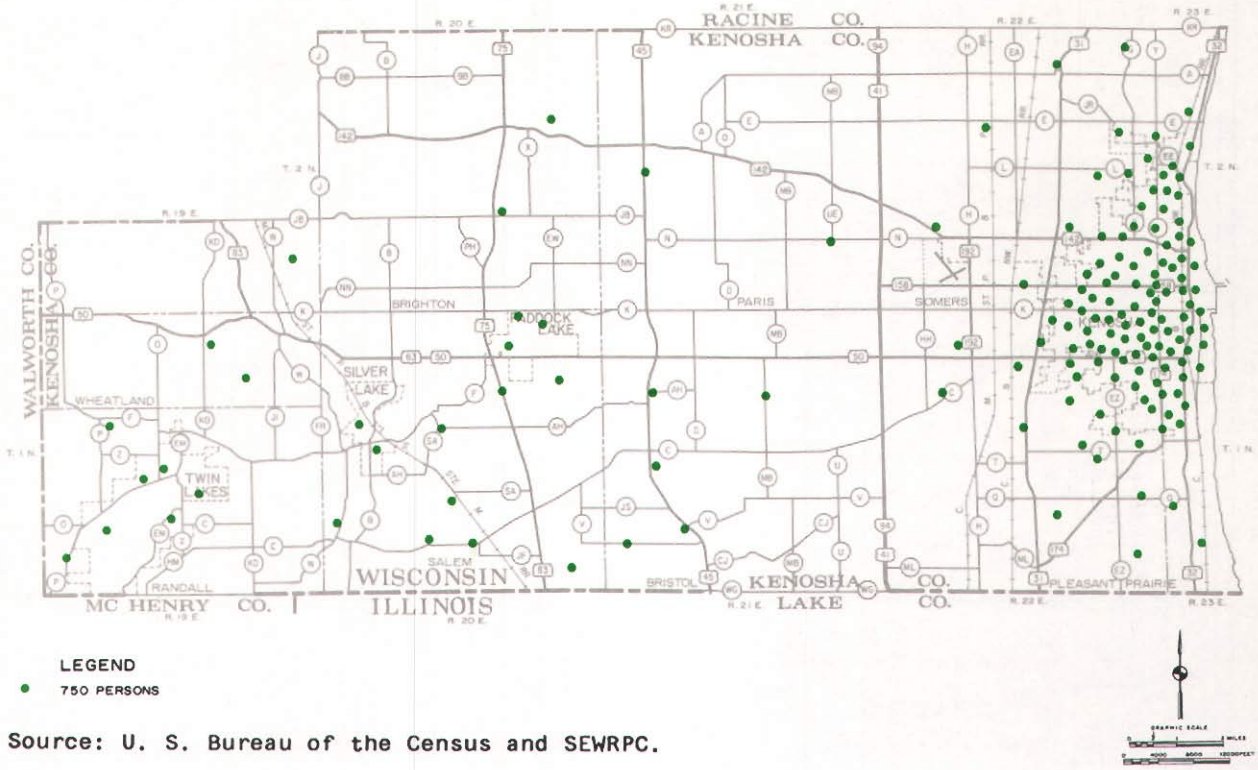
POPULATION IN KENOSHA COUNTY BY CIVIL DIVISION: 1960, 1970, AND 1980

Civil Division	1960		1970		1980		Percent Change	
	Population	Percent of County	Population	Percent of County	Population	Percent of County	1960-1970	1970-1980
City								
Kenosha.....	67,899	67.5	78,805	66.8	77,685	63.1	16.1	-1.4
Villages								
Paddock Lake.....	--	--	1,470	1.3	2,207	1.8	--	50.1
Silver Lake.....	1,077	1.1	1,210	1.0	1,598	1.3	12.3	32.1
Twin Lakes.....	1,497	1.5	2,276	1.9	3,474	2.8	52.0	52.6
Towns								
Brighton.....	1,081	1.1	1,199	1.0	1,180	1.0	10.9	-1.6
Bristol.....	2,155	2.1	2,740	2.3	3,599	2.9	27.1	31.4
Paris.....	1,423	1.4	1,744	1.5	1,612	1.3	22.6	-7.6
Pleasant Prairie...	10,287	10.2	12,019	10.2	12,703	10.3	16.8	5.7
Randall.....	1,013	1.0	1,582	1.4	2,155	1.7	56.2	36.2
Salem.....	5,541	5.5	5,555	4.7	6,292	5.1	0.3	13.3
Somers.....	7,139	7.1	7,270	6.2	7,724	6.3	1.8	6.2
Wheatland.....	1,503	1.5	2,047	1.7	2,908	2.4	36.2	42.1
County Total	100,615	100.0	117,917	100.0	123,137	100.0	17.2	4.4

Source: U. S. Bureau of the Census and SEWRPC.

Map 1

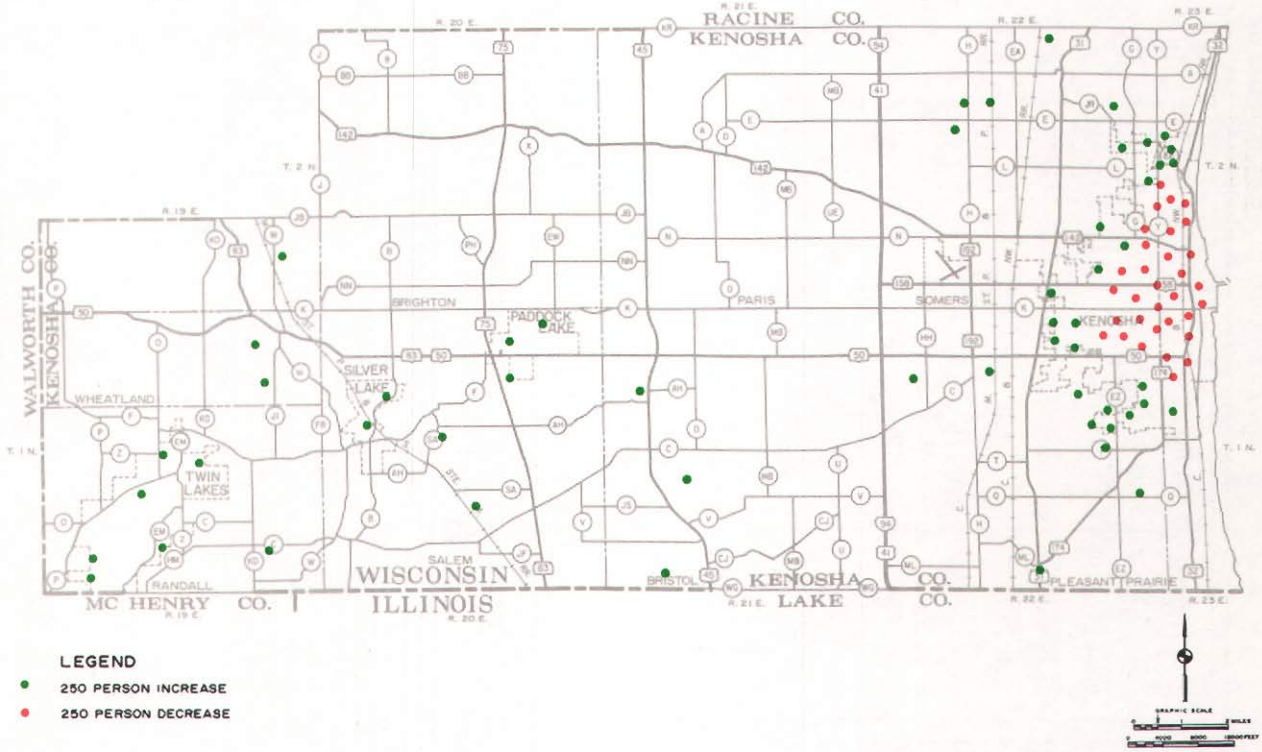
POPULATION DISTRIBUTION IN KENOSHA COUNTY: 1980



Source: U. S. Bureau of the Census and SEWRPC.

Map 2

DISTRIBUTION OF 1970 TO 1980 POPULATION CHANGE IN KENOSHA COUNTY



Source: U. S. Bureau of the Census and SEWRPC.

Table 3

URBAN AND RURAL POPULATION IN KENOSHA COUNTY: CENSUS YEARS 1850-1980

Year	Urban		Rural						Total
			Nonfarm		Farm		Subtotal		
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	
1850	3,455	32.2	--	--	--	--	7,279	67.8	10,734
1860	3,990	28.7	--	--	--	--	9,910	71.3	13,900
1870	4,309	32.8	--	--	--	--	8,838	67.2	13,147
1880	5,039	37.2	--	--	--	--	8,511	62.8	13,550
1890	6,532	41.9	--	--	--	--	9,049	58.1	15,581
1900	11,606	53.5	--	--	--	--	10,101	46.5	21,707
1910	21,371	64.9	--	--	--	--	11,558	35.1	32,929
1920	40,472	78.9	--	--	--	--	10,812	21.1	51,284
1930[a]	50,262	79.4	6,464	10.2	6,551	10.4	13,015	20.6	63,277
1940	48,765	76.8	7,323	11.5	7,417	11.7	14,740	23.2	63,505
1950	54,368	72.2	14,349	19.1	6,521	8.7	20,870	27.8	75,238
1960	72,852	72.4	23,517	23.4	4,246	4.2	27,763	27.6	100,615
1970	84,224	71.4	30,396	25.8	3,297	2.8	33,693	28.6	117,917
1980	89,257	72.5	32,149	26.1	1,731	1.4	33,880	27.5	123,137

[a]The rural population has been divided into rural farm and rural nonfarm since the 1930 census.

Source: U. S. Bureau of the Census and SEWRPC.

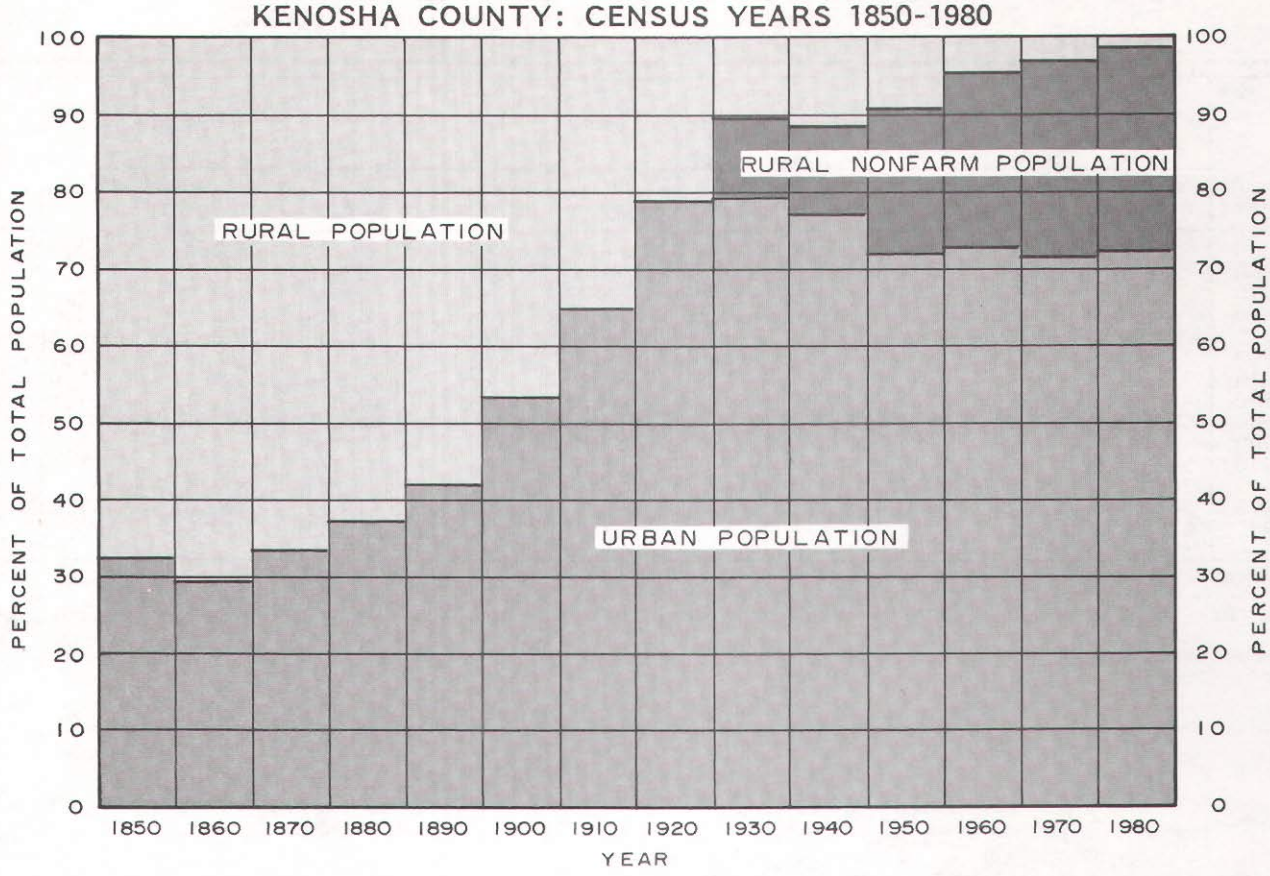
"nonfarm" population has increased dramatically from about 10 percent of the total population in 1930 to about 26 percent in 1980. The rural nonfarm population may be typified as urban dwellers generally living in a scattered fashion throughout the rural and rural-urban fringe areas of the County.

Components of Population Change: The population of an area such as Kenosha County is constantly changing with the occurrence of vital events such as births and deaths, and through the inflow and outflow of persons migrating from one area to another. Population increases result from births and in-migrations of persons; population decreases result from deaths and out-migrations of persons. Thus, population change is not a simple phenomenon but is comprised of four major components: births, deaths, in-migration, and out-migration. The balance between births and deaths is termed "natural increase" and the balance between in-migration and out-migration is termed "net migration." Review of the trends in natural increase and net migration provides insight into the dynamics of population change in Kenosha County.

As indicated in Table 4, over the past six decades, the highest level of net migration--a net in-migration of 11,339 persons--occurred between 1950 and 1960. This high level of in-migration, coupled with a natural increase of 14,038 persons, resulted in a substantial increase of 25,377 persons in the county population during the 1950's. During the 1960's, the natural increase of 15,125 persons exceeded that of the previous decade, but the net in-migration of population decreased to 2,177 persons, resulting in an overall

Figure 2

URBAN AND RURAL POPULATION IN KENOSHA COUNTY: CENSUS YEARS 1850-1980



Source: U. S. Bureau of the Census and SEWRPC.

Table 4

POPULATION CHANGE, NATURAL INCREASE, AND NET MIGRATION FOR KENOSHA COUNTY: 1920-1980

Time Period	Population Change		Natural Increase		Net Migration	
	Number	Rate	Number	Rate	Number	Rate
1920-1930	11,993	23.4	7,571	14.8	4,422	8.6
1930-1940	228	0.4	4,391	6.9	-4,163	-6.5
1940-1950	11,773	18.5	8,090	12.7	3,643	5.8
1950-1960	25,377	33.7	14,038	18.7	11,339	15.0
1960-1970	17,302	17.2	15,125	15.0	2,177	2.2
1970-1980	5,220	4.4	7,757	6.6	-2,537	-2.2

Source: U. S. Bureau of the Census, Wisconsin Department of Health and Social Services, and SEWRPC.

population increase of 17,302 persons. During the 1970's, a natural increase of 7,757 persons, combined with a net out-migration of 2,537 persons, resulted in a very modest increase of 5,220 persons in the county population. The 1970-1980 decade was the first since the Depression years of the 1930's in which Kenosha County experienced a net out-migration of population.

Population Characteristics

The preceding sections of this chapter described changes in the size and spatial distribution of the population of Kenosha County. An understanding of the County's demographic base also requires examination of basic population characteristics, including age composition, sex composition, racial composition, educational attainment, marital status, and household composition. Accordingly, this section examines these characteristics of the resident population of Kenosha County.

Age Composition: The age composition of the population of Kenosha County, expressed in terms of five-year age groups, is presented for the years 1960, 1970, and 1980 in Table 5. As indicated in Table 5, 11 of the 17 five-year age groups increased in size between 1970 and 1980, with the largest absolute increases occurring in the groups between 20 and 34 years of age. Conversely, the largest absolute decreases between 1970 and 1980 occurred in the groups less than 15 years of age. The age groups between 40 and 54 years also experienced decreases during that time.

Table 5

AGE COMPOSITION OF THE POPULATION IN KENOSHA COUNTY: CENSUS YEARS 1960-1980

Age Group	Population									
	1960		1970		1980		Change 1960-1970		Change 1970-1980	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent	Number	Percent
Under 5	12,320	12.3	10,479	8.9	8,819	7.2	-1,841	-14.9	-1,660	-15.8
5-9	10,861	10.8	13,280	11.3	9,274	7.5	2,419	22.3	-4,006	-30.2
10-14	9,357	9.3	12,662	10.7	10,535	8.6	3,305	35.3	-2,127	-16.8
15-19	7,182	7.1	11,105	9.4	12,502	10.2	3,923	54.6	1,397	12.6
20-24	6,030	6.0	8,493	7.2	11,389	9.2	2,463	40.8	2,896	34.1
25-29	5,923	5.9	7,725	6.6	10,382	8.4	1,802	30.4	2,657	34.4
30-34	6,591	6.6	6,741	5.7	8,949	7.3	150	2.3	2,208	32.8
35-39	6,969	6.9	6,074	5.2	7,545	6.1	-895	-12.8	1,471	24.2
40-44	6,522	6.5	6,656	5.6	6,490	5.3	134	2.1	-166	-2.5
45-49	5,876	5.8	6,941	5.9	5,902	4.8	1,065	18.1	-1,039	-15.0
50-54	5,076	5.1	6,425	5.4	6,260	5.1	1,349	26.6	-165	-2.6
55-59	4,556	4.5	5,482	4.7	6,339	5.1	926	20.3	857	15.6
60-64	4,114	4.1	4,636	3.9	5,467	4.4	522	12.7	831	17.9
65-69	3,753	3.7	3,705	3.1	4,551	3.7	-48	-1.3	846	22.8
70-74	2,728	2.7	3,051	2.6	3,425	2.8	323	11.8	374	12.3
75-84	2,355	2.3	3,677	3.1	4,057	3.3	1,322	56.1	380	10.3
85 and Older	402	0.4	785	0.7	1,251	1.0	383	95.3	466	59.4
All Ages	100,615	100.0	117,917	100.0	123,137	100.0	17,302	17.2	5,220	4.4

Source: U. S. Bureau of the Census and SEWRPC.

Table 6

MEDIAN AGE OF THE POPULATION IN KENOSHA COUNTY, THE REGION, WISCONSIN, AND THE UNITED STATES: CENSUS YEARS 1960-1980

Area	Median Age		
	1960	1970	1980
Kenosha County.....	28.8	26.9	29.4
Southeastern Wisconsin Region....	29.7	27.6	29.7
Wisconsin.....	29.4	27.2	29.4
United States.....	29.5	28.1	30.0

Source: U. S. Bureau of the Census and SEWRPC.

Table 7

MEDIAN AGE OF THE POPULATION IN KENOSHA COUNTY BY CIVIL DIVISION: 1980

Civil Division	Median Age
City	
Kenosha.....	29.1
Villages	
Paddock Lake.....	27.4
Silver Lake.....	29.0
Twin Lakes.....	32.4
Towns	
Brighton.....	28.1
Bristol.....	29.8
Paris.....	26.9
Pleasant Prairie.....	30.8
Randall.....	30.5
Salem.....	30.0
Somers.....	30.4
Wheatland.....	27.4
Kenosha County	29.4

Source: U. S. Bureau of the Census and SEWRPC.

Another indication of the age structure of the population of an area is the median age. As indicated in Table 6, in 1980 the median age of the population of Kenosha County was 29.4 years, the same as the median age of the population of the State and just slightly lower than that of the Region and of the United States. Over the 1960 to 1980 time period, the median age in Kenosha County decreased during the first decade, then increased during the last decade, reflecting the same trend as the Region, State, and United States. As indicated in Table 7, among the minor civil divisions in Kenosha County, the median age ranged from a low of 26.9 years in the Town of Paris to a high of 32.4 years in the Village of Twin Lakes in 1980.

A measure of the impact of age composition on the productive capacity of the population is the dependency ratio. In the application of the dependency ratio, it is assumed that the age group 18 through 64 years comprises the "productive" segment of the population, while those under 18 and those 65 years and older constitute the "dependent" segment. A rough measure of the dependency load that the productive population must bear, then, is the ratio of the population 17 years and younger and 65 years and older to the population 18 through 64, multiplied by 100. This ratio is intended to measure how many dependents each 100 persons in the productive years must, on the average, support. As indicated in Table 8, in 1980 the dependency ratio for Kenosha County was 66.8, indicating that each 100 persons in the age group 18 to 64 years on the average supports about 67 dependent persons. In comparison, the 1980 dependency ratios for the Region, the State, and the United States were 65.6, 69.0, and 65.1, respectively. The 1980 county dependency ratio of 66.8 is considerably lower than the 1970 county ratio of 85.9 and the 1960 ratio of 85.3. This decrease may be attributed primarily to a decrease in a number of persons under 18 relative to the number of persons in the 18 to 64 age group.

Table 8

DEPENDENCY RATIOS OF THE POPULATION IN KENOSHA COUNTY BY CIVIL DIVISION, THE REGION, WISCONSIN, AND THE UNITED STATES: CENSUS YEARS 1960-1980

Civil Division	Dependency Ratio		
	1960	1970	1980
City			
Kenosha	82.1	84.0	66.7
Villages			
Paddock Lake[a]	--	88.9	74.9
Silver Lake	113.3	96.4	72.4
Twin Lakes	95.7	98.3	76.3
Towns			
Brighton	118.8	100.8	65.5
Bristol	89.5	89.1	68.4
Paris	106.8	102.1	70.9
Pleasant Prairie	86.7	86.7	64.9
Randall	94.1	98.5	69.6
Salem	90.7	87.7	72.6
Somers	91.5	85.2	57.1
Wheatland	100.9	99.1	77.3
Kenosha County	85.3	85.9	66.8
Southeastern Wisconsin Region	80.4	82.7	65.6
Wisconsin	88.5	87.1	69.0
United States	81.9	79.0	65.1

[a]The Village of Paddock Lake was incorporated in June 1960, two months after the 1960 census was taken. Therefore, a dependency ratio could not be determined for 1960.

Source: U. S. Bureau of the Census and SEWRPC.

Table 9

SEX RATIOS OF THE POPULATION IN KENOSHA COUNTY BY CIVIL DIVISION, THE REGION, WISCONSIN, AND THE UNITED STATES: 1980

Civil Division	Number of Males per 100 Females
City	
Kenosha	93.6
Villages	
Paddock Lake	99.7
Silver Lake	99.5
Twin Lakes	96.3
Towns	
Brighton	107.4
Bristol	103.1
Paris	108.5
Pleasant Prairie	100.8
Randall	100.7
Salem	97.7
Somers	105.2
Wheatland	100.8
Kenosha County	96.4
Southeastern Wisconsin Region	93.8
Wisconsin	96.0
United States	94.5

Source: U. S. Bureau of the Census and SEWRPC.

The dependency ratio for minor civil divisions in Kenosha County in 1980 ranged from 57.1 in the Town of Somers to 77.3 in the Town of Wheatland. In 1970, the dependency ratios of the minor civil divisions ranged from 84.0 in the City of Kenosha to 102.1 in the Town of Paris.

Sex Composition: In most populations, the number of males and females tends to be nearly equal, with males slightly outnumbering females at the younger ages and females outnumbering males at the older ages. The sex ratio--the number of males per 100 females--is one method of expressing the sex composition of the population. The sex composition of a population is determined by three factors: the ratio of the sexes among infants at birth, differential mortality rates between the sexes, and differential net migration rates between the sexes. As indicated in Table 9, females outnumbered males in Kenosha County in 1980. For every 100 females in the County there were about 96 males. Similarly, the City of Kenosha and the Villages of Paddock Lake, Silver Lake, and Twin Lakes all had a slightly higher proportion of females, while all civil towns in Kenosha County except the Town of Salem had a slightly higher proportion of males.

Race: The Census Bureau classifies the population by three broad, currently recognized racial groups which represent cultural distinctions. Skin color is the basis for this distinction; the population can be enumerated as white, black, and other nonwhite. As indicated in Table 10, the black population and other nonwhite population comprised 2.4 percent and 1.9 percent, respectively, of the total county population in 1980. By comparison, in the Region about 9.5 percent of the population was black and 2.2 percent was other nonwhite; in Wisconsin, about 3.9 percent was black and 1.7 percent was other nonwhite;

Table 10

RACIAL COMPOSITION OF THE POPULATION IN KENOSHA COUNTY BY CIVIL DIVISION, THE REGION, WISCONSIN, AND THE UNITED STATES: 1980

Civil Division	Population							
	White		Black		Other Nonwhite[a]		Total	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent
City								
Kenosha	72,940	93.9	2,813	3.6	1,932	2.5	77,685	100.0
Villages								
Paddock Lake	2,178	98.7	--	--	29	1.3	2,207	100.0
Silver Lake	1,582	99.0	2	0.1	14	0.9	1,598	100.0
Twin Lakes	3,438	99.0	--	--	36	1.0	3,474	100.0
Towns								
Brighton	1,178	99.8	--	--	2	0.2	1,180	100.0
Bristol	3,565	99.1	--	--	34	0.9	3,599	100.0
Paris	1,605	99.6	--	--	7	0.4	1,612	100.0
Pleasant Prairie	12,561	98.9	20	0.1	122	1.0	12,703	100.0
Randall	2,136	99.1	--	--	19	0.9	2,155	100.0
Salem	6,234	99.1	--	--	58	0.9	6,292	100.0
Somers	7,551	97.8	48	0.6	125	1.6	7,724	100.0
Wheatland	2,894	99.5	3	0.1	11	0.4	2,908	100.0
Kenosha County	117,862	95.7	2,886	2.4	2,389	1.9	123,137	100.0
Southeastern Wisconsin Region	1,558,076	88.3	167,876	9.5	38,967	2.2	1,764,919	100.0
Wisconsin	4,443,035	94.4	182,592	3.9	80,140	1.7	4,705,767	100.0
United States	188,371,622	83.1	26,495,025	11.7	11,679,158	5.2	226,545,805	100.0

[a]Includes American Indian, Eskimo, Aleut, Asian, Pacific Islander, and other racial groups.

Source: U. S. Bureau of the Census and SEWRPC.

Table 11

PERSONS OF SPANISH ORIGIN IN KENOSHA COUNTY BY CIVIL DIVISION, THE REGION, WISCONSIN, AND THE UNITED STATES: 1980

Civil Division	Persons of Spanish Origin		
	Number	Percent of Total Population	Total Population
City			
Kenosha	3,110	4.0	77,685
Villages			
Paddock Lake	15	0.7	2,207
Silver Lake	9	0.6	1,598
Twin Lakes	41	1.2	3,474
Towns			
Brighton	7	0.6	1,180
Bristol	24	0.7	3,599
Paris	17	1.1	1,612
Pleasant Prairie	128	1.0	12,703
Randall	12	0.6	2,155
Salem	50	0.8	6,292
Somers	145	1.9	7,724
Wheatland	20	0.7	2,908
Kenosha County	3,578	2.9	123,137
Southeastern Wisconsin Region	46,452	2.6	1,764,919
Wisconsin	62,972	1.3	4,705,767
United States	14,608,673	6.4	226,545,805

Source: U. S. Bureau of the Census and SEWRPC.

and in the United States about 11.7 percent was black and 5.2 percent was other nonwhite. Among the civil divisions in the County, there was a significant nonwhite population in the City of Kenosha--where 3.6 percent of the population was black and 2.5 percent was other nonwhite in 1980. In the remaining civil divisions, generally over 98 percent of the resident population was white.

Persons of Spanish origin constitute an ethnic--rather than a racial--minority population. As indicated in Table 11, 3,578 persons, or 2.9 percent of the county population, identified themselves as being of Spanish origin in 1980. This is about the same as the percentage for the Region, 2.6 percent; greater than that for the State, 1.3 percent; and below that for the nation, 6.4 percent. Of the approximately 3,600 persons of Spanish origin in the County, 60.7 percent also identified themselves as white in the 1980 census, 1.0 percent identified themselves as black, and 38.3 percent identified themselves as other nonwhite.

Educational Attainment: The level of formal education attained is a significant determinant of the social and economic status of a population. For many people, the degree of participation in and understanding of the complex technological changes occurring in society today are directly related to the extent of their formal education.

As indicated in Table 12, of the population 25 years of age or older in Kenosha County in 1980, 7,578 persons, or 10.7 percent, had completed four or more years of college; 28,670 persons, or 40.6 percent, had completed high school but had not completed college; and 11,570 persons, or 16.4 percent, had

Table 12

EDUCATIONAL ATTAINMENT LEVELS OF THE POPULATION 25 YEARS OF AGE AND OLDER IN KENOSHA COUNTY BY CIVIL DIVISION, THE REGION, WISCONSIN, AND THE UNITED STATES: 1980

Civil Division	Total Population 25 Years and Older	Completed Elementary School		Completed High School		Completed Four or More Years of College	
		Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
City							
Kenosha	44,496	7,612	17.1	17,843	40.1	4,602	10.3
Villages							
Paddock Lake	1,204	174	14.5	504	41.9	126	10.5
Silver Lake	915	149	16.3	373	40.8	101	11.0
Twin Lakes	2,122	315	14.8	938	44.2	228	10.7
Towns							
Brighton	648	111	17.1	308	47.5	52	8.0
Bristol	2,061	291	14.1	918	44.5	141	6.8
Paris	849	159	18.7	395	46.5	86	10.1
Pleasant Prairie	7,328	937	12.8	2,987	40.8	1,018	13.9
Randall	1,259	158	12.5	579	46.0	194	15.4
Salem	3,661	755	20.6	1,368	37.4	335	9.2
Somers	4,489	623	13.9	1,741	38.8	599	13.3
Wheatland	1,586	286	18.0	716	45.1	96	6.1
Kenosha County	70,618	11,570	16.4	28,670	40.6	7,578	10.7
Southeastern Wisconsin Region	1,026,917	154,875	15.1	399,214	38.9	167,257	16.3
Wisconsin	2,705,138	485,923	18.0	1,093,496	40.4	401,076	14.8
United States	132,768,638	24,257,683	18.3	45,947,035	34.6	21,558,480	16.2

Source: U. S. Bureau of the Census and SEWRPC.

completed elementary school but had not completed high school. A total, then, of 47,818 persons in Kenosha County, or 67.7 percent of the county population 25 years of age or older, had at least an elementary school education.

As further indicated in Table 12, the percentage of the county population which had completed elementary school but had not completed high school, 16.4 percent, is similar to the percentage for the Region (15.1 percent), the State (18.0 percent), and the nation (18.3 percent). The percentage of the county population which had completed high school but had not completed college, 40.6 percent, is similar to the percentage for the Region (38.9 percent), and the State (40.4 percent), and is somewhat higher than that for the nation (34.6 percent). The percentage of the county population which had completed four or more years of college, 10.7 percent, is somewhat lower than that for the Region (16.3 percent), the State (14.8 percent), and the nation (16.2 percent).

Marital Status: Marital status affects population growth, since most childbearing is done by persons who are married. Moreover, deathrates and migration rates both vary substantially according to marital status, so that marital status conditions other important aspects of population dynamics. The marital status of the county population 15 years of age and older is tabulated in Table 13 in three categories--single (never married), married (includes separated), and widowed or divorced. In 1980, 60.1 percent of the Kenosha County population 15 years of age and older was classified as married, 26.6 percent was classified as single, and 13.3 percent was classified as widowed or divorced. Among the minor civil divisions in Kenosha County, the percentage of married persons ranged from 57.3 percent in the City of Kenosha to 68.4 percent in the Village of Paddock Lake. The percentage of single persons ranged from 21.9 percent in the Village of Silver Lake to 30.2 percent in the Town of Paris. The percentage of widowed or divorced persons ranged from 6.7 percent in the Town of Paris to 15.0 percent in the City of Kenosha.

Household Composition: One of the most important characteristics of the county population in comprehensive planning is the manner in which the County's residents are arranged into households. A household is, by definition, composed of all persons who occupy a group of rooms or a single room which constitutes a housing unit--that is, which constitutes a separate living quarter. The household represents a basic consuming unit and generates much of the demand for urban land, and is an important component in the generation of the demand for transportation and many other types of facilities and services.

There were 43,064 households in Kenosha County in 1980. Between 1970 and 1980, the number of households increased by 7,596, or 21.4 percent, while the household population--that is, the population living in households[1]--increased by 4,750 persons, or 4.1 percent. Between 1960 and 1970, the number of households increased by 5,923, or 20.0 percent, while the household population increased by 16,329 persons, or 16.4 percent (see Figure 3).

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[1]All persons not living in households are classified as living in group quarters. Persons in group quarters include persons under care or custody in institutions such as hospitals for the chronically ill, homes for the aged, and correctional facilities, as well as persons residing in noninstitutional facilities such as college dormitories and military barracks.

Table 13

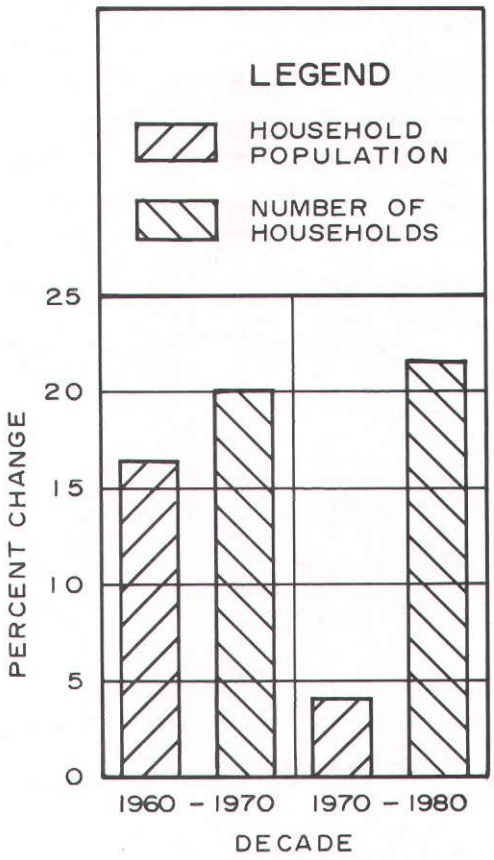
MARITAL STATUS OF PERSONS 15 YEARS OF AGE AND OLDER IN KENOSHA COUNTY BY CIVIL DIVISION, THE REGION, WISCONSIN, AND THE UNITED STATES: 1980

Civil Division	Population							
	Single		Married		Widowed or Divorced		Total	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent
City								
Kenosha	16,618	27.7	34,442	57.3	8,994	15.0	60,054	100.0
Villages								
Paddock Lake	360	22.3	1,103	68.4	150	9.3	1,613	100.0
Silver Lake	265	21.9	777	64.2	169	13.9	1,211	100.0
Twin Lakes	599	22.4	1,711	63.9	368	13.7	2,678	100.0
Towns								
Brighton	255	29.0	555	63.1	70	7.9	880	100.0
Bristol	597	22.3	1,811	67.6	270	10.1	2,678	100.0
Paris	362	30.2	756	63.1	80	6.7	1,198	100.0
Pleasant Prairie	2,417	25.1	6,298	65.3	929	9.6	9,644	100.0
Randall	374	23.1	1,093	67.7	148	9.2	1,615	100.0
Salem	1,116	23.3	3,086	64.6	579	12.1	4,781	100.0
Somers	1,660	27.4	3,795	62.7	601	9.9	6,056	100.0
Wheatland	471	22.4	1,394	66.4	236	11.2	2,101	100.0
Kenosha County	25,094	26.6	56,821	60.1	12,594	13.3	94,509	100.0
Southeastern Wisconsin Region	392,529	28.8	787,725	57.8	182,494	13.4	1,362,748	100.0
Wisconsin	1,013,067	28.0	2,159,618	59.6	449,091	12.4	3,621,776	100.0
United States	46,159,302	26.4	104,506,159	59.6	24,590,005	14.0	175,255,466	100.0

Source: U. S. Bureau of the Census and SEWRPC.

Figure 3

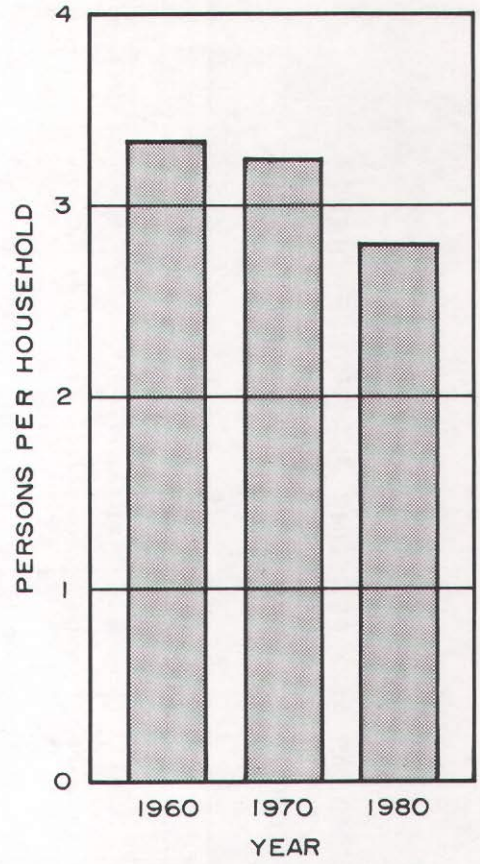
RELATIVE CHANGE IN HOUSEHOLD POPULATION AND NUMBER OF HOUSEHOLDS IN KENOSHA COUNTY: 1960-1970 AND 1970-1980



Source: U. S. Bureau of the Census and SEWRPC.

Figure 4

PERSONS PER HOUSEHOLD IN KENOSHA COUNTY: 1960, 1970, AND 1980



Source: U. S. Bureau of the Census and SEWRPC.

The increase in the number of households in Kenosha County during the 1960's and 1970's was accompanied by a decrease in average household size (see Table 14 and Figure 4). Between 1960 and 1970, the average household size in the County decreased from 3.36 to 3.26 persons per household, or by 3.0 percent. Between 1970 and 1980, the average household size decreased further, from 3.26 to 2.80 persons per household, or by 14.1 percent. The average household size decreased in each city, village, and town in the County during the 1960's and 1970's. Among the civil divisions in the County, the average number of persons per household in 1980 ranged from a low of 2.69 in the City of Kenosha to a high of 3.45 in the Town of Paris.

Family Composition: A family, by definition, consists of a household head and one or more other persons living in the same household who are related to the head by blood, marriage, or adoption. Not all households contain families, because a household may be composed of a group of unrelated persons or of one person living alone. Family households represent the majority of households in Kenosha County. There were 32,078 family households in Kenosha County in 1980, representing 74 percent of all households in the County.

Table 14

NUMBER OF HOUSEHOLDS AND PERSONS PER HOUSEHOLD IN KENOSHA COUNTY BY CIVIL DIVISION, THE REGION WISCONSIN, AND THE UNITED STATES: CENSUS YEARS 1960-1980

Civil Division	1960			1970			1980			Percent Change in Households	
	Number of Households	Percent of County	Persons per Household	Number of Households	Percent of County	Persons per Household	Number of Households	Percent of County	Persons per Household	1960-1970	1970-1980
City											
Kenosha	20,593	69.7	3.26	24,245	68.3	3.17	27,964	64.9	2.69	17.7	15.3
Villages											
Paddock Lake[a]	--	--	--	447	1.3	3.29	718	1.7	3.07	--	60.6
Silver Lake	309	1.0	3.44	388	1.1	3.07	569	1.3	2.81	25.6	46.6
Twin Lakes	472	1.6	3.17	725	2.0	3.04	1,228	2.8	2.77	53.6	69.4
Towns											
Brighton	256	0.9	4.22	312	0.9	3.84	359	0.8	3.29	21.9	15.1
Bristol	584	2.0	3.69	757	2.1	3.62	1,189	2.8	3.03	29.6	57.1
Paris	339	1.1	4.15	431	1.2	4.03	467	1.1	3.45	27.1	8.4
Pleasant Prairie	2,774	9.4	3.68	3,303	9.3	3.61	4,041	9.4	3.11	19.1	22.3
Randall	280	0.9	3.62	446	1.3	3.53	700	1.6	3.08	59.3	57.0
Salem	1,645	5.6	3.30	1,732	4.9	3.17	2,148	5.0	2.91	5.3	24.0
Somers	1,884	6.4	3.65	2,115	6.0	3.44	2,741	6.4	2.81	12.3	29.6
Wheatland	409	1.4	3.67	567	1.6	3.61	940	2.2	3.09	38.6	65.8
Kenosha County	29,545	100.0	3.36	35,468	100.0	3.26	43,064	100.0	2.80	20.0	21.4
Southeastern Wisconsin Region	465,913	--	3.30	536,486	--	3.20	627,955	--	2.75	15.1	17.0
Wisconsin	1,146,342	--	3.38	1,328,804	--	3.22	1,652,261	--	2.77	15.9	24.3
United States	53,023,875	--	3.31	63,449,747	--	3.11	80,389,673	--	2.75	19.7	26.7

[a]The Village of Paddock Lake was incorporated in June 1960, two months after the 1960 census was taken; therefore, household data cannot be shown for 1960.

Source: U. S. Bureau of the Census and SEWRPC.

Table 15

FAMILY STRUCTURE IN KENOSHA COUNTY BY CIVIL DIVISION, THE REGION, WISCONSIN, AND THE UNITED STATES: 1980

Civil Division	Total Families	Family Structure					
		Husband-Wife		Female Head		Male Head	
		Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
City							
Kenosha	19,912	16,174	81.2	3,039	15.3	699	3.5
Villages							
Paddock Lake	601	532	88.5	56	9.3	13	2.2
Silver Lake	432	374	86.6	40	9.2	18	4.2
Twin Lakes	949	806	84.9	118	12.4	25	2.7
Towns							
Brighton	299	269	90.0	20	6.7	10	3.3
Bristol	976	873	89.4	65	6.7	38	3.9
Paris	405	370	91.4	18	4.4	17	4.2
Pleasant Prairie	3,388	3,037	89.6	258	7.6	93	2.8
Randall	590	529	89.7	39	6.6	22	3.7
Salem	1,693	1,475	87.1	160	9.5	58	3.4
Somers	2,062	1,825	88.5	167	8.1	70	3.4
Wheatland	771	666	86.4	73	9.5	32	4.1
Kenosha County	32,078	26,930	84.0	4,053	12.6	1,095	3.4
Southeastern Wisconsin Region	454,705	372,852	82.0	66,389	14.6	15,464	3.4
Wisconsin	1,208,094	1,033,597	85.5	136,204	11.3	38,293	3.2
United States	58,882,153	48,371,006	82.1	8,409,168	14.3	2,101,979	3.6

Source: U. S. Bureau of the Census and SEWRPC.

Families may be classified by type as "husband-wife" families, or families in which both husband and wife are present; "male-headed" families, or families headed by a male with no wife present; and "female-headed" families, or families headed by a female with no husband present. As indicated in Table 15, of the 32,078 families in Kenosha County in 1980, 26,930, or 84.0 percent, were husband-wife families. Among the minor civil divisons in Kenosha County, the percentage of husband-wife families ranged from 81.2 percent in the City of Kenosha to 91.4 percent in the Town of Paris. As further indicated in Table 15, there was a total of 4,053 female-headed families in Kenosha County in 1980, representing 12.6 percent of all families in the County. The percentage of female-headed families ranged from 4.4 percent in the Town of Paris to 15.3 percent in the City of Kenosha. Finally, families headed by males with no wife present totaled 1,095 in Kenosha County in 1980, accounting for 3.4 percent of all families in the County. Such families accounted for less than 5.0 percent of all families within in each city, village, and town in Kenosha County in 1980.

ECONOMIC BASE OF THE COUNTY

The economic base of an area is another important consideration in the comprehensive planning process. This section describes the economic base of Kenosha County, including the size and characteristics of the civilian labor force, personal income levels, and the overall structure of the County's economy as indicated by the number and type of jobs.

Table 16

CIVILIAN LABOR FORCE SIZE IN KENOSHA COUNTY, THE REGION, WISCONSIN, AND THE UNITED STATES: CENSUS YEARS 1950-1980

Geographic Area	1950[a]	1960[a]	1970[b]	1980[b]	Percent Change 1950-1960	Percent Change 1960-1970	Percent Change 1970-1980
Kenosha County.....	32,535	39,726	47,171	59,625	22.1	18.7	26.4
Southeastern Wisconsin Region...	538,716	636,901	736,078	876,152	18.2	15.6	19.0
Wisconsin.....	1,396,383	1,527,722	1,774,008	2,263,413	9.4	16.1	27.6
United States.....	59,303,720	68,144,079	80,051,046	104,449,817	14.9	17.5	30.5

[a]The 1950 and 1960 censuses defined the labor force as those persons 14 years of age or older who were employed or temporarily unemployed.

[b]The 1970 and 1980 censuses defined the labor force as those persons 16 years of age or older who were employed or temporarily unemployed. The significance of this shift in definitions involving the two age groups is considered minimal.

Source: U. S. Bureau of the Census and SEWRPC.

Labor Force

The labor force is that segment of the resident population which can be most closely related to the economy. By definition, the labor force of an area consists of all of its residents who are 16 years of age or older,[2] and are either employed at one or more jobs or temporarily unemployed. Labor force data are often referred to as "place of residence" data, as distinguished from "place of work" data, which are discussed later in this section. Historical changes in the size of an area's labor force can reflect changes in the area's economy, population growth or decline--especially in the working-age groups, and population movement from one area to another.

As indicated in Table 16, the civilian labor force of Kenosha County increased from 32,535 persons in 1950 to 39,726 persons in 1960, to 47,171 persons in 1970, and to 59,625 persons in 1980. The rate of increase from 1970 to 1980, 26.4 percent, was higher than the growth rate from 1950 to 1960, 22.1 percent, and the growth rate from 1960 to 1970, 18.7 percent. During the 1950's and 1960's, the growth rate in the Kenosha County labor force was greater than that for the Region, the State, and the United States. During the 1970's, the growth rate in the county labor force was greater than that for the Region, similar to that for the State, and somewhat lower than that for the United States.

Table 17 presents the trends in the employed and unemployed components of the labor force. The number of employed persons in Kenosha County increased from 31,859 in 1950 to 55,280 in 1980, an increase of 73.5 percent in 30 years. This compares to an increase of 57.6 percent for the Region, 56.0 percent for the State, and 73.0 percent for the United States over the same period. In the 10-year period from 1970 to 1980, the number of employed persons in Kenosha County increased by 22.4 percent, compared to growth rates of 16.6 percent for the Region, 24.1 percent for the State, and 27.5 percent for the United States.

[2]Through 1960 the labor force was defined as including persons 14 years of age and older. Since 1970, labor force data have referred to persons 16 years of age and older. The effect of this change in definition on comparative analyses is believed to be minimal.

Table 17

CIVILIAN LABOR FORCE EMPLOYMENT AND UNEMPLOYMENT IN KENOSHA COUNTY, THE REGION, WISCONSIN, AND THE UNITED STATES: CENSUS YEARS 1950-1980

Geographic Area	1950			1960		
	Employed	Unemployed	Percent Unemployed	Employed	Unemployed	Percent Unemployed
Kenosha County.....	31,859	676	2.1	38,498	1,228	3.1
Southeastern Wisconsin Region...	524,553	14,163	2.6	612,723	24,174	3.8
Wisconsin.....	1,355,283	41,100	2.9	1,468,631	59,091	3.9
United States.....	56,449,409	2,854,311	4.8	64,639,252	3,504,827	5.1

Geographic Area	1970			1980		
	Employed	Unemployed	Percent Unemployed	Employed	Unemployed	Percent Unemployed
Kenosha County.....	45,145	2,026	4.3	55,280	4,345	7.3
Southeastern Wisconsin Region...	708,800	27,278	3.7	826,456	49,696	5.7
Wisconsin.....	1,703,629	70,379	4.0	2,114,473	148,940	6.6
United States.....	76,553,599	3,497,447	4.4	97,639,355	6,810,462	6.5

Geographic Area	Percent Change					
	1950-1960		1960-1970		1970-1980	
	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed
Kenosha County.....	20.8	81.7	17.3	65.0	22.4	114.5
Southeastern Wisconsin Region...	16.8	70.7	15.7	12.8	16.6	82.2
Wisconsin.....	8.4	43.8	16.0	19.1	24.1	111.6
United States.....	14.5	22.8	18.4	-0.2	27.5	94.7

Source: U. S. Bureau of the Census and SEWRPC.

The unemployed portion of the civilian labor force in Kenosha County increased from 676 persons in 1950 to 1,228 persons in 1960, to 2,026 persons in 1970, and to 4,345 persons in 1980. The corresponding unemployment rates for 1950, 1960, 1970, and 1980 were 2.1 percent, 3.1 percent, 4.3 percent, and 7.3 percent, respectively. In 1980, the unemployment rate for Kenosha County was somewhat higher than that for the Region (5.7 percent), the State (6.6 percent), and the United States (6.5 percent).

The distribution of the civilian labor force among the minor civil divisions in Kenosha County is presented in Table 18. Minor civil divisions east of IH 94--including the City of Kenosha and the Towns of Pleasant Prairie and Somers--accounted for 80.5 percent of the county civilian labor force in 1980. The 11 minor civil divisions west of IH 94 accounted for the balance, 19.5 percent of the labor force.

Sex Composition of the Labor Force: The sex composition of the resident labor force of Kenosha County is set forth in Table 19, which indicates that the number of females in the labor force has increased rapidly. The number of females in the labor force increased by 42.4 percent from 1950 to 1960, by 54.0 percent from 1960 to 1970, and by 41.9 percent from 1970 to 1980. In comparison, the number of males increased by 15.5 percent from 1950 to 1960, by 4.7 percent from 1960 to 1970, and by 17.3 percent from 1970 to 1980. Consequently, the proportion of the labor force represented by females increased from 24.5 percent in 1950 to 41.6 percent in 1980. The proportion represented by males decreased from 75.5 percent in 1950 to 58.4 percent in 1980. The relatively larger increases in the number of females in the labor force may be attributed in part to the trend toward smaller families, increasing number of wives working to supplement the family income, accelerated growth in retailing and service jobs, emphasis on equal employment opportunities for females, and the decision by an increasing number of females to more actively pursue full- or part-time employment in lieu of, or in addition to, marriage and family formation.

Table 18

CIVILIAN LABOR FORCE BY CIVIL DIVISION IN KENOSHA COUNTY: 1980

Civil Division	Total Civilian Labor Force	
	Number	Percent of County Total
City		
Kenosha	37,344	62.6
Villages		
Paddock Lake	997	1.7
Silver Lake	760	1.3
Twin Lakes	1,499	2.5
Towns		
Brighton	571	1.0
Bristol	1,802	3.0
Paris	791	1.3
Pleasant Prairie	6,468	10.8
Randall	1,062	1.8
Salem	2,805	4.7
Somers	4,212	7.1
Wheatland	1,314	2.2
Kenosha County	59,625	100.0

Source: U. S. Bureau of the Census and SEWRPC.

As indicated in Table 20, the sex composition of the county labor force is similar to the sex composition of the regional, state, and national labor force, with slightly more than 40 percent of the labor force of each consisting of females, and slightly less than 60 percent consisting of males. As further indicated in Table 20, among the minor civil divisions in Kenosha County, the proportion of females in the labor force varied modestly, ranging from 35.7 percent in the Town of Brighton to 42.8 percent in the City of Kenosha.

Place of Work: The salaries and wages earned by the resident labor force of an area may not, in all cases, be generated within the community of residence. Workers may travel outside the local labor market for employment, especially when a nearby area offers a wider range of job opportunities or higher wages. Table 21 provides place-of-work information for employed persons 16 years of age and older. As indicated in the table, Kenosha County had a greater percentage of workers whose place of employment was outside the county of residence--23.6 percent--than that reported for the Region (18.3), the State (15.2), and the United States (19.0). As further indicated in Table 21, the proportion of the labor force working outside Kenosha County was considerably higher for civil divisions located west of IH 94 than for those located east of IH 94. In this regard, 46.5 percent of the employed labor force living in communities west of IH 94 worked outside Kenosha County in 1980. In contrast, only 17.9 percent of the employed labor force living east of IH 94 worked outside Kenosha County.

Table 19

SEX COMPOSITION OF THE CIVILIAN LABOR FORCE IN KENOSHA COUNTY: CENSUS YEARS 1950-1980

Composition	Civilian Labor Force							
	1950		1960		1970		1980	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Male.....	24,576	75.5	28,392	71.5	29,713	63.0	34,844	58.4
Female.....	7,959	24.5	11,334	28.5	17,458	37.0	24,781	41.6
Total	32,535	100.0	39,726	100.0	47,171	100.0	59,625	100.0

Composition	Change in Civilian Labor Force					
	1950-1960		1960-1970		1970-1980	
	Number	Percent	Number	Percent	Number	Percent
Male.....	3,816	15.5	1,321	4.7	5,131	17.3
Female.....	3,375	42.4	6,124	54.0	7,323	41.9
Total	7,191	22.1	7,445	18.7	12,454	26.4

Source: U. S. Bureau of the Census and SEWRPC.

Table 20

SEX COMPOSITION OF THE CIVILIAN LABOR FORCE IN KENOSHA COUNTY BY CIVIL DIVISION, THE REGION, WISCONSIN, AND THE UNITED STATES: 1980

Civil Division	Civilian Labor Force				
	Male	Percent of Total Labor Force	Female	Percent of Total Labor Force	Total Civilian Labor Force
City					
Kenosha.....	21,347	57.2	15,997	42.8	37,344
Villages					
Paddock Lake.....	618	62.0	379	38.0	997
Silver Lake.....	457	60.1	303	39.9	760
Twin Lakes.....	866	57.8	633	42.2	1,499
Towns					
Brighton.....	367	64.3	204	35.7	571
Bristol.....	1,104	61.3	698	38.7	1,802
Paris.....	492	62.2	299	37.8	791
Pleasant Prairie...	3,924	60.7	2,544	39.3	6,468
Randall.....	651	61.3	411	38.7	1,062
Salem.....	1,746	62.2	1,059	37.8	2,805
Somers.....	2,482	58.9	1,730	41.1	4,212
Wheatland.....	790	60.1	524	39.9	1,314
Kenosha County.....	34,844	58.4	24,781	41.6	59,625
Southeastern Wisconsin Region ..	496,957	56.7	379,195	43.3	876,152
Wisconsin.....	1,299,739	57.4	963,674	42.6	2,263,413
United States.....	59,926,488	57.4	44,523,329	42.6	104,449,817

Source: U. S. Bureau of the Census and SEWRPC.

Table 21

PLACE OF WORK FOR THE EMPLOYED CIVILIAN LABOR FORCE IN KENOSHA COUNTY BY CIVIL DIVISION, THE REGION, WISCONSIN, AND THE UNITED STATES: 1980

Civil Division	Place of Work						Total Labor Force 16 Years and Older	
	Worked in County of Residence		Worked Outside County of Residence		Place of Work Not Reported			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
City								
Kenosha	24,766	75.5	5,205	15.9	2,827	8.6	32,798	100.0
Villages								
Paddock Lake	438	46.4	461	48.9	44	4.7	943	100.0
Silver Lake	386	56.5	264	38.7	33	4.8	683	100.0
Twin Lakes	407	30.4	711	53.1	221	16.5	1,339	100.0
Towns								
Brighton	193	37.2	310	59.7	16	3.1	519	100.0
Bristol	926	54.4	673	39.5	104	6.1	1,703	100.0
Paris	506	61.8	293	35.8	20	2.4	819	100.0
Pleasant Prairie	3,907	66.8	1,446	24.7	495	8.5	5,848	100.0
Randall	285	30.6	514	55.3	131	14.1	930	100.0
Salem	1,078	43.8	1,125	45.7	260	10.5	2,463	100.0
Somers	2,640	69.9	955	25.3	182	4.8	3,777	100.0
Wheatland	499	43.7	550	48.2	92	8.1	1,141	100.0
Kenosha County	36,031	68.0	12,507	23.6	4,425	8.4	52,963	100.0
Southeastern Wisconsin Region	596,573	74.2	147,304	18.3	60,577	7.5	804,454	100.0
Wisconsin	1,596,400	77.5	312,324	15.2	151,412	7.3	2,060,136	100.0
United States	69,998,780	72.4	18,383,759	19.0	8,289,664	8.6	96,672,203	100.0

Source: U. S. Bureau of the Census and SEWRPC.

Occupation of Labor Force: The occupational distribution of the labor force provides insight into the skill levels of the labor force. The occupational distribution of the labor force in Kenosha County, the Region, the State, and the United States is presented in Table 22. The occupational distribution of Kenosha County differs from that of Region, State, and the United States primarily in its higher percentage of jobs in the machine operators, assemblers, and inspectors category. About 17.2 percent of the County's employed labor force was in this category in 1980, compared to 13.3 percent for the Region, 12.0 percent for the State, and 9.3 percent for the United States. The county percentages of employment in the other occupational categories are generally similar to those for the areas of comparison.

Structure of the Economy

The distribution of employment opportunities, or jobs, by major industry category provides insight into the structure of an area's economy. The distribution of jobs by major industry group is presented for Kenosha County, the Region, the State, and the United States in Table 23. As indicated in the table, employment in Kenosha County is heavily concentrated in manufacturing. Manufacturing employment accounted for 36.9 percent of all jobs in Kenosha County in 1980, compared to 29.6 percent for the Region, 24.8 percent for the State, and 19.6 percent for the United States. The concentration of jobs in manufacturing is directly related to the location of the American Motors Corporation (AMC) in the City of Kenosha. The AMC plant, which includes facilities for engine manufacturing, stamping, body manufacturing, and assembling of cars, has a significant bearing on manufacturing employment levels in Kenosha County.

Table 24 indicates that the industry mix of jobs in Kenosha County changed somewhat during the 1970's. Most noteworthy in this regard is a decrease in the proportion of manufacturing jobs--from 41.1 percent in 1970 to 36.9 percent in 1980--and an increase in the proportion of service jobs--from 14.4 percent in 1970 to 16.7 percent in 1980. This trend parallels a national trend of decreasing relative importance of manufacturing jobs and increasing relative importance of service jobs. It should be noted, however, that manufacturing jobs continue to represent a relatively high proportion of all jobs in the County, particularly when compared to the figures for the State and the United States, as indicated above.

Personal Income

Another indicator of the general trend of the economy of Kenosha County is personal income. While income levels are generally identified by the census year in which they are collected--1950, 1960, 1970, and 1980--it should be noted that the income figures collected in the census are for the year preceding the census; that is, 1949, 1959, 1969, and 1979. It should also be noted that the following analysis of personal income is based upon converting all reported income figures to constant dollars to provide a more meaningful comparison of change in income over time.[3]

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[3]Income figures have been converted to constant 1979 dollars using the U. S. Bureau of Labor Statistics Consumer Price Index (CPI) for urban wage earners and clerical workers.

Table 22

OCCUPATION OF THE EMPLOYED CIVILIAN LABOR FORCE IN KENOSHA COUNTY, THE REGION, WISCONSIN, AND THE UNITED STATES: 1980

Occupation	Kenosha County		Southeastern Wisconsin Region		Wisconsin		United States	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Executive, Administrative, and Managerial	4,128	7.5	81,635	9.9	187,186	8.8	10,133,551	10.4
Professional Specialty	5,539	10.0	96,863	11.7	237,064	11.2	12,018,097	12.3
Technicians and Related Support	1,708	3.1	25,271	3.1	61,000	2.9	2,981,951	3.0
Sales	4,602	8.3	81,057	9.8	191,172	9.0	9,760,157	10.0
Administrative Support Including Clerical	8,102	14.7	143,121	17.3	327,179	15.5	16,851,398	17.3
Service Workers Except Private Household	7,692	13.9	107,537	13.0	289,409	13.7	12,040,073	12.3
Private Household Workers	129	0.2	2,486	0.3	8,204	0.4	589,352	0.6
Farming, Forestry, and Fishing	920	1.7	9,065	1.1	116,130	5.5	2,811,258	2.9
Precision Production, Craft, and Repair	7,769	14.0	100,953	12.2	255,333	12.1	12,594,175	12.9
Machine Operators, Assemblers, and Inspectors	9,483	17.2	109,787	13.3	253,362	12.0	9,084,988	9.3
Transportation and Material Moving	2,359	4.3	33,843	4.1	94,180	4.4	4,389,412	4.5
Handlers, Equipment Cleaners, Helpers, and Laborers	2,849	5.1	34,838	4.2	94,254	4.5	4,384,943	4.5
Total	55,280	100.0	826,456	100.0	2,114,473	100.0	97,639,355	100.0

Source: U. S. Bureau of the Census and SEWRPC.

Table 23

EMPLOYMENT BY MAJOR INDUSTRY IN KENOSHA COUNTY, THE REGION, WISCONSIN, AND THE UNITED STATES: 1980

Employment Category	Kenosha County		Southeastern Wisconsin Region		Wisconsin		United States	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Agriculture	1,410	2.8	12,818	1.5	156,648	7.0	4,107,300	3.9
Construction	2,578	5.2	25,816	2.9	70,062	3.1	4,332,000	4.2
Manufacturing	18,250	36.9	261,754	29.6	560,200	24.8	20,375,000	19.6
Transportation, Communication, and Utilities	1,530	3.1	39,610	4.5	92,625	4.1	5,156,000	5.0
Wholesale Trade	907	1.8	43,454	4.9	95,946	4.3	5,291,000	5.1
Retail Trade	7,769	15.7	131,866	14.9	341,240	15.1	15,086,000	14.5
Finance, Insurance, and Real Estate	1,002	2.0	46,403	5.3	96,578	4.3	5,268,000	5.1
Services	8,245	16.7	177,971	20.1	384,043	17.0	19,395,000	18.7
Government and Government Enterprises[a]	4,676	9.4	95,736	10.8	297,972	13.2	16,350,000	15.7
Nonfarm Proprietors	2,852	5.8	46,191	5.2	150,995	6.7	7,007,000	6.7
Miscellaneous[b]	282	0.6	2,526	0.3	9,984	0.4	1,594,000	1.5
Total Jobs	49,501	100.0	884,145	100.0	2,256,293	100.0	103,961,300	100.0

[a]Excludes military jobs.

[b]Includes agricultural services, forestry, commercial fishing, mining, and jobs held by U. S. residents working for international organizations in the United States.

Source: U. S. Department of Commerce, Bureau of Economic Analysis; and SEWRPC.

Table 24

EMPLOYMENT BY MAJOR INDUSTRY GROUP IN KENOSHA COUNTY: 1970 AND 1980

Employment Category	1970 Employment		1980 Employment	
	Number	Percent	Number	Percent
Agriculture	1,331	3.3	1,410	2.8
Construction	1,251	3.1	2,578	5.2
Manufacturing	16,440	41.1	18,250	36.9
Transportation, Communication, and Utilities	1,263	3.2	1,530	3.1
Wholesale Trade	609	1.5	907	1.8
Retail Trade	6,144	15.3	7,769	15.7
Finance, Insurance, and Real Estate	659	1.6	1,002	2.0
Services	5,762	14.4	8,245	16.7
Government and Government Enterprises[a]	4,291	10.7	4,676	9.4
Nonfarm Proprietors	2,269	5.7	2,852	5.8
Miscellaneous[b]	22	0.1	282	0.6
Total Jobs	40,041	100.0	49,501	100.0

[a] Excludes military jobs.

[b] Includes agricultural services, forestry, commercial fishing, mining, and jobs held by U. S. residents working for international organizations in the United States.

Source: U. S. Department of Commerce, Bureau of Economic Analysis; and SEWRPC.

Personal income levels--aggregate, per capita, and median family--for Kenosha County, the Region, the State, and the United States for census years 1950 through 1980 are set forth in Table 25. As shown in this table, aggregate personal income in Kenosha County, as measured in constant dollars, increased by 229 percent between 1950 and 1980. This compares to personal income growth rates of 182 percent for the Region, 209 percent for the State, and 225 percent for the United States during that time.

The 1980 census reported a per capita income of $7,756 for Kenosha County. As indicated in Table 25, the 1980 per capita income for the County was slightly lower than for the Region, $8,154, and slightly higher than for the State, $7,243, and the United States, $7,298. The relative increase in per capita income for Kenosha County between 1950 and 1980, 102 percent, was somewhat greater than for the Region, 98 percent, but somewhat lower than for the State, 126 percent, and the United States, 121 percent.

The 1980 median family income for Kenosha County of $23,161 was slightly lower than the median income for the Region, $23,515, and somewhat higher than the median income for the State, $20,915, and the United States, $19,917. Kenosha County experienced a relative increase in median family income between 1950 and 1980 of 107 percent, exceeding the increase for the Region of 99 percent, and very similar to the increases for the State, 109 percent, and the United States, 110 percent.

Among the civil divisions in Kenosha County, per capita income in 1980 ranged from a low of $6,531 in the Town of Wheatland to a high of $8,897 in the Town of Pleasant Prairie (see Table 26). The Town of Wheatland also had the lowest median family income in 1980, $20,873, and the Town of Pleasant Prairie had the highest median family income, $27,064 (see Table 27).

Table 25

PERSONAL INCOME LEVELS IN KENOSHA COUNTY, THE REGION, WISCONSIN, AND THE UNITED STATES: CENSUS YEARS 1950-1980

Geographic Area	1950	1960	1970	1980	Percent Change 1950-1960	Percent Change 1960-1970	Percent Change 1970-1980	Percent Change 1950-1980
Kenosha County								
Aggregate Personal Income[a]								
Reported Dollars	$ 94	$ 220	$ 362	$ 955	134.0	64.5	163.8	916.0
Constant 1979 Dollars	290	546	728	955	88.3	33.3	31.2	229.3
Per Capita Personal Income								
Reported Dollars	1,249	2,187	3,072	7,756	75.1	40.5	152.5	521.0
Constant 1979 Dollars	3,847	5,424	6,175	7,756	41.0	13.8	25.6	101.6
Median Family Income								
Reported Dollars	3,626	6,916	10,380	23,161	90.7	50.1	123.1	538.7
Constant 1979 Dollars	11,168	17,152	20,864	23,161	53.6	21.6	11.0	107.4
Region								
Aggregate Personal Income[a]								
Reported Dollars	$ 1,660	$ 3,492	$ 6,029	$ 14,391	110.4	72.7	138.7	766.9
Constant 1979 Dollars	5,113	8,660	12,118	14,391	69.4	39.9	18.8	181.5
Per Capita Personal Income								
Reported Dollars	1,338	2,219	3,433	8,154	65.8	54.7	137.5	509.4
Constant 1979 Dollars	4,121	5,503	6,900	8,154	33.5	25.4	18.2	97.9
Median Family Income								
Reported Dollars	3,846	6,908	11,182	23,515	79.6	61.9	110.3	511.4
Constant 1979 Dollars	11,846	17,132	22,476	23,515	44.6	31.2	4.6	98.5
Wisconsin								
Aggregate Personal Income[a]								
Reported Dollars	$ 3,581	$ 7,287	$ 13,457	$ 34,083	103.5	84.7	153.3	851.8
Constant 1979 Dollars	11,029	18,072	27,049	34,083	63.9	49.7	26.0	209.0
Per Capita Personal Income								
Reported Dollars	1,043	1,844	3,046	7,243	76.8	65.2	137.8	594.4
Constant 1979 Dollars	3,212	4,573	6,122	7,243	42.4	33.9	18.3	125.5
Median Family Income								
Reported Dollars	3,256	5,926	10,068	20,915	82.0	69.9	107.7	542.4
Constant 1979 Dollars	10,028	14,696	20,237	20,915	46.5	37.7	3.4	108.6
United States								
Aggregate Personal Income[a]								
Reported Dollars	$165,063	$331,700	$ 635,563	$1,653,331	101.0	91.6	160.1	901.6
Constant 1979 Dollars	508,394	822,616	1,277,482	1,653,331	61.8	55.3	29.4	225.2
Per Capita Personal Income								
Reported Dollars	1,070	1,849	3,128	7,298	72.8	69.2	133.3	582.1
Constant 1979 Dollars	3,296	4,586	6,287	7,298	39.1	37.1	16.1	121.4
Median Family Income								
Reported Dollars	3,073	5,660	9,590	19,917	84.2	69.4	107.7	548.1
Constant 1979 Dollars	9,465	14,037	19,276	19,917	48.3	37.3	3.3	110.4

[a] In millions of dollars.

Source: U. S. Bureau of the Census, U. S. Bureau of Labor Statistics, and SEWRPC.

Table 26

PER CAPITA INCOME LEVELS IN KENOSHA COUNTY BY CIVIL DIVISION: CENSUS YEAR 1980

Civil Division	Per Capita Income
City	
Kenosha	$7,543
Villages	
Paddock Lake	$7,136
Silver Lake	7,317
Twin Lakes	7,289
Towns	
Brighton	$8,152
Bristol	8,247
Paris	7,450
Pleasant Prairie	8,897
Randall	8,283
Salem	7,468
Somers	8,819
Wheatland	6,531
Kenosha County	$7,756

Source: U. S. Bureau of the Census and SEWRPC.

Table 27

MEDIAN FAMILY INCOME IN KENOSHA COUNTY BY CIVIL DIVISION: CENSUS YEAR 1980

Civil Division	Median Family Income
City	
Kenosha	$22,313
Villages	
Paddock Lake	$22,267
Silver Lake	22,377
Twin Lakes	22,175
Towns	
Brighton	$26,937
Bristol	23,965
Paris	25,202
Pleasant Prairie	27,064
Randall	25,565
Salem	22,086
Somers	26,322
Wheatland	20,873
Kenosha County	$23,161

Source: U. S. Bureau of the Census and SEWRPC.

SUMMARY

This chapter has presented information on the demographic and economic base of Kenosha County. The major findings of this chapter are summarized point by point below.

1. The resident population of Kenosha County stood at 123,137 persons in 1980, representing about 3 percent of the population of the State and 7 percent of the population of the Southeastern Wisconsin Region. The Kenosha County population ranked ninth among the 72 counties in the State in 1980.

2. Between 1950 and 1980, the population of Kenosha County increased by 47,899 persons, or 64 percent. Net in-migration of 11,339 persons combined with a natural increase of 14,038 persons resulted in a substantial increase of 25,377 persons in the county population during the 1950's. During the 1960's, the natural increase of 15,125 persons exceeded that for the previous decade, but net in-migration decreased to 2,177 persons, resulting in an overall population increase of 17,302 persons. During the 1970's, a natural increase of 7,757 persons combined with a net out-migration of 2,537 persons resulted in a very modest increase of 5,220 persons in the county population. The 1970-1980 decade was the first since the Depression years of the 1930's in which Kenosha County experienced a net out-migration of population.

3. Between 1970 and 1980, minor civil divisions west of IH 94 in Kenosha County generally experienced more rapid population growth than did those east of IH 94. East of IH 94, the populations of the Town of Pleasant Prairie and the Town of Somers increased by 5.7 percent and 6.2 percent, respectively, while the population of the City of Kenosha decreased slightly, by 1.4 percent. West of IH 94, six minor civil divisions--the Villages of Paddock Lake, Silver Lake, and Twin Lakes and the Towns of Bristol, Randall, and Wheatland--experienced population increases of more than 30 percent between 1970 and 1980. At the same time, the Town of Salem population increased by 13.3 percent, the Town of Brighton population remained virtually unchanged, and the Town of Paris population decreased by 7.6 percent.

4. The 1980 census provides the following profile of the resident population of Kenosha County. The median age of the resident population was 29.4 years. The female population outnumbered the male population in Kenosha County, there being an average of 96 males per 100 females in the County. The racial composition of the population was 95.7 percent white, 2.4 percent black, and 1.9 percent other nonwhite. About 90 percent of the nonwhite population of Kenosha County lived in the City of Kenosha in 1980. With respect to educational attainment, of the population 25 years of age or older, 10.7 percent had completed four or more years of college; 40.6 percent had completed high school but had not completed college; and 16.4 percent had completed elementary school but had not completed high school. With respect to marital status, of the population 15 years of age or older, 60.1 percent was married; 26.6 percent was single (never married); and 13.3 percent was widowed or divorced.

5. There were 43,064 households in Kenosha County in 1980. The number of households in the County increased by 20.0 percent between 1960 and 1970 and by 21.4 percent between 1970 and 1980. The relative increase in the number of households thus exceeded the increase in the county population of 17.2 percent during the 1960's and 4.4 percent during the 1970's. The increase in the number of households during the 1960's and 1970's was accompanied by a decrease in average household size. Between 1960 and 1970, the average household size in Kenosha County decreased from 3.36 to 3.26 persons per household, or by 3.0 percent. Between 1970 and 1980, the average household size decreased further, from 3.26 to 2.80 persons per household, or by 14.1 percent.

6. The labor force is that segment of the resident population which can be most closely related to the economy. By definition, the labor force of an area consists of all of its residents 16 years of age or older who are either employed at one or more jobs or temporarily unemployed. The civilian labor force of Kenosha County increased from 32,535 persons in 1950 to 39,726 persons in 1960, to 47,171 persons in 1970, and to 59,625 persons in 1980. During the 1950's and 1960's, the growth rate in the Kenosha County labor force was greater than that for the Region, State, and United States. During the 1970's, the growth rate in the county labor force was greater than that for the Region, similar to that for the State, and somewhat lower than that for the United States.

7. The unemployed portion of the civilian labor force in Kenosha County increased from 676 persons in 1950 to 1,228 persons in 1960 to 2,026 persons in 1970, and to 4,345 persons in 1980. The corresponding unemployment rates for 1950, 1960, 1970, and 1980 were 2.1 percent, 3.1 percent, 4.3 percent, and 7.3 percent. The 1980 unemployment rate for Kenosha County was somewhat higher than that for the Region, the State, and the United States.

8. Between 1950 and 1980, the number of females in the Kenosha County labor force increased by 211 percent, while the number of males increased by 42 percent. As a result, the proportion of the labor force represented by females increased from 24.5 percent in 1950 to 41.6 percent in 1980, while the proportion of the labor force represented by males decreased from 75.5 percent in 1950 to 58.4 percent in 1980.

9. About 23.6 percent of the employed civilian labor force worked outside Kenosha County. The proportion of the labor force working outside the County was considerably higher for minor civil divisions located west of IH 94 than for those located east of IH 94. In this regard, 46.5 percent of the employed labor force living in communities west of IH 94 worked outside Kenosha County, while 17.9 percent of the employed labor force living east of IH 94 worked outside the County.

10. The distribution of employment opportunities, or jobs, by major industry category provides insight into the structure of an area's economy. Employment in Kenosha County has historically been heavily concentrated in manufacturing. Manufacturing employment accounted for 36.9 percent of all jobs in Kenosha County in 1980, compared to 29.6 percent for the Region, 24.8 percent for the State, and 19.6 percent for the United States. The concentration of jobs in manufacturing is directly related to the location of the American Motors Corporation (AMC) in the City of Kenosha. The AMC plant, which includes facilities for engine manufacturing, stamping, body manufacturing, and assembling of cars, has a significant bearing on manufacturing employment levels in Kenosha County.

11. The 1980 census reported a per capita income of $7,756 for Kenosha County. The 1980 county per capita income was slightly lower than that for the Region, $8,154, and slightly higher than that for the State, $7,243, and the United States, $7,298. The median family income for Kenosha County in 1980 was $23,161, also slightly lower than the figure for the Region, $23,515, and somewhat higher than the figures for the State, $20,915, and the United States, $19,917.

Chapter III

THE NATURAL RESOURCE BASE

INTRODUCTION

The natural resources of an area are vital to its economic development and its ability to provide a pleasant and habitable environment for human life. Natural resources not only condition, but are conditioned by, economic development. Any meaningful county development planning effort must, therefore, recognize the existence of a limited natural resource base to which urban and rural development must be properly adjusted if serious environmental problems are to be avoided. This is particularly true in Kenosha County, where an increasing number of urbanites are becoming year-round residents of outlying areas of the County, seeking not only the varied recreational opportunities that are offered by these areas, but also the feeling of open space which these areas lend to residential development.

The principal elements of the natural resource base of the County are the climate, air, physiography, geology, soils, groundwater resources, surface water resources, woodlands, wetlands, and wildlife habitat areas. Existing outdoor recreation and related open space sites and existing agricultural resources other than soils, while not strictly a part of the natural resource base, are closely linked to the underlying resource base, and are therefore considered in this chapter along with that base.

Without a proper understanding and recognition of these elements and of the interrelationships which exist between them, human use and alteration of the natural environment proceeds at the risk of excessive costs in terms of both monetary expenditures and environmental degradation. The natural resource base is highly subject to grave misuse through improper land use and transportation facility development. Such misuse may lead to severe environmental problems which are difficult and costly to correct, and to the deterioration and destruction of the natural resource base itself.

CLIMATE

Kenosha County has a continental climate which spans four seasons, one season succeeding the other through varying time periods of unsteady transition. Summer generally spans the months of June, July, and August. The summers are relatively warm with occasional periods of hot, humid weather and sporadic periods of cool weather. Winter generally spans the months of December, January, and February, but it may, in some years, be lengthened to include parts of the months of November and March. Autumn and spring in the County are transitional times of the year between the dominant seasons and are usually periods of unsettled weather conditions. Temperatures are extremely varied, and long periods of precipitation are common in autumn and spring.

Air temperatures within the County are subject to great seasonal change and yearly variation, as well as diurnal variations. Data on temperature observations in the County, as recorded at the Kenosha weather station located at the City of Kenosha sewage treatment plant on the Lake Michigan shoreline, and at the Union Grove weather station located at the Village of Union Grove sewage treatment plant in Racine County, are presented in Table 28. Data for the Kenosha weather station are considered representative of meteorological and climatic conditions in eastern Kenosha County, while data for the Union Grove weather station are considered representative of such conditions in the central and western portions of the County. These data, which encompass periods of record ranging from 1948 through 1976 and 1964 through 1976, respectively, indicate the temporal and spatial variations in temperature which may be anticipated within the County. As indicated in Table 28, monthly mean temperatures range from 21.6°F in January to 70.5°F in July at the Kenosha weather station; and from 21.2°F in January to 71.7°F in July at the Union Grove weather station.

Daily precipitation data for observations recorded at those two weather stations are shown in Table 29. These data encompass periods of record ranging from 1945 through 1978 for the Kenosha weather station, and from 1945 through 1977 for the Union Grove weather station. The total average annual precipitation based on these observation stations is over 31 inches expressed as water equivalent. Monthly averages at the Kenosha weather station range from a February low of 1.02 inches to a June high of 3.90 inches. Monthly averages for the Union Grove weather station range from a February low of 1.17 inches to a June high of 4.10 inches. Snowfall averages 42.80 inches annually at the Kenosha weather station, and 41.07 inches annually at the Union Grove weather station.

Prevailing winds in southeastern Wisconsin are northwesterly in the late fall and winter; northeasterly in the spring; and southwesterly in the summer and early fall. Wind velocities are less than 5 miles per hour about 15 percent of the year, between 5 and 15 miles per hour about 60 percent of the year, and greater than 15 miles per hour about 25 percent of the year.

AMBIENT AIR QUALITY

Air quality is not only an important determinant of the overall quality of life in an area, but has important direct and indirect effects on the economic development of an area. Air generally contains substances in the form of smoke, soot, dust, fly ash, fumes, mists, odors, and pollens. Although some of this particulate matter in air is contributed by natural sources, much is contributed by man-made sources such as land cultivation; heat and power generation; industrial processes; transportation movements; and waste burning, including the incineration of waste solids produced by wastewater treatment facilities. Urbanization tends to intensify the contribution of air pollutants from human activities because it concentrates the distribution of pollutant sources. When the level of pollutants in the air becomes so severe as to seriously and adversely affect health and property, an air pollution problem exists.

Table 28

AIR TEMPERATURE CHARACTERISTICS AT SELECTED LOCATIONS IN OR NEAR KENOSHA COUNTY IN DEGREES FAHRENHEIT

Month	Kenosha (1948-1976)			Union Grove (1964-1976)		
	Average Daily Maximum[a]	Average Daily Minimum[a]	Mean[b]	Average Daily Maximum[a]	Average Daily Minimum[a]	Mean[b]
January.....	29.8	13.4	21.6	29.9	12.5	21.2
February....	33.4	17.6	25.5	33.5	15.8	24.7
March.....	41.0	25.7	33.4	42.9	24.9	33.9
April.....	53.7	35.9	44.8	56.8	35.3	46.0
May.....	64.3	44.7	54.5	67.5	43.8	55.7
June.....	75.0	54.7	64.8	78.2	54.6	66.4
July.....	79.9	61.0	70.5	83.0	60.4	71.7
August.....	79.3	60.9	70.1	82.0	59.5	70.7
September...	72.1	53.1	62.6	74.6	51.7	63.1
October.....	62.0	43.1	52.6	64.0	42.1	53.0
November....	46.8	30.5	38.6	47.0	29.3	38.1
December....	34.4	18.9	26.7	34.2	17.9	26.1
Year	56.0	38.3	47.1	57.8	37.3	47.6

[a]The monthly average daily maximum and minimum temperatures are obtained by using daily measurements to compile an average for each month in the indicated period of record; the results are then averaged for all months in the period of record.

[b]The mean monthly temperature is the average of the average daily maximum temperature and daily minimum temperature for each month.

Source: National Weather Service and SEWRPC.

Table 29

PRECIPITATION CHARACTERISTICS AT SELECTED LOCATIONS IN OR NEAR KENOSHA COUNTY IN INCHES

Month	Kenosha		Union Grove	
	Average Total Precipitation (1945-1978)	Average Snow and Sleet (1960-1977)	Average Total Precipitation (1945-1977)	Average Snow and Sleet[a]
January.....	1.53	11.10	1.39	8.44
February....	1.02	10.00	1.17	8.17
March.....	2.22	8.20	2.39	9.55
April.....	3.38	1.80	3.22	1.59
May.....	3.19	--	3.19	--
June.....	3.90	--	4.10	--
July.....	3.58	--	3.56	--
August.....	3.12	--	3.22	--
September...	3.24	--	3.07	--
October.....	2.26	0.10	2.27	0.01
November....	2.09	2.00	2.00	2.64
December....	1.78	9.60	1.80	10.67
Year	31.31	42.80	31.38	41.07

[a] Snow and sleet data are not available at Union Grove. Therefore, approximations were made by taking proportional values of the average total precipitation, using the same proportion of snow and sleet to total precipitation, computed from data recorded at the Waukesha station, which is located approximately the same distance from Lake Michigan.

Source: National Weather Service and SEWRPC.

The adopted regional air quality management plan for southeastern Wisconsin[1] recommends actions that should be taken by federal, state, and local units of government, businesses and industries, and individuals to attain and maintain the air quality standards established by the federal and state governments for ambient air quality. The federal government has established ambient air quality standards which are intended to protect human health and the public welfare by preventing damage to vegetation and real and personal property, and improving visibility. These standards have been set for the following pollutants: particulate matter, sulfer oxides as measured by sulfer dioxide, carbon monoxide, nitrogen dioxide, ozone, and lead. Based upon these standards, nonattainment areas--that is, areas having ambient air quality conditions which do not meet the prescribed standards--have been identified. In 1980, upon adoption of the regional air quality management plan, all of Kenosha County was designated as an ozone nonattainment area. In addition, a small portion of Kenosha County--specifically, that portion of the City of Kenosha bounded by 67th Street, 39th Avenue, 52nd Street, and Lake Michigan--was designated as a secondary nonattainment area for particulate matter.[2] There was no change in the air quality nonattainment designations for Kenosha County as of 1985.

PHYSIOGRAPHIC AND TOPOGRAPHIC FEATURES

As already noted, Kenosha County encompasses an area of approximately 278.4 square miles, or about 178,174 acres. The County extends for approximately 12 miles north to south and, at its maximum width, 25 miles east to west. Kenosha County is bounded on the north by Racine County, on the west by Walworth County, on the south by Lake and McHenry Counties, Illinois, and on the east by Lake Michigan. The irregularly shaped eastern boundary of the County is the result of erosion by wind and rainfall, groundwater discharges, and Lake Michigan wave action.

The County's physiographic features, or surficial land forms, have been determined largely by the underlying bedrock and overlying glacial deposits. The major surficial land forms of the County are shown on Map 3. There is evidence of four major stages of glaciation in southeastern Wisconsin. The last and most influential in terms of present physiography and topography was the Wisconsin stage, which is believed to have ended about 10,000 years ago. The Lake Michigan lobe, or tongue, of the last continental glacier completely covered Kenosha County.

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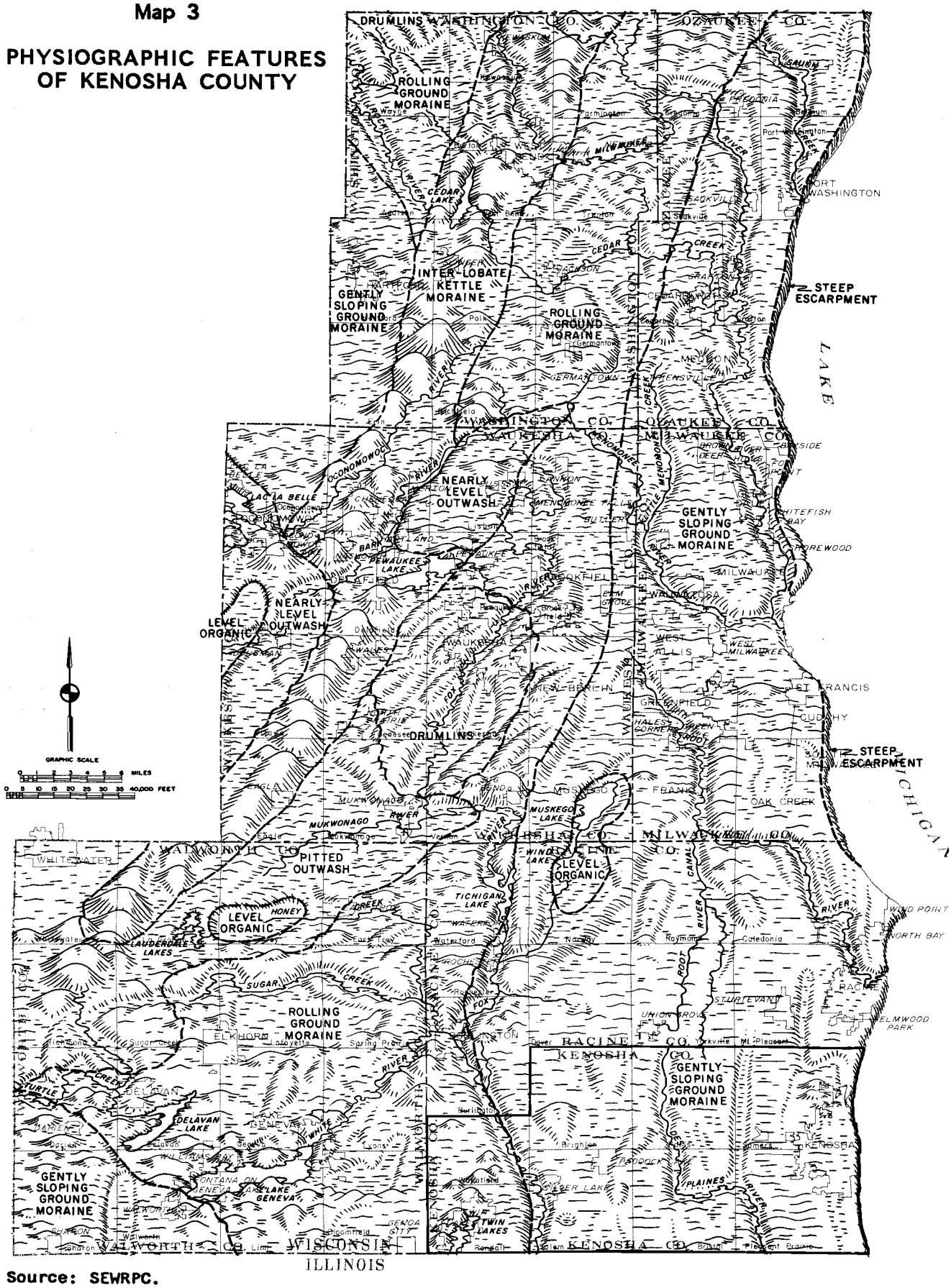
[1]SEWRPC Planning Report No. 28, A Regional Air Quality Attainment and Maintenance Plan for Southeastern Wisconsin: 2000, June 1980.

[2]Nonattainment areas for particulate matter may be categorized as either primary areas--that is, areas wherein health-related standards are not being met--or secondary areas--that is, areas wherein welfare-related standards are not being met. Primary and secondary ozone ambient air quality standards have been established at the same level and, therefore, all nonattainment areas for this pollutant species may be considered to be primary.

Map 3

PHYSIOGRAPHIC FEATURES OF KENOSHA COUNTY



Source: SEWRPC.

The Niagara cuesta on which the County lies is a gently eastward sloping bedrock surface, with the bedrock surface along the eastern border of the County being generally lower in elevation--by about 200 to 250 feet--than along the western border. Glacial deposits overlying the bedrock formations form the irregular surface topography of the County, characterized by rounded hills or groups of hills and ridges, particularly in the western one-third of the County; broad, undulating plains; and poorly drained wetlands.

As shown on Map 4, surface elevations within the County range from a high of approximately 990 feet above National Geodetic Vertical Datum (NGVD) (mean sea level datum) in the Town of Randall to approximately 580 feet above NGVD at the shoreline of Lake Michigan. Most of the County is covered by gently sloping ground moraine--heterogeneous material deposited beneath the ice, end moraines consisting of material deposited at the forward margins of the ice sheet, and outwash plains formed by the action of flowing glacial meltwater.

GEOLOGY

The bedrock formations underlying the unconsolidated surficial deposits of Kenosha County consist of Precambrian crystalline rocks; Cambrian sandstone; Ordovician dolomite, sandstone, and shale; and Silurian dolomite. The uppermost bedrock unit throughout most of the County is Silurian dolomite, primarily Niagara dolomite underlain by a relatively impervious layer of Maquoketa shale (see Map 5). In some of the pre-Pleistocene Age valleys in the southwestern and central portions of the County, however, the Niagara dolomite is absent and the uppermost bedrock unit is the Maquoketa shale.

Bedrock topography was shaped by preglacial and glacial erosion of the exposed bedrock. The consolidated bedrock underlying Kenosha County generally dips eastward at a rate of about 10 feet per mile. The bedrock surface ranges in elevation from 750 feet NGVD in the western portion of the County to less than 450 feet NGVD in the eastern portion of the County, as shown on Map 5.

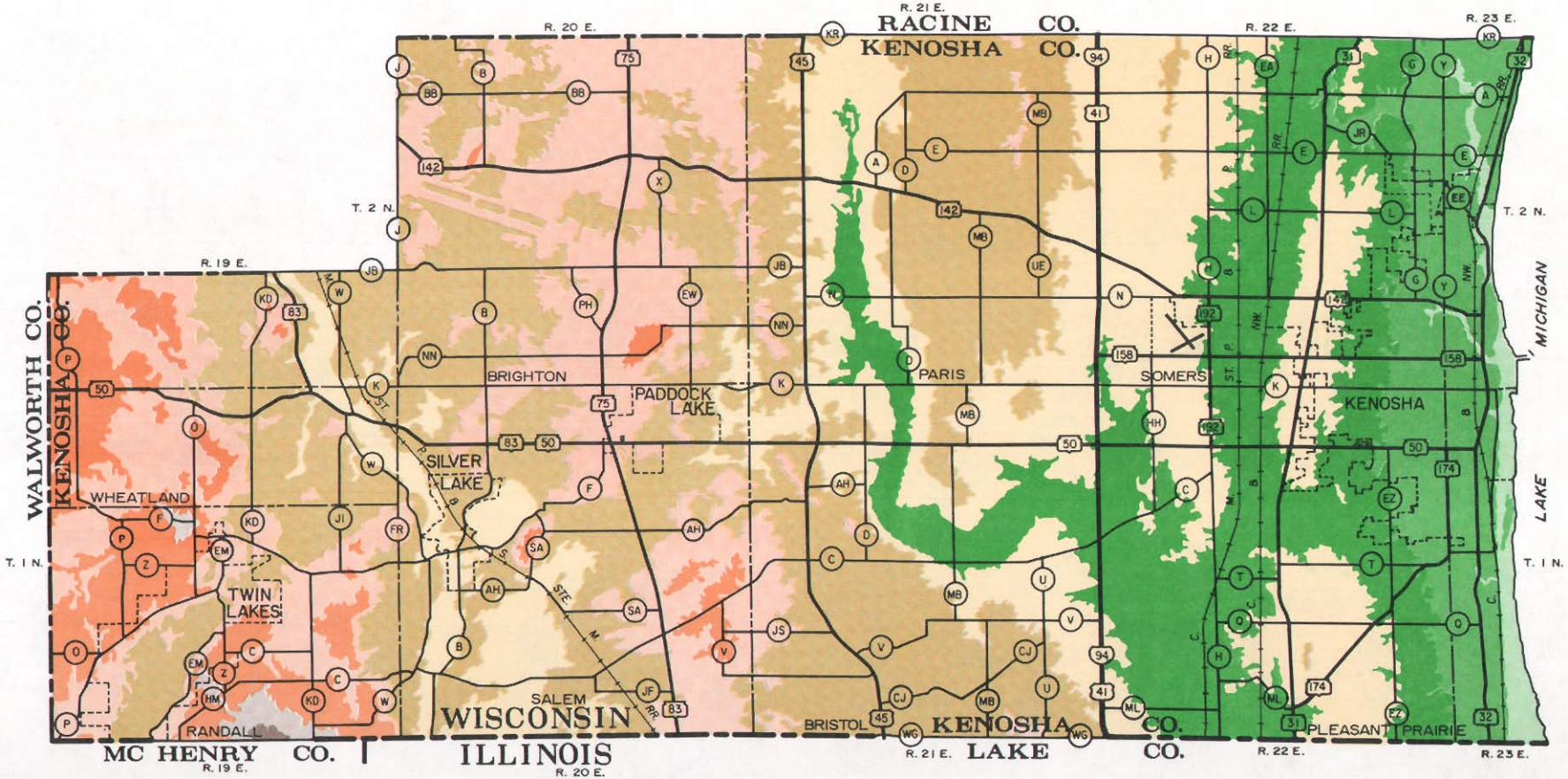
The glacial deposits above the bedrock include end moraine, ground moraine, outwash, and lake-basin deposits. End moraines are formed by deposition at the margin of a glacier at a time when melting equals the rate of advance. End moraines consist of unsorted debris ranging from clay to boulders. End moraine topography typically consists of a ridge with a rolling to hummocky surface, often with internal drainage.

Ground moraines are formed beneath glacial ice during its advance or retreat. Such moraines are deposited as a blanket of unsorted rock debris of irregular thickness, ranging from clay to boulders, and may be buried by later glacial deposits. Ground moraines usually have moderate relief and form a gently undulating plain with no definite alignment to the undulation. In some areas, however, elongated hills of ground moraine are aligned along the direction of ice movement.

Outwash plains are stratified deposits, consisting of gravel, sand, silt, and clay, laid down by water from melting ice fronts. Buried outwash deposits from earlier glaciation are apparent from drill-hole logs, but are difficult to map accurately. Lake-basin deposits are composed of materials derived from

Map 4

TOPOGRAPHY OF KENOSHA COUNTY



LEGEND

ELEVATION IN FEET ABOVE NATIONAL GEODETIC VERTICAL DATUM

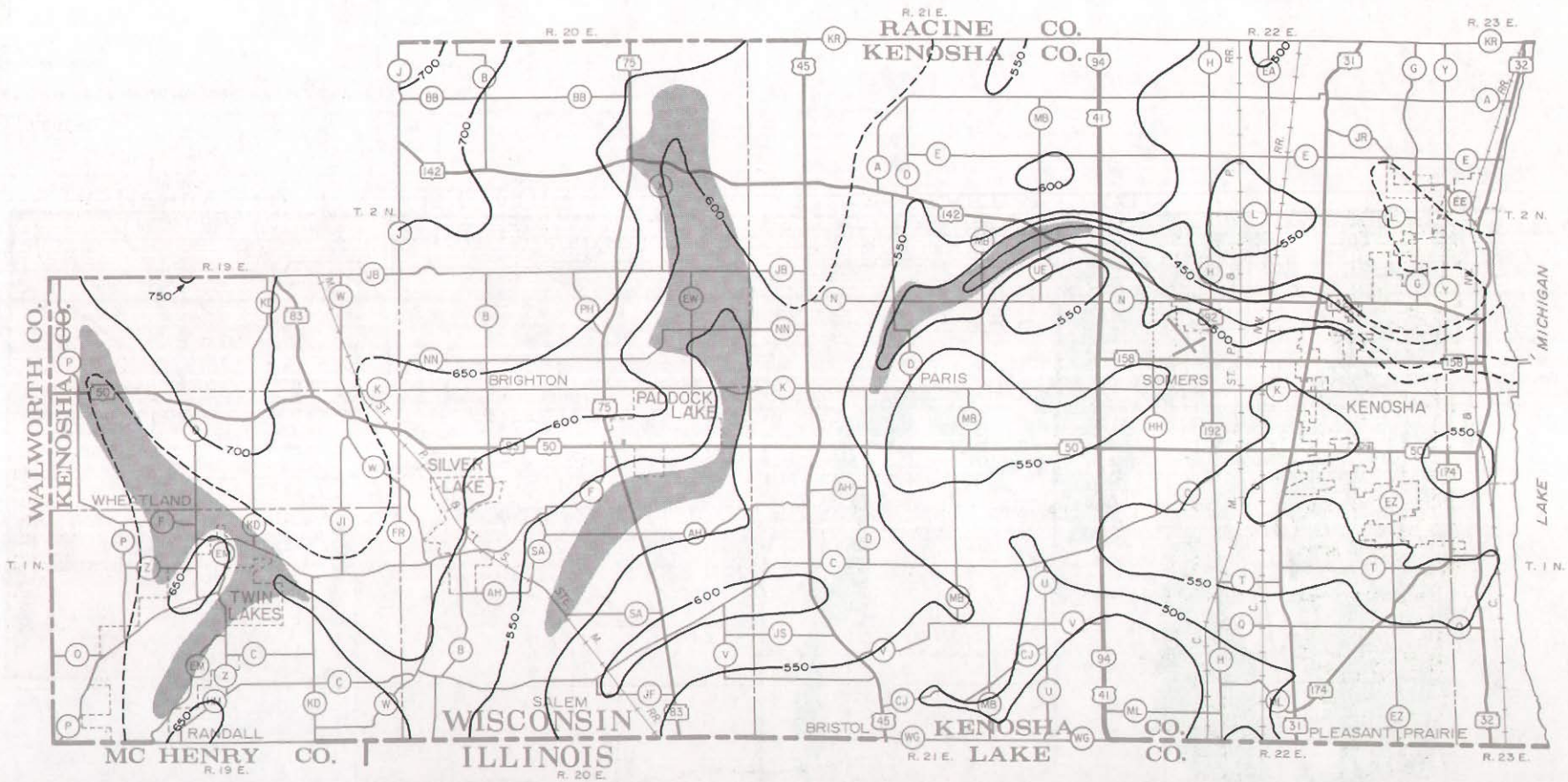
580 – 600	800 – 850
600 – 650	850 – 900
650 – 700	900 – 950
700 – 750	950 – 990
750 – 800	

GRAPHIC SCALE
0 1 2 MILES
0 4000 8000 12000 FEET

Source: U. S. Geological Survey.

Map 5

BEDROCK GEOLOGY OF KENOSHA COUNTY



LEGEND

- SILURIAN DOLOMITE UNDIFFERENTIATED
- MAQUOKETA SHALE
- BEDROCK CONTOUR (NATIONAL GEODETIC VERTICAL DATUM) DASHED WHERE LOCATION IS APPROXIMATE

GRAPHIC SCALE
0 1 2 MILES
0 4000 8000 12000 FEET

Source: U. S. Geological Survey, University of Wisconsin-Extension, and SEWRPC.

glaciers and laid down in fresh-water lakes. Alluvium is a deposit of unconsolidated materials laid down by running water. Marsh deposits are formed by decaying vegetation.

The combined thickness of unconsolidated glacial deposits, alluvium, and marsh deposits exceeds 100 feet throughout most of the County. Thicknesses are greatest where glacial materials fill the bedrock valleys and in areas of topographic highs formed by end moraines. Map 6 indicates the spatial variation of the thickness of the unconsolidated deposits overlying the bedrock in Kenosha County.

SOILS

The nature of soils within Kenosha County has been determined primarily by the interaction of the parent glacial deposits covering the County and by topography, climate, plants, animals, and time. To assess the significance of the diverse soils found in southeastern Wisconsin, the Southeastern Wisconsin Regional Planning Commission in 1963 negotiated a cooperative agreement with the U. S. Soil Conservation Service under which detailed operational soil surveys were completed for the entire Region. The results of the soil surveys have been published in SEWRPC Planning Report No. 8, Soils of Southeastern Wisconsin. The regional soil surveys have resulted in the mapping of the soils within the Region in great detail. At the same time, the surveys have provided definitive data on the physical, chemical, and biological properties of the soils and, more importantly, have provided interpretations of the soil properties for planning, engineering, agricultural, and resource conservation purposes.

Major Soil Association Groups

The soils in the County range from organic, poorly drained soils to loamy, well-drained soils. There are nine major soils association groups in the County as identified by the U. S. Department of Agriculture, Soil Conservation Service. A soil association is a group of defined and named taxonomic soil units occurring together in an individual and characteristic pattern over a geographic region. A description of these soil associations along with their distribution within the County is presented on Map 7.

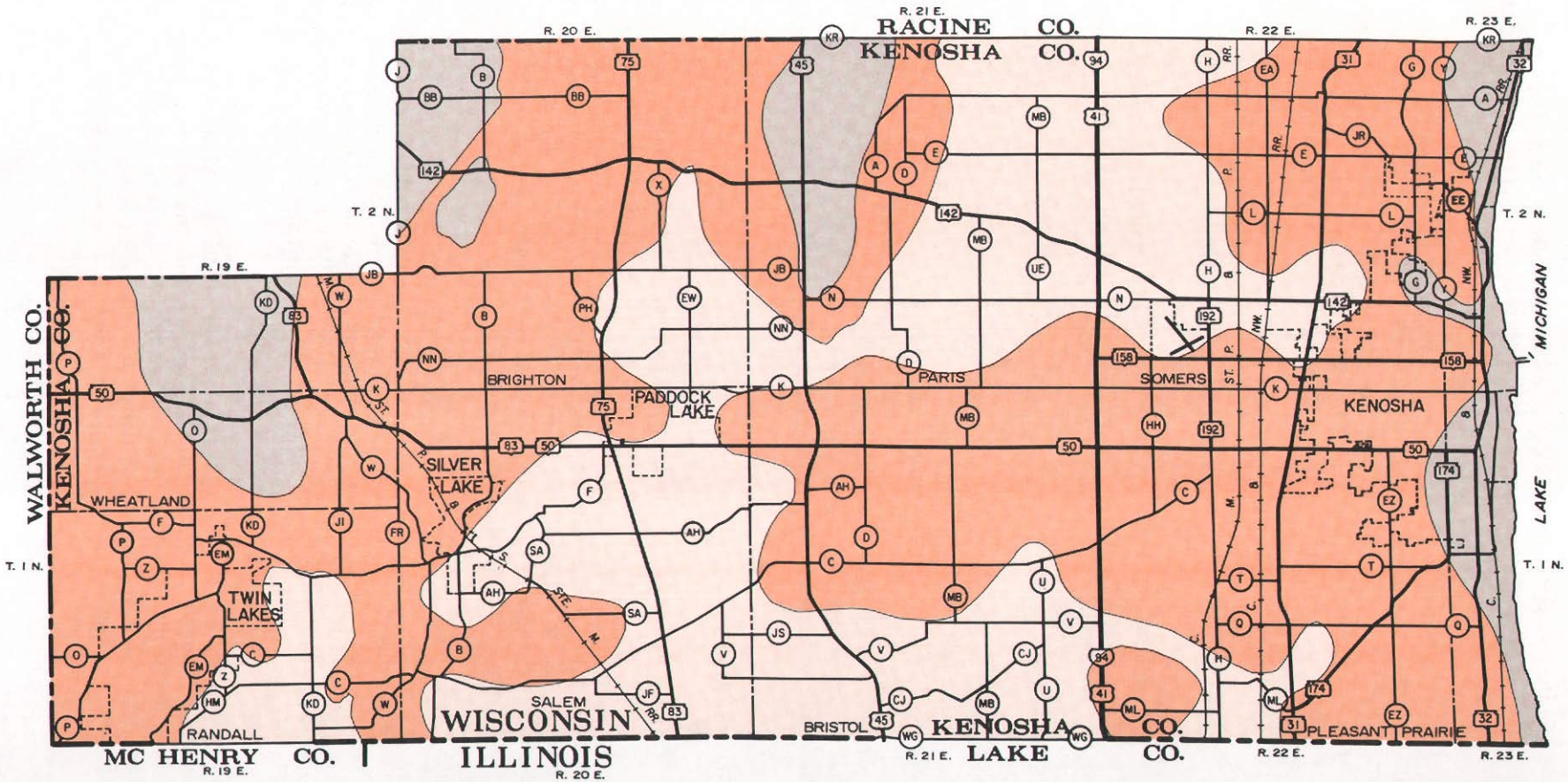
Detailed Soil Suitability Interpretations

Soil suitability interpretations for specific types of urban and rural land uses are important to physical development planning. Such use-specific interpretations are set forth for Kenosha County in SEWRPC Planning Report No. 8, and in the soil survey report for Kenosha and Racine Counties prepared by the U. S. Soil Conservation Service.

Residential Soil Suitability: Maps 8, 9, and 10, respectively, show the suitability of soils in Kenosha County for residential development served by public sanitary sewers; by conventional onsite soil absorption sewage disposal systems on lots one acre or larger in size; and by conventional onsite soil absorption sewage disposal systems on lots smaller than one acre in size.

Map 6

THICKNESS OF GLACIAL DEPOSITS IN KENOSHA COUNTY



LEGEND

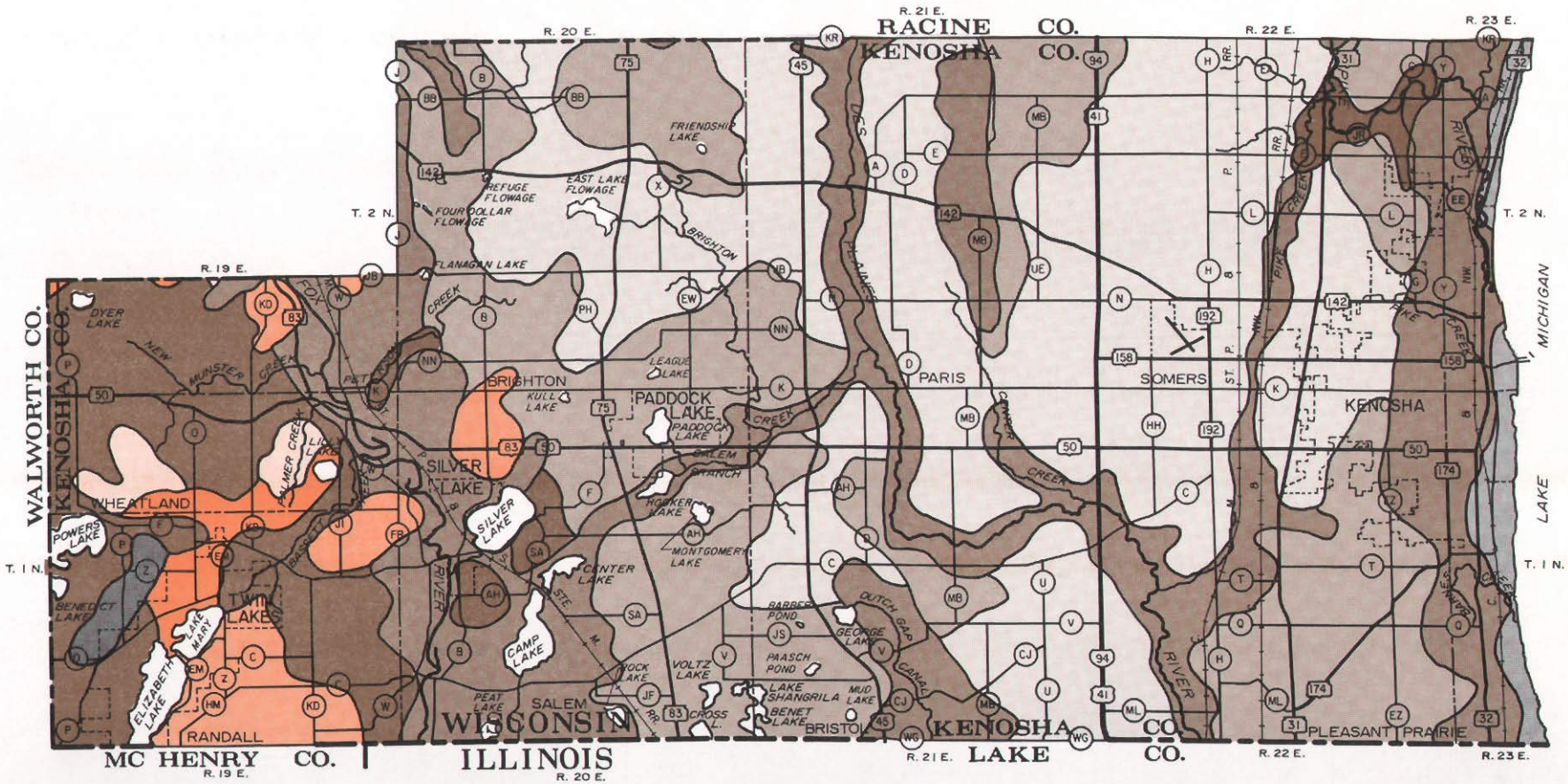
- 20 – 100 FEET
- 100 – 200 FEET
- 200 – 300 FEET

GRAPHIC SCALE
0 1 2 MILES
0 4000 8000 12000 FEET

Source: T. O. Friz, Man and the Materials of Construction, How They Interrelate in the Seven Counties of Southeastern Wisconsin, Ph.D. Dissertation, University of Wisconsin-Madison, 1969.

Map 7

GENERAL SOIL ASSOCIATIONS IN KENOSHA COUNTY



LEGEND

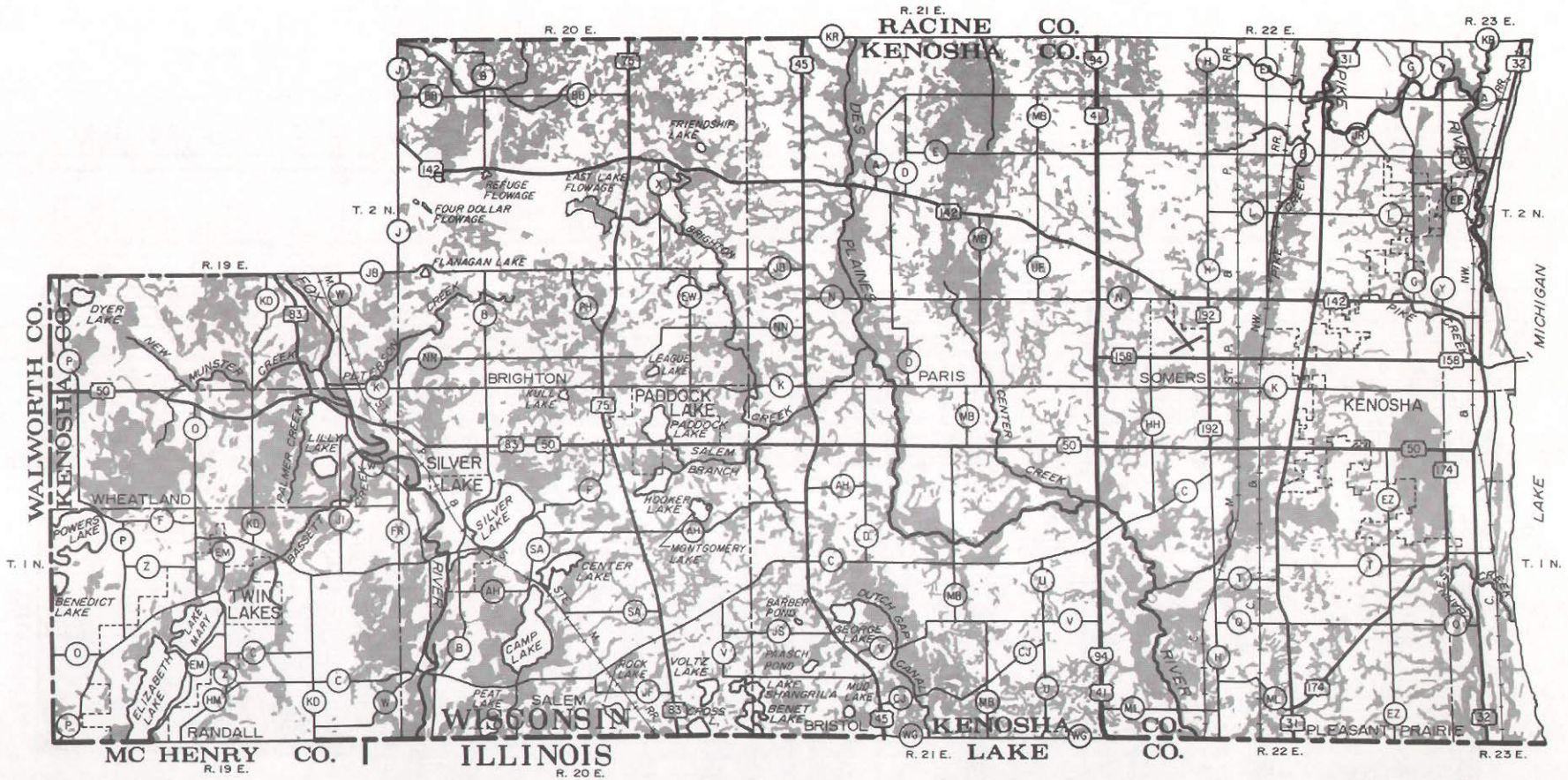
- VARNA-ELLIOTT-ASHKUM ASSOCIATION: WELL-DRAINED TO POORLY DRAINED SOILS THAT HAVE A SILTY CLAY LOAM TO CLAY SUBSOIL; FORMED IN THIN LOESS AND THE UNDERLYING CLAY LOAM OR SILTY CLAY LOAM GLACIAL TILL ON RIDGES AND KNOBS
- MORLEY-BEECHER-ASHKUM ASSOCIATION: WELL-DRAINED TO POORLY DRAINED SOILS THAT HAVE A SILTY CLAY OR SILTY CLAY LOAM SUBSOIL; FORMED IN THIN LOESS AND THE UNDERLYING CLAY LOAM OR SILTY CLAY LOAM GLACIAL TILL ON RIDGES AND KNOBS
- HEBRON-MONTGOMERY-AZTALAN ASSOCIATION: WELL-DRAINED TO POORLY DRAINED SOILS THAT HAVE A LOAM TO SILTY CLAY SUBSOIL; UNDERLAIN BY CLAYEY TO LOAMY LACUSTRINE AND OUTWASH MATERIAL ON HILLS, KNOBS, AND LAKE PLAINS
- FOX-CASCO ASSOCIATION: WELL-DRAINED SOILS THAT HAVE A CLAY LOAM AND SILTY CLAY LOAM SUBSOIL; MODERATELY DEEP TO SHALLOW OVER SAND AND GRAVEL, ON STREAM TERRACES
- HOUGHTON-PALMS ASSOCIATION: VERY POORLY DRAINED ORGANIC SOILS; IN BASINS AND DEPRESSIONS
- MIAMI ASSOCIATION: WELL-DRAINED SOILS THAT HAVE A SILTY CLAY LOAM AND CLAY LOAM SUBSOIL; FORMED IN THIN LOESS AND THE UNDERLYING LOAMY GLACIAL TILL ON RIDGES AND KNOBS
- CASCO-RODMAN ASSOCIATION: WELL-DRAINED AND EXCESSIVELY DRAINED SOILS THAT HAVE A CLAY LOAM OR GRAVELLY LOAM SUBSOIL; SHALLOW OVER SAND AND GRAVEL, ON STREAM TERRACES AND MORAINIC RIDGES
- BOYER-GRANBY ASSOCIATION: WELL-DRAINED TO VERY POORLY DRAINED SOILS THAT HAVE A LOAM TO SAND SUBSOIL; UNDERLAIN BY SANDY GLACIAL OUTWASH ON RIDGES AND KNOBS AND IN DRAINAGEWAYS AND DEPRESSIONS
- WARSAW-PLANO ASSOCIATION: WELL-DRAINED SOILS THAT HAVE A LOAM TO SILTY CLAY LOAM SUBSOIL; MODERATELY DEEP TO DEEP OVER SAND AND GRAVEL, ON STREAM TERRACES

GRAPHIC SCALE
0 1 2 MILES
0 4000 8000 12000 FEET

Source: U. S. Department of Agriculture, Soil Conservation Service.

Map 8

SUITABILITY OF SOILS IN KENOSHA COUNTY FOR RESIDENTIAL DEVELOPMENT WITH PUBLIC SANITARY SEWER SERVICE



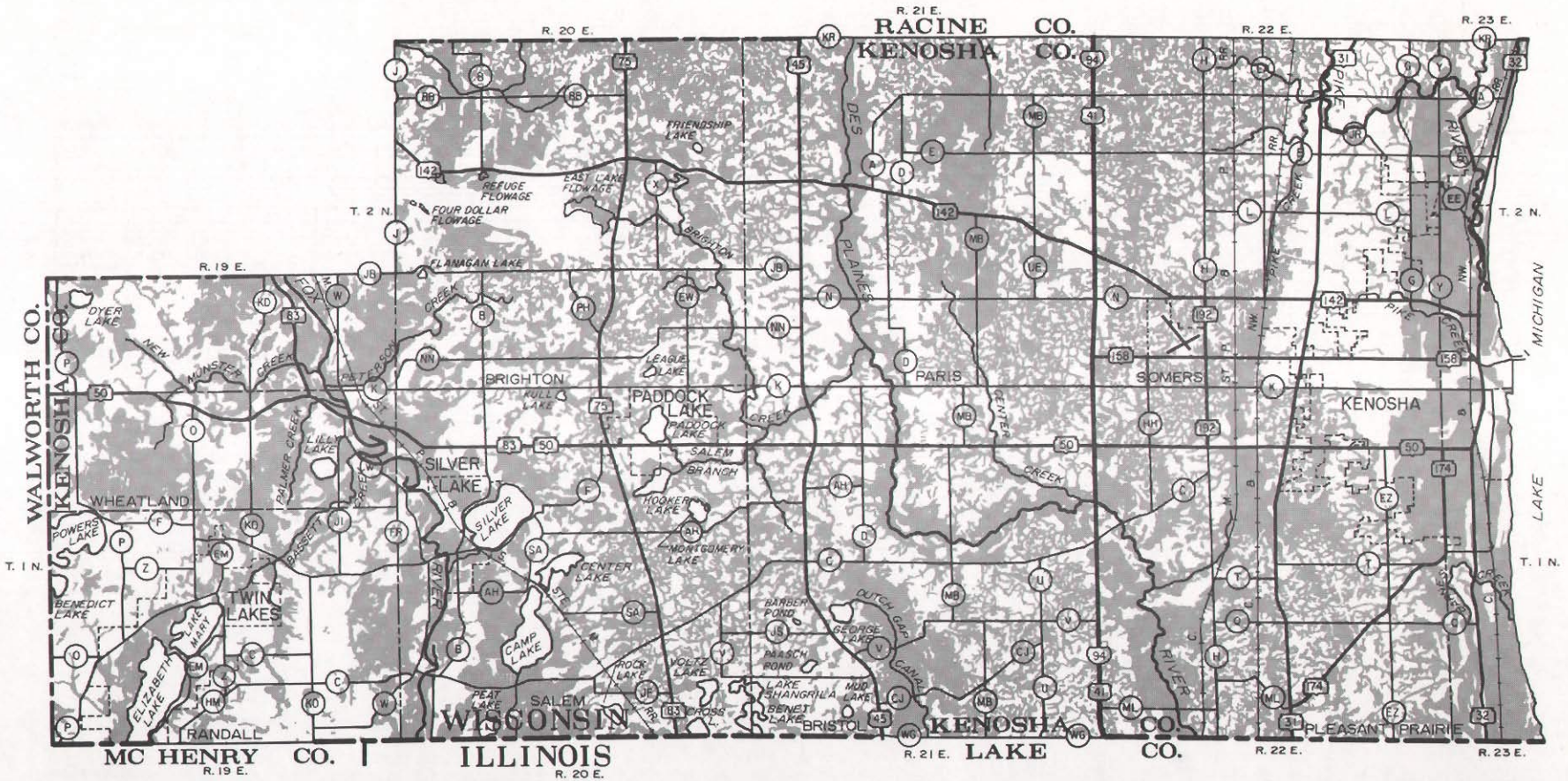
LEGEND

AREAS COVERED BY SOILS HAVING SEVERE OR VERY SEVERE LIMITATIONS FOR RESIDENTIAL DEVELOPMENT WITH PUBLIC SANITARY SEWER SERVICE

Source: U. S. Department of Agriculture, Soil Conservation Service; and SEWRPC.

Map 9

SUITABILITY OF SOILS IN KENOSHA COUNTY FOR RESIDENTIAL DEVELOPMENT WITHOUT PUBLIC SANITARY SEWER SERVICE ON LOTS ONE ACRE OR MORE IN SIZE



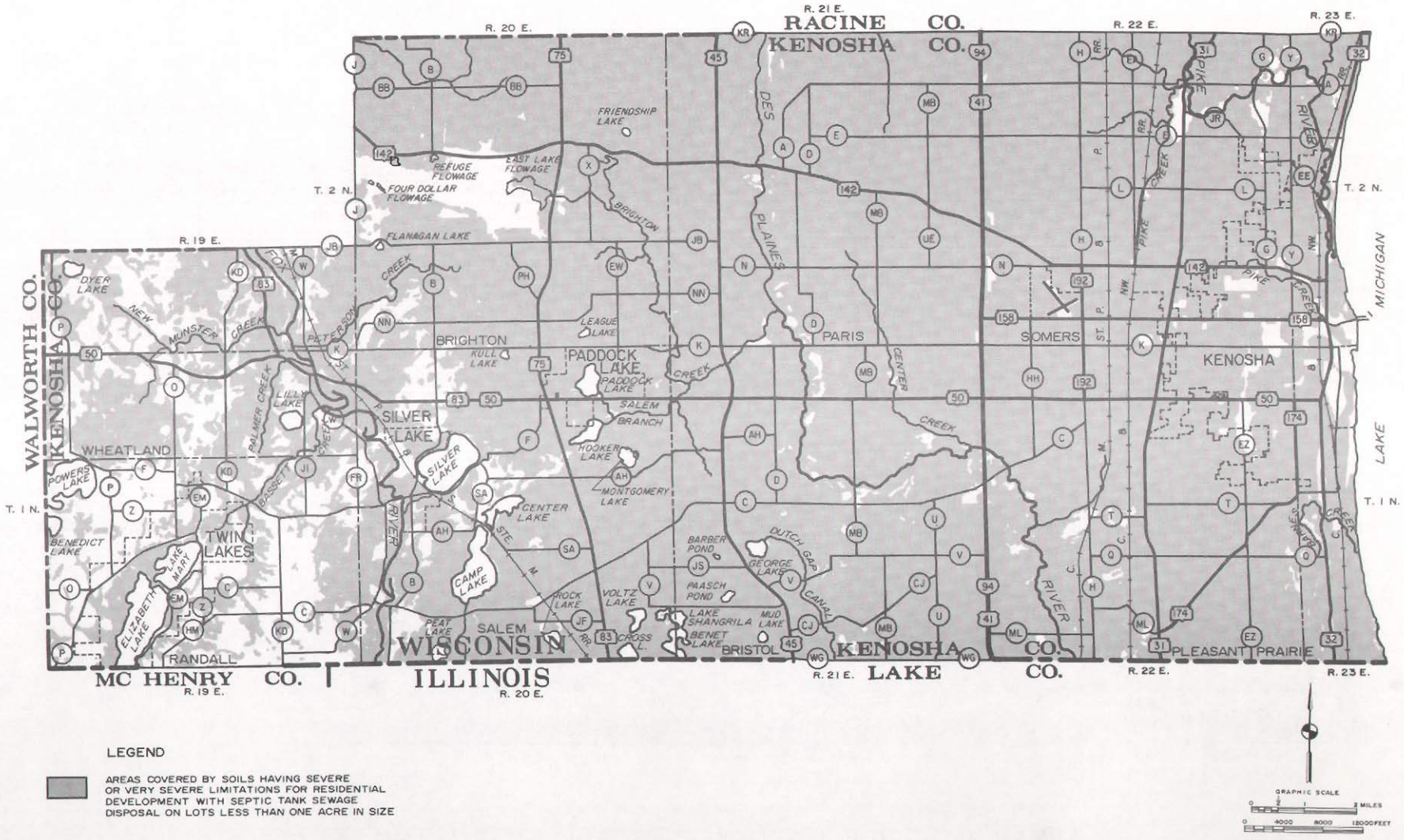
LEGEND

AREAS COVERED BY SOILS HAVING SEVERE OR VERY SEVERE LIMITATIONS FOR RESIDENTIAL DEVELOPMENT WITH SEPTIC TANK SEWAGE DISPOSAL ON LOTS ONE ACRE OR MORE IN SIZE

Source: U. S. Department of Agriculture, Soil Conservation Service; and SEWRPC.

Map 10

SUITABILITY OF SOILS IN KENOSHA COUNTY FOR RESIDENTIAL DEVELOPMENT WITHOUT PUBLIC SANITARY SEWER SERVICE ON LOTS LESS THAN ONE ACRE IN SIZE



LEGEND

AREAS COVERED BY SOILS HAVING SEVERE OR VERY SEVERE LIMITATIONS FOR RESIDENTIAL DEVELOPMENT WITH SEPTIC TANK SEWAGE DISPOSAL ON LOTS LESS THAN ONE ACRE IN SIZE

Source: U. S. Department of Agriculture, Soil Conservation Service; and SEWRPC.

On the basis of the detailed soil survey suitability interpretations, it is evident that much of Kenosha County exhibits severe or very severe limitations for specific types of residential development. Approximately 60,000 acres, or about 35 percent of the land area of the County, are covered by soils which are poorly suited for residential development with public sanitary sewer service or, stated differently, poorly suited for residential development of any kind. Approximately 95,700 acres, or about 55 percent of the land area of the County, are covered by soils which are poorly suited for residential development served by conventional onsite sewage disposal systems on lots one acre or larger in size. Approximately 149,400 acres, or about 86 percent of the land area of the County, are covered by soils poorly suited for residential development served by conventional onsite sewage disposal systems on lots smaller than one acre in size.

It should be noted that in 1975, the Wisconsin Department of Health and Social Services, Division of Health, approved for use on a limited basis throughout Wisconsin three new types of "package" onsite soil absorption sewage disposal systems designed to overcome certain soil limitations such as slow permeability, seasonal high groundwater, and shallow bedrock. Unlike the conventional gravity flow septic tank system, these new systems utilize mechanical facilities to pump septic tank effluent through small-diameter perforated distribution pipes placed in clean, medium sand fill on top of the natural soil. When in place, this fill takes on the appearance of a mound; hence, the new systems are commonly called "mound systems." Currently, the Department of Industry, Labor and Human Relations (DILHR) administers rules governing the number of mound system permits allowed for new construction. Under DILHR rules, each county is allowed five new construction mound system permits per year. In addition, each county can request up to 25 additional mound system permits from a "pool" of 500 permits set aside for new construction by the State. The DILHR will issue the additional permits to each county on a first come, first served basis until the allocated pool of 500 permits is exhausted. There is, however, no limit on the issuance of mound system permits needed to replace failing systems serving existing development. While the rules adopted by the Department of Industry, Labor and Human Relations currently restrict the application of the mound systems, such restrictions could be relaxed if the systems prove to be operational on a widespread basis. This would serve to reduce greatly the constraints imposed on the location of urban development by soil limitations and permit substantial additional areas of the County to be developed for urban use without centralized sanitary sewerage systems. This would create new and costly developmental and environmental problems, which could only be avoided through sound comprehensive planning and plan implementation.

Agricultural Soil Suitability: In order to lend uniformity to the identification of prime farmland and other significant farmland throughout the nation, the U. S. Department of Agriculture, Soil Conservation Service (SCS), has established a soil classification system under which soils are categorized into four major types--national prime farmland, farmland of statewide importance, farmland of local importance, and other land. Classification within a given category may depend on the implementation of certain farm management practices and improvements. For example, certain soils are considered to be national prime farmland only if drained and not frequently flooded; if undrained or frequently flooded, they are considered to be other land. Each of these major farmland categories is described below.

National Prime Farmland--The SCS defines national prime farmland as land best suited for the production of food, feed, forage, fiber, and oilseed crops. Such farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops economically when treated and managed according to modern farming methods. National prime farmlands generally consist of areas covered by soils in Capability Classes I and II.[3] Class I soils have few limitations which restrict their use for farming. Class II soils generally have some limitations which reduce the choice of plants or require moderate conservation practices. In addition, national prime farmlands include areas covered by certain soils in Capability Class III which have adequate water capacity. Areas shown on Map 11 as meeting national prime farmland soil standards total 131,700 acres, or 76 percent of the total land area of Kenosha County.

Farmland of Statewide Importance--The SCS defines farmland of statewide importance as land in addition to prime agricultural land which is of statewide importance for the production of food, feed, fiber, forage, and oilseed crops. Farmlands of statewide importance generally include areas covered by soils in Capability Class III. Class III soils have moderate or severe limitations that reduce the choice of plants, require special conservation practices, or both. For example, farmlands of statewide importance include, among other soil types, the nearly level, very poorly drained mucky peats, or mucks of the Houghton, Muskego, or Ogden series which require drainage to remove excess water and enable cultivation. Areas shown on Map 11 as meeting soil criteria for farmland of statewide importance total 18,700 acres, or 11 percent of the total land area of Kenosha County.

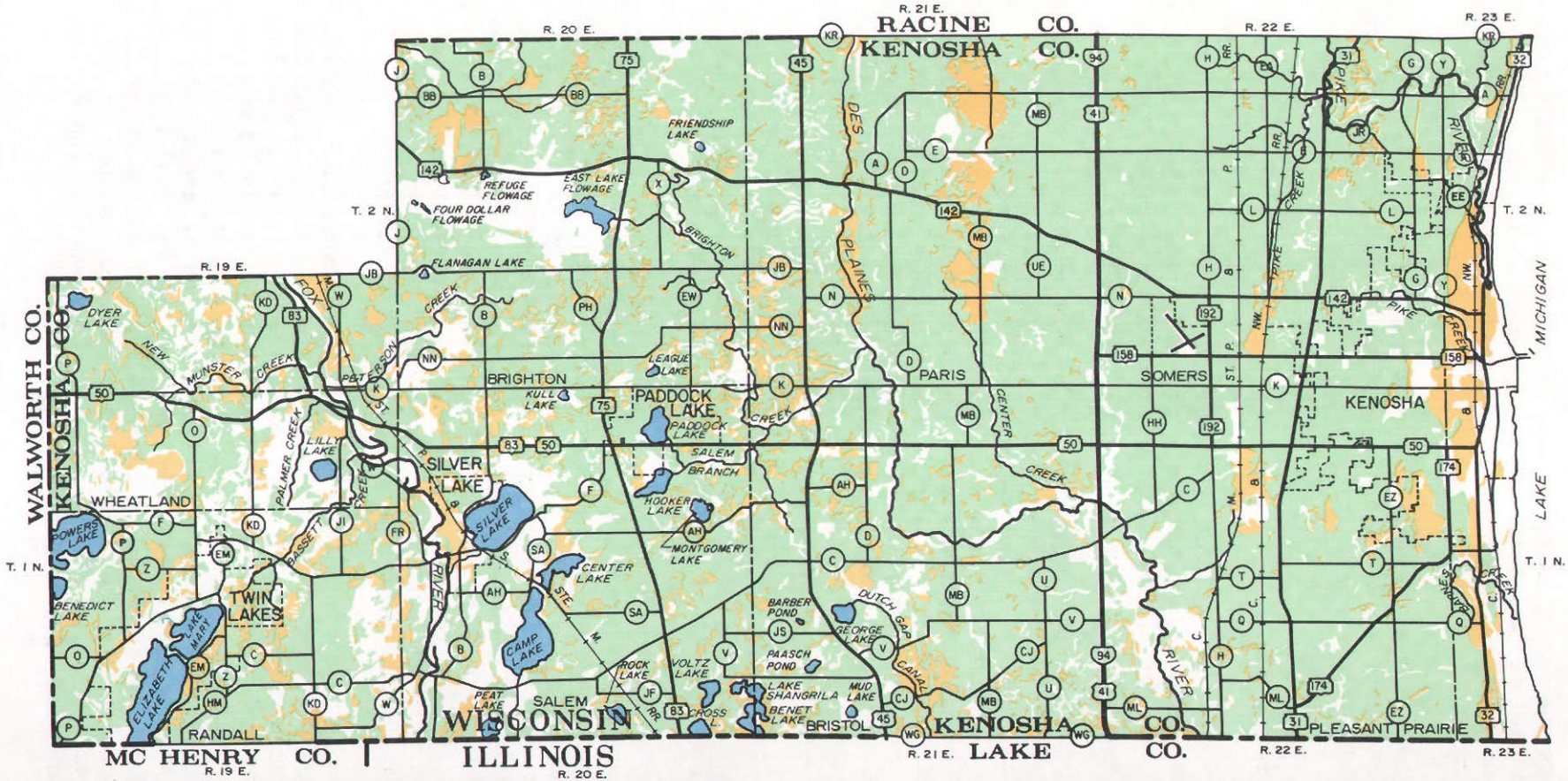
Farmland of Local Significance and Other Land--The SCS defines farmlands of local significance as lands which are not identified as national prime farmlands or farmlands of statewide importance, but which nevertheless are perceived to be important for the production of food, feed, and fiber within a community or county. While such lands are intended to be identified through local planning efforts, the SCS has suggested the soil capability units which should be considered to be locally significant farmlands. These generally include soils in Capability Classes IV and VI. These soils usually have severe or very severe limitations for agricultural use.

Other lands consist of the balance of land not included in the other categories. These consist, for the most part, of Class VII and Class VIII soils, as well as soils in lower classes which are undrained or frequently flooded,

[3]The SCS has classified soils into capability groupings that indicate general suitability for most kinds of farming. These are practical groupings based on the limitations of soils, the risk of damage when used, and the way the soils respond to treatment. Under this system, all soils are grouped at three levels: the capability class, the capability subclass, and the capability unit. The eight capability classes are the broadest groupings and are designated by Roman numerals I through VIII. Class I soils are soils that have few limitations, the widest range of use, and the least risk of damage when used. The soils in the other classes have progressively greater natural limitations. In Class VIII are soils and land forms so rough, shallow, or otherwise limited that they do not produce economically worthwhile yields of crops, forage, or wood products.

Map 11

SOIL CLASSIFICATION FOR AGRICULTURAL CAPABILITY IN KENOSHA COUNTY



LEGEND

- NATIONAL PRIME FARMLAND
- FARMLAND OF STATEWIDE IMPORTANCE
- FARMLAND OF LOCAL SIGNIFICANCE AND OTHER LAND
- MAJOR OR MINOR LAKE

GRAPHIC SCALE
0 1 2 MILES
0 4000 8000 12000 FEET

Source: U. S. Department of Agriculture, Soil Conservation Service; and SEWRPC.

and which therefore do not qualify as national prime farmland, farmland of statewide importance, or farmland of local importance. In general, areas classified as other lands have very severe limitations that make them unsuitable for cultivation.

Areas shown on Map 11 as meeting soil criteria for farmlands of local significance and other lands total 22,900 acres, or about 13 percent of the total land area of Kenosha County.

GROUNDWATER RESOURCES

Groundwater resources constitute an extremely valuable element of the natural resource base. The groundwater reservoir not only sustains lake levels and provides the base flow of the streams, but comprises a major source of water supply for domestic, municipal, and industrial water users.

The rock units within Kenosha County and the Southeastern Wisconsin Region differ widely in the yield of stored water. Rock units that supply water in usable amounts to pumping wells and in important amounts to lakes and streams are called aquifers. There are three major aquifers within Kenosha County and the Southeastern Wisconsin Region. From land surface downward, they are the: 1) sand and gravel aquifer; 2) dolomite aquifer; and 3) sandstone aquifer. Because of their relative nearness to the land surface and their intimate hydraulic interconnection, the first two aquifers are often considered to be a single aquifer commonly known as the "shallow aquifer." The latter, accordingly, is commonly known as the "deep aquifer."

The sand and gravel aquifer consists of unconsolidated sand and gravel deposits in glacial drift and alluvium. These deposits occur over much of the County, either at land surface or buried beneath less permeable drift.

The Niagara dolomite aquifer in Kenosha County consists of Silurian Age dolomite, which overlies the Maquoketa shale throughout most of the County. The sandstone aquifer includes all sedimentary bedrock below the Maquoketa shale. The Maquoketa shale separates the Niagara and sandstone aquifers. Because of its very slow permeability, the shale restricts the vertical movement of water and confines water in the sandstone aquifer. The bottom of the sandstone aquifer is the surface of the impermeable Precambrian rocks. The aquifer is continuous throughout the County and is a part of a large regional aquifer which is used as a source of water supply for major concentrations of urban development throughout southeastern Wisconsin and northeastern Illinois.

The source of all groundwater in the County is precipitation, which infiltrates and recharges the groundwater reservoir in Kenosha County. The amount that infiltrates depends mainly on the type of soils covering the land surface, and the extent of urban development with its attendant impervious surfaces. Recharge is least in areas covered by fine-grained clayey till, greater in silty-sandy till, and greatest where sand and gravel are at the surface. Urban development adversely affects both the quantity and quality of recharge water. Recharge to each aquifer is largely controlled by the permeability of the overlying units. Recharge to the shallowest bedrock aquifer is high where the aquifer is overlain by outwash and end moraine and low where water must pass through clay or silty till.

A limited amount of recharge to the sandstone aquifer occurs through the Maquoketa shale, but most occurs west of the limit of occurrence of the shale outside Kenosha County. Discharge from the sandstone aquifer in most of Kenosha County is through wells, with little or no natural discharge to surface water bodies. Water in the sandstone aquifer also moves regionally from the County to pumping centers in southeast Wisconsin and northeast Illinois.

Map 12 shows the elevation of the top of the saturation zone in the sand and gravel aquifer by 20-foot contour intervals. For the most part, the water table lies within the glacial drift. The elevation ranges from more than 840 feet above National Geodetic Vertical Datum (NGVD) along the extreme western border of the County to about 580 feet NGVD along the Lake Michigan shoreline. The water table generally is a subdued replica of the land surface and is higher under topographic highs and lower under topographic lows. Areas where the depth to water is less than 10 feet for at least part of the year occur in the low-lying parts of the County along streams, lakes, and wetlands.

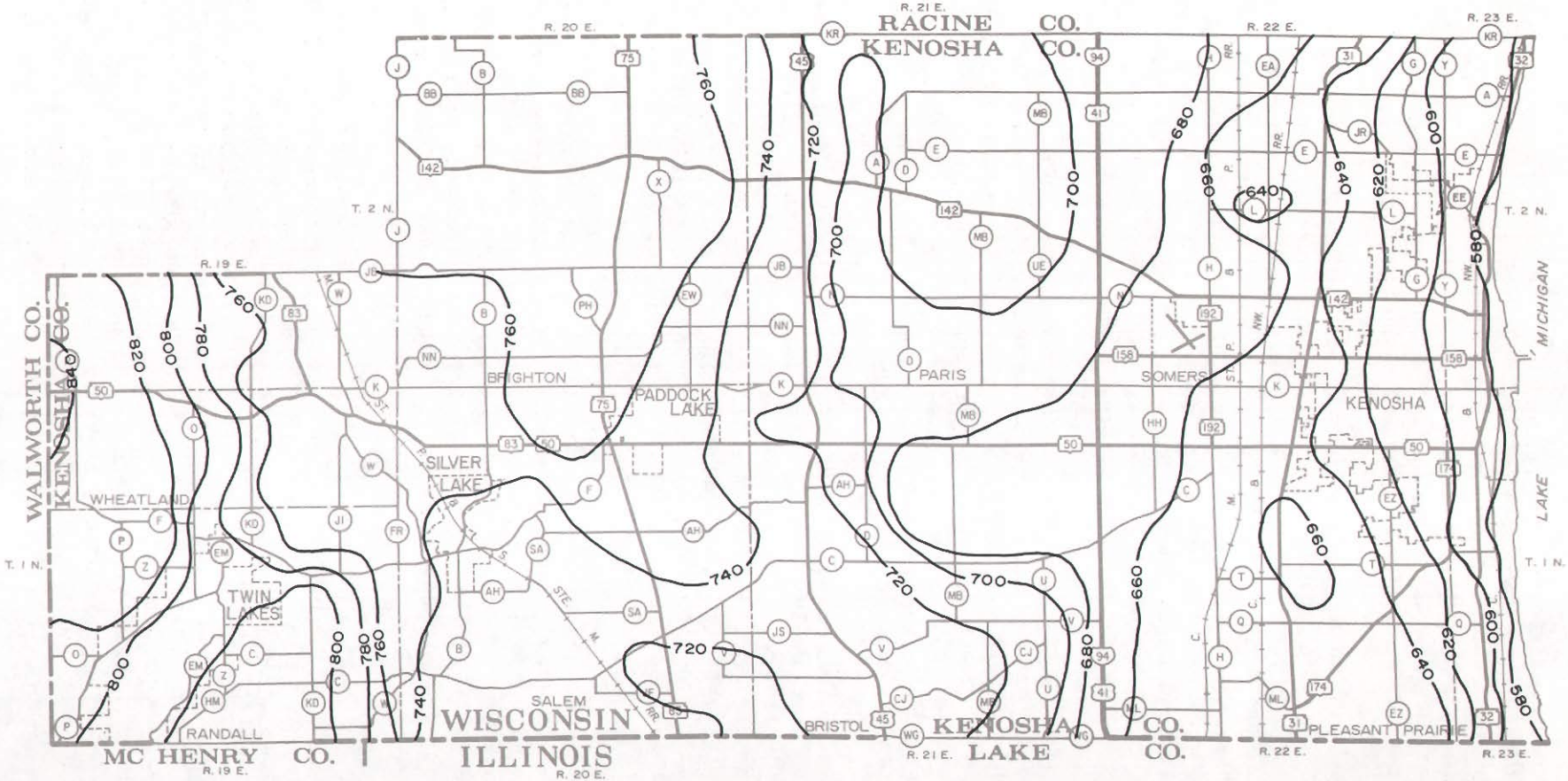
Map 13 shows the potentiometric surface of the sandstone aquifer, or the altitude to which water rose in wells in the sandstone aquifer as of 1974. These data were obtained by SEWRPC and the U. S. Geological Survey in 1973 and 1974. In Kenosha County, the potentiometric surface was found to range from an elevation of about 600 feet NGVD along the western border of the County to less than 450 feet NGVD in the extreme southeast corner of the County. The general slope of the surface was downward toward the east.

Water levels of the sandstone aquifer of Racine and Kenosha Counties began to decline after the first wells tapping that aquifer were drilled--probably shortly after the Civil War. The early wells were free flowing. The artesian heads in wells in Racine and Kenosha were as much as 125 feet above the land surface. Much of this artesian flow was wasted, as the flow from many of the wells was unrestrained, causing water levels to decline rapidly through 1910. After 1910, the rate of water level decline slowed as a result of diminished artesian flow. Further decline occurred, however, as a result of local pumpage and withdrawals in the Milwaukee and Chicago areas. Presently, water level declines in the sandstone aquifer of Kenosha County result primarily from continuing pumpage in the Chicago and Milwaukee metropolitan areas rather than from local pumpage. Withdrawal from the sandstone aquifer in the Chicago area increased from about 30 million gallons per day (mgd) in the mid-1920's to about 80 mgd in the early 1970's. Withdrawal from the sandstone aquifer in the Milwaukee-Waukesha area increased from under 5 mgd in the mid-1920's to more than 20 mgd in the early 1970's.

Most of the area of Kenosha County, although by no means most of the resident population, depends on groundwater as a source of potable water. In 1984, there were three public water utilities and 22 special-purpose water supply systems using groundwater for their source of water. These utilities together served about 8,200 persons, or about 6.8 percent of the resident population, and an area of about 3.6 square miles, or about 1.3 percent of the total area of the County. The Kenosha Water Utility uses Lake Michigan as its source of supply, and in 1984 served about 85,000 persons, or about 70.1 percent of the resident population, and about 18.7 square miles, or about 6.7 percent of the total area of the County. Urban development and farm dwellings in the rest of the County--accounting for about 28,000 persons, or about 23.1 percent of the resident population--also utilized groundwater for their source of supply,

Map 12

ELEVATION OF GROUNDWATER TABLE IN KENOSHA COUNTY: 1978



LEGEND

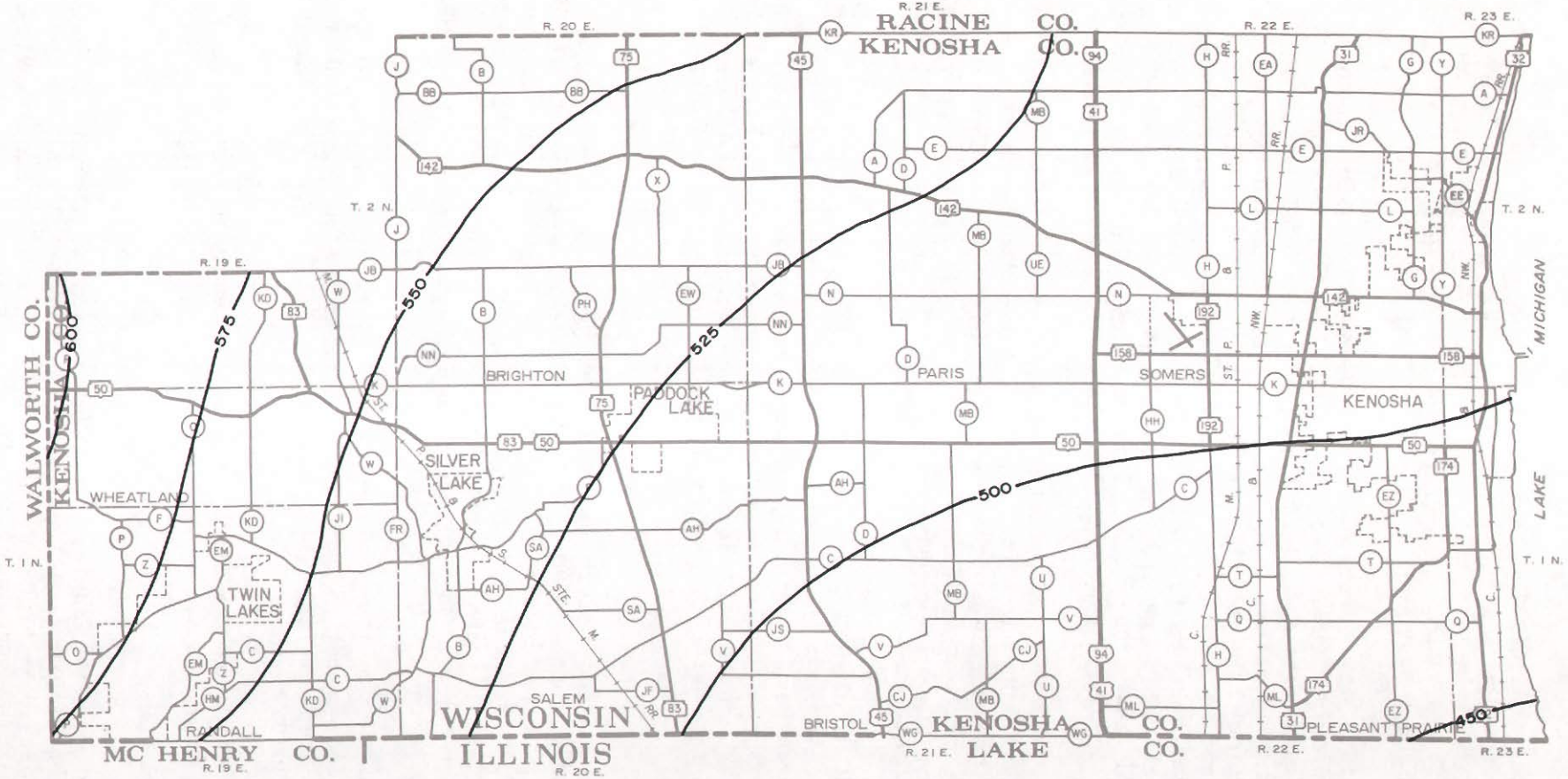
GROUNDWATER TABLE CONTOUR (NATIONAL GEODETIC VERTICAL DATUM)

GRAPHIC SCALE
0 2 MILES
0 4000 8000 12000 FEET

Source: U. S. Geological Survey and SEWRPC.

Map 13

POTENTIOMETRIC SURFACE OF THE SANDSTONE AQUIFER IN KENOSHA COUNTY: 1973-1974



LEGEND

POTENTIOMETRIC CONTOUR (NATIONAL GEODETIC VERTICAL DATUM)

GRAPHIC SCALE
0 1 2 MILES
0 4000 8000 12000 FEET

Source: U. S. Geological Survey and SEWRPC.

primarily from the shallow limestone and sand and gravel aquifers. Well water pumped from the shallow aquifer in Kenosha County averaged about 2.2 million gallons per day (mgd) in 1984. Well water pumped from the deep sandstone aquifer averaged 0.3 mgd. Water pumped from Lake Michigan by the Kenosha Water Utility averaged about 14.9 mgd.

Under current state law (Section 30.21 of the Wisconsin Statutes), public utilities may provide water from Lake Michigan to municipalities located within 50 miles of the lake, provided that the municipal sewage is collected, properly treated, and returned to the Lake Michigan basin. Substantial diversion of water from Lake Michigan across the subcontinental divide, which traverses the eastern portion of Kenosha County in a generally north-south direction, is further constrained by interstate compact and international agreement, as well as by past U. S. Supreme Court rulings. As a result, the western areas of the County must rely primarily on groundwater from the shallow aquifer or from the deep sandstone aquifer as a source of water supply. Of the two aquifers, the deep sandstone aquifer is a higher quality source of water. However, use of that aquifer is more costly because of the depth of the wells required, particularly as water levels continue to decline as a result of pumping in southeastern Wisconsin and northeastern Illinois. In contrast, the shallow aquifer, while less costly to tap, provides a less dependable source of water supply--being locally recharged--and is more subject to contamination.

SURFACE WATER RESOURCES

Surface water resources, consisting of lakes and streams and their associated floodlands, form a particularly important element of the natural resource base of Kenosha County. Their contribution to the economic development, recreational activity, and aesthetic quality of the County is immeasurable.

Lakes

Major lakes are defined herein as those having 50 acres or more of surface water area, a size capable of supporting reasonable recreational use with relatively little degradation of the resource. As indicated in Table 30, there are 16 major lakes in Kenosha County, ranging in size from 52 acres (Voltz Lake) to 682 acres (Elizabeth Lake). The location and relative sizes of the lakes are shown on Map 14. Major lakes in Kenosha County have a combined surface area of 3,432 acres.

In addition, there are 12 lakes and ponds in Kenosha County of less than 50 acres of surface water, which are considered to be minor lakes in this report. As indicated in Table 30, these minor lakes have a combined surface water area of about 227 acres.

Additional information on the lakes of Kenosha County is set forth in Appendix A of this report.

Streams

As shown on Map 14, the surface drainage system of Kenosha County may be viewed as existing within five individual watersheds. Two of the five watersheds contained partly in Kenosha County--the Fox and Des Plaines River watersheds--lie west of the subcontinental divide and are part of the Mississippi

Table 30

LAKES AND PONDS IN KENOSHA COUNTY

Lakes and Ponds	U. S. Public Land Survey Sections, Town, and Range	Surface Area (acres)	Maximum Depth (feet)	Direct Tributary Drainage Area (acres)
Major Lakes				
Benedict Lake	24-1-18; 19-1-19	78	37	2,589[a]
Benet/Shangrila Lake	36-1-20; 31-1-21	180	24	328
Camp Lake	21, 28, 29-1-20	461	19	2,566
Center Lake	15, 16, 21-1-20	129	28	2,243
Cross Lake	35, 36-1-20	87	35	436
Dyer Lake	30-2-19	56	13	1,353
East Lake Flowage	15, 16, 21, 22-2-20	123	15	960
Elizabeth Lake	28, 29, 32-1-19	682	32	5,029
George Lake	20, 29-1-21	59	16	1,911
Hooker Lake	11-1-20	87	24	1,133
Lilly Lake	11-1-19	88	6	307
Lake Mary	21, 28-1-19	315	33	1,143
Paddock Lake	2-1-20	112	32	362
Powers Lake	13-1-18; 18-1-19	459	33	2,426
Silver Lake	8, 9, 16, 17-1-20	464	44	3,191
Voltz Lake	36-1-20	52	24	257
Subtotal	--	3,432	--	--
Other Named Lakes and Ponds				
Barber Pond	30-1-21	2	20	N/A
Flanagan Lake	19, 30-2-20	11	24	N/A
Four Dollar Flowage	18-2-20	18	6	N/A
Friendship Lake	12-2-20	11	11	N/A
Kull Lake	4-1-20	13	14	N/A
League Lake	35-2-20	14	21	N/A
Montgomery Lake	12, 13, 14-1-20	46	23	N/A
Mud Lake	32-1-21	22	14	N/A
Paasch Lake	29, 30-1-21	15	9	N/A
Peat Lake	32-1-20	6	5	N/A
Refuge Flowage	17-2-20	23	9	N/A
Rock Lake	34-1-20	46	33	N/A
Subtotal	--	227	--	--
Total	--	3,659	--	--

NOTE: N/A indicates data not available.

[a]Combined direct drainage area of Lake Benedict and Lake Tombeau.

Source: SEWRPC.

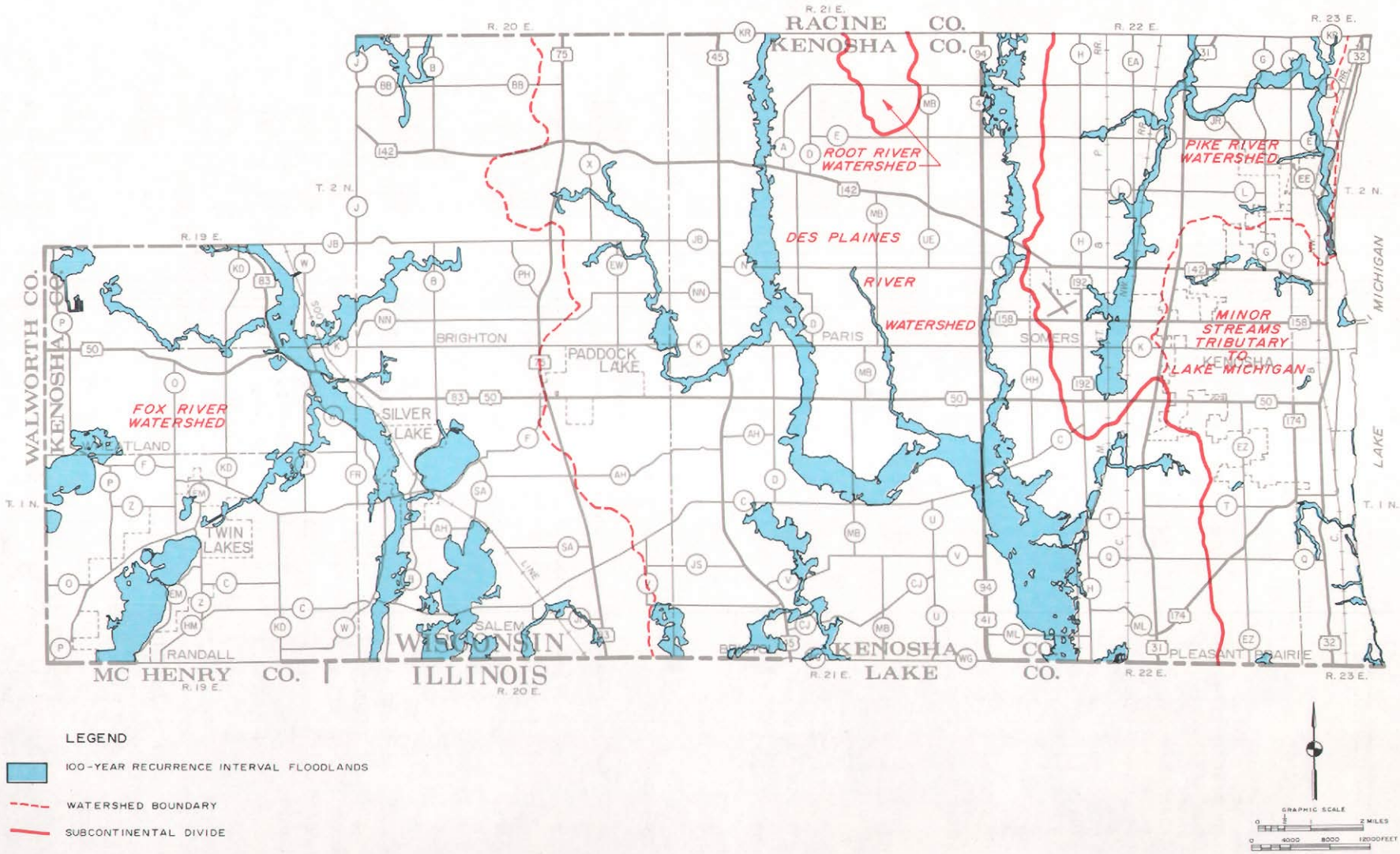
River drainage system. These two watersheds have a combined area of 219 square miles, or 79 percent of the area of the County. The three watersheds lying east of the subcontinental divide constitute the remainder of Kenosha County--the Root River watershed, the Pike River watershed, and the watershed of minor streams directly tributary to Lake Michigan--and have a combined area of 59 square miles, or 21 percent of the area of Kenosha County. These rivers and streams discharge into Lake Michigan and are a part of the Great Lakes-St. Lawrence River drainage system. Table 31 summarizes the watershed characteristics of Kenosha County. Major streams in Kenosha County--including those watercourses which have a perennial flow and those intermittent streams that have been identified in SEWRPC Planning Guide No. 5, Floodland and Shoreland Development Guide--total 106 lineal miles.

Floodlands

The floodlands of a river or stream are the wide, gently sloping areas contiguous with, and usually lying on both sides of, a river or stream channel.

Map 14

SURFACE WATER RESOURCES AND FLOODLANDS IN KENOSHA COUNTY



Source: Federal Emergency Management Agency and SEWRPC.

Table 31

CHARACTERISTICS OF WATERSHEDS IN KENOSHA COUNTY

Watershed	Area (square miles)	Percent of County
Mississippi River Drainage Basin		
Fox River	96.33	34.6
Des Plaines River	122.61	44.1
Subtotal	218.94	78.7
Great Lakes-St. Lawrence River Drainage Basin		
Root River	2.18	0.8
Pike River	30.02	10.8
Minor Streams Tributary to Lake Michigan	27.14	9.7
Subtotal	59.34	21.3
Total	278.28	100.0

Source: SEWRPC.

Rivers and streams occupy their channels most of the time. However, during even minor flood events, stream discharges increase markedly such that the channel is not able to convey all the flow. As a result, stages increase and the river or stream spreads laterally over the floodlands. The periodic flow of a river onto its floodlands is a normal phenomenon and, in the absence of major, costly structural flood control works, will occur regardless of whether or not urban development occurs on the floodlands.

For planning and regulatory purposes, floodlands are normally defined as the areas, excluding the channel, subject to inundation by the 100-year recurrence interval flood event. This is the event that would be reached or exceeded in severity on the average of once every 100 years. Stated another way, there is a 1 percent chance that this event will be reached or exceeded in severity in any given year. Obviously, the 100-year recurrence interval floodland contains within its boundaries the areas inundated by floods of less severe but more frequent occurrence such as the 50-, 25-, and 5-year recurrence interval events.

Floodland areas are generally not well suited to urban development because of flood hazards, high water tables, and inadequate soils. These areas are, however, generally prime locations for much needed park and open space areas and, therefore, every effort should be made to discourage indiscriminate urban development in floodplains while encouraging open space uses.

Floodlands delineated in Kenosha County are shown on Map 14. The 100-year recurrence interval flood hazard area in Kenosha County encompasses about 12,300 acres--not including surface water in existing stream channels or lake beds--or about 6.9 percent of the total area of the County.

WOODLANDS

Woodlands have both economic and ecological value and, under good management, can serve a variety of uses providing multiple benefits. Located primarily on ridges and slopes and along streams and lakeshores, woodlands provide an attractive natural resource of immeasurable value. Woodlands accentuate the beauty of the lakes, streams, and topography of the area, and are essential to

the maintenance of the overall environmental quality of the area. In addition to contributing to clean air and water, woodlands can contribute to the maintenance of a diversity of plant and animal life in association with human life, and can provide for important recreational opportunities. Woodlands can and should be maintained for their total values--scenic, wildlife, educational, recreational, and watershed protection--as well as for their forest products. Under balanced use and sustained yield management, woodlands can serve many of these benefits simultaneously.

As indicated in Table 32 and on Map 15, in 1980 woodlands covered a combined area of 9,572 acres in Kenosha County, or 5.4 percent of the total area of the County. Among the minor civil divisions in Kenosha County, the woodland acreage ranged from 37 acres in the Village of Paddock Lake to 1,533 acres in the Town of Salem.

WETLANDS

Wetlands are defined as areas where water is at, near, or above the land surface long enough each year to be capable of supporting aquatic or hydrophytic vegetation--such as cattails, bulrushes, sedges, and willows--and which are covered by soils indicative of wet conditions. Wetlands perform an important set of natural functions which make them particularly valuable resources. Wetlands contribute to the maintenance of good water quality--except during unusual periods of high runoff following prolonged drought--by serving as traps which retain nutrients and sediments, thereby preventing them from reaching streams and lakes. They act to retain water during dry periods and hold it during flooding events, thus keeping the water table high and relatively stable. Wetlands are important resources for overall environmental health and diversity. They provide essential breeding, nesting, resting, and feeding grounds and predator escape cover for many forms of fish and wildlife. The presence of water is also attractive to many upland birds and other animals. These attributes have the net effect of improving general environmental health; providing recreational, research, and educational opportunities; maintaining opportunities for hunting and fishing; and adding to the aesthetics of an area.

Wetlands have severe limitations for residential, commercial, and industrial development. In general, these limitations are related to the high compressibility and instability, high water table, low bearing capacity, and high shrink-swell potential of wetland soils. These limitations may result in flooding, wet basements, unstable foundations, failing pavements, and failing sewer and water lines. Moreover, there are significant and costly onsite preparation and maintenance costs associated with the development of wetland soils, particularly in connection with roads, foundations, and public utilities.

As indicated in Table 33 and on Map 15, in 1980 wetlands covered a combined area of 15,612 acres in Kenosha County, or about 9 percent of the total area of the County.[4] Among the minor civil divisions in Kenosha County, the wetland

[4]Included in these wetlands are ridge and swale communities located adjacent to Lake Michigan. The swales, or low areas between the ridges, are wetlands and are covered by cattails, bulrushes, sedges, grasses, and other wetland vegetation; the ridges themselves are dry. The alternating ridges and swales adjacent to Lake Michigan are typically too small to be delineated individually on small-scale maps, and much of the ridge and swale complex has been identified as wetland under the Wisconsin Wetland Inventory owing to the predominance of wetland vegetation.

Table 32

WOODLANDS IN KENOSHA COUNTY BY CIVIL DIVISION: 1980

Civil Division	Woodlands	
	Acres	Percent of County Total Woodlands
City		
Kenosha	50	0.5
Villages		
Paddock Lake	37	0.4
Silver Lake	64	0.7
Twin Lakes	214	2.2
Towns		
Brighton	1,408	14.7
Bristol	1,447	15.1
Paris	957	10.0
Pleasant Prairie	978	10.2
Randall	1,058	11.1
Salem	1,533	16.0
Somers	650	6.8
Wheatland	1,176	12.3
County Total	9,572	100.0

Source: SEWRPC.

Table 33

WETLANDS IN KENOSHA COUNTY BY CIVIL DIVISION: 1980

Civil Division	Wetlands	
	Acres	Percent of County Total Wetlands
City		
Kenosha	56	0.4
Villages		
Paddock Lake	55	0.4
Silver Lake	147	0.9
Twin Lakes	326	2.1
Towns		
Brighton	2,146	13.8
Bristol	2,221	14.2
Paris	755	4.8
Pleasant Prairie	3,185	20.4
Randall	954	6.1
Salem	2,895	18.5
Somers	547	3.5
Wheatland	2,325	14.9
County Total	15,612	100.0

Source: SEWRPC.

acreage ranged from 55 acres in the Village of Paddock Lake to 3,185 acres in the Town of Pleasant Prairie.

WILDLIFE HABITAT

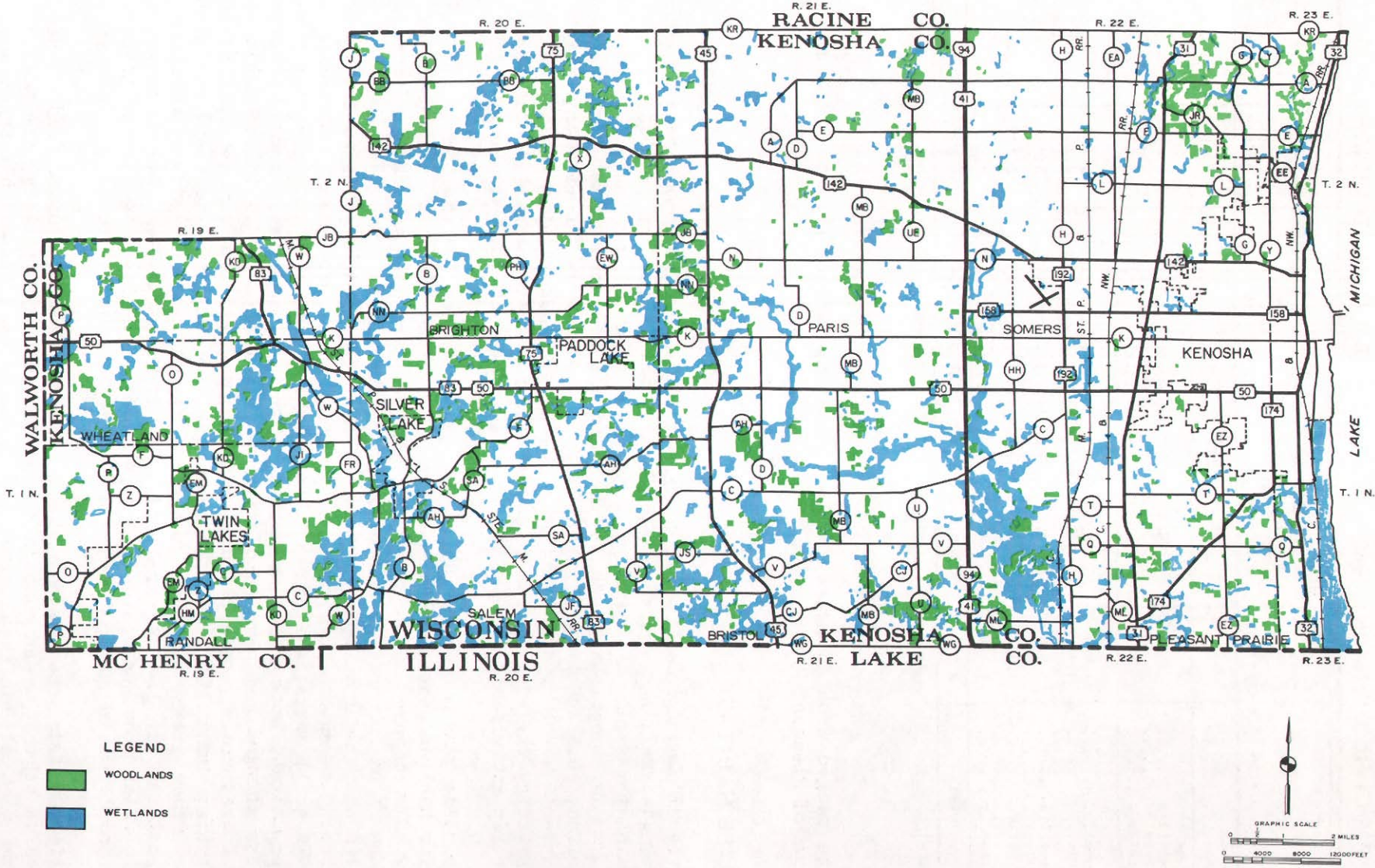
Wildlife in Kenosha County includes upland game and nongame species such as rabbit, squirrel, and woodchuck; predators such as fox and raccoon; game birds including pheasant; and marsh furbearers such as muskrat. Other nongame species include songbirds, such as the cardinal and wood thrush, and marsh and shorebirds, such as the great blue heron and killdeer. In addition, waterfowl are present and deer are found in some areas. The remaining habitat and wildlife residing therein provide opportunities for recreational, educational, and scientific activities, and constitute an aesthetic asset to the County.

The complete spectrum of wildlife species native to Kenosha County has, along with its habitat, undergone tremendous alterations since the settlement of the County. The change is the direct result of alteration of the environment of the County by European man, beginning with the clearing of forests and prairies and the drainage of wetlands and ending with extensive agricultural and urban land uses. This process, which began in the early nineteenth century, is still operative today. Successive cultural uses and attendant management practices, both rural and urban, have been superimposed on the overall land use changes and have also affected the wildlife and wildlife habitat. In agricultural areas, these cultural management practices include land drainage by ditching and tiling, and the expanding use of fertilizers and pesticides. In the urban areas, cultural management practices that affect wildlife and their habitat are the use of fertilizers and pesticides, road salting, heavy traffic which produces disruptive noise levels and damaging air pollution, and the introduction of domestic animals.

Wildlife habitat areas in Kenosha County in 1980 are identified on Map 16. High-value habitat areas contain a good diversity of wildlife, are adequate in size to meet all of the habitat requirements for the species concerned, and

Map 15

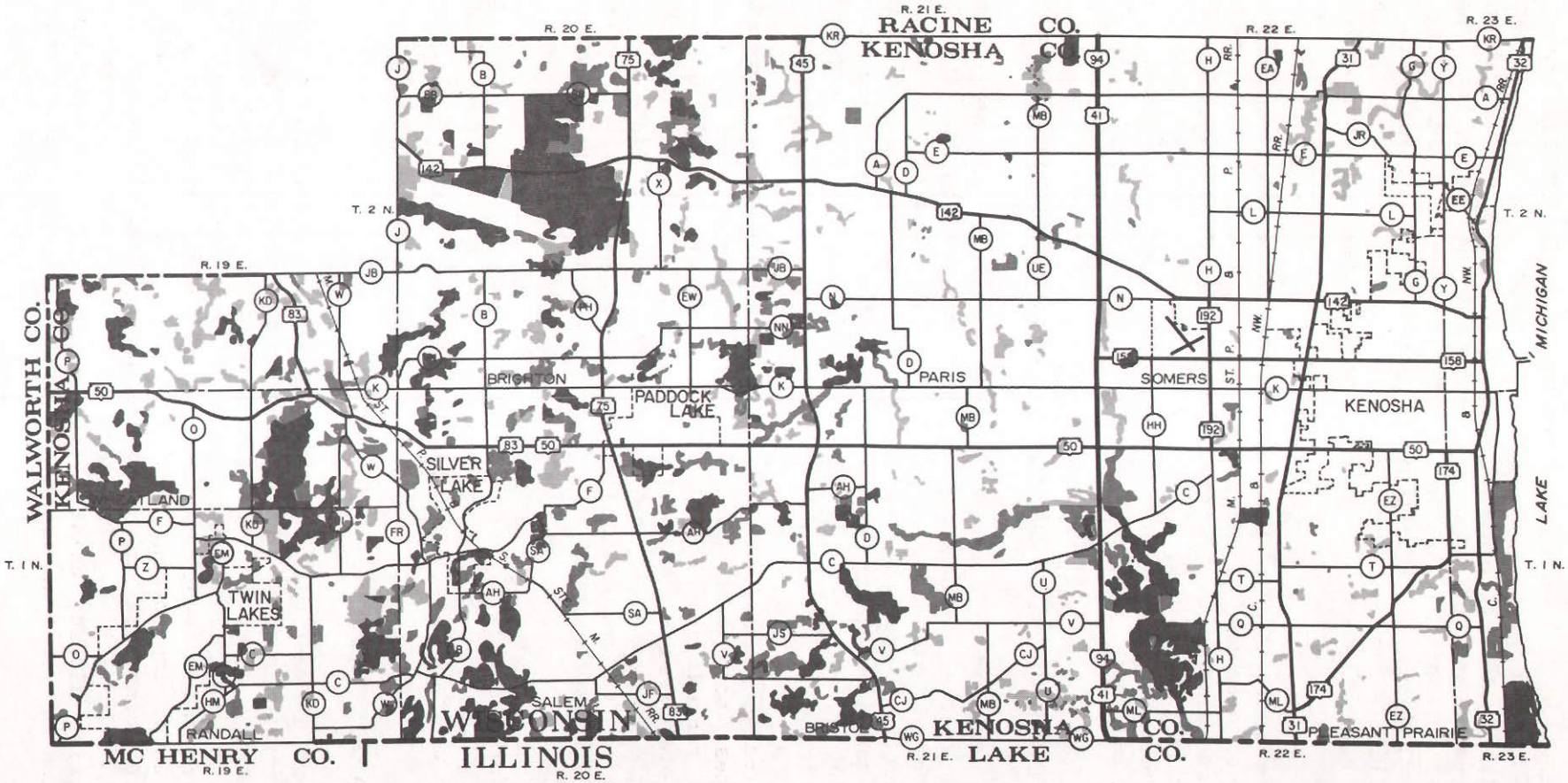
WOODLANDS AND WETLANDS IN KENOSHA COUNTY: 1980



Source: Wisconsin Department of Natural Resources and SEWRPC.

Map 16

WILDLIFE HABITAT IN KENOSHA COUNTY: 1980



LEGEND

- HIGH VALUE
- MEDIUM VALUE
- LOW VALUE

GRAPHIC SCALE

0 1 2 MILES

0 4000 8000 12000 FEET

Source: SEWRPC.

are generally located in proximity to other wildlife habitat areas. Medium-value wildlife habitat areas generally lack one of the three criteria for a high-value wildlife habitat. However, they do retain a good plant and animal diversity. Low-value habitat areas are remnant in nature in that they generally lack two or more of the three criteria for a high-value wildlife habitat, but may, nevertheless, be important if located in proximity to high- or medium-value wildlife habitat areas, if they provide corridors linking higher value wildlife habitat areas, or if they provide the only available range in the area.

As indicated in Table 34, in 1980 the identified wildlife habitat areas in Kenosha County encompassed 22,065 acres, or 12 percent of the total area of the County. High-value wildlife habitat comprised 10,307 acres, or 47 percent of the total wildlife habitat; medium-value wildlife habitat comprised 5,893 acres, or 27 percent of the total; and low-value wildlife habitat comprised 5,865 acres, or 26 percent of the total.

EXISTING OUTDOOR RECREATION AND RELATED OPEN SPACE SITES

Kenosha County encompasses a broad spectrum of public and nonpublic outdoor recreation and related open space sites, ranging from tot lots and small intensively developed neighborhood parks in urbanized areas to large wildlife preserves in outlying areas of the County. As indicated in Table 35, in 1985 there were 200 public outdoor recreation and related open space sites in the County, totaling 9,754 acres. In addition, there were 117 nonpublic sites, totaling 3,385 acres.

As further indicated in Table 35, the number of outdoor recreation and related open space sites, both public and private, in the minor civil divisions in Kenosha County ranged from 5 in the Town of Paris to 100 in the City of Kenosha. The total area in such sites ranged from 73 acres in the Village of Paddock Lake to 5,539 acres in the Town of Brighton. The relatively large outdoor recreation site acreage in the Town of Brighton reflects the location in the Town of the state-owned Bong Recreation Area, which encompasses about 4,515 acres.

Additional information regarding outdoor recreation and related open space sites in Kenosha County, including a map showing the location of such sites, is presented in the next chapter of this report.

POTENTIAL PARK SITES

Certain outdoor recreational activities are dependent upon the natural resource base for their very existence, as in the case of nature study, while others are heavily dependent on natural resource amenities to enhance the quality of the recreational experience, as in the case of picnicking. To some extent, sites needed to meet the demand for such activities can be created by earth-moving, water impoundment, and planting activities. Usually, however, it is far more economical and desirable to satisfy the demand for outdoor recreational facilities by developing parks at sites where appropriate natural resource amenities already exist. This approach requires the identification and preservation of sites at which the demand for resource-oriented recrea-

Table 34

WILDLIFE HABITAT IN KENOSHA COUNTY BY CIVIL DIVISION: 1980

Civil Division	Acres							
	High Value		Medium Value		Low Value		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
City								
Kenosha	--	--	27	37.0	46	63.0	73	100.0
Villages								
Paddock Lake	51	68.0	24	32.0	--	--	75	100.0
Silver Lake	72	47.7	69	45.7	10	6.6	151	100.0
Twin Lakes	323	60.9	117	22.1	90	17.0	530	100.0
Towns								
Brighton	3,468	64.0	1,002	18.5	950	17.5	5,420	100.0
Bristol	733	29.4	993	39.9	765	30.7	2,491	100.0
Paris	413	27.8	449	30.3	621	41.9	1,483	100.0
Pleasant Prairie	1,427	48.8	969	33.1	528	18.1	2,924	100.0
Randall	707	38.5	378	20.6	750	40.9	1,835	100.0
Salem	1,512	44.2	1,266	37.1	639	18.7	3,417	100.0
Somers	43	6.7	36	5.6	561	87.7	640	100.0
Wheatland	1,558	51.5	563	18.6	905	29.9	3,026	100.0
Kenosha County	10,307	46.7	5,893	26.7	5,865	26.6	22,065	100.0

Source: SEWRPC.

Table 35

OUTDOOR RECREATION AND RELATED OPEN SPACE SITES BY CIVIL DIVISION IN KENOSHA COUNTY: 1985

Civil Division	Public			Nonpublic			Total		
		Acres			Acres			Acres	
	Number of Sites	Number	Percent of County	Number of Sites	Number	Percent of County	Number of Sites	Number	Percent of County
City									
Kenosha	77	865	8.9	23	68	2.0	100	933	7.1
Villages									
Paddock Lake	9	71	0.7	2	2	0.1	11	73	0.6
Silver Lake	9	67	0.7	5	9	0.3	14	76	0.6
Twin Lakes	4	36	0.4	11	164	4.8	15	200	1.5
Towns									
Brighton	6	5,236	53.7	4	303	8.9	10	5,539	42.2
Bristol	13	400	4.1	7	473	14.0	20	873	6.7
Paris	2	132	1.3	3	81	2.4	5	213	1.6
Pleasant Prairie	26	215	2.2	6	474	14.0	32	689	5.2
Randall	10	390	4.0	9	351	10.4	19	741	5.6
Salem	33	1,157	11.8	35	791	23.4	68	1,948	14.8
Somers	11	525	5.4	8	437	12.9	19	962	7.3
Wheatland	5	660	6.8	6	232	6.8	11	892	6.8
County Total[a]	200	9,754	100.0	117	3,385	100.0	317	13,139	100.0

[a]The sum of the number of sites by minor civil division may not match the total number of sites in the County because several sites are located in more than one minor civil division.

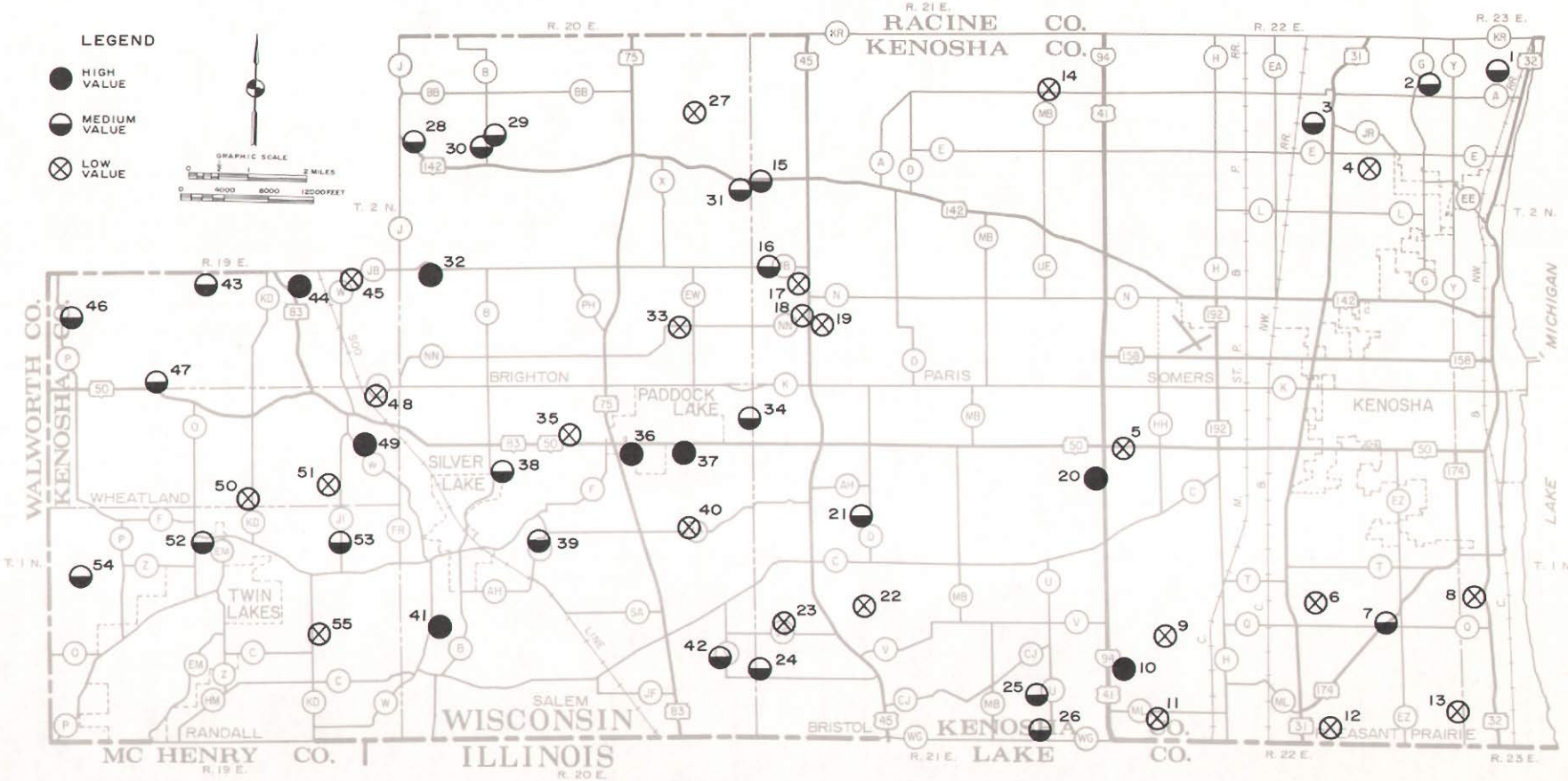
Source: SEWRPC.

tional facilities can be met. Recognizing the need to preserve high-value resource areas to meet the recreational demand of the existing and future population, the Regional Planning Commission in 1963 undertook an inventory of the best remaining potential park sites within Kenosha County and the balance of the Southeastern Wisconsin Region. This inventory was updated by the Commission in 1968, 1975, and 1980.

As indicated on Map 17 and in Table 36, 55 potential park sites encompassing 6,945 acres, or 4 percent of the County, were identified in the potential park site inventory in 1980. Of this total, eight sites encompassing 1,566 acres

Map 17

POTENTIAL PARK SITES IN KENOSHA COUNTY: 1980



Site Number	Area (Acres)	Town, Range, Section, Quarter
1	173	T2N, R23E--NE, SE Sec 6
2	231	T2N, R22E--SW, SE Sec 1
3	218	T2N, R22E--SE Sec 3; and NE, NW, SW, SE Sec 10
4	46	T2N, R22E--NE, NW Sec 14
5	443	T1N, R22E--NW, SW Sec 6; and SW, SW Sec 7
6	51	T1N, R22E--NE, NW, SW, SE Sec 22
7	96	T1N, R22E--SE Sec 23
8	288	T1N, R23E--SW Sec 18; and NW, SW Sec 19
9	296	T1N, R22E--NE, NW Sec 29; and NE Sec 30
10	288	T1N, R22E--SW, SE Sec 30; and NW Sec 31
11	164	T1N, R22E--NE, SW, SE Sec 31
12	55	T1N, R22E--SE Sec 34
13	43	T1N, R22E--NE Sec 36
14	50	T2N, R21E--SW Sec 1; and SE Sec 2
15	115	T2N, R21E--NW, SW Sec 18
16	150	T2N, R21E--SW, Se Sec 19; and NW Sec 30
17	27	T2N, R21E--NE Sec 30
18	35	T2N, R21E--SE Sec 30
19	47	T2N, R21E--SW Sec 29; and NW Sec 32
20	252	T1N, R21E--NE, SE Sec 12
21	152	T1N, R21E--NE Sec 17
22	52	T1N, R21E--SE Sec 20
23	79	T1N, R21E--NW Sec 29; and NE, NW Sec 30
24	73	T1N, R21E--SW Sec 30
25	129	T1N, R21E--NE, NW Sec 35
26	30	T1N, R21E--SE Sec 35
27	533	T2N, R20E--NE, SE Sec 11; and SW, SW Sec 12
28	130	T2N, R20E--SW Sec 7
29	68	T2N, R20E--NE, SE Sec 8
30	60	T2N, R20E--SW Sec 8
31	103	T2N, R20E--NE, SE Sec 13
32	98	T2N, R20E--SW, SE Sec 19; and NE, NW Sec 30
33	82	T2N, R20E--SW, SE Sec 26; and NE Sec 35
34	62	T1N, R20E--NE, SE Sec 1
35	70	T1N, R20E--SE Sec 4
36	90	T1N, R20E--NE Sec 10
37	225	T1N, R20E--NE Sec 11; and NW Sec 12
38	86	T1N, R20E--NE, SE Sec 8
39	76	T1N, R20E--NW, SW Sec 16; and NW Sec 21
40	38	T1N, R20E--NE Sec 14
41	205	T1N, R20E--SE Sec 19; and NE, NW, SW, SE Sec 30
42	130	T1N, R20E--NW, SW Sec 25
43	160	T2N, R19E--NE Sec 28
44	315	T2N, R19E--NE, NW, SW, SE, Sec 26; and NE Sec 27
45	57	T2N, R19E--NW Sec 25
46	77	T2N, R19E--SW, SE Sec 30
47	106	T2N, R19E--NE, SE Sec 32
48	84	T1N, R19E--NE, NW Sec 1
49	93	T1N, R19E--SW, SE Sec 1; and NE, NW Sec 12
50	56	T1N, R19E--SW Sec 10
51	60	T1N, R19E--SE Sec 11
52	47	T1N, R19E--SE Sec 16
53	108	T1N, R19E-- NW, SW Sec 13; and SE Sec 14
54	91	T1N, R19E--NE Sec 19
55	52	T1N, R19E--NE Sec 26

Source: SEWRPC.

Table 36

POTENTIAL PARK SITES IN KENOSHA COUNTY BY CIVIL DIVISION: 1980

Civil Division	Potential Park Sites											
	High Value			Medium Value			Low Value			Total		
	Number of Sites	Acres	Percent of County	Number of Sites	Acres	Percent of County	Number of Sites	Acres	Percent of County	Number of Sites	Acres	Percent of County
City												
Kenosha	--	--	--	--	--	--	--	--	--	--	--	--
Villages												
Paddock Lake	--	--	--	--	--	--	--	--	--	--	--	--
Silver Lake	--	--	--	--	--	--	--	--	--	--	--	--
Twin Lakes	--	--	--	--	--	--	--	--	--	--	--	--
Towns												
Brighton	1	98	6.3	4	361	13.5	2	615	22.7	7	1,074	15.5
Bristol	1	252	16.1	4	384	14.4	2	131	4.8	7	767	11.1
Paris	--	--	--	2	265	9.9	4	159	5.9	6	424	6.1
Pleasant Prairie	1	288	18.4	1	96	3.6	7	1,340	49.5	9	1,724	24.8
Randall	--	--	--	3	246	9.2	1	52	1.9	4	298	4.3
Salem	3	520	33.2	4	354	13.3	2	108	4.0	9	982	14.1
Somers	--	--	--	3	622	23.3	1	46	1.7	4	668	9.6
Wheatland	2	408	26.0	3	343	12.8	4	257	9.5	9	1,008	14.5
Kenosha County	8	1,566	100.0	24	2,671	100.0	23	2,708	100.0	55	6,945	100.0

Source: SEWRPC.

were classified as high-value sites; 24 sites encompassing 2,671 acres were classified as medium-value sites; and 23 sites encompassing 2,708 acres were classified as low-value sites. High-value sites are those which possess the most favorable recreational development potential and for which the inventory revealed no serious development limitations. Medium-value sites possess certain minor development limitations, while low-value sites possess major development limitations and, therefore, have relatively low potential for development as park sites without major modification.

HISTORIC SITES

The National Register of Historic Places is the official list of the nation's and the State's historical, architectural, and archaeological sites and structures worthy of preservation. Under the National Historic Preservation Act of 1966, the Secretary of the U. S. Department of the Interior is authorized to maintain a national register of districts, sites, buildings, structures, and objects which are significant in American history, architecture, archaeology, and culture. Properties of local, state, and national importance are included in the register.

As indicated in Table 37, a total of 10 sites in Kenosha County were listed on the National Register of Historic Places as of 1985. Eight of these are historic structures located in the City of Kenosha. The other two sites are archaeological sites located in the Town of Pleasant Prairie.

In addition to the sites listed on the National Register of Historic Places, an inventory of historic sites in Wisconsin is maintained by the State Histor-

Table 37

SITES IN KENOSHA COUNTY LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES: 1985

Site Name	Civil Division	U. S. Public Land Survey Town and Range Section	Level of Significance	Year Listed
Boys and Girls Library.....	City of Kenosha	T2N, R23E Section 31	Local	1980
Kemper Hall.....	City of Kenosha	T1N, R23E Section 5	State	1976
Kenosha County Courthouse...	City of Kenosha	T2N, R23E Section 31	Local	1982
John McCaffary House.....	City of Kenosha	T2N, R23E Section 31	State	1978
The Manor House.....	City of Kenosha	T1N, R23E Section 5	State	1980
St. Matthew's Episcopal Church.....	City of Kenosha	T2N, R23E Section 31	Local	1979
Gilbert M. Simmons Memorial Library.....	City of Kenosha	T2N, R23E Section 31	Local	1974
Justin Weed House.....	City of Kenosha	T2N, R22E Section 25	Local	1974
Barnes Creek Site.....	Town of Pleasant Prairie	T1N, R23E Section 19	National	1977
Chesrow Site.....	Town of Pleasant Prairie	T1N, R23E Section 19	State	1978

Source: State Historical Society of Wisconsin.

ical Society of Wisconsin in Madison. State Historical Society files identify more than 300 historical sites--including structures, archaeological features, and other cultural features--in Kenosha County.

NATURAL AND SCIENTIFIC AREAS

Natural areas, as defined by the Wisconsin Scientific Areas Preservation Council, are tracts of land or water so little modified by man's activity, or which have sufficiently recovered from the effects of such activity, that they contain intact native plant and animal communities believed to be representative of the pre-European settlement landscape. Natural area sites are ranked into one of the following three categories: natural area of statewide or greater significance, natural area of countywide or regional significance, and natural area of local significance.

The ranking of a natural area into one of these three categories is based upon consideration of the diversity of plant and animal species and community types present; the structure and integrity of the native plant or animal community; the extent of disturbance from man's activity such as logging, grazing, water level changes, and pollution; the commonness of the plant and animal communities present; any unique natural features within the area; the size of the area; and the educational value. More specifically, the three types of natural areas are defined as follows:

1. Natural areas of statewide or greater significance (NA-1) are those natural areas which have not been significantly modified by man's activity or have sufficiently recovered from the effects of such activity so as to contain nearly intact native plant and animal communities which are believed to be representative of the pre-European settlement landscape, but which have not yet been classified as state scientific areas.

2. Natural areas of countywide or regional significance (NA-2) are those natural areas which have been slightly modified by man's activities, or which have sufficiently recovered from the effects of such activities so as to contain good examples of native plant and animal communities representative of the pre-European settlement landscape. These natural areas are of lesser significance because their quality is less than ecologically ideal and there is evidence of past or present disturbance, such as logging, grazing, water level changes as a result of ditching or filling, or pollution; the area may contain plant or animal community types commonly found in the Region, in which case only the best examples would qualify for state scientific area recognition; or the area may be too small to qualify as a state scientific area. These natural areas may serve local communities as educational sites or as passive recreational areas and ecological zones which lend naturalness to their surroundings. In addition, these natural areas, if protected in an undisturbed condition, may be expected to increase in value over time. Therefore, some of these areas may in the future become natural or scientific areas of statewide significance.

3. Natural areas of local significance (NA-3) are those natural areas which have been significantly modified by man's activities, but nevertheless retain a modest amount of natural cover. Such natural areas are suitable for local educational use. Natural areas of local significance may reflect the patterns of former vegetation, or serve as examples of the influence of human settlements on vegetation. These natural areas may also be expected to increase in value if protected in an undisturbed condition.

Those natural areas which represent the best remaining examples of plant and animal communities, geological sites, or archaeological sites may be designated as state scientific areas (SA). These areas have been determined to be of at least statewide significance and have been so designated by the Scientific Areas Preservation Council.

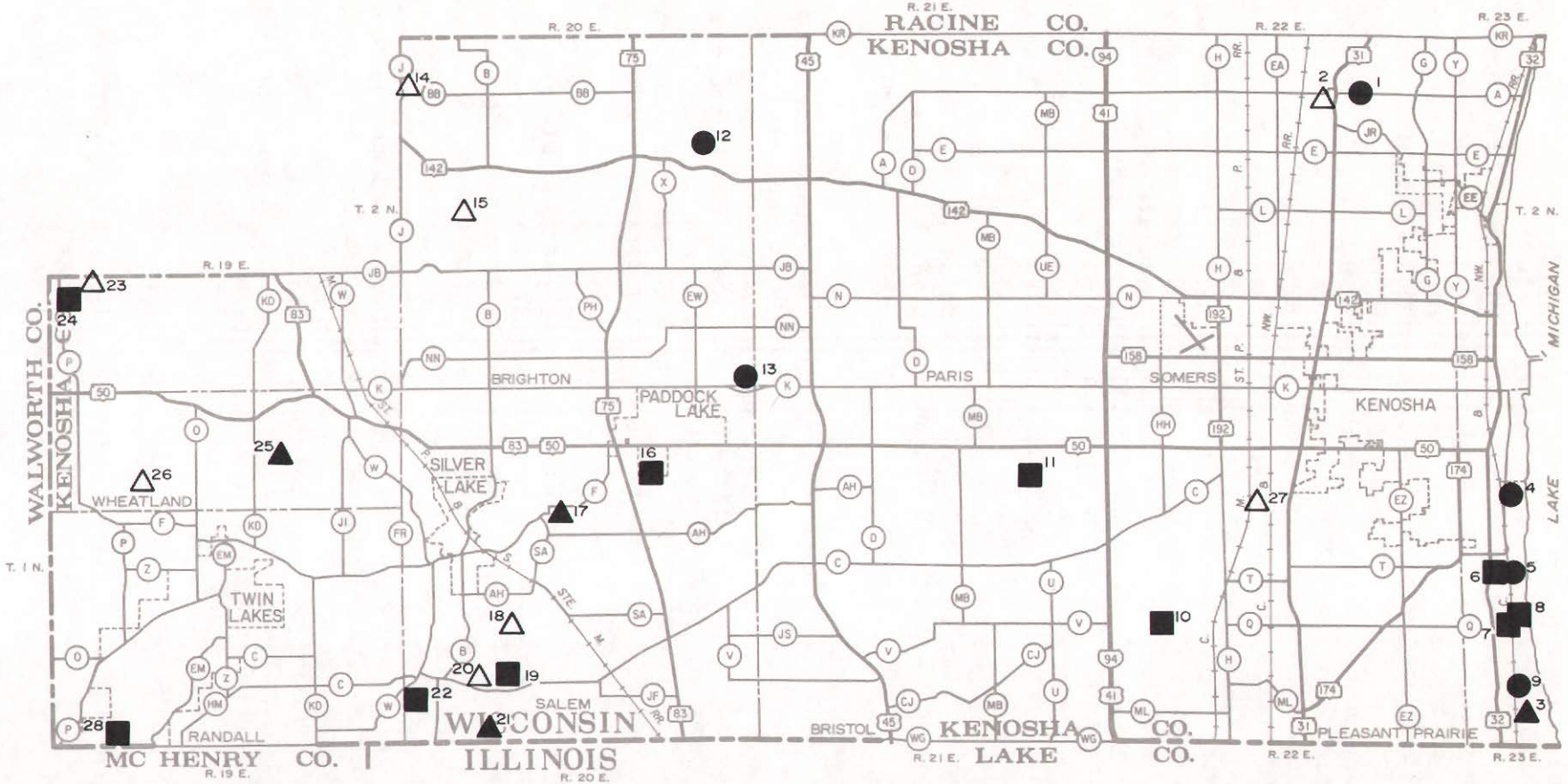
A total of 28 natural areas have been identified and ranked in Kenosha County (see Map 18). Four of these sites--Chiwaukee Prairie in the Town of Pleasant Prairie, Silver Lake Bog and Peat Lake in the Town of Salem, and New Munster Bog Island in the Town of Wheatland--have been designated as state scientific areas by the Wisconsin Scientific Areas Preservation Council. A description of the natural areas in Kenosha County is presented in Table 38.

ENVIRONMENTAL CORRIDORS

One of the most important tasks completed under the regional planning effort has been the identification and delineation of those areas in southeastern Wisconsin which contain concentrations of recreational, aesthetic, ecological,

Map 18

SCIENTIFIC AND NATURAL AREAS IN KENOSHA COUNTY: 1980



LEGEND

- ▲ STATE SCIENTIFIC AREA (SA)
- ● NATURAL AREA OF STATEWIDE OR GREATER SIGNIFICANCE (NA-1)
- ■ NATURAL AREA OF COUNTYWIDE OR REGIONAL SIGNIFICANCE (NA-2)
- △ NATURAL AREA OF LOCAL SIGNIFICANCE (NA-3)
- 15 SITE NUMBER (SEE TABLE 38)

GRAPHIC SCALE
0 1 2 MILES
0 4000 8000 12000 FEET

Source: Wisconsin Department of Natural Resources and SEWRPC.

Table 38

SCIENTIFIC AND NATURAL AREAS IN KENOSHA COUNTY: 1980

Number on Map 18	Name	U. S. Public Land Survey Town, Range Section, Quarter Section	Acreage	Classification Code	Description
1	Petrifying Springs Hardwoods	T2N, R22E SE, SW Sec. 2 NE, NW Sec. 11	140	NA-1	A rich southern mesic to dry-mesic hardwood forest containing white oak, red oak, ash, sugar maple, and basswood. The undulating topography is covered by a very diverse spring flora. One of the better woodland areas remaining in southeastern Wisconsin.
2	Hawthorne Hollow	T2N, R22E SE Sec. 3 NE Sec. 10	50	NA-3	A lowland hardwood forest bordering Pike Creek. Area includes a 10-acre prairie.
3	Chiwaukee Prairie	T1N, R23E NE, SE Sec. 31 NW, SW Sec. 32	271	SA and NA-1	Rich prairie and marsh on swell and swale topography created when the level of glacial Lake Michigan was lowered in stages. Over 400 plant species have been documented in the prairie, some of which are very rare in the State. Scattered oaks in portions give a savanna aspect to the tract. A National Natural Landmark and one of the most important prairies in Wisconsin. Critical plant species present. The officially designated state scientific area represents an 82-acre portion of this area adjacent to the Chicago & North Western Railway right-of-way.
4	Kenosha Sand Dunes	T1N, R23E SE Sec. 7 SW Sec. 8	94	NA-1	One-half mile of frontage on Lake Michigan containing well-developed dunes and dune succession patterns (fore dunes to swale to wet prairie). The diversity of beach plant species is good. Some ditching has been done behind the dune area, but it remains in good condition and is an excellent observation area for migrating shore birds. An ancient hardwood forest bed was discovered in this area in the early 1960's as wave erosion exposed sections of the shoreline. The Lake Michigan shore has now been riprapped.
5	Carol Beach Low Prairie and Panne'	T1N, R23E SE Sec. 18 NE Sec. 19	35	NA-1	A rich low prairie and calcareous fen on a dune and swale topography. Critical plant species present.
6	Carol Beach Estates Prairie	T1N, R23E SE Sec. 18 NE Sec. 19	14	NA-2	A rich wet to mesic prairie with some shrub invasion on sandy soils. Critical plant species present.
7	Carol Beach Prairie	T1N, R23E SE Sec. 19 SW Sec. 20 NW Sec. 29 NE Sec. 30	66	NA-2	A rich complex of low to dry prairie with fresh (wet) meadow, sedge meadow, shrub carr, and shallow marsh communities on a dune and swale topography. Critical plant species present.
8	Barnes Creek Dunes and Panne'	T1N, R23E SW Sec. 20	9	NA-2	An unusual mixture of dry prairie and calcareous fen plant species on a dune and swale topography adjacent to Barnes Creek. Critical plant species present.

Table 38 (continued)

Number on Map 18	Name	U. S. Public Land Survey Town, Range Section, Quarter Section	Acreage	Classification Code	Description
9	Tobin Road Prairie	T1N, R23E SE Sec. 30	4	NA-1	A portion of the northern Chiwaukee Prairie area containing a rich low prairie on a dune and swale topography. Critical plant species present.
10	Des Plaines River Marsh and Woods	T1N, R22E SE Sec. 18 NE, NW, SW, SE Sec. 19 NW, SW Sec. 20 NE, NW, SW Sec. 29 NE, SE Sec. 30 NE Sec. 31 NW Sec. 32	910	NA-2	Woodland containing remnant oak-shagbark hickory with old growth of both red and white oak and black cherry timber. The undergrowth is generally shrubs, with hawthorns, black cherry, and raspberry dominant. An old meander of the Des Plaines River divides the woodland, now containing various wetland species. To the south there is an extensive wetland, ditched in many places but not traversed by a highway for nearly two miles. Significant because of its open space and wildlife habitat, it is one of the longest stretches of river without a highway in the County.
11	Benedict Prairie	T1N, R21E SE Sec. 11	6	NA-2	A small, but rich, six-acre wet-mesic to mesic prairie remnant located in an abandoned railroad right-of-way.
12	Friendship Lake and Marsh	T2N, R20E SW Sec. 12 NW Sec. 13	55	NA-1	A small, but good-quality, kettle lake and marsh. Valuable feeding and nesting habitat for a variety of marshland birds.
13	Harris Tract	T1N, R20E NE Sec. 1 T2N, R20E NE, SE Sec. 36 T2N, R21E NW, SW Sec. 31	150	NA-1	A large, good-quality marsh adjacent to Brighton Creek. A grazed oak opening is located to the east of the marsh. Managed by the University of Wisconsin-Parkside.
14	Henning Tract	T2N, R20E SW Sec. 6	10	NA-3	A small, moderate-quality lowland hardwoods and bog.
15	Bong Prairie Remnant	T2N, R20E NW Sec. 20	6	NA-3	A small, low prairie remnant.
16	Hooker Lake Marsh	T1N, R20E NE, NW, SW Sec. 11	60	NA-2	A large, deep and shallow marsh in Hooker Lake.
17	Silver Lake Bog	T1N, R20E NE Sec. 16	20	SA	A southern bog lake lacking many of the typical species of its type farther north, but with well-defined zones of succession and a number of unusual species for the Region. Poison sumac and a quaking sphagnum bog mat make visitation to the open water center a challenge. Under the shade of tamaracks grow such typical bog species as pitcher plant, round-leaved sundew, cranberry, and Michigan holly.
18	Valmar Marsh	T1N, R20E SE Sec. 20, SW Sec. 21 NW Sec. 28, NE Sec. 29	105	NA-3	Cattail marsh adjacent to Camp Lake. Some ditching.

Table 38 (continued)

Number on Map 18	Name	U. S. Public Land Survey Town, Range Section, Quarter Section	Acreage	Classification Code	Description
19	Camp Lake Marsh	T1N, R20E SW Sec. 28 NE, SE Sec. 29 NE Sec. 32, NW Sec. 33	125	NA-2	Marshland ditched, but rich in aquatic plants and waterfowl.
20	Kriska Property Marsh	T1N, R20E SE, SW Sec. 29 NE, NW Sec. 32	100	NA-3	A good-quality deep and shallow marsh. Some ditching attempts.
21	Peat Lake	T1N, R20E SE, SW Sec. 32	125	SA	Shallow, slightly alkaline lake about 12 acres in size located in ground moraine. The muck bottom lake is surrounded by a wide belt of sedge meadow and cattail marsh, making it a valuable nesting and resting area for a variety of wetland bird species. This is one of the few undeveloped lakes in Kenosha County which is isolated from roads and homes.
22	Stopa Fen	T1N, R20E NW Sec. 31	5	NA-2	A small calcareous fen and springs located adjacent to the Fox (Illinois) River. Reportedly contains a large population of white lady's slipper orchids. Presently threatened by shrub invasion.
23	Dyer Lake Goat Prairie	T2N, R19E NE Sec. 30	3	NA-3	A small, dry prairie remnant located on steep slopes. Reportedly contains kitten-tails (Besseya bullii).
24	Dyer Lake and Marsh	T2N, R19E NE, NW, SW Sec. 30	105	NA-2	A small, undeveloped lake with a good-quality successional wetland complex of deep and shallow marsh, southern sedge meadow, and shrub carr.
25	New Munster Bog Island	T1N, R19E SW Sec. 2, SE Sec. 3 NE Sec. 10, NW Sec. 11	55	SA	Lowland tract containing a diversity of southern Wisconsin shrub and timber swamp types, surrounding an upland knoll wooded with a dry-mesic forest. Yellow birch occurs in the swamp at the southern edge of its range. The vegetational diversity supports a wide array of nesting birds, as evidenced by breeding bird censuses.
26	Powers Lake Tamarack	T1N, R19E NE, NW, SW, SE Sec. 8	235	NA-3	A large but disturbed sedge marsh and tamarack-shrub carr wetland complex.
27	Bain Station Road Prairie	T1N, R22E SE, SW Sec. 9	10	NA-3	A small wet-mesic to mesic prairie remnant dominated by big bluestem grass, switch grass, and prairie dock.
28	Elizabeth Lake Wetlands	T1N, R19E SE Sec. 31, SW Sec. 32	45	NA-2	A large, good-quality sedge meadow, shrub carr, and shallow and deep marsh complex.

Source: Wisconsin Department of Natural Resources and SEWRPC.

and cultural resources, and which therefore should be preserved and protected. Such areas normally include one or more of the following seven elements of the natural resource base which are essential to the maintenance of both the ecological balance and the natural beauty of southeastern Wisconsin: 1) lakes, rivers, and streams and their associated floodlands and shorelands; 2) wetlands; 3) woodlands; 4) prairies; 5) wildlife habitat areas; 6) wet, poorly drained, or organic soils; and 7) rugged terrain and high-relief topography. While the foregoing elements constitute integral parts of the natural resource base, there are five additional elements which, although not part of the natural resource base per se, are closely related to or centered on that base and are a determining factor in identifying and delineating areas with recreational, aesthetic, ecological, and cultural values. These five additional elements are: 1) existing park and open space sites; 2) potential park and open space sites; 3) historic sites; 4) significant scenic areas and vistas; and 5) natural and scientific areas.

The delineation of these 12 natural resource and natural resource-related elements on a map results in an essentially linear pattern of relatively narrow, elongated areas which have been termed "environmental corridors" by the Regional Planning Commission. Primary environmental corridors include a wide variety of the important resource and resource-related elements and are at least 400 acres in size, two miles long, and 200 feet wide. Secondary environmental corridors generally connect with primary environmental corridors and are at least 100 acres in size and one mile long.

In any discussion of environmental corridors and important natural resource features, it is important to point out that there are many interacting relationships between living organisms and their environment. The destruction of any important element of the total environment may lead to a chain reaction of deterioration and destruction. The drainage of wetlands, for example, may have far-reaching effects, since such drainage may destroy fish spawning grounds, wildlife habitat areas, groundwater recharge areas, and the natural filtration and floodwater storage areas of interconnecting stream systems. The resulting deterioration of surface water quality may, in turn, lead to a deterioration of the quality of the groundwater, which serves as a source of domestic, municipal, and industrial water supply and upon which low flows of rivers and streams may depend. Similarly, the destruction of woodland cover may result in soil erosion, stream siltation, more rapid runoff, and increased flooding, as well as the destruction of wildlife habitat. Although the effects of any one of the environmental changes may not in and of itself be overwhelming, the combined effects must eventually lead to serious deterioration of the supporting natural resource base and of the overall quality of the environment for life. The need to maintain the integrity of the remaining environmental corridors and important natural resource features within Kenosha County should thus be apparent.

It should be noted that environmental corridors are generally poorly suited for intensive urban development. The intrusion of intensive urban land uses into the corridors can, because of the soil limitations, high groundwater tables, and flood hazards present, result in the creation of such problems as faulty foundations for pavements and structures, wet basements, excessive clear water infiltration and inflow into sanitary sewerage systems, and poor drainage. Protection of the environmental corridors from urban encroachment serves to minimize these serious and costly developmental problems.

Primary Environmental Corridors

Primary environmental corridors in Kenosha County generally lie along major stream valleys and around major lakes (see Map 19). These corridors contain important woodlands, wetlands, surface water, and wildlife habitat areas in the County; are, in effect, a composite of the best individual elements of the natural resource base; and have truly immeasurable environmental and recreational value.

In 1980 primary environmental corridors encompassed 27,970 acres in Kenosha County, or 16 percent of the total area of the County. Of this total acreage, 43 percent consisted of wetlands, 18 percent of woodlands, 19 percent of other open lands, 16 percent of surface water, and 3 percent of urban lands (see Table 39). Urban lands within the primary environmental corridors consist primarily of developed shorelands around the inland lakes and Lake Michigan.

As indicated in Table 40, the primary environmental corridor acreage in the minor civil divisions in Kenosha County ranged from 250 acres in the Village of Paddock Lake to 6,630 acres in the Town of Salem.

Secondary Environmental Corridors

The secondary environmental corridors in Kenosha County are generally located along intermittent streams or serve as links between segments of primary environmental corridors. These corridors contain a variety of resource elements, often remnant resources from former primary environmental corridors which have been developed for agricultural purposes or urban land uses. Secondary environmental corridors facilitate surface water drainage, maintain "pockets" of natural resource features, and provide for the movement of wildlife, as well as for the movement and dispersal of seeds for a variety of plant species.

In 1980, secondary environmental corridors encompassed 6,134 acres in Kenosha County, or 3 percent of the total area of the County. Of this total acreage, 36 percent consisted of wetlands, 32 percent of woodlands, 30 percent of other open land, 2 percent of surface water, and less than 1 percent of urban lands. As indicated in Table 40, the secondary environmental corridor acreage in the minor civil divisions in Kenosha County ranged from zero in the Village of Silver Lake to 1,074 in the Town of Pleasant Prairie.

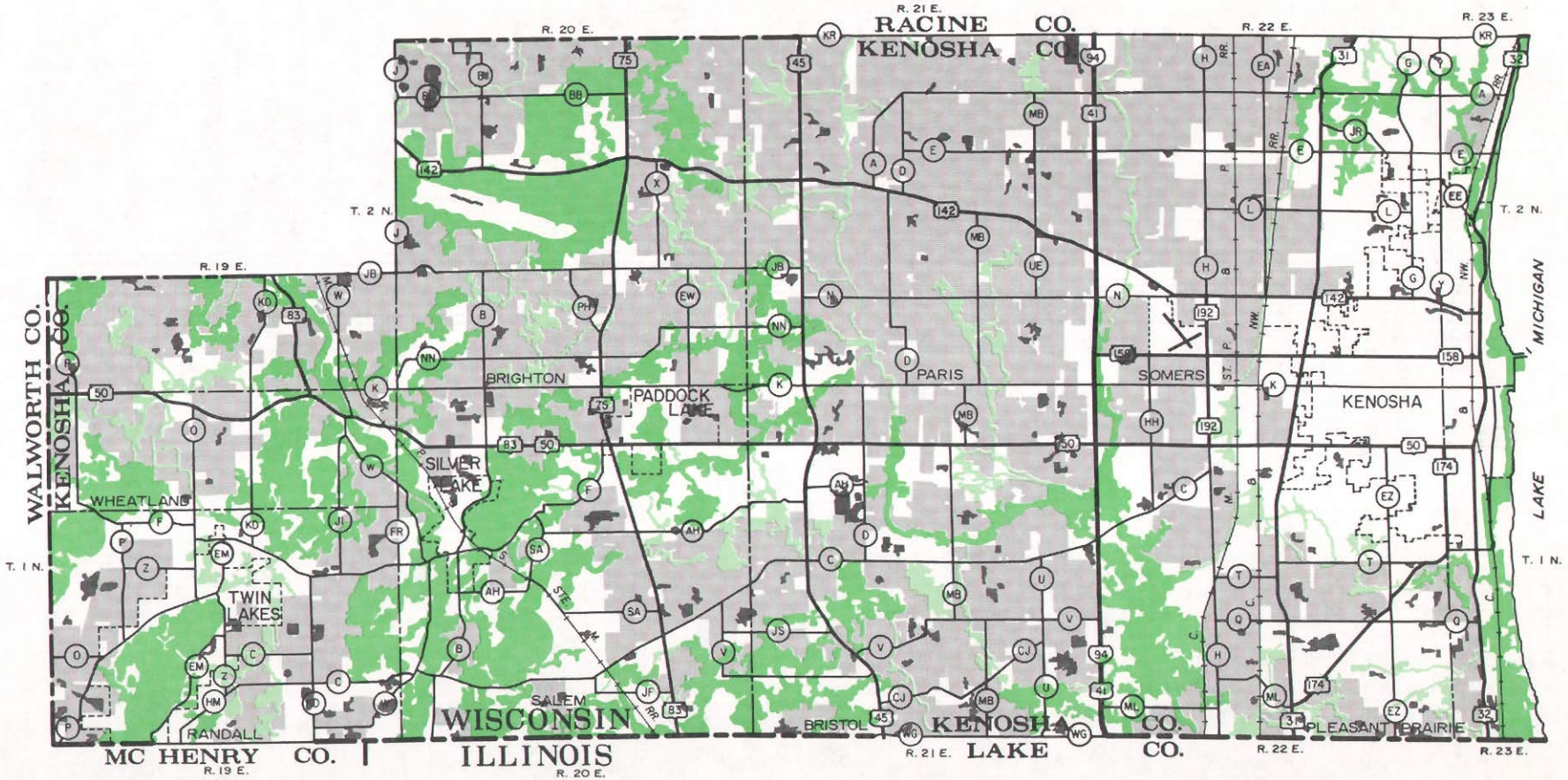
Isolated Natural Features

In addition to the primary and secondary environmental corridors, other, small concentrations of natural resource base elements exist within the County. These resource base elements are isolated from the environmental corridors by urban development or agricultural uses and, although separated from the environmental corridor network, may have important natural values. Isolated natural features may provide the only available wildlife habitat in an area, provide good locations for local parks and nature study areas, and lend aesthetic character and natural diversity to an area.

In 1980 isolated natural areas encompassed a total of 3,869 acres in Kenosha County, or 2 percent of the total area of the County. Of this total acreage, 33 percent consisted of wetlands, 52 percent of woodlands, 11 percent of other open lands, 4 percent of surface water, and less than 1 percent of urban lands.

Map 19

ENVIRONMENTAL CORRIDORS, ISOLATED NATURAL AREAS, AND PRIME AGRICULTURAL LANDS IN KENOSHA COUNTY: 1980



LEGEND

- PRIMARY ENVIRONMENTAL CORRIDOR
- SECONDARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL AREA
- PRIME AGRICULTURAL LAND

GRAPHIC SCALE
0 1 2 MILES
0 4000 8000 12000 FEET

Source: SEWRPC.

Table 39

LAND USE WITHIN PRIMARY ENVIRONMENTAL CORRIDORS, SECONDARY ENVIRONMENTAL CORRIDORS, AND ISOLATED NATURAL AREAS IN KENOSHA COUNTY: 1980

Land Use	Primary Environmental Corridor		Secondary Environmental Corridor		Isolated Natural Area	
	Acres	Percent of Total	Acres	Percent of Total	Acres	Percent of Total
Wetlands	12,099	43.3	2,188	35.7	1,263	32.7
Upland Woodlands	5,004	17.9	1,953	31.8	2,023	52.3
Other Open Lands	5,384	19.2	1,851	30.2	438	11.3
Urban Lands	911	3.3	27	0.4	8	0.2
Surface Water	4,572	16.3	115	1.9	137	3.5
Total[a]	27,970	100.0	6,134	100.0	3,869	100.0

[a]Acreages include the open space preservation area identified in the land use management plan for the Chiwaukee Prairie-Carol Beach area of the Town of Pleasant Prairie, documented in SEWRPC Community Assistance Planning Report No. 88, A Land Use Management Plan for the Chiwaukee Prairie-Carol Beach Area of the Town of Pleasant Prairie, Kenosha County, Wisconsin.

Source: SEWRPC.

Table 40

ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL AREAS IN KENOSHA COUNTY BY CIVIL DIVISION: 1980

Civil Division	Primary Environmental Corridor		Secondary Environmental Corridor		Isolated Natural Area	
	Acres	Percent of County Total	Acres	Percent of County Total	Acres	Percent of County Total
City						
Kenosha	345	1.2	12	0.2	98	2.5
Villages						
Paddock Lake	250	0.9	2	--[a]	20	0.5
Silver Lake	252	0.9	--	--	76	2.0
Twin Lakes	1,533	5.5	236	3.9	31	0.8
Towns						
Brighton	5,441	19.5	903	14.7	457	11.8
Bristol	2,720	9.7	994	16.2	786	20.3
Paris	634	2.3	1,062	17.3	459	11.9
Pleasant Prairie[b]	3,437	12.3	1,074	17.5	560	14.5
Randall	1,996	7.1	483	7.9	491	12.7
Salem	6,630	23.7	362	5.9	402	10.4
Somers	1,181	4.2	309	5.0	226	5.8
Wheatland	3,551	12.7	697	11.4	263	6.8
Kenosha County	27,970	100.0	6,134	100.0	3,869	100.0

[a]Less than 0.1 percent.

[b]Acreages include the open space preservation area identified in the land use management plan for the Chiwaukee Prairie-Carol Beach area of the Town of Pleasant Prairie, documented in SEWRPC Community Assistance Planning Report No. 88, A Land Use Management Plan for the Chiwaukee Prairie-Carol Beach Area of the Town of Pleasant Prairie, Kenosha County, Wisconsin.

Source: SEWRPC.

AGRICULTURAL RESOURCES

Existing Farm Units

The number of farms in Kenosha County decreased from 750 farms in 1970 to 570 farms in 1980. This represents a decrease of 180 farms, or 24 percent of the total farms that existed in 1970. This loss of farms may be attributed to, among other factors, the retiring of operators, economic disadvantages created by increased property taxes as the County continues to urbanize, the proliferation of low-density residential development which interferes with the continued agricultural use of land, and the increased cost of land and machinery.

While the actual number of farms in Kenosha County has declined in recent years, the average farm size has increased steadily from about 162 acres in 1970 to 193 acres in 1980, an increase of about 19 percent. This increase in farm size may be attributed in part to advanced agricultural practices which allow the farmer to more efficiently and economically farm land.

Agricultural Lands

Agricultural lands, including lands used for cropland, pasture, orchards and nurseries, and farm buildings, encompassed about 107,300 acres of Kenosha County in 1980, or 60 percent of the total area of the County (see Table 41). The agricultural land acreage in the minor civil divisions in Kenosha County ranged from less than 1,000 acres each in the City of Kenosha and Villages of Paddock Lake, Silver Lake, and Twin Lakes to almost 20,000 acres in the Town of Paris.

In 1981, Kenosha County, with the assistance of the Regional Planning Commission, completed a county farmland preservation plan, the primary purpose of which was the identification of those farmlands which should be preserved for continued agricultural use. Under that planning program, prime agricultural lands were identified on the basis of the agricultural capabilities of the soils, the size of the individual farm unit, and the size of the overall farming area. Specifically, to be considered prime agricultural land, farm units must have met the following criteria: 1) the farm unit must be at least 35 acres in area; 2) at least 50 percent of the farm unit must be covered by soils which meet the U. S. Department of Agriculture, Soil Conservation Service (SCS), standards for national prime farmland or farmland of statewide importance; and 3) the farm unit must occur in blocks of similar farmland of at least 100 acres in size. Farmland meeting these criteria are shown on Map 19. These areas encompassed a total of 76,252 acres in 1980, or about 71 percent of all county farmland, and 43 percent of the total area of the County.

SUMMARY

This chapter has presented information on the natural resource base of Kenosha County. The major findings of this chapter are summarized below.

1. Kenosha County has a continental climate which spans four seasons, one season succeeding the other through varying time periods of unsteady transition. Monthly mean temperatures range from just over 20°F in

Table 41

AGRICULTURAL LAND IN KENOSHA COUNTY BY CIVIL DIVISION: 1980

Civil Division	Agricultural Lands					
	Prime		Other [a]		Total	
	Acres	Percent of County	Acres	Percent of County	Acres	Percent of County
City						
Kenosha.....	--	--	690	2.2	690	0.7
Villages						
Paddock Lake.....	304	0.4	19	0.1	323	0.3
Silver Lake.....	--	--	154	0.5	154	0.2
Twin Lakes.....	261	0.4	627	2.0	888	0.8
Towns						
Brighton.....	11,779	15.5	2,096	6.8	13,875	12.9
Bristol.....	11,779	15.5	4,396	14.2	16,175	15.1
Paris.....	17,796	23.3	1,984	6.4	19,780	18.4
Pleasant Prairie...	6,740	8.8	5,534	17.8	12,274	11.4
Randall.....	4,504	5.9	2,578	8.3	7,082	6.6
Salem.....	5,973	7.8	4,356	14.0	10,329	9.6
Somers.....	9,919	13.0	5,726	18.4	15,645	14.6
Wheatland.....	7,197	9.4	2,889	9.3	10,086	9.4
County Total	76,252	100.0	31,049	100.0	107,301	100.0

[a] Includes farm buildings.

Source: SEWRPC.

January to just over 70°F in July and August. The total average annual precipitation is just over 31 inches, expressed as water equivalent.

2. Physiographic features, or surficial land forms, have been determined largely by the underlying bedrock and the overlying glacial deposits of the County. The Niagara cuesta on which the County lies is a gently eastward sloping bedrock surface, with the bedrock surface along the eastern border of the County being generally lower in elevation--by about 200 feet to 250 feet--than along the western border. Glacial deposits overlying the bedrock formations form the irregular surface topography of the County, characterized by rounded hills or groups of hills and ridges, particularly in the western one-third of the County; broad undulating plains; and poorly drained wetlands.

   Surface elevations within the County range from a high of approximately 990 feet above National Geodetic Vertical Datum (NGVD) (mean sea level datum) in western Kenosha County to approximately 580 feet above NGVD at the shoreline of Lake Michigan. Most of the County is covered by gently sloping ground moraine--heterogeneous material deposited beneath the ice, end moraines consisting of material deposited at the forward margins of the ice sheet, and outwash plains formed by the action of flowing glacial meltwater.

3. The soils in Kenosha County have a wide range of properties--from organic, poorly drained soils to loamy, well-drained soils. Soil suitability interpretations for specific types of urban and rural land uses

are important to physical development planning. Much of Kenosha County exhibits severe ard very severe limitations for certain types of residential development. In this regard, approximately 60,000 acres, or about 35 percent of the land area of the County, are covered by soils which are poorly suited for residential development with public sanitary sewer service or, stated differently, poorly suited for residential development of any kind. Approximately 95,700 acres, or about 55 percent of the land area of the County, are covered by soils which are poorly suited for residential development served by conventional onsite soil absorption sewage disposal systems on lots one acre or larger in size. Approximately 149,400 acres, or about 86 percent of the land area of the County, are covered by soils poorly suited for residential development served by conventional onsite soil absorption sewage disposal systems on lots smaller than one acre in size.

4. The federal government has established ambient air quality standards which are intended to protect human health and public welfare by preventing damage to vegetation and real and personal property, and improving visibility. Based upon these standards, nonattainment areas--that is, areas having air quality conditions which do not meet the prescribed standards--have been identified. As of 1985, all of Kenosha County was designated as an ozone nonattainment area. In addition, a small portion of the County, consisting of the central area of the City of Kenosha, was designated as a secondary nonattainment area for particulate matter.

5. Groundwater resources constitute an extremely valuable element of the natural resource base. There are three major aquifers within the Southeastern Wisconsin Region. From land surface downward, they are the: 1) sand and gravel aquifer; 2) dolomite aquifer; and 3) sandstone aquifer. Because of their relative nearness to the land surface and their intimate hydraulic interconnection, the first two aquifers are often considered to be a single aquifer commonly known as the "shallow aquifer." The latter, accordingly is known as the "deep aquifer." The deep sandstone aquifer is a higher quality source of water. However, use of that aquifer is more costly because of the depth of the wells required, particularly as water levels continue to decline as a result of pumping in southeastern Wisconsin and northeastern Illinois. In 1973-1974, the potentiometric surface of the sandstone aquifer--or the altitude to which water rose in wells in the aquifer--ranged from an elevation of about 600 feet National Geodetic Vertical Datum (NGVD) along the western border of the County to less than 450 feet NGVD in the extreme southeast corner of the County. The shallow aquifer, while less costly to tap than the deep sandstone aquifer, provides a less dependable source of water supply--being locally recharged--and is more subject to contamination.

6. Surface water resources, consisting of lakes and streams and their associated floodlands, form a particularly important element of the natural resource base of Kenosha County. There are 16 major lakes--that is, lakes having 50 acres or more of surface water area--in the County, ranging in size from 52 acres (Voltz Lake) to 682 acres (Elizabeth Lake). In addition, there are 12 named lakes and ponds in the County having less than 50 acres of surface water. There are approximately 106 miles of major streams in the County.

Floodlands are typically wide, gently sloping areas contiguous with, and usually lying on both sides of, a river or stream channel which are subject to inundation during storm events. For planning and regulatory purposes, floodlands are normally defined as the areas, excluding the channel, subject to inundation by the 100-year recurrence interval flood event--that is, the event that would be reached or exceeded in severity on the average of once every 100 years. Floodland areas are generally not well suited for intensive urban development because of flood hazards, high water tables, and inadequate soils. Floodlands are, however, generally prime locations for park and open space areas. About 12,300 acres--not including surface water in existing stream channels or lake beds--or 6.9 percent of the total area of Kenosha County, are located within the 100-year recurrence interval flood hazard area.

7. Woodlands covered a combined area of 9,572 acres in Kenosha County in 1980, or 5.4 percent of the County. Woodlands in the County serve scenic, wildlife, open space, educational, and recreational uses, and contribute to the quality of the environment as measured in terms of clean air, clean water, and scenic beauty.

8. Wetlands covered a combined area of 15,612 acres in Kenosha County in 1980, or 8.8 percent of the total area of the County. Wetlands contribute to the maintenance of good water quality, provide wildlife habitat, and are important for overall environmental health and diversity. Conversely, wetlands have severe limitations for residential, commercial, and industrial development. In general, these limitations are related to the high compressibility and instability, high water table, low bearing capacity, and high shrink-swell potential of wetland soils.

9. Wildlife in Kenosha County includes upland game and nongame species such as rabbit, squirrel, and woodchuck; predators such as fox and raccoon; game birds including pheasant; and marsh furbearers such as muskrat. Other nongame species include songbirds, such as the cardinal and wood thrush, and marsh- and shorebirds, such as the great blue heron and killdeer. In addition, water fowl are present and deer are found in some areas. The remaining habitat and wildlife residing therein provide opportunities for recreational, educational, and scientific activities, and constitute an aesthetic asset to the County. Wildlife habitat areas in Kenosha County encompassed 22,065 acres in 1980, or 12 percent of the total area of the County. High-value wildlife habitat comprised 10,307 acres, or 47 percent of the total wildlife habitat; medium-value wildlife habitat comprised 5,893 acres, or 27 percent of the total; and low-value wildlife habitat comprised 5,865 acres, or 26 percent of the total.

10. Kenosha County encompasses a wide range of public and private outdoor recreation and related open space sites. There were 200 public outdoor recreation and open space sites, encompassing 9,754 acres, in Kenosha County in 1985. One of the sites, the state-owned Bong Recreation Area in the Town of Brighton, encompassed 4,515 acres, or 46 percent of the total public outdoor recreational site acreage. In addition, there were 117 private outdoor recreation and open space sites encompassing 3,385 acres in 1985.

11. As of 1984, a total of 10 sites in Kenosha County were listed on the National Register of Historic Places, the official list of the nation's and State's historical, architectural, and archaeological sites and structures worthy of preservation maintained by the U. S. Department of the Interior. Eight of these sites are historic structures located in the City of Kenosha. The other two sites are archaeological sites located in the Town of Pleasant Prairie. In addition to the sites listed on the National Register of Historic Places, an inventory of historic sites in Wisconsin is maintained by the State Historical Society of Wisconsin in Madison. The State Historical Society files identify more than 300 historical sites--including structures, archaeological features, and other cultural features--in Kenosha County.

12. One of the most important tasks completed under the regional planning effort has been the identification and delineation of those areas in southeastern Wisconsin containing concentrations of recreational, aesthetic, ecological, and cultural resources, and which therefore should be preserved and protected. Such areas normally include one or more of the following seven elements of the natural resource base which are essential to the maintenance of both the ecological balance and the natural beauty of southeastern Wisconsin: 1) lakes, rivers, and streams and their associated floodlands and shorelands; 2) wetlands; 3) woodlands; 4) prairies; 5) wildlife habitat areas; 6) wet, poorly drained, or organic soils; and 7) rugged terrain and high-relief topography. While the foregoing elements constitute integral parts of the natural resource base, there are five additional elements which, although not part of the natural resource base per se, are closely related to or centered on that base and are a determining factor in identifying and delineating areas with recreational, aesthetic, ecological, and cultural values. These five additional elements are: 1) existing park and open space sites; 2) potential park and open space sites; 3) historic sites; 4) significant scenic areas and vistas; and 5) natural and scientific areas.

    The delineation of these 12 natural resource and natural resource-related elements on a map results in an essentially linear pattern of relatively narrow, elongated areas which have been termed "environmental corridors" by the Regional Planning Commission. The preservation of these corridors is important to the maintenance of a high level of environmental quality in the County, to the protection of its natural beauty, and to the provision of opportunities for scientific, educational, and recreational activities. The exclusion of urban development from these corridors will also avoid the creation of serious and costly developmental problems such as wet and flooded basements, foundation failures, and excessive clear water infiltration and inflow into sanitary sewerage systems.

    Primary environmental corridors include a wide variety of important resource and resource-related elements and are at least 400 acres in size, two miles long, and 200 feet wide. In 1980 primary environmental corridors encompassed 27,970 acres in Kenosha County, or 16 percent of the total area of the County. Of this total acreage, 43 percent consisted of wetlands, 18 percent of woodlands, 19 percent of other open lands, 16 percent of surface water, and 3 percent of urban land. Urban lands within the primary environmental corridors consist primarily of developed shorelands around the inland lakes and along Lake Michigan.

Secondary environmental corridors generally connect primary environmental corridors and are at least 100 acres in size and one mile long. In 1980 secondary environmental corridors encompassed 6,134 acres in Kenosha County, or 3 percent of the total area of the County. Of this total acreage, 36 percent consisted of wetlands, 32 percent of woodlands, 30 percent of other open land, 2 percent of surface water, and less than 1 percent of urban lands.

In addition to the primary and secondary environmental corridors, other, small concentrations of natural resource base elements exist within the County. These resource base elements are isolated from the environmental corridors by urban development or agricultural uses and, although segregated from the environmental corridor network, may have important natural values. Isolated natural features may provide the only available wildlife habitat in an area, provide good locations for local parks and nature study areas, and lend aesthetic character and natural diversity to an area. In 1980 isolated natural areas encompassed a total of 3,869 acres in Kenosha County, or 2 percent of the total area of the County.

13. Agricultural lands, including lands used for croplands, pastures, orchards and nurseries, and farm buildings, encompassed about 107,300 acres in Kenosha County in 1980, or 60 percent of the total area of the County. In 1981, Kenosha County, with the assistance of the Regional Planning Commission, completed a county farmland preservation plan, the primary purpose of which was the identification of those farmlands which should be preserved for continued agricultural use. Under that planning program, prime agricultural lands were identified on the basis of the agricultural capabilities of the soils, the size of the individual farm units, and the size of the overall farming areas. Specifically, to be considered prime agricultural lands, farm units must have met the following criteria: 1) the farm unit must be at least 35 acres in area; 2) at least 50 percent of the farm unit must be covered by soils which meet the U. S. Department of Agriculture, Soil Conservation Service, standards for national prime farmland or farmland of state importance; and 3) the farm unit must occur in blocks of similar farmland of at least 100 acres in size. Such areas encompassed a total of 76,252 acres in 1980, or about 71 percent of all farmland in Kenosha County and 43 percent of the total area of the County.

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Chapter IV

THE MAN-MADE ENVIRONMENT

INTRODUCTION

Kenosha County may be viewed as a complex of natural and man-made features which interact to form a continually changing environment for human life. The previous chapter of this report described the natural resource base of the County. This chapter describes the important man-made features of Kenosha County. More specifically, this chapter describes the land use base and existing housing stock of the County as well as the basic community facilities and services which support the existing settlement pattern, including the transportation system, public utility systems, outdoor recreation and related open space sites, solid waste disposal facilities, schools, public libraries, hospitals, and police and fire protection services.

LAND USE

Historic Growth Patterns

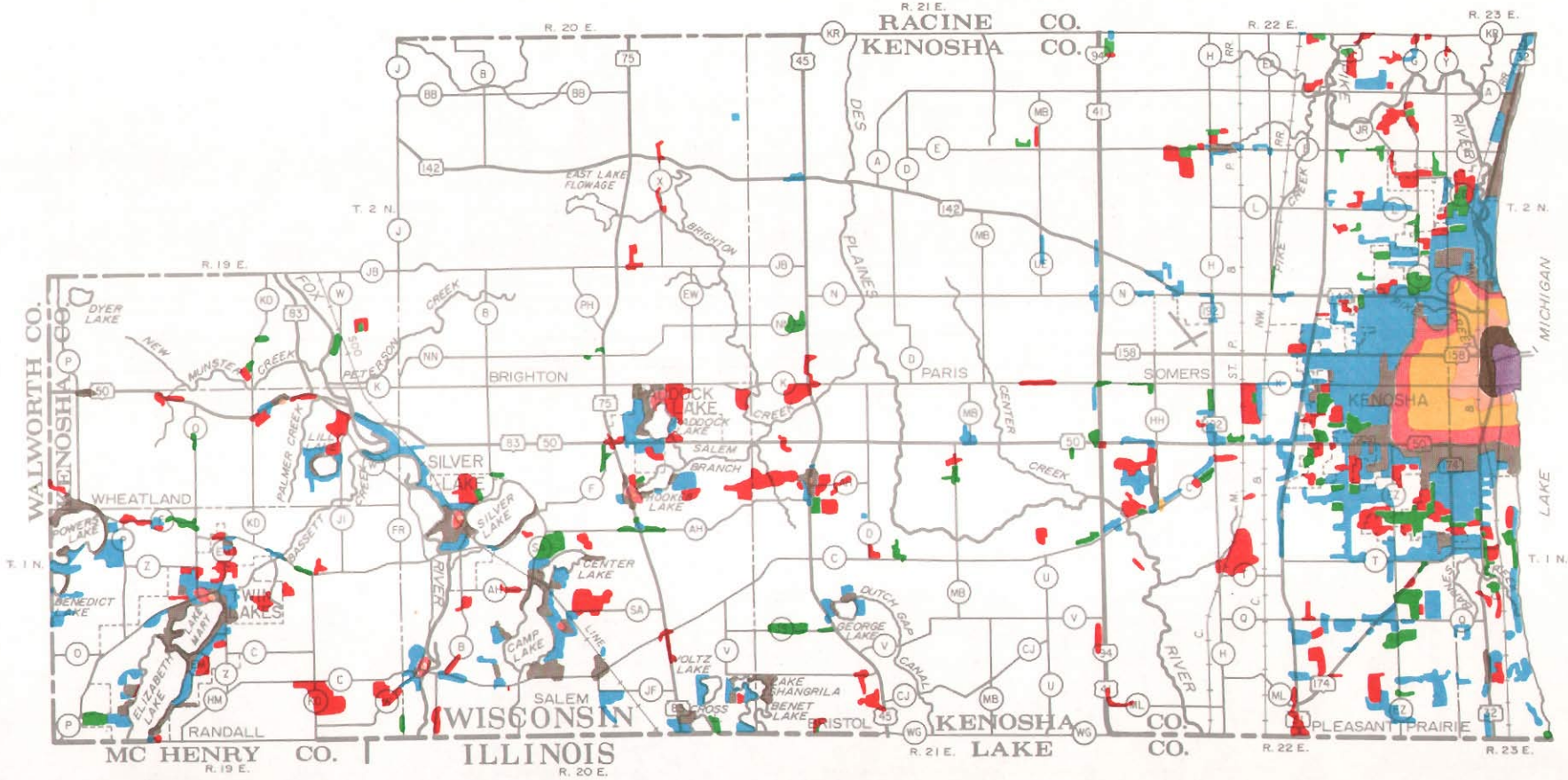
The amount of land devoted to urban use has increased steadily in Kenosha County since 1850 (see Map 20). Over the 100-year period from 1850 to 1950, urban development within Kenosha County occurred in relatively tight concentric rings outward from the central portion of the City of Kenosha and from the outlying smaller urban centers such as Paddock Lake, Silver Lake, and Twin Lakes. However, dramatic change in the pattern of urban development within Kenosha County occurred in about 1950. Urban development became discontinuous and scattered, with much urban development occurring in rural areas into which the extension of urban services and facilities is difficult and costly. This "urban sprawl" form of development reduces the viability of rural areas for agricultural uses and unnecessarily creates costly environmental and developmental problems.

Existing Land Use

While Map 20 summarizes urban growth in Kenosha County over the past 130 years, Map 21 and Figure 5 show more precisely the relationship between existing (1980) urban development and various categories of rural land use. The areas presently devoted to each major land use category within the County are indicated in Table 42. Although Kenosha County is a relatively urbanized county, in 1980 only about 31,100 acres, or about 17 percent of the total area of the County, were devoted to urban land uses. The largest urban land use category, residential, accounted for 15,128 acres, or about 8.5 percent of the total area of the County in 1980, and about 48.6 percent of the developed urban area of the County. Other urban land use categories include commercial--593 acres, or about 0.3 percent of the total area of the County and about 1.9 percent of the developed urban area of the County; industrial--888 acres,

Map 20

HISTORIC URBAN GROWTH IN KENOSHA COUNTY: 1850-1980



LEGEND

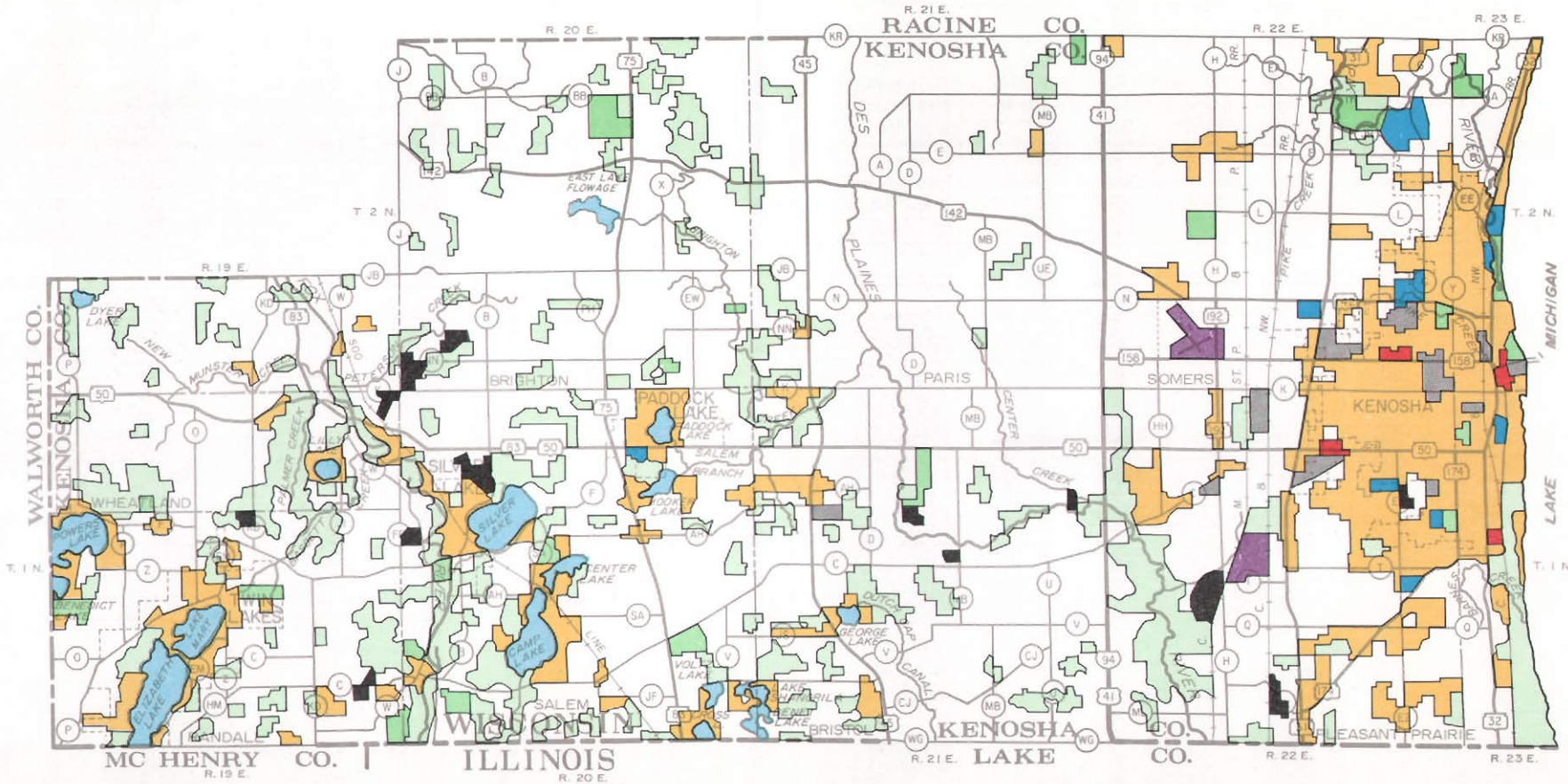
1850	1950
1880	1963
1900	1970
1920	1980
1940	

GRAPHIC SCALE
0 1 2 MILES
0 4000 8000 12000 FEET

Source: SEWRPC.

Map 21

EXISTING LAND USE IN KENOSHA COUNTY: 1980



LEGEND

PREDOMINANT LAND USE

- RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- EXTRACTIVE AND LANDFILL
- TRANSPORTATION, COMMUNICATION AND UTILITIES
- GOVERNMENTAL AND INSTITUTIONAL
- WOODLAND AND WETLAND
- PARK
- MAJOR LAKE
- AGRICULTURAL AND OPEN LAND

GRAPHIC SCALE

0 1 2 MILES

0 4000 8000 12000 FEET

Source: SEWRPC.

Figure 5

DISTRIBUTION OF URBAN AND RURAL LAND USE FOR MINOR CIVIL DIVISIONS IN KENOSHA COUNTY: 1980

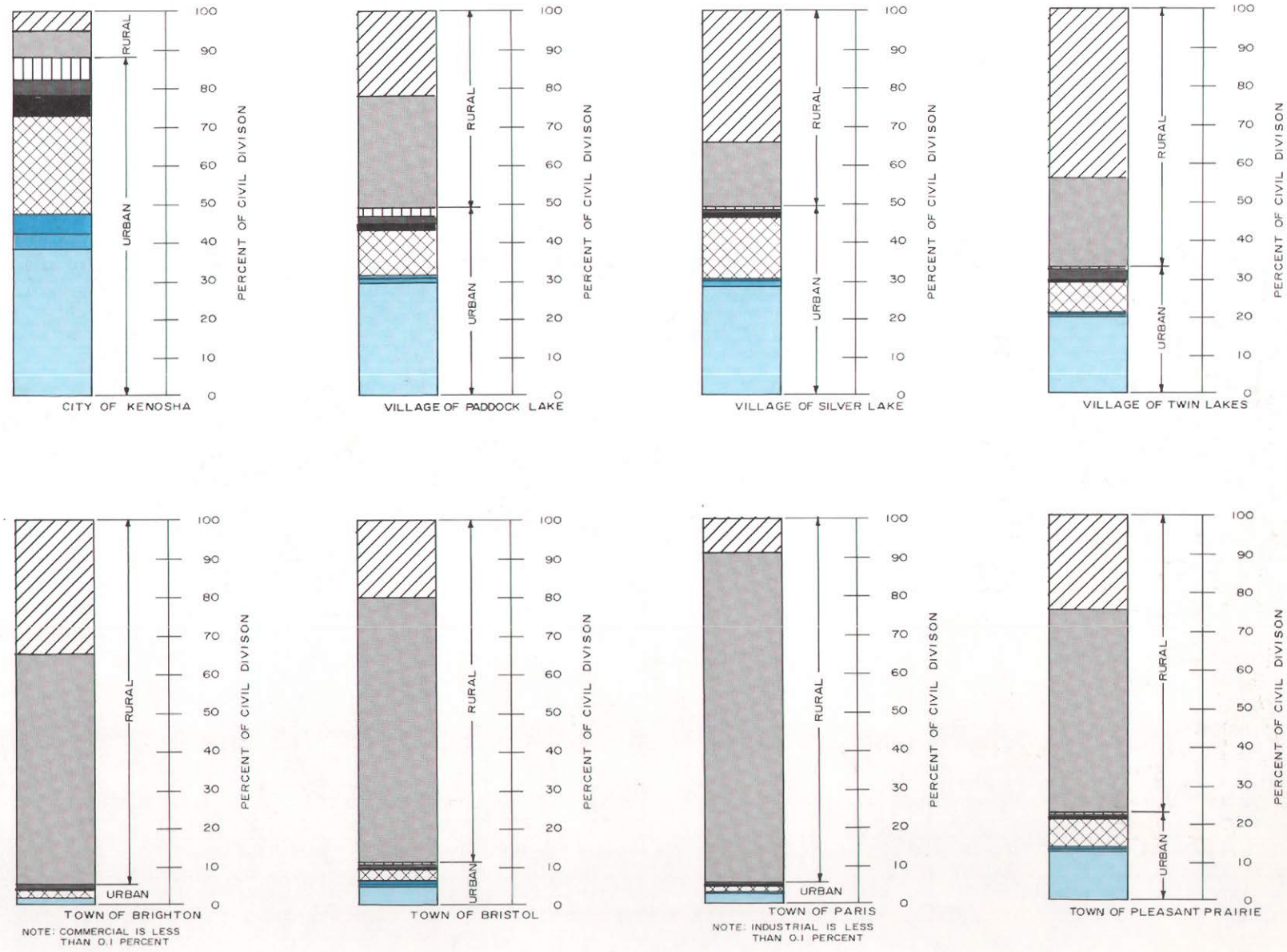
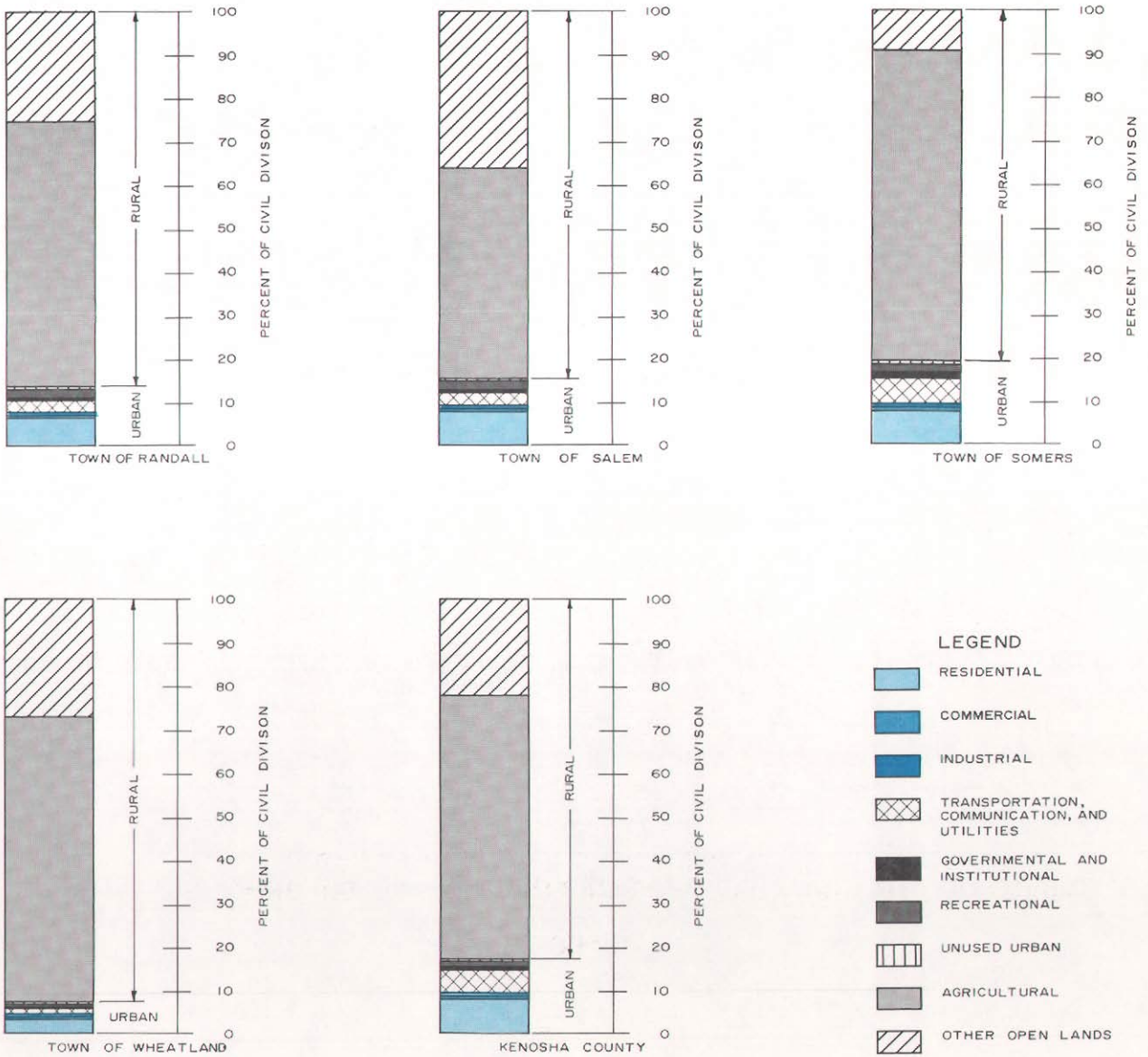


Figure 5 (continued)



Source: SEWRPC.

Table 42

EXISTING LAND USE IN KENOSHA COUNTY BY CIVIL DIVISION: 1980

Land Use Category	City			Villages									Towns					
	Kenosha			Paddock Lake			Silver Lake			Twin Lakes			Brighton			Bristol		
	Acres	Percent of Subtotal	Percent of Total	Acres	Percent of Subtotal	Percent of Total	Acres	Percent of Subtotal	Percent of Total	Acres	Percent of Subtotal	Percent of Total	Acres	Percent of Subtotal	Percent of Total	Acres	Percent of Subtotal	Percent of Total
Urban																		
Residential	3,767	43.8	38.3	337	62.5	30.3	252	59.2	28.6	770	59.8	19.9	358	31.5	1.6	1,240	50.8	5.3
Commercial	269	3.1	2.7	6	1.1	0.5	12	2.8	1.4	22	1.7	0.6	2	0.2	--	44	1.8	0.2
Industrial	525	6.1	5.4	3	0.5	0.3	4	0.9	0.5	4	0.3	0.1	--	--	--	40	1.6	0.2
Transportation, Communication, and Utilities	2,480	28.9	25.2	127	23.6	11.4	140	32.9	15.9	321	25.0	8.3	467	41.1	2.0	827	33.9	3.6
Governmental and Institutional	514	6.0	5.2	22	4.1	2.0	10	2.3	1.1	17	1.3	0.4	21	1.9	0.1	43	1.8	0.2
Recreational	415	4.8	4.2	21	3.9	1.9	5	1.2	0.6	150	11.7	3.9	287	25.3	1.3	166	6.8	0.7
Unused Urban	628	7.3	6.4	23	4.3	2.1	3	0.7	0.3	3	0.2	0.1	--	--	--	82	3.3	0.3
Urban Subtotal	8,598	100.0	87.4	539	100.0	48.5	426	100.0	48.4	1,287	100.0	33.3	1,135	100.0	5.0	2,442	100.0	10.5
Rural																		
Agricultural	690	55.9	7.0	323	56.5	29.1	154	33.9	17.5	888	34.3	22.9	13,875	63.5	60.3	16,175	77.8	69.7
Surface Water	78	6.3	0.8	142	24.8	12.8	8	1.8	0.9	1,038	40.2	26.8	308	1.4	1.3	262	1.3	1.1
Wetlands	56	4.5	0.6	55	9.6	5.0	147	32.4	16.7	326	12.6	8.4	2,146	9.8	9.3	2,221	10.7	9.6
Woodlands	50	4.1	0.5	37	6.5	3.3	64	14.1	7.3	214	8.3	5.5	1,408	6.4	6.1	1,447	7.0	6.2
Unused Rural and Other Open Lands	361	29.2	3.7	15	2.6	1.3	81	17.8	9.2	119	4.6	3.1	4,126	18.9	18.0	675	3.2	2.9
Rural Subtotal	1,235	100.0	12.6	572	100.0	51.5	454	100.0	51.6	2,585	100.0	66.7	21,863	100.0	95.0	20,780	100.0	89.5
Total	9,833	--	100.0	1,111	--	100.0	880	--	100.0	3,872	--	100.0	22,998	--	100.0	23,222	--	100.0

Land Use Category	Towns																Kenosha County		
	Paris			Pleasant Prairie			Randall			Salem			Somers			Wheatland					
	Acres	Percent of Subtotal	Percent of Total	Acres	Percent of Subtotal	Percent of Total	Acres	Percent of Subtotal	Percent of Total	Acres	Percent of Subtotal	Percent of Total	Acres	Percent of Subtotal	Percent of Total	Acres	Percent of Subtotal	Percent of Total	Acres[a]	Percent of Subtotal	Percent of Total
Urban																					
Residential	602	50.6	2.6	2,977	55.7	12.7	759	49.4	6.6	1,671	51.5	7.9	1,773	42.4	8.1	622	52.6	4.0	15,128	48.6	8.5
Commercial	14	1.2	0.1	82	1.5	0.4	14	0.9	0.1	31	1.0	0.1	81	1.9	0.4	15	1.3	0.1	593	1.9	0.3
Industrial	11	0.9	--	187	3.5	0.8	10	0.7	0.1	23	0.7	0.1	71	1.7	0.3	9	0.8	0.1	888	2.9	0.5
Transportation, Communication, and Utilities	485	40.8	2.1	1,717	32.2	7.3	429	27.9	3.7	902	27.8	4.3	1,300	31.1	6.0	443	37.5	2.9	9,639	31.0	5.4
Governmental and Institutional	23	1.9	0.1	125	2.3	0.5	52	3.4	0.5	100	3.1	0.5	343	8.2	1.6	26	2.2	0.2	1,295	4.2	0.7
Recreational	55	4.6	0.2	58	1.1	0.3	245	15.9	2.1	468	14.4	2.2	528	12.6	2.4	57	4.8	0.3	2,456	7.9	1.4
Unused Urban	--	--	--	196	3.7	0.8	28	1.8	0.2	47	1.5	0.2	86	2.1	0.4	9	0.8	0.1	1,103	3.5	0.6
Urban Subtotal	1,190	100.0	5.1	5,342	100.0	22.8	1,537	100.0	13.3	3,242	100.0	15.3	4,182	100.0	19.2	1,181	100.0	7.7	31,102	100.0	17.4
Rural																					
Agricultural	19,780	90.7	86.0	12,274	68.0	52.5	7,082	70.8	61.4	10,329	57.6	48.8	15,645	89.1	72.0	10,086	70.8	65.4	107,301	73.0	60.2
Surface Water	48	0.2	0.2	205	1.1	0.9	465	4.7	4.0	1,906	10.6	9.0	70	0.4	0.3	297	2.1	1.9	4,826	3.3	2.7
Wetlands	755	3.5	3.3	3,185	17.7	13.6	954	9.5	8.3	2,895	16.1	13.7	547	3.1	2.5	2,325	16.3	15.1	15,612	10.6	8.8
Woodlands	957	4.4	4.2	978	5.4	4.2	1,058	10.6	9.2	1,533	8.6	7.2	650	3.7	3.0	1,176	8.3	7.6	9,572	6.5	5.4
Unused Rural and Other Open Lands	267	1.2	1.2	1,404	7.8	6.0	443	4.4	3.8	1,275	7.1	6.0	643	3.7	3.0	352	2.5	2.3	9,761	6.6	5.5
Rural Subtotal	21,807	100.0	94.9	18,046	100.0	77.2	10,002	100.0	86.7	17,938	100.0	84.7	17,555	100.0	80.8	14,236	100.0	92.3	147,072	100.0	82.6
Total	22,997	--	100.0	23,388	--	100.0	11,539	--	100.0	21,180	--	100.0	21,737	--	100.0	15,417	--	100.0	178,174	--	100.0

[a]County area may not match sum of minor civil division areas because of rounding.

Source: SEWRPC.

or about 0.5 percent and 2.9 percent, respectively; transportation, communication, and utilities--9,639 acres, or about 5.4 percent and 31.0 percent, respectively; governmental and institutional--1,295 acres, or about 0.7 percent and 4.2 percent, respectively; recreational land--2,456 acres, or about 1.4 percent and 7.9 percent, respectively; and unused urban lands--1,103 acres, or about 0.6 percent and 3.5 percent, respectively. As further indicated in Table 42, among the minor civil divisions in Kenosha County, the area of land in urban use ranged from a low of 426 acres in the Village of Silver Lake to 8,598 acres in the City of Kenosha.

Rural land in Kenosha County totaled about 147,100 acres, or about 83 percent of the total area of the County, in 1980. Agricultural land alone accounted for 107,301 acres, or about 60 percent of the total area of the County. Other rural land use categories included wetlands--15,612 acres, or 8.8 percent of the total area of the County; woodlands--9,572 acres, or 5.4 percent; surface water--4,826 acres, or 2.7 percent; and unused rural and other open land--9,761 acres, or 5.5 percent. Among the minor civil divisions in Kenosha County, the area of land in rural uses ranged from a low of 454 acres in the Village of Silver Lake to 21,863 acres in the Town of Brighton.

HOUSING STOCK

The total number of housing units in Kenosha County stood at 47,506 in 1980, following increases of 5,467 housing units, or 16 percent, between 1960 and 1970; and 8,396 housing units, or 21 percent, between 1970 and 1980. Of the total housing stock in Kenosha County in 1980, 45,893 units, or almost 97 percent, were year-round housing units; that is, housing units intended for occupancy throughout the year. The balance--1,613 housing units, or just over 3 percent of the total housing stock--consisted of vacant seasonal and migratory housing units, intended for use only in certain seasons. As indicated in Table 43, the number of vacant seasonal and migratory housing units decreased by 1,241 units, or about 43 percent, between 1960 and 1980, reflecting, in part, the conversion of seasonal housing units to year-round use.

As further indicated in Table 43, of the total year-round housing stock, 43,064 housing units, or about 94 percent, were occupied at the time of the federal census of population and housing taken in April 1980, while 2,829 housing units, or about 6 percent, were vacant. Of the total occupied year-round housing stock, 30,367 housing units, or about 71 percent, were owner-occupied, and 12,697 housing units, or about 29 percent, were renter-occupied.

Of the total 2,829 vacant year-round housing units in the County in 1980, 356 units, or about 13 percent, were classified as being "for sale" at the time of the census; 1,187 units, or 42 percent, were classified as being "for rent"; and 1,286 units, or just over 45 percent, were classified as "other vacant" and included vacant housing units which were rented or sold and awaiting occupancy, units which were held for occasional use throughout the year, and units which were vacant for other reasons, including those held vacant pending repairs or settlement of an estate. As indicated in Table 43, the rental vacancy rate for Kenosha County in 1980, 8.55 percent, was higher than the rate in 1970, 3.94 percent, and 1960, 2.35 percent. The homeowner vacancy rate in 1980, 1.16 percent, was just slightly greater than the rate in 1970, 0.71 percent, and 1960, 0.94 percent.

Table 43

HOUSING UNITS IN KENOSHA COUNTY: 1960, 1970, AND 1980

Housing Unit Category	1960	1970	1980	Change 1960-1970 Number	Change 1960-1970 Percent	Change 1970-1980 Number	Change 1970-1980 Percent
Total Housing Units	33,643	39,110	47,506	5,467	16.3	8,396	21.5
Year-Round Housing Units	30,789	37,144	45,893	6,355	20.6	8,749	23.6
Occupied	29,545	35,468	43,064	5,923	20.0	7,596	21.4
Owner-Occupied	20,359	24,861	30,367	4,502	22.1	5,506	22.1
Renter-Occupied	9,186	10,607	12,697	1,421	15.5	2,090	19.7
Vacant	1,244	1,676	2,829	432	34.7	1,153	68.8
For Sale	194	177	356	-17	-8.8	179	101.1
Homeowner Vacancy Rate[a]	0.94	0.71	1.16	--	--	--	--
For Rent	221	435	1,187	214	96.8	752	172.9
Rental Vacancy Rate[b]	2.35	3.94	8.55	--	--	--	--
Other	829[c]	1,064	1,286	235	28.3	222	20.9
Vacant Seasonal and Migratory Housing Units	2,854	1,966	1,613	-888	-31.1	-353	-18.0

[a] Percentage obtained by dividing the number of vacant "for sale" housing units by the sum of owner-occupied and vacant "for sale" housing units.

[b] Percentage obtained by dividing the number of vacant "for rent" housing units by the sum of renter-occupied and vacant "for rent" housing units.

[c] In the 1960 census, dilapidated, vacant, year-round housing units were not classified as vacant for rent, vacant for sale, or other vacant year-round housing units. These units are, however, included as other vacant year-round housing units in this table.

Source: U. S. Bureau of the Census and SEWRPC.

Table 44 provides similar information regarding the housing stock of the minor civil divisions in Kenosha County in 1980. As indicated in that table, the total number of housing units ranged from 387 in the Town of Brighton to 29,411 in the City of Kenosha. The number of occupied housing units ranged from 359--including 288 owner-occupied units and 71 renter-occupied units--also in the Town of Brighton to 27,964 housing units--including 18,174 owner-occupied units and 9,790 renter-occupied units--in the City of Kenosha.

As further indicated in Table 44, seasonal and migratory housing units were concentrated to a large extent in the southwestern portion of the County. Of the total 1,613 such housing units in the County, 1,492 units, or almost 93 percent, were located in the Villages of Paddock Lake, Silver Lake, and Twin Lakes and the Towns of Randall, Salem, and Wheatland.

The average net residential density in 1980, calculated as the total number of housing units--including occupied and vacant year-round and vacant seasonal housing units--divided by the total number of acres in residential use, is presented for each minor civil division and for the County overall in Table 45. As indicated in Table 45, there was an average of 3.1 housing units per acre of residential land in Kenosha County in 1980. Among the minor civil divisions in Kenosha County, the average residential density was highest in the City of Kenosha, 7.8 housing units per residential acre. Among the other 11 minor civil divisions, the density ranged from a low of 0.8 housing unit per residential acre in the Town of Paris to 2.7 housing units per residential acre in the Villages of Paddock Lake and Silver Lake.

Table 44

EXISTING HOUSING UNITS IN KENOSHA COUNTY BY MINOR CIVIL DIVISION: 1980

Civil Division	Year-Round								Vacant Seasonal and Migratory	Total
	Occupied			Vacant				Subtotal		
	Owner Occupied	Renter Occupied	Subtotal	Vacant For Sale	Vacant For Rent	Other Vacant	Subtotal			
City										
Kenosha.....	18,174	9,790	27,964	162	923	335	1,420	29,384	27	29,411
Villages										
Paddock Lake.....	599	119	718	4	6	57	67	785	131	916
Silver Lake.....	446	123	569	11	11	56	78	647	26	673
Twin Lakes.....	902	326	1,228	22	26	161	209	1,437	558	1,995
Towns										
Brighton.....	288	71	359	1	3	18	22	381	6	387
Bristol.....	937	252	1,189	20	15	119	154	1,343	18	1,361
Paris.....	353	114	467	2	3	20	25	492	--	492
Pleasant Prairie..	3,543	498	4,041	41	23	61	125	4,166	55	4,221
Randall.....	576	124	700	16	5	62	83	783	250	1,033
Salem.....	1,715	433	2,148	27	26	278	331	2,479	391	2,870
Somers.....	2,045	696	2,741	31	137	46	214	2,955	15	2,970
Wheatland.....	789	151	940	19	9	73	101	1,041	136	1,177
County Total	30,367	12,697	43,064	356	1,187	1,286	2,829	45,893	1,613	47,506

Source: U. S. Bureau of the Census and SEWRPC.

Table 45

RESIDENTIAL DENSITY IN KENOSHA COUNTY
BY MINOR CIVIL DIVISION: 1980

Civil Division	Residential Land (acres)	Housing Units	
		Total	Number per Residential Acre
City			
Kenosha.....	3,767	29,411	7.8
Villages			
Paddock Lake.....	337	916	2.7
Silver Lake.....	252	673	2.7
Twin Lakes.....	770	1,995	2.6
Towns			
Brighton.....	358	387	1.1
Bristol.....	1,240	1,361	1.1
Paris.....	602	492	0.8
Pleasant Prairie....	2,977	4,221	1.4
Randall.....	759	1,033	1.4
Salem.....	1,671	2,870	1.7
Somers.....	1,773	2,970	1.7
Wheatland.....	622	1,177	1.9
County Total	15,128	47,506	3.1

Source: U. S. Bureau of the Census and SEWRPC.

TRANSPORTATION FACILITIES

Transportation facilities are among the most critical elements that influence travel characteristics and shape the spatial distribution of rural and urban development within an area. The availability or lack of a transportation facility influences the path, mode, and frequency of personal travel. The accessibility of a site to population and employment concentrations and to community facilities and services influences the type and intensity of its development, and this accessibility is, in turn, a function of the transportation system. Thus, transportation facilities form the basic framework for both rural and urban development, and, to a considerable extent, determine the efficiency of the other functional elements of such development.

Surface Transportation Facilities

Surface transportation service within Kenosha County is supplied primarily by a highly developed system of streets and highways. More limited transportation service is supplied by public transit and railway freight and passenger service.

Street and Highway System: As indicated in Table 46, there were about 934 miles of streets and highways in Kenosha County in 1984. Of this total, 329 miles, or 35 percent, consisted of arterial streets and highways intended to serve the through movement of fast and heavy traffic (see Map 22). The responsibility for the design, construction, operation, and maintenance of the arterial street and highway network rests with three levels of government: the State, the County, and local municipalities. Approximately 124 miles, or

Table 46

EXISTING STREET AND HIGHWAY SYSTEM MILEAGE IN KENOSHA COUNTY BY FUNCTIONAL AND JURISDICTIONAL CLASSIFICATION: 1984

Classification	Miles	Percent of Subtotal	Percent of Total
Arterial Streets and Highways[a]			
State			
Freeway	12.13	3.7	1.3
Surface Arterials	111.82	34.0	12.0
County	161.92	49.2	17.3
Local	43.23	13.1	4.6
Subtotal	329.10	100.0	35.2
Nonarterial Streets and Highways[b]			
County	105.14	17.4	11.3
Local	499.52	82.6	53.5
Subtotal	604.66	100.0	64.8
Total	933.76	--	100.0

[a]Arterials are defined as those streets and highways which are intended to serve the through movement of fast or heavy traffic. Together, the arterials should form an integrated system located and designed to properly carry the imposed traffic loadings.

[b]Nonarterial streets and highways may be classified as either collector streets--those streets and highways which serve primarily as connections between the arterial system and the local street system--or local streets--those streets and highways which serve primarily as a means of access to abutting property.

Source: SEWRPC.

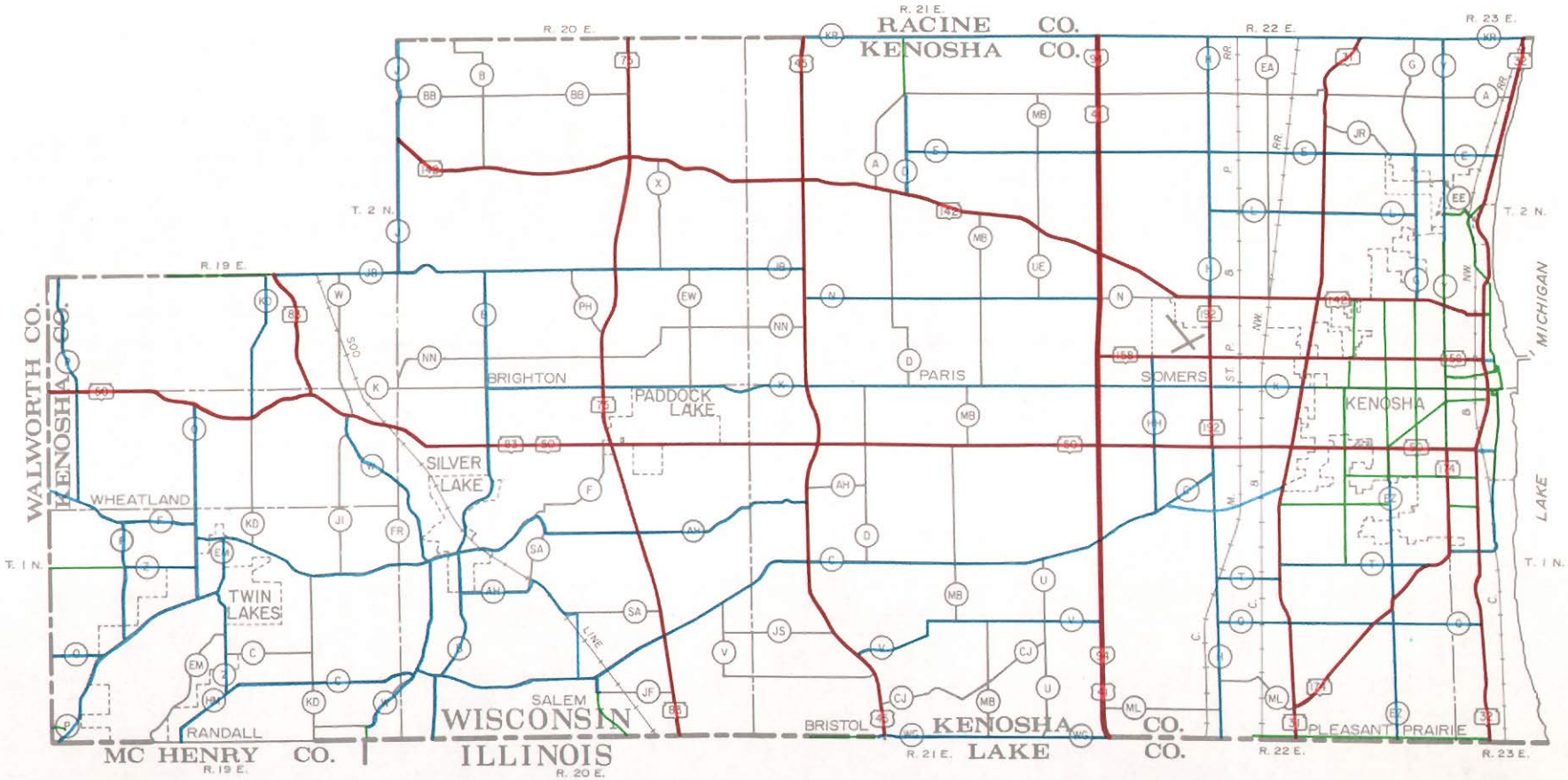
38 percent, of the arterial street and highway system were under the jurisdiction of the State, being comprised of interstate and state trunk highways and connecting streets; about 162 miles, or about 49 percent, were under the jurisdiction of the County, being comprised of county trunk highways; and about 43 miles, or 13 percent, were under local jurisdiction, being comprised of local arterial streets and highways.

As further indicated in Table 46, there were 605 miles of nonarterial streets and highways in Kenosha County in 1984. Nonarterial streets include local streets, which serve primarily as a means of access to abutting property, and collector streets, which serve primarily as connections between the arterial system and the local street system. About 105 miles, or 17 percent, of the nonarterial street and highway mileage were under county jurisdiction in 1984, while the balance--500 miles, or 83 percent--was under local jurisdiction.

The existing street and highway system mileage for minor civil divisions in Kenosha County is presented in Table 47. As indicated in the table, among the minor civil divisions in the County, the arterial street and highway mileage ranged from just over two miles in the Village of Paddock Lake to about 55 miles in the Town of Pleasant Prairie. The nonarterial street and highway mileage ranged from about 12 miles in the Village of Silver Lake to about 213 miles in the City of Kenosha.

Map 22

EXISTING ARTERIAL STREET AND HIGHWAY SYSTEM IN KENOSHA COUNTY: 1984



LEGEND

- STATE TRUNK HIGHWAY - FREEWAY
- STATE TRUNK HIGHWAY - NON FREEWAY
- COUNTY TRUNK HIGHWAY
- LOCAL TRUNK HIGHWAY

Source: SEWRPC.

Table 47

EXISTING STREET AND HIGHWAY SYSTEM MILEAGE FOR MINOR CIVIL DIVISIONS IN KENOSHA COUNTY BY FUNCTIONAL AND JURISDICTIONAL CLASSIFICATION: 1984

Civil Division	Arterial Streets and Highways									
	State									
	Freeway		Surface Arterials		County		Local		Subtotal	
	Miles	Percent	Miles	Percent	Miles	Percent	Miles	Percent	Miles	Percent
City										
Kenosha	--	--	17.07	15.2	4.63	2.9	27.93	64.6	49.63	15.1
Villages										
Paddock Lake	--	--	1.64	1.5	0.68	0.4	--	--	2.32	0.7
Silver Lake	--	--	--	--	3.17	2.0	--	--	3.17	1.0
Twin Lakes	--	--	--	--	7.75	4.8	--	--	7.75	2.4
Towns										
Brighton	--	--	12.38	11.1	11.95	7.4	--	--	24.33	7.4
Bristol	3.04	25.1	12.51	11.2	17.11	10.6	0.54	1.3	33.20	10.1
Paris	3.02	24.9	12.31	11.0	16.28	10.0	0.96	2.2	32.57	9.9
Pleasant Prairie	3.04	25.1	18.75	16.8	24.70	15.2	8.32	19.3	54.81	16.6
Randall	--	--	--	--	16.45	10.2	1.79	4.1	18.24	5.5
Salem	--	--	10.67	9.5	23.44	14.5	2.09	4.8	36.20	11.0
Somers	3.03	24.9	17.87	16.0	24.04	14.8	0.21	0.5	45.15	13.7
Wheatland	--	--	8.62	7.7	11.72	7.2	1.39	3.2	21.73	6.6
County Total	12.13	100.0	111.82	100.0	161.92	100.0	43.23	100.0	329.10	100.0

Civil Division	Nonarterial Streets and Highways							
	County		Local		Subtotal		Total	
	Miles	Percent	Miles	Percent	Miles	Percent	Miles	Percent
City								
Kenosha	--	--	212.70	42.6	212.70	35.2	262.33	28.1
Villages								
Paddock Lake	--	--	15.20	3.0	15.20	2.5	17.52	1.9
Silver Lake	--	--	11.91	2.4	11.91	2.0	15.08	1.6
Twin Lakes	2.62	2.5	26.54	5.3	29.16	4.8	36.91	3.9
Towns								
Brighton	19.44	18.5	15.24	3.0	34.68	5.7	59.01	6.3
Bristol	20.04	19.1	22.36	4.5	42.40	7.0	75.60	8.1
Paris	16.22	15.4	5.87	1.2	22.09	3.7	54.66	5.9
Pleasant Prairie	3.52	3.3	64.52	12.9	68.04	11.3	122.85	13.2
Randall	8.59	8.2	16.80	3.4	25.39	4.2	43.63	4.7
Salem	10.94	10.4	59.32	11.9	70.26	11.6	106.46	11.4
Somers	17.22	16.4	27.67	5.5	44.89	7.4	90.04	9.6
Wheatland	6.55	6.2	21.39	4.3	27.94	4.6	49.67	5.3
County Total	105.14	100.0	499.52	100.0	604.66	100.0	933.76	100.0

Source: SEWRPC.

Mass Transit: Mass transit service in Kenosha County is provided in the form of railway passenger train service, fixed-route bus service, and demand-responsive service for the elderly and handicapped.

Railway passenger train service in Kenosha County is limited to a Chicago-oriented commuter service provided by the Regional Transportation Authority of Northeastern Illinois (RTA). Actual operation of this service is provided by the Chicago & North Western Transportation Company (C&NW) by contract with the RTA. During 1985, commuter train service between the City of Kenosha and the Chicago metropolitan area consisted of nine trips departing Kenosha southbound to Chicago and eight trips departing Chicago northbound to Kenosha each weekday, with reduced service on weekends. Intercity passenger train service operated by the National Railroad Passenger Corporation (Amtrak) uses the Milwaukee Road main line through Kenosha County but does not make any stops within the county limits.

Fixed-route bus service in Kenosha County includes interregional service over routes in the eastern portion of the County and intraregional service within and through the Kenosha urbanized area. The most frequent interregional bus service in the Region in 1985 was provided in the Milwaukee-Chicago corridor, with a total of 38 regularly scheduled weekday trips in each direction. Greyhound Lines West operated 16 scheduled weekday trips in each direction between Milwaukee and Chicago, with two trips serving the City of Kenosha. Royal Coach Lines, Inc., operated seven scheduled weekday trips in each direction between Milwaukee and O'Hare International Airport in Chicago, with a stop in Kenosha County at STH 50 and IH 94. Intercity bus service was also provided in 1985 by Wisconsin Coach Lines, Inc., which operated eight weekday bus trips in each direction between the Cities of Kenosha and Milwaukee, with an intermediate stop in the City of Racine. Finally, Wisconsin Michigan Trailways/Great Lakes Trailways operated seven round trips each weekday between Chicago and Milwaukee, but made no stops within the County.

In 1985, the City of Kenosha's federally assisted public transit system--the Kenosha Transit System--provided fixed-route local bus service within the Kenosha urbanized area. This service is supplemented by peak-hour "tripper" service, with schedules that accommodate the movement of students to and from school and alleviate overcrowded conditions on the regular bus routes during the school year. The City of Kenosha owned a fleet of 30 buses, 19 of which operate during weekday peak periods and 10 of which operate during the base period on a total of seven regular routes. An additional nine buses are used to operate the peak-hour tripper service. Bus service is available between 6:00 a.m. and 6:00 p.m., Monday through Saturday. Virtually all of the city population is served by this system, with access provided to the downtown area, Carthage College, Gateway Technical Institute, the University of Wisconsin-Parkside, hospitals, and the major shopping districts. In 1984, the ridership level on the Kenosha Transit System was 1,279,200 revenue passengers.

The City of Racine's federally assisted local transit system--The Belle Urban System--also provided fixed-route local bus service within the County in 1985 on one route operated between the University of Wisconsin-Parkside and the Racine central business district. At the University of Wisconsin-Parkside, transfers can be made between the Kenosha Transit System and the system serving the City of Racine.

Special carrier, nonfixed-route transit service is provided within the County primarily through a program administered by the Kenosha County Department on Aging. The Department on Aging contracts with the Kenosha Achievement Center for the provision of advance-reservation transportation service to elderly and handicapped persons within the County. The Kenosha Achievement Center provides these services through two programs: Project Accessibility, which serves transportation-handicapped individuals residing east of IH 94; and Project Circuit of Care, which serves elderly and handicapped individuals residing west of IH 94. A third major program, Client Route, provides all of Kenosha County and northern Lake County, Illinois, with door-to-door and curb pick-up service for disabled clientele of public and private organizations providing rehabilitation, training, or employment services to handicapped individuals. During 1984, about 75,000 one-way trips were made on these three special services.

Railway Freight System: As of December 31, 1984, railway freight service in Kenosha County was provided by three railway companies. The Chicago & North Western Transportation Company operated in the eastern portion of the County over two north-south main lines in the Chicago-Milwaukee corridor, the first passing through the City of Kenosha and the second located just west of the City of Kenosha in the Towns of Somers and Pleasant Prairie. The C&NW also provided extensive switching service in and around the City and Port of Kenosha. The Chicago, Milwaukee, St. Paul & Pacific Railroad Company (Milwaukee Road) also operated over a north-south main line in the Chicago-Milwaukee corridor, located in the Towns of Somers and Pleasant Prairie. The Soo Line Railroad Company's Chicago-Twin Cities main line passes through the western portion of the County, including the Town of Wheatland and the Village of Silver Lake. This railway freight system, as shown on Map 23, and attendant services facilitate the movement of commodities between Kenosha County and state, national, and international markets.

Airport Facilities

There are 13 airports located within Kenosha County, of which four are general aviation facilities open to use by the general public. The remaining nine airports are restricted to private use. General aviation airports are intended to serve business, charter, and air taxi aircraft, as well as aircraft used for agricultural, recreational, sport, and training purposes. The largest general aviation airport in Kenosha County is the publicly owned Kenosha Municipal Airport. This airport currently has two runways, one being 3,300 feet long and the other being 4,200 feet long. A third runway under construction at the airport will be 5,500 feet in length--long enough to accept most types of corporate business aircraft.

Water Transportation Facilities

Kenosha County is served by a harbor on Lake Michigan that is used for both commercial shipping and recreational boating purposes. The Kenosha port can accommodate up to five ocean-going vessels at one time. Principal export cargos include deep frozen offal, bagged grain products and other foodstuffs, logs, and some machinery. Import cargos include twine, tanning extract, cardboard, heavy ore, rock salt, and tractors. Cargo-handling facilities include approximately 140,000 square feet of warehouse space. In addition, the Kenosha port specializes in cold storage cargo handling.

PUBLIC UTILITIES

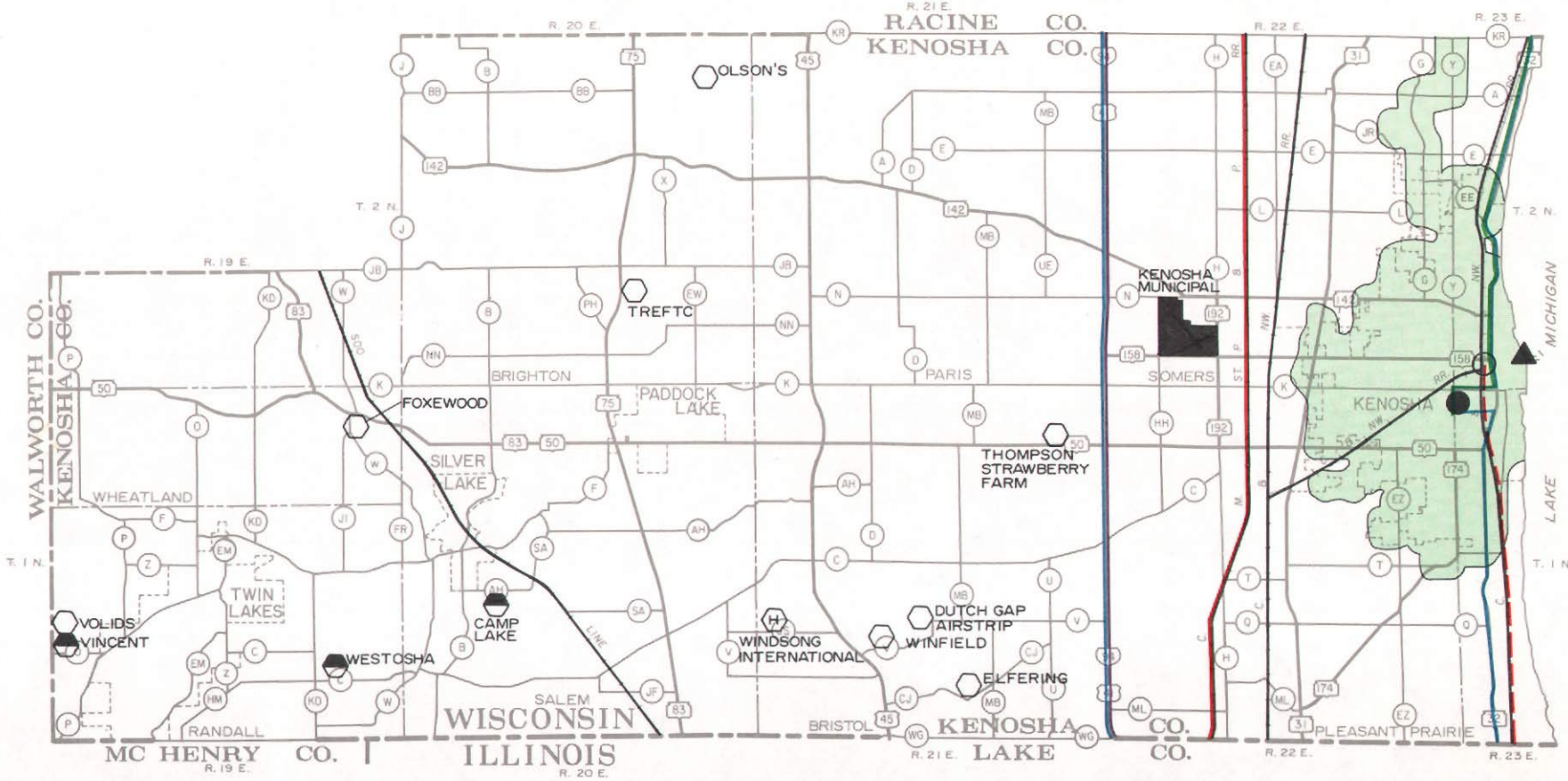
Public utility systems are an important factor influencing economic and urban growth and development. All urban and much economic development today is highly dependent upon the utility systems which serve the individual land uses with power, light, communication, heat, water, and sewerage. Water supply and sanitary sewerage facilities have a particularly important relationship to urban land use development.

Sanitary Sewerage Facilities

There were 16 public sanitary sewerage systems in Kenosha County in 1984. Fifteen of these were served by a total of 11 sewage treatment plants in

Map 23

MAJOR TRANSPORTATION FACILITIES IN KENOSHA COUNTY: 1985



LEGEND

LOCAL BUS SERVICE

TRANSIT SERVICE AREA

INTERCITY BUS SERVICE

GREYHOUND LINES, INC.

WISCONSIN COACH LINES, INC.

ROYAL COACH LINES, INC. / WISCONSIN-MICHIGAN TRAILWAYS / GREAT LAKES TRAILWAYS

RAILROAD PASSENGER TRAIN LINE

AMTRAK

CHICAGO & NORTH WESTERN TRANSPORTATION CO.

TERMINAL FACILITY

INTERCITY BUS

PASSENGER TRAIN

RAILWAY FREIGHT LINE

C&NW. - CHICAGO & NORTH WESTERN TRANSPORTATION CO.

CMSTP&P - CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC RAILROAD CO. (THE MILWAUKEE ROAD)

SOO - SOO LINE RAILROAD CO.

AIRPORTS (NAME SHOWN ON MAP)

PUBLIC USE - PUBLIC OWNERSHIP

PUBLIC USE - PRIVATE OWNERSHIP

PRIVATE USE - PRIVATE OWNERSHIP

PRIVATE USE HELIPAD - PRIVATE OWNERSHIP

SEAPORT (PORT OF KENOSHA)

GRAPHIC SCALE

0 1 2 MILES

0 4000 8000 12000 FEET

Sour[illegible] SEWRPC

Kenosha County.[1] Sewage from the remaining system, the KR Utility District located along CTH KR in the Town of Somers, is conveyed to the City of Racine sewage treatment plant for treatment and disposal. In addition, there were 8 special-purpose sewage treatment plants serving isolated enclaves of urban development within the County. As indicated on Map 24, the public sanitary sewerage systems in Kenosha County together served an area of about 30.2 square miles, or about 10.8 percent of the total area of the County. These systems served a resident population of about 101,000 persons, or about 83.3 percent of the county population.

Water Utilities

There were five public water utilities in Kenosha County in 1984, serving a combined area of about 21.1 square miles, or about 7.6 percent of the county area, and a resident population of about 88,200 persons, or 72.8 percent of the county population. In addition to publicly owned water utilities, there were 22 special-purpose water systems in Kenosha County, which provide water supply service on a limited basis to isolated residential areas (see Map 25). Lake Michigan served as the source of supply for public water systems serving a total area of 18.7 square miles, and a resident population of 85,000 persons. The remainder of the public water supply systems, and all of the private water supply systems, were served by wells tapping either the deep sandstone aquifer or the shallow limestone and interconnected glacial till aquifers.

Gas and Electric Utilities

Natural gas service is provided to Kenosha County in part by the Wisconsin Natural Gas Company, whose service area includes that portion of the County east of IH 94, and in part by the Wisconsin Southern Gas Company, whose service area includes that portion of the County west of IH 94. The Wisconsin Electric Power Company provides electric power service throughout Kenosha County with the exception of the Town of Randall, the Village of Twin Lakes, and the southwesternmost portion of the Town of Wheatland, where electric power is supplied by the Wisconsin Power and Light Company, as shown on Map 26. Generally, natural gas and electric power service is available on demand to serve residential, commercial, and industrial uses throughout the County. The availability of these services is not a major constraint on the location and intensity of urban development.

Telephone Service

Telephone service in Kenosha County is provided primarily by three telephone companies--the Wisconsin Bell Telephone Company; the General Telephone Company of Wisconsin; and the Burlington, Brighton, and Wheatland Telephone Company. A fourth company--the Waterford Telephone Company--serves a small area in the northwest corner of the Town of Brighton. The service areas of these telephone companies in Kenosha County are also shown on Map 26.

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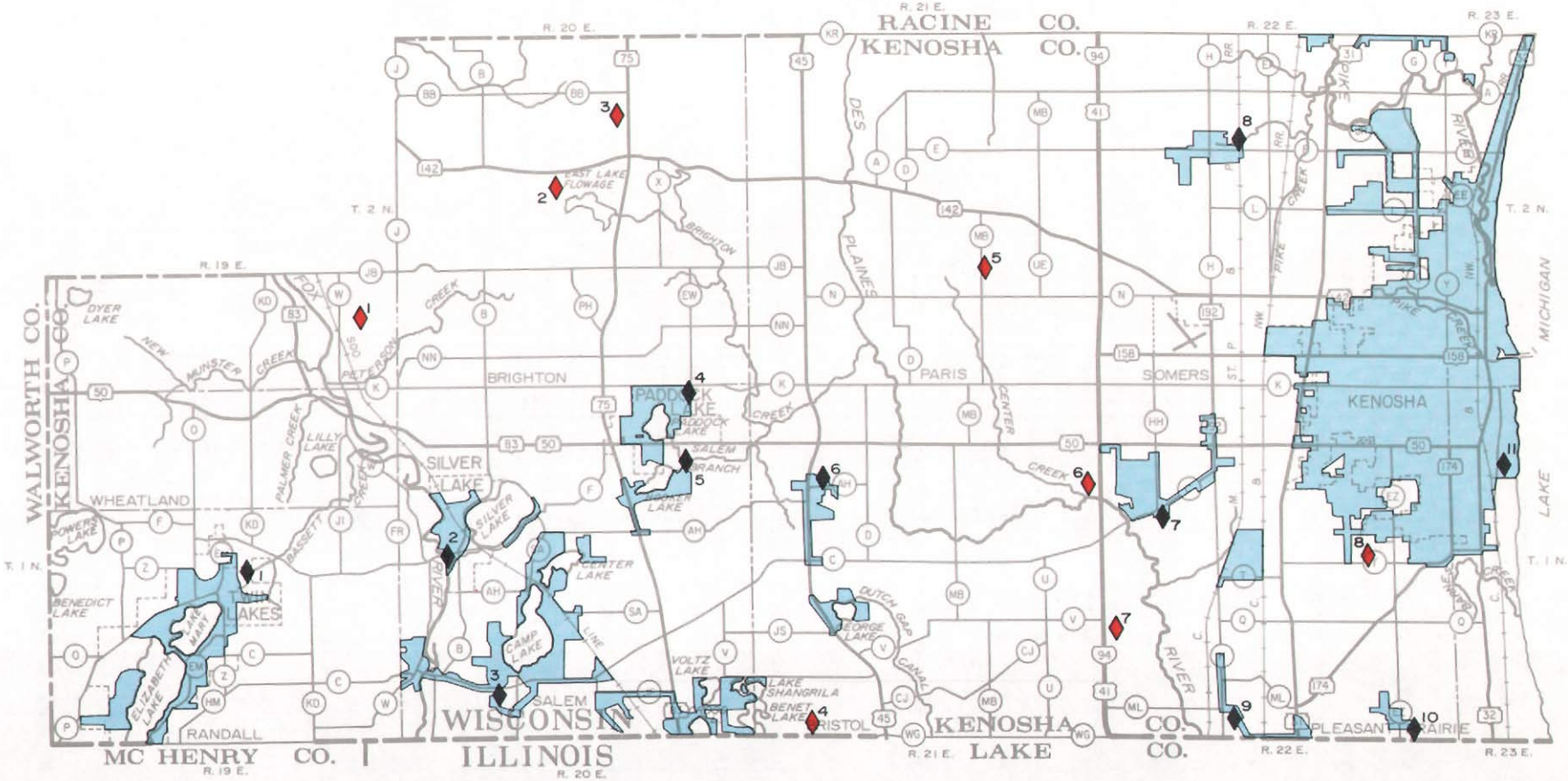
[1]Although it is privately owned, the Pleasant Park Sewer Utility has been classified herein as a public sanitary sewerage system because it operates in much the same fashion as a public system.

Map 24

EXISTING PUBLIC SANITARY SEWER SERVICE AREAS AND SEWAGE TREATMENT FACILITIES IN KENOSHA COUNTY: 1984



LEGEND

PUBLIC SANITARY SEWER SERVICE AREA

PUBLIC SEWAGE TREATMENT PLANT

1 VILLAGE OF TWIN LAKES
2 VILLAGE OF SILVER LAKE
3 TOWN OF SALEM UTILITY DISTRICT NO. 2
4 VILLAGE OF PADDOCK LAKE
5 TOWN OF SALEM UTILITY DISTRICT NO. 1
6 TOWN OF BRISTOL UTILITY DISTRICT NO. 1
7 TOWN OF PLEASANT PRAIRIE SEWER UTILITY DISTRICT D
8 TOWN OF SOMERS UTILITY DISTRICT NO. 1
9 TOWN OF PLEASANT PRAIRIE SANITARY DISTRICT NO. 73-1
10 PLEASANT PARK
11 CITY OF KENOSHA

SPECIAL PURPOSE SEWAGE TREATMENT PLANT

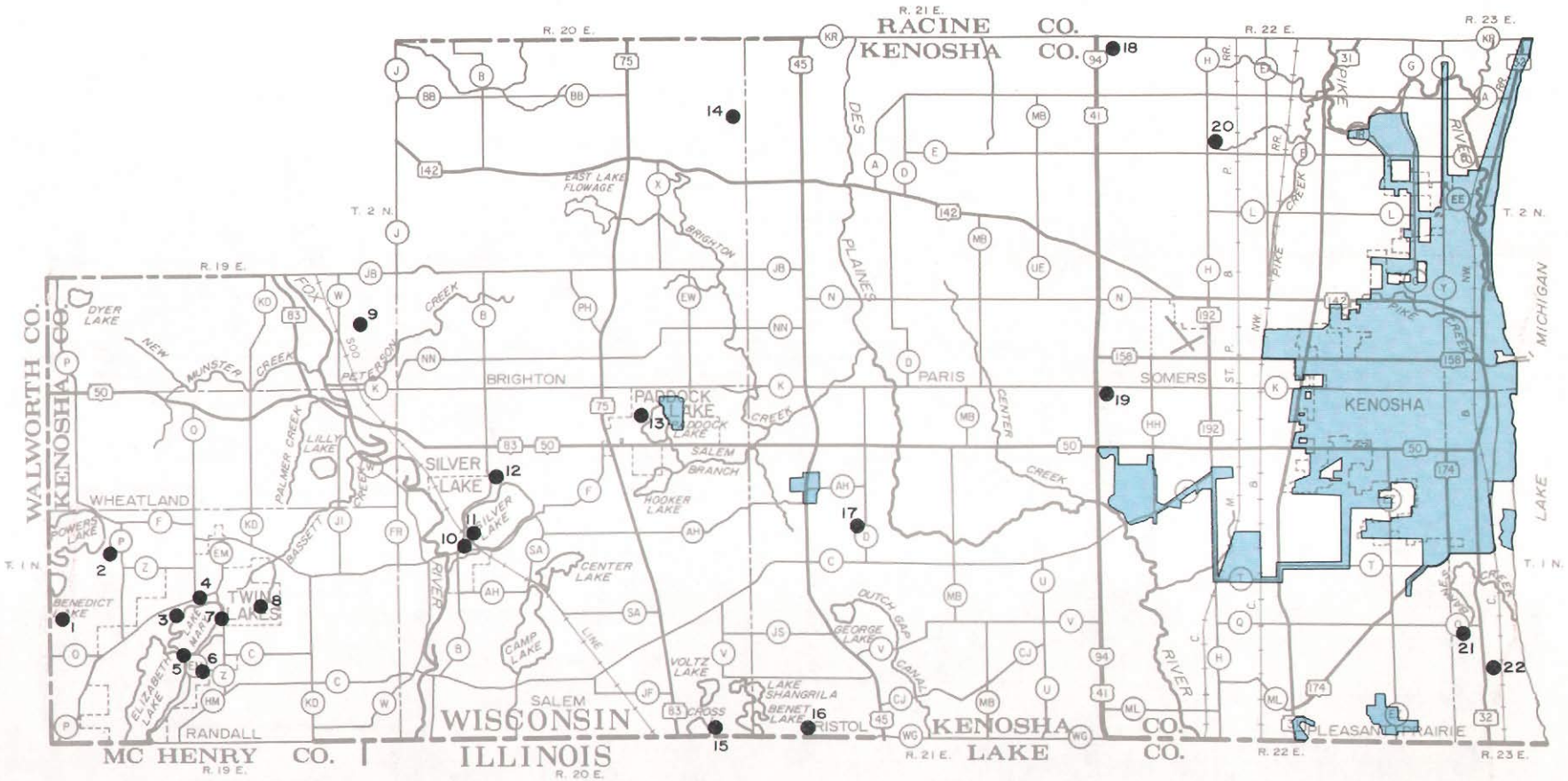
1 WHEATLAND MOBILE HOME PARK
2 BONG RECREATIONAL AREA
3 BRIGHTON DALE COUNTY PARK
4 PARAMSKI MOBILE HOME PARK
5 KENOSHA PACKING COMPANY
6 HOWARD JOHNSON MOTOR LODGE
7 WISCONSIN DEPARTMENT OF TRANSPORTATION
8 SIENDALE MOTHERHOUSE

GRAPHIC SCALE
0 1 2 MILES
0 4000 8000 12000 FEET

Source: SEWRPC.

Map 25

EXISTING PUBLIC WATER SUPPLY SERVICE AREAS AND SPECIAL-PURPOSE WATER UTILITIES IN KENOSHA COUNTY: 1984



LEGEND

AREA SERVED BY PUBLIC WATER UTILITY

LOCATION OF SPECIAL PURPOSE WATER SUPPLY SYSTEM

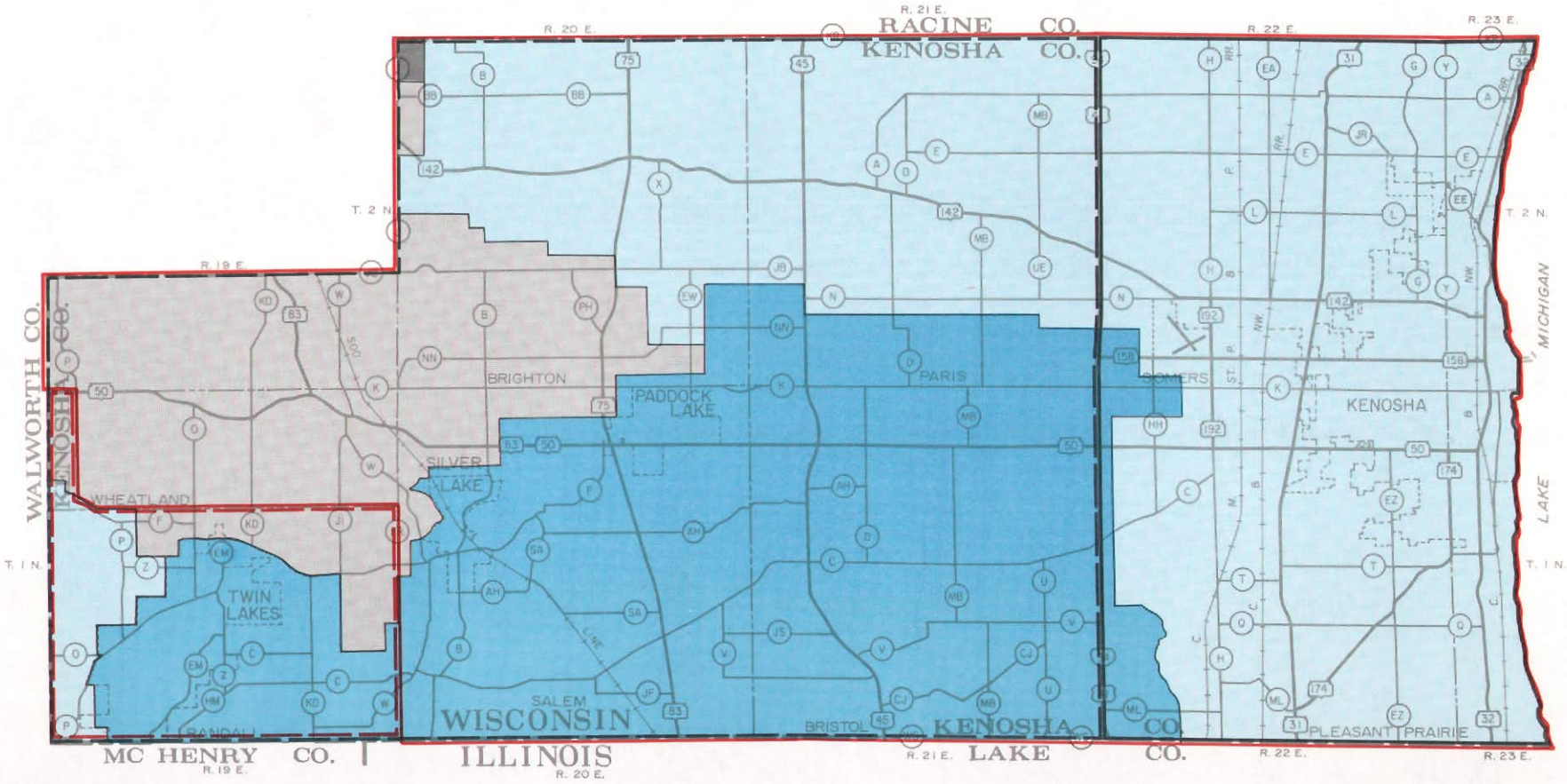
1 NIPPERSINK WATER TRUST	12 LAKEWOOD ESTATES MOBILE HOME PARK
2 LAKE KNOLLS SUBSDIVISION	13 GLEN WATER SYSTEM
3 REGIS LANDING	14 SHADY NOOK TRAILER PARK
4 CHATEAU DU LAC	15 OAKWOOD KNOLLS SUBDIVISION
5 TWIN LAKES WATER COOPERATIVE	16 RAINBOW LAKE MANOR MOBILE HOME PARK
6 VAN WOODS ESTATES	17 BRISTOL MOBILE HOME COURT
7 WYWOOD COOPERATIVE	18 OAKDALE ESTATES MOBILE HOME PARK
8 COUNTRY CLUB TRAILS	19 PLEASANT PRAIRIE MOBILE HOME PARK
9 WHEATLAND MOBILE HOME PARK	20 EAGLE CHATEAU APARTMENTS
10 SILVER CREST APARTMENTS	21 KENOSHA MOBILE HOME COURT
11 LAKE CREST MOBILE HOME PARK	22 CAROL BEACH WATER COMPANY

GRAPHIC SCALE

Source: SEWRPC.

Map 26

NATURAL GAS AND ELECTRIC UTILITY SERVICE AREAS AND TELEPHONE COMPANY SERVICE AREAS IN KENOSHA COUNTY: 1984



LEGEND

NATURAL GAS UTILITIES

- WISCONSIN NATURAL GAS COMPANY
- WISCONSIN SOUTHERN GAS COMPANY

ELECTRIC UTILITIES

- WISCONSIN ELECTRIC POWER COMPANY
- WISCONSIN POWER AND LIGHT COMPANY

TELEPHONE UTILITIES

- WISCONSIN BELL TELEPHONE COMPANY
- GENERAL TELEPHONE COMPANY OF WISCONSIN
- BURLINGTON, BRIGHTON, WHEATLAND TELEPHONE COMPANY
- WATERFORD TELEPHONE COMPANY

GRAPHIC SCALE

0 1 2 3 MILES

0 4000 8000 12000 FEET

Source: SEWRPC.

Table 48

EXISTING SOLID WASTE DISPOSAL FACILITIES IN KENOSHA COUNTY: 1984

Owner/Operator	Location	Landfill Type	Estimated Site Life (years)	Remaining Capacity (cubic yards)	Available Contiguous Property for Expansion
Waste Management of Wisconsin, Inc. Pheasant Run Landfill	Section 32, T2N, R21E Town of Paris	Commercial General Use	4	1,100,000	Yes
Land Reclamation, Ltd., Landfill	Section 23, T3N, R22E Town of Mt. Pleasant	Commercial General Use	12 to 33	4,000,000	Yes
Browning and Ferris Industries, Inc., Landfill	Section 7, T46N, R12E Town of Benton Lake County, Illinois	Commercial General Use	25	10,700,000	Yes
Wisconsin Electric Power Company-Pleasant Prairie Landfill	Section 9, T1N, R22E Town of Pleasant Prairie	Private Special Use	30	1,400,000	No
Village of Twin Lakes Landfill	Section 16, T1N, R19E Village of Twin Lakes	Public Special Use	--[a]	<5,000	No
Town of Randall Landfill	Section 23, T1N, R19E Town of Randall	Public General Use	--[b]	>25,000	No
Town of Bristol Landfill	Section 17, T1N, R21E Town of Bristol	Public General Use	5	22,500	No
Kenosha County Highway Department Landfill[c]	Section 8, T1N, R20E Town of Salem	Private Special Use	1	--	No

[a]The Village of Twin Lakes has signed an agreement with the Wisconsin Department of Natural Resources to abandon this landfill by 1999. Presently, only very limited amounts of solid wastes are disposed of at this site.

[b]The Town of Randall has signed an agreement with the Wisconsin Department of Natural Resources to abandon this landfill by 1999. Presently, nearly all of the residential solid wastes generated in the Town of Randall are disposed of at this site.

[c]This landfill was closed in 1984, with only limited amounts of refuse being disposed of at this site prior to closure.

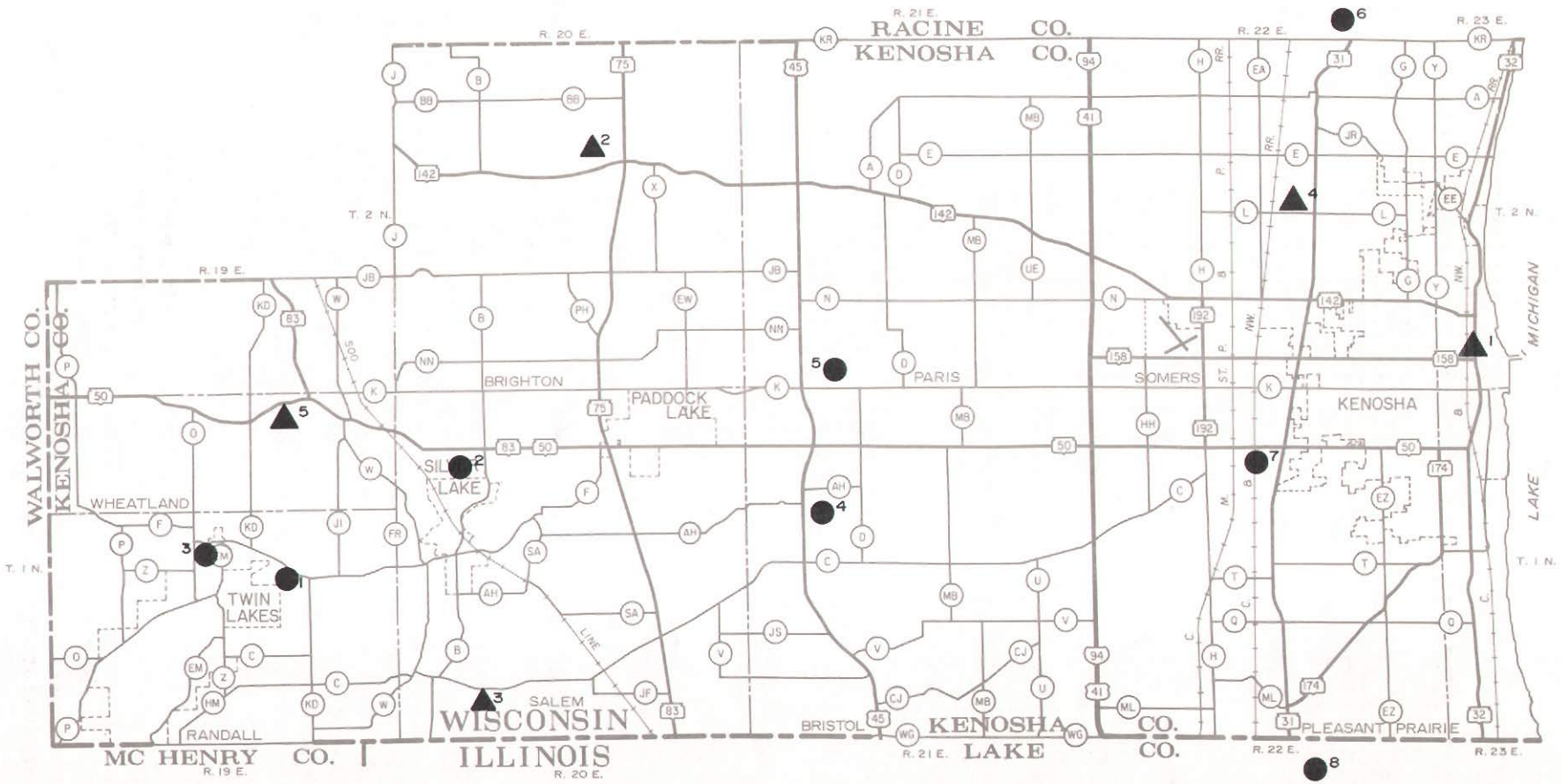
Source: Wisconsin Department of Natural Resources and SEWRPC.

EXISTING SOLID WASTE DISPOSAL FACILITIES

Municipal solid wastes generated in Kenosha County are disposed of primarily in two licensed sanitary landfills, one each in Racine and Kenosha Counties; and one additional landfill located in Lake County, Illinois. In addition, there are two public general-use landfills, one public special-use landfill, and two private special-use landfills located within Kenosha County which are used for the disposal of special solid wastes such as demolition debris and fly ash, as well as a limited amount of domestic wastes. The locations of these facilities are shown on Map 27, and pertinent characteristics are presented in Table 48. Residential refuse from the City of Kenosha is presently transported to a transfer station located at the City Waste Division garage located at the intersection of 50th Street and 13th Avenue prior to transport to the Browning & Ferris landfill located in the Town of Benton, Lake County, Illinois. Four other transfer stations in the County, which are located in the Towns of Brighton, Salem, Somers, and Wheatland, serve the residential refuse disposal needs of these Towns. The locations of these sites are shown on Map 27. Limited amounts of residential solid wastes are recycled. The recycling efforts include separation of "white goods" and other recyclable material such as motor oil. Considerable recycling of commercial and industrial solid waste also occurs. Presently, there are no municipal or county-owned and -operated incinerators in Kenosha County.

Map 27

EXISTING SOLID WASTE DISPOSAL FACILITIES IN KENOSHA COUNTY: 1984



LEGEND

- ● LANDFILL SITE
- ▲ TRANSFER STATION
- 3 SITE IDENTIFICATION NUMBER

TRANSFER STATION IDENTIFICATION

1	CITY OF KENOSHA
2	TOWN OF BRIGHTON
3	TOWN OF SALEM
4	TOWN OF SOMERS
5	TOWN OF WHEATLAND

LANDFILL SITE IDENTIFICATION

1	TOWN OF RANDALL
2	KENOSHA COUNTY HIGHWAY DEPARTMENT
3	VILLAGE OF TWIN LAKES
4	TOWN OF BRISTOL
5	WASTE MANAGEMENT INC.-PHEASANT RUN
6	LAND RECLAMATION, LTD.
7	WISCONSIN ELECTRIC POWER-PLEASANT PRAIRIE
8	BROWNING AND FERRIS, INC.

GRAPHIC SCALE
0 1 2 MILES
0 4000 8000 12000 FEET

Source: SEWRPC.

EXISTING OUTDOOR RECREATION AND RELATED OPEN SPACE SITES

There were a wide variety of public and private outdoor recreation and related open space sites in Kenosha County in 1985 (see Map 28). For park and open space planning purposes, such sites have been classified by the Regional Planning Commission into four general categories: general-use outdoor recreation sites, special-use outdoor recreation sites, urban open space sites, and rural open space sites. Based upon this classification system, Kenosha County's outdoor recreation and open space sites are described below.

General-Use Sites

General-use outdoor recreation sites may be defined as areas of land and water whose primary function is the provision of space and facilities for outdoor recreational activities. Such sites, when publicly owned, are known as parks. Thus, parks are a special form of publicly owned open space in which the major portion of needed outdoor recreation facilities is provided. School-related outdoor recreation areas are also classified by the Commission as general-use outdoor recreation sites. In addition, nonpublic outdoor recreation areas which provide facilities similar to those provided at parks and school sites, including private golf courses, campgrounds, riding stables, and nonpublic school sites, have been categorized by the Commission as general-use outdoor recreation sites.

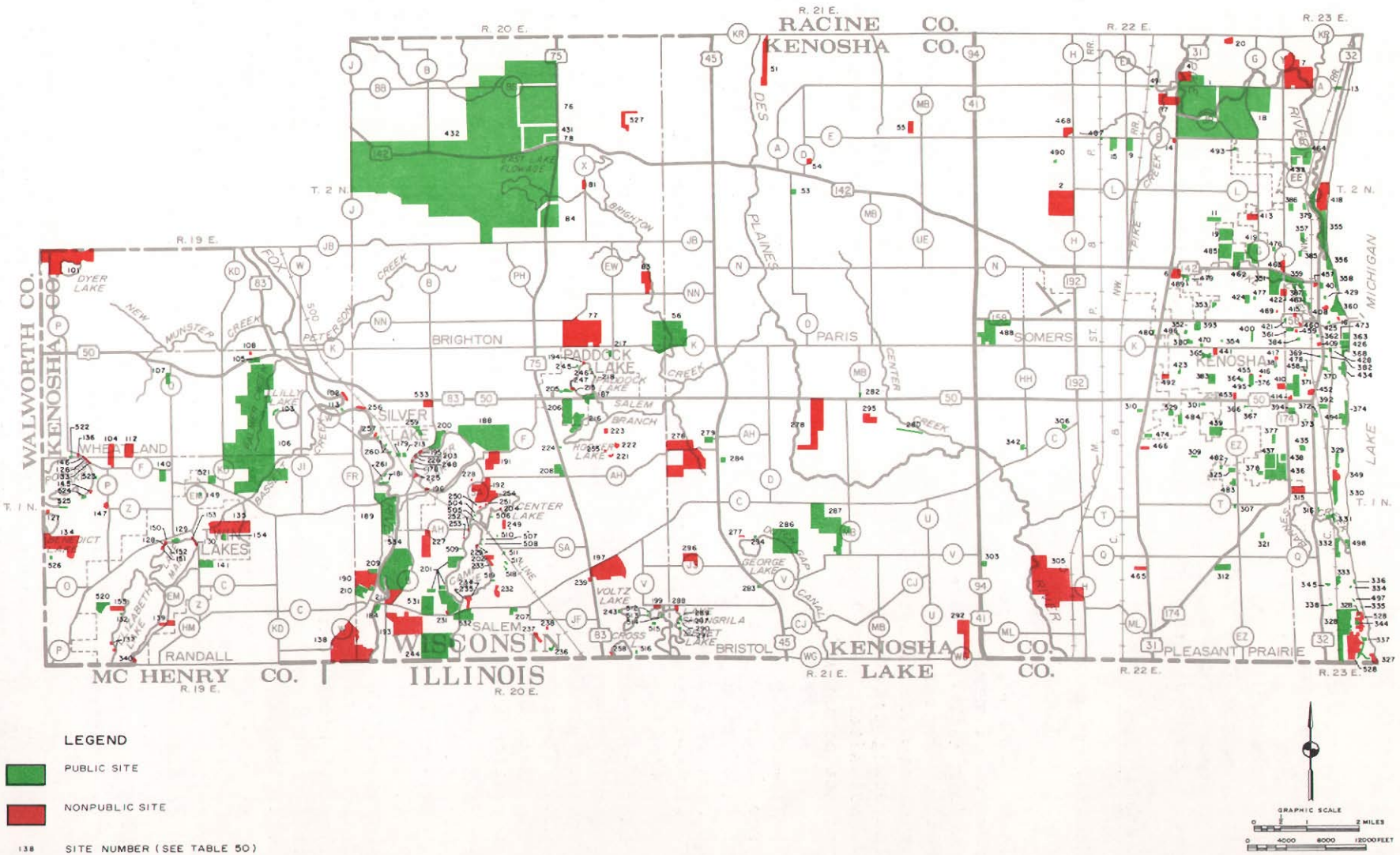
There were 214 general-use outdoor recreation sites in Kenosha County in 1985 (see Tables 49 and 50). In combination, these sites encompassed a total area of 4,602 acres, or 2.6 percent of Kenosha County. About 122 of these sites, encompassing 2,347 acres, were in public ownership, while the balance of 92 sites, encompassing 2,255 acres, were in nonpublic ownership.

General-use outdoor recreation sites can be divided into four types based primarily upon size, but also upon service area and the extent of natural resource amenities present at the site. Type I sites are defined as large outdoor recreation sites 250 acres or more in area having a multi-county service area. Such sites rely heavily on natural resource amenities for their recreational value and character to the degree that such amenities dictate the location and extent of that type of site. Type II sites are defined as intermediate in size, ranging in area from 100 to 249 acres, typically having a countywide or multi-community service area. As do Type I sites, Type II sites rely on the natural resource amenities for their recreational value and character, but such sites usually provide a smaller variety of recreational facilities or have smaller areas devoted to a given recreational activity. Type III sites range in area from 25 to 99 acres and primarily have a multi-neighborhood service area. Such sites rely more on the developmental characteristics of the area to be served than on natural resource amenities for their location, and may have both intensively developed areas for active recreational pursuits and open "green" areas for more passive recreational pursuits. Type IV sites are defined as small sites usually less than 25 acres in area which have the neighborhood or subneighborhood as a service area. Such sites also include the small mini-parks, tot lots, and school playgrounds which primarily provide for such recreational pursuits as softball, basketball, tennis, and playground activities.

As indicated in Table 49, there were four Type I general-use outdoor recreation sites, encompassing 1,228 acres, in Kenosha County in 1985. Three of these sites--Brighton-Dale Park in the Town of Brighton, Silver Lake Park in

Map 28

EXISTING OUTDOOR RECREATION AND OPEN SPACE SITES IN KENOSHA COUNTY: 1985



Source: SEWRPC.

Table 49

NUMBER AND AREA OF PUBLIC AND NONPUBLIC OUTDOOR RECREATION AND OPEN SPACE SITES BY CIVIL DIVISION IN KENOSHA COUNTY: 1985

Civil Division	Ownership	General-Use Sites										Special-Use Sites		Urban Open Space Sites		Rural Open Space Sites		Total	
		Type I		Type II		Type III		Type IV		Subtotal									
		Number of Sites	Acres	Number of Sites	Acres	Number of Sites	Acres	Number of Sites	Acres	Number of Sites	Acres	Number of Sites	Acres	Number of Sites	Acres	Number of Sites	Acres	Number of Sites	Acres
City of Kenosha	Public	--	--	--	--	9	488	55	278	64	766	3	23	5	11	5	65	77	865
	Nonpublic	--	--	--	--	1	15	21	43	22	58	--	--	--	--	1	10	23	68
	Total	--	--	--	--	10	503	76	321	86	824	3	23	5	11	6	75	100	933
Village of Paddock Lake	Public	--	--	--	--	--	--	5	33	5	33	--	--	--	--	4	38	9	71
	Nonpublic	--	--	--	--	--	--	2	2	2	2	--	--	--	--	--	--	2	2
	Total	--	--	--	--	--	--	7	35	7	35	--	--	--	--	4	38	11	73
Village of Silver Lake	Public	--	--	--	--	--	--	4	8	4	8	--	--	--	--	5	59	9	67
	Nonpublic	--	--	--	--	--	--	5	9	5	9	--	--	--	--	--	--	5	9
	Total	--	--	--	--	--	--	9	17	9	17	--	--	--	--	5	59	14	76
Village of Twin Lakes	Public	--	--	--	--	--	--	4	36	4	36	--	--	--	--	--	--	4	36
	Nonpublic	--	--	1	127	--	--	10	37	11	164	--	--	--	--	--	--	11	164
	Total	--	--	1	127	--	--	14	73	15	200	--	--	--	--	--	--	15	200
Town of Brighton	Public	1	360	--	--	--	--	1	8	2	368	--	--	--	--	4	4,868	6	5,236
	Nonpublic	--	--	1	235	1	42	1	3	3	280	1	23	--	--	--	--	4	303
	Total	1	360	1	235	1	42	2	11	5	648	1	23	--	--	4	4,868	10	5,539
Town of Bristol	Public	--	--	1	206	--	--	7	16	8	222	1	1	--	--	4	177	13	400
	Nonpublic	--	--	1	152	--	--	2	4	3	156	1	88	--	--	3	229	7	473
	Total	--	--	2	358	--	--	9	20	11	378	2	89	--	--	7	406	20	873
Town of Paris	Public	--	--	--	--	--	--	1	6	1	6	--	--	--	--	1	126	2	132
	Nonpublic	--	--	--	--	--	--	1	1	1	1	2	80	--	--	--	--	3	81
	Total	--	--	--	--	--	--	2	7	2	7	2	80	--	--	1	126	5	213
Town of Pleasant Prairie	Public	--	--	--	--	--	--	8	21	8	21	2	14	--	--	16	180	26	215
	Nonpublic	--	--	--	--	--	--	4	37	4	37	1	382	--	--	1	55	6	474
	Total	--	--	--	--	--	--	12	58	12	58	3	396	--	--	17	235	32	689
Town of Randall	Public	--	--	--	--	--	--	5	14	5	14	--	--	--	--	5	376	10	390
	Nonpublic	1	193	1	131	--	--	6	11	8	335	1	16	--	--	--	--	9	351
	Total	1	193	1	131	--	--	11	25	13	349	1	16	--	--	5	376	19	741
Town of Salem	Public	1	258	1	154	--	--	10	39	12	451	--	--	--	--	21	706	33	1,157
	Nonpublic	1	59	2	377	2	142	19	66	24	644	3	122	--	--	8	25	35	791
	Total	2	317	3	531	2	142	29	105	36	1,095	3	122	--	--	29	731	68	1,948
Town of Somers	Public	1	358	--	--	--	--	5	56	6	414	--	--	--	--	5	111	11	525
	Nonpublic	--	--	2	332	1	25	3	28	6	385	1	14	--	--	1	38	8	437
	Total	1	358	2	332	1	25	8	84	12	799	1	14	--	--	6	149	19	962
Town of Wheatland	Public	--	--	--	--	--	--	3	8	3	8	--	--	--	--	2	652	5	660
	Nonpublic	--	--	1	177	--	--	3	7	4	184	2	48	--	--	--	--	6	232
	Total	--	--	1	177	--	--	6	15	7	192	2	48	--	--	2	652	11	892
Kenosha County[a]	Public	3	976	2	360	9	488	108	523	122	2,347	6	38	5	11	67	7,358	200	9,754
	Nonpublic	1	252	9	1,531	5	224	77	248	92	2,255	11	773	--	--	14	357	117	3,385
	Total	4	1,228	11	1,891	14	712	185	771	214	4,602	17	811	5	11	81	7,715	317	13,139

[a]The sum of the number of sites by minor civil division may not match the total number of sites in the County because several sites are located in more than one minor civil division. Specifically, Hooker Lake Marsh lies in the Village of Paddock Lake and the Town of Salem; the University of Wisconsin Nature Area lies in the Towns of Brighton, Bristol, Paris, and Salem; the New Munster Wildlife Area and the Powers Lake Sportsman's Club lie in the Towns of Randall and Wheatland; and the Wilmot Mountain Ski Area lies in the Towns of Randall and Salem.

Source: SEWRPC.

Table 50

EXISTING OUTDOOR RECREATION AND OPEN SPACE SITES IN KENOSHA COUNTY: 1985

Ownership	Site Number	Site Name	Site Area	Site Type: General Use Type I	Type II	Type III	Type IV	Special Use	Urban Open Space	Rural Open Space
City of Kenosha										
Public	019	John Bullen Junior High School	12	--	--	--	X	--	--	--
	325	Jeffrey School	5	--	--	--	X	--	--	--
	351	Washington Park Golf Course	71	--	--	X	--	--	--	--
	352	Kenfair Park	2	--	--	--	X	--	--	--
	353	Endee Park	2	--	--	--	X	--	--	--
	354	Davis Park	1	--	--	--	X	--	--	--
	355	Alford Park	94	--	--	X	--	--	--	--
	356	Pennoyer Park	23	--	--	--	X	--	--	--
	357	Petzke Park	10	--	--	--	X	--	--	--
	358	J. F. Kennedy Park	25	--	--	X	--	--	--	--
	359	Washington Park	25	--	--	X	--	--	--	--
	360	Simmons Island Park	41	--	--	X	--	--	--	--
	361	Columbus Park	5	--	--	--	X	--	--	--
	362	Civic Center Park	?	--	--	--	--	--	X	--
	363	Lakefront Stadium Park	9	--	--	--	--	X	--	--
	364	Bullamore Park	?	--	--	--	X	--	--	--
	365	Forest Park	6	--	--	--	X	--	--	--
	366	Newman Park	2	--	--	--	X	--	--	--
	367	Elmwood Manor	1	--	--	--	X	--	--	--
	368	Eichelman Park	9	--	--	--	X	--	--	--
	369	Bain Park	?	--	--	--	X	--	--	--
	370	Baker Park	5	--	--	--	X	--	--	--
	371	Lincoln Park	44	--	--	X	--	--	--	--
	372	Simmons Athletic Field	6	--	--	--	--	X	--	--
	373	Tot Park	1	--	--	--	X	--	--	--
	374	Southport Park	20	--	--	--	X	--	--	--
	376	Roosevelt Park	6	--	--	--	X	--	--	--
	377	Sunnyside Park	5	--	--	--	X	--	--	--
	378	Isetts Park	5	--	--	--	X	--	--	--
	379	Petretti Park	8	--	--	--	X	--	--	--
	380	Little League Park	5	--	--	--	X	--	--	--
	381	Columbus School	1	--	--	--	X	--	--	--
	382	Durkee School	1	--	--	--	X	--	--	--
	383	Forest Park School	6	--	--	--	X	--	--	--
	384	Frank School	1	--	--	--	X	--	--	--
	385	Grant School	2	--	--	--	X	--	--	--
	386	Cordelia Harvey School	5	--	--	--	X	--	--	--
	387	Jefferson School	1	--	--	--	X	--	--	--
	392	Southport School	2	--	--	--	X	--	--	--
	393	Strange School	4	--	--	--	X	--	--	--
	394	Grewenow School	4	--	--	--	X	--	--	--
	400	McKinley Elementary and Junior High School	2	--	--	--	X	--	--	--
	419	Gateway Technical Institute	11	--	--	--	X	--	--	--
	401	Washington Junior High School	1	--	--	--	X	--	--	--
	421	Bain School	1	--	--	--	X	--	--	--
	423	Tower Line Park	3	--	--	--	X	--	--	--
	424	Wilson School	5	--	--	--	X	--	--	--
	425	Navy Memorial Park	1	--	--	--	--	--	X	--
	426	Wolfenbuttel Park	15	--	--	--	X	--	--	--
	428	Library Park	6	--	--	--	--	--	X	--
	429	Union Park	1	--	--	--	X	--	--	--
	433	Bose School	3	--	--	--	X	--	--	--
	434	Kemper Center	18	--	--	--	X	--	--	--
	435	Red Arrow Park	7	--	--	--	X	--	--	--
	436	James Anderson Park	94	--	--	X	--	--	--	--
	437	Tremper High School	24	--	--	X	--	--	--	--
	438	Vernon School	5	--	--	--	X	--	--	--
	439	Lance Junior High School	13	--	--	--	X	--	--	--
	462	Bradford Senior High School	2	--	--	--	X	--	--	--
	464	Poerio Park	70	--	--	X	--	--	--	--
	467	Nedweski Park	10	--	--	--	X	--	--	--
	470	60th Street Tennis Courts	1	--	--	--	X	--	--	--
	473	Friendship Park	1	--	--	--	--	--	X	--
	474	Gangler Park	5	--	--	--	X	--	--	--
	476	Matoska Park	3	--	--	--	X	--	--	--
	477	Nursery Park	2	--	--	--	X	--	--	--
	478	Streeter Park	1	--	--	--	X	--	--	--
	479	Jamestown Park (undeveloped)	2	--	--	--	--	--	--	X
	480	Johnson Highlands Park	1	--	--	--	--	--	X	--
	482	Schulte Park	3	--	--	--	X	--	--	--
	483	Retension Basin	9	--	--	--	--	--	--	X
	485	Retension Basin	51	--	--	--	--	--	--	X
	486	City Park Site	1	--	--	--	--	--	--	X
	493	City Park Site	2	--	--	--	--	--	--	X
	494	Shoreland Park	1	--	--	--	X	--	--	--
	495	Roosevelt School	1	--	--	--	X	--	--	--
	529	County Ice Arena	8	--	--	--	--	X	--	--
Nonpublic	016	Kenosha Yacht Club	2	--	--	--	X	--	--	--
	315	St. Therese School and Church	9	--	--	--	X	--	--	--
	408	St. George School	1	--	--	--	X	--	--	--
	409	St. James School	1	--	--	--	X	--	--	--
	410	St. Joseph High School	2	--	--	--	X	--	--	--
	413	St. Peter School	1	--	--	--	X	--	--	--
	414	Bethany Lutheran School	1	--	--	--	X	--	--	--
	415	Friedens Lutheran School	1	--	--	--	X	--	--	--
	416	St. Lukes Evangelical Lutheran School	1	--	--	--	X	--	--	--
	417	St. Thomas Aquinas School	1	--	--	--	X	--	--	--
	418	Carthage College	15	--	--	X	--	--	--	--
	422	Holy Rosary School	5	--	--	--	X	--	--	--
	441	Christian Life School--Joyland Playground	3	--	--	--	X	--	--	--
	452	St. Mark's School	1	--	--	--	X	--	--	--
	453	St. Mary's Church and School	1	--	--	--	X	--	--	--
	455	Kenosha Youth Foundation Outpost No. 1	1	--	--	--	X	--	--	--
	457	St. Casimir School and Church	1	--	--	--	X	--	--	--
	458	Kenosha Youth Foundation Outpost No. 3	1	--	--	--	X	--	--	--
City of Kenosha (continued)										
Nonpublic	459	Mount Carmel Church and School	1	--	--	--	X	--	--	--
	460	Christian Youth Council	1	--	--	--	X	--	--	--
	463	Woodhaven Girl Scout Camp	10	--	--	--	--	--	--	X
	469	Kenosha Youth Foundation Outpost No. 2	1	--	--	--	X	--	--	--
	492	Carol Rikli C.Y.C.	7	--	--	--	X	--	--	--
Village of Paddock Lake										
Public	187	Old Settler's Park	16	--	--	--	X	--	--	--
	205	Village Park	1	--	--	--	X	--	--	--
	206	Salem Central Union High School	11	--	--	--	--	--	--	--
	215	Paddock Lake Marsh	9	--	--	--	--	--	--	X
	216	Hooker Lake Marsh (part)	27	--	--	--	--	--	--	X
	217	Village Park	4	--	--	--	X	--	--	--
	218	Public Access	1	--	--	--	X	--	--	--
	245	Village Park	1	--	--	--	--	--	--	X
	246	Village Park	1	--	--	--	--	--	--	X
Nonpublic	194	North Shore Paddock Lake Community Club	1	--	--	--	X	--	--	--
	247	Paddock-Hooker Lake Association Park	1	--	--	--	X	--	--	--
Village of Silver Lake										
Public	178	Silver Lake Beach	1	--	--	--	X	--	--	--
	179	Silver Lake Ball Park	5	--	--	--	X	--	--	--
	181	Marsh River Bottom	7	--	--	--	--	--	--	X
	200	Silver Lake Marsh	39	--	--	--	--	--	--	X
	203	Public Access	1	--	--	--	X	--	--	--
	213	River View School	1	--	--	--	X	--	--	--
	259	Silver Lake Beach Subdivision Park	11	--	--	--	--	--	--	X
	260	North Silver Lake Estates Subdivision Parks	1	--	--	--	--	--	--	X
	261	South Silver Lake Estates Subdivision Park	1	--	--	--	--	--	--	X
Nonpublic	195	Lakeland Subdivision Beach No. 2	2	--	--	--	X	--	--	--
	196	Terry's Ferry	2	--	--	--	X	--	--	--
	225	The Cove	3	--	--	--	X	--	--	--
	226	Cason's Boat and Bait	1	--	--	--	X	--	--	--
	248	The Tackle Box	1	--	--	--	X	--	--	--
Village of Twin Lakes										
Public	129	Lance Park	10	--	--	--	X	--	--	--
	132	Public Beach	1	--	--	--	X	--	--	--
	154	Legion Park	9	--	--	--	X	--	--	--
	520	West Side Park	16	--	--	--	X	--	--	--
Nonpublic	128	Oak Ridge Subdivision Park	1	--	--	--	X	--	--	--
	130	Edgewater Motor Inn Beach	1	--	--	--	X	--	--	--
	135	Twin Lakes Country Club	127	--	X	--	--	--	--	--
	137	Elizabeth Manor Subdivision Park	3	--	--	--	X	--	--	--
	139	Rollie and Joe's Resort	13	--	--	--	X	--	--	--
	150	Pink House Resort	1	--	--	--	X	--	--	--
	151	Ackerman's Resort	4	--	--	--	X	--	--	--
	152	Knobe's Subdivision Park	1	--	--	--	X	--	--	--
	153	Young's Boats	1	--	--	--	X	--	--	--
	155	Oriole Club	10	--	--	--	X	--	--	--
	340	Snug Harbor	2	--	--	--	X	--	--	--
Town of Brighton										
Public	056	University of Wisconsin Nature Area (part)	80	--	--	--	--	--	--	X
	076	Brighton Dale Park	360	X	--	--	--	--	--	--
	078	Brighton School	8	--	--	--	X	--	--	--
	084	Kenosha School Forest	113	--	--	--	--	--	--	X
	431	Salem School Forest	160	--	--	--	--	--	--	X
	432	Bong Recreation Area	4,515	--	--	--	--	--	--	X
Nonpublic	077	Union League Boys Club Camp	235	--	X	--	--	--	--	--
	081	St. Francis Xavier School	3	--	--	--	X	--	--	--
	083	Happy Acres Campground	42	--	--	X	--	--	--	--
	527	Kenosha Achievement Center	23	--	--	--	--	X	--	--
Town of Bristol										
Public	056	University of Wisconsin Nature Area (part)	6	--	--	--	--	--	--	X
	279	Bristol School	3	--	--	--	X	--	--	--
	280	Benedict Prairie	8	--	--	--	--	--	--	X
	282	Woodworth School	2	--	--	--	X	--	--	--
	283	Wayside	1	--	--	--	--	X	--	--
	284	Richard Hansen Memorial Park	7	--	--	--	X	--	--	--
	286	State Wetland Area	160	--	--	--	--	--	--	X
	287	Bristol Woods County Park	206	--	X	--	--	--	--	--
	289	Park No. 1	1	--	--	--	X	--	--	--
	290	Park No. 2	1	--	--	--	X	--	--	--
	291	Park No. 3	1	--	--	--	X	--	--	--
	294	Town Land	1	--	--	--	X	--	--	--
	297	Wildlife Refuge	3	--	--	--	--	--	--	X
Nonpublic	276	Conservation Club of Kenosha	179	--	--	--	--	--	--	X
	277	George Lake Beach	1	--	--	--	X	--	--	--
	278	Bristol Oaks Country Club	152	--	X	--	--	--	--	--
	288	Lake Shangrila Resort	3	--	--	--	X	--	--	--
	292	King Richard's Faire	88	--	--	--	--	X	--	--
	295	Kenosha Bowmen	25	--	--	--	--	--	--	X
	296	Waukegan Bowmen	25	--	--	--	--	--	--	X

Table 50 (continued)

Ownership	Site Number	Site Name	Site Area	Site Type: General Use Type I	Type II	Type III	Type IV	Special Use	Urban Open Space	Rural Open Space
Town of Paris										
Public	053	Paris School	6	--	--	--	X	--	--	--
	056	University of Wisconsin Nature Area (part)	126	--	--	--	--	--	--	X
Nonpublic	051	Van's Great Lakes Dragaway	63	--	--	--	--	X	--	--
	054	St. John's Catholic School	1	--	--	--	X	--	--	--
	055	Sowers Rod and Gun Club	17	--	--	--	--	X	--	--
Town of Pleasant Prairie										
Public	301	Midwest Highlands Park	2	--	--	--	X	--	--	--
	303	Kenosha Tourist Information Center	13	--	--	--	--	X	--	--
	306	Pleasant Prairie School	4	--	--	--	X	--	--	--
	307	Highland School	1	--	--	--	X	--	--	--
	309	Whittier School	2	--	--	--	X	--	--	--
	310	Green Bay School	1	--	--	--	X	--	--	--
	312	Prairie Lane School	2	--	--	--	X	--	--	--
	316	Wayside	1	--	--	--	--	X	--	--
	321	Town Land	4	--	--	--	--	--	--	X
	328	Chiwaukee Prairie	91	--	--	--	--	--	--	X
	329	Town Land	10	--	--	--	--	--	--	X
	330	Town Land	23	--	--	--	--	--	--	X
	331	Town Land	8	--	--	--	--	--	--	X
	332	Town Land	8	--	--	--	--	--	--	X
	333	Town Land	4	--	--	--	--	--	--	X
	334	Town Land	1	--	--	--	--	--	--	X
	335	Town Land	1	--	--	--	--	--	--	X
	336	Town Land	1	--	--	--	--	--	--	X
	337	Town Land	7	--	--	--	--	--	--	X
	338	Town Land	1	--	--	--	--	--	--	X
	342	Pleasant Prairie Ball Park	6	--	--	--	X	--	--	--
	344	Town Land	2	--	--	--	--	--	--	X
	345	Carol Beach Park	3	--	--	--	X	--	--	--
	484	Retension Basin (city-owned land within the Town of Pleasant Prairie)	14	--	--	--	--	--	--	X
	497	Town Land	1	--	--	--	--	--	--	X
	498	Town Land	4	--	--	--	--	--	--	X
Nonpublic	305	Pheasant Valley Hunting Club	382	--	--	--	--	X	--	--
	327	Trident Marina	6	--	--	--	X	--	--	--
	349	Kenosha Town Club	16	--	--	--	X	--	--	--
	465	Lagoon Tavern Picnic Ground	10	--	--	--	X	--	--	--
	466	Colonial Inn Picnic Ground	5	--	--	--	X	--	--	--
	528	Chiwaukee Prairie-The Nature Conservancy	55	--	--	--	--	--	--	X
Town of Randall										
Public	106	New Munster Wildlife Area (part)	358	--	--	--	--	--	--	X
	140	Randall Consolidated School	7	--	--	--	X	--	--	--
	141	Lakewood School	3	--	--	--	X	--	--	--
	149	Bel Air Subdivision Park	1	--	--	--	X	--	--	--
	521	Town Land	12	--	--	--	--	--	--	X
	522	Town Land	1	--	--	--	X	--	--	--
	523	Town Land	1	--	--	--	--	--	--	X
	524	Bayview Public Park	2	--	--	--	X	--	--	--
	525	Town Land	3	--	--	--	--	--	--	X
	526	Nippersink Public Subdivision Park	2	--	--	--	--	--	--	X
Nonpublic	104	Powers Lake Sportsman's Club (part)	16	--	--	--	--	X	--	--
	126	Old Mill Beach Resort	1	--	--	--	X	--	--	--
	127	Club Benedict	2	--	--	--	X	--	--	--
	133	Jim's Boats	1	--	--	--	X	--	--	--
	134	Nippersink Manor Golf Course	131	--	X	--	--	--	--	--
	138	Wilmot Mountain Ski Area (part)	193	X	--	--	--	--	--	--
	145	Lakeside Park	1	--	--	--	X	--	--	--
	146	Dick and Rae's Resort	1	--	--	--	X	--	--	--
	147	Randale Park	5	--	--	--	X	--	--	--
Town of Salem										
Public	056	University of Wisconsin Nature Area (part)	19	--	--	--	--	--	--	X
	184	Wilmot Dam Area	10	--	--	--	X	--	--	--
	188	Silver Lake County Park	258	X	--	--	--	--	--	--
	189	Fox River Park	154	--	X	--	--	--	--	--
	201	Camp Lake Fishery Area	126	--	--	--	--	--	--	X
	207	Trevor School	2	--	--	--	X	--	--	--
	208	Salem Consolidated School	6	--	--	--	X	--	--	--
	209	Wilmot School	5	--	--	--	X	--	--	--
	210	Wilmot Union High School	10	--	--	--	X	--	--	--
	216	Hooker Lake Marsh (part)	13	--	--	--	--	--	--	X
	224	Public Access	1	--	--	--	X	--	--	--
	236	Public Beach	2	--	--	--	X	--	--	--
	243	Community Beach	1	--	--	--	X	--	--	--
	244	Peat Lake Wildlife Area	177	--	--	--	--	--	--	X
	504	Town Land	1	--	--	--	--	--	--	X
	505	Town Land	1	--	--	--	--	--	--	X
	506	Town Land	1	--	--	--	--	--	--	X
	507	Town Land	1	--	--	--	--	--	--	X
	508	Town Land	1	--	--	--	--	--	--	X
	509	Town Land	1	--	--	--	--	--	--	X
	510	Town Land	1	--	--	--	--	--	--	X
	511	Town Land	1	--	--	--	--	--	--	X
	512	Town Land	1	--	--	--	X	--	--	--
	513	Town Land	1	--	--	--	X	--	--	--
	514	Town Land	2	--	--	--	--	--	--	X
	515	Town Land	3	--	--	--	--	--	--	X
	516	Town Land	1	--	--	--	--	--	--	X
	517	Town Land	1	--	--	--	--	--	--	X
	518	Town Land	1	--	--	--	--	--	--	X
	519	Town Land	2	--	--	--	--	--	--	X
	531	Scattered Wetland	60	--	--	--	--	--	--	X
	532	Scattered Wetland	40	--	--	--	--	--	--	X
	534	Extensive Wildlife Habitat Peat Lake	253	--	--	--	--	--	--	X
Nonpublic	138	Wilmot Mountain Ski Area (part)	59	X	--	--	--	--	--	--
	190	Kenosha County Fairgrounds	75	--	--	--	--	X	--	--
	191	Silver Lake Sportsman's Club	45	--	--	--	--	X	--	--
	192	Salvation Army Camp Wonderland	90	--	--	X	--	--	--	--
	193	Camp Sol R Crown (BSA)	139	--	X	--	--	--	--	--
	197	Spring Valley Golf Club	238	--	X	--	--	--	--	--
	199	Jo-Ann's Resort	4	--	--	--	X	--	--	--
	202	Country Side Resort	7	--	--	--	X	--	--	--
	204	Subdivision Beach	1	--	--	--	X	--	--	--
	211	Holy Name School	1	--	--	--	X	--	--	--
	221	Subdivision Park	1	--	--	--	--	--	--	X
	222	Subdivision Park	2	--	--	--	--	--	--	X
	223	Subdivision Park	4	--	--	--	X	--	--	--
	227	Buccaneer Men's Club	52	--	--	X	--	--	--	--
	228	Subdivision Park	1	--	--	--	--	--	--	X
	229	Subdivision Park and Beach	1	--	--	--	X	--	--	--
	231	Nancy's Rest Awhile	2	--	--	--	X	--	--	--
	232	Subdivision Park	8	--	--	--	--	--	--	X
	233	Subdivision Park	3	--	--	--	X	--	--	--
	234	Sande's Resort	1	--	--	--	X	--	--	--
	235	Camp Lake Gardens	8	--	--	--	X	--	--	--
	237	Rock Lake Beach	7	--	--	--	X	--	--	--
	238	Rock Lake Highlands Beach	1	--	--	--	X	--	--	--
	239	Dugout Park	2	--	--	--	--	X	--	--
	249	Center Lake Woods Subdivision Park	6	--	--	--	--	--	--	X
	250	Lakewood Terrace Subdivision Park	1	--	--	--	X	--	--	--
	251	Lakewood Terrace Subdivision Park	1	--	--	--	X	--	--	--
	252	Camp Lake Subdivision Park	1	--	--	--	X	--	--	--
	253	Yaw's Camp Lake Subdivision Park	1	--	--	--	X	--	--	--
	254	Timber Lane Subdivision Park	1	--	--	--	X	--	--	--
	255	Montgomery Lake Highlands Park	1	--	--	--	--	--	--	X
	256	Fox River Dells Subdivision Park	5	--	--	--	--	--	--	X
	257	Fox River Dells Subdivision Park	1	--	--	--	--	--	--	X
	258	Cross Lake Subdivision Park	5	--	--	--	X	--	--	--
	533	Softball Field	16	--	--	--	X	--	--	--
Town of Somers										
Public	001	Petrifying Springs Park	358	X	--	--	--	--	--	--
	009	Somers School	7	--	--	--	X	--	--	--
	011	Hill Crest School	3	--	--	--	X	--	--	--
	013	Berryville School	2	--	--	--	X	--	--	--
	015	Somers Athletic Field	21	--	--	--	X	--	--	--
	018	UW-Parkside	23	--	--	--	X	--	--	--
	487	Town Land	1	--	--	--	--	--	--	X
	488	Town Land	103	--	--	--	--	--	--	X
	489	Town Land	3	--	--	--	--	--	--	X
	490	Town Land	2	--	--	--	--	--	--	X
	491	Town Land	2	--	--	--	--	--	--	X
Nonpublic	002	Maplecrest Country Club	173	--	X	--	--	--	--	--
	004	Jacksons Park, Inc	25	--	--	X	--	--	--	--
	006	Maple Springs Driving Range	14	--	--	--	--	X	--	--
	007	Kenosha Country Club	159	--	X	--	--	--	--	--
	014	Finney's West	10	--	--	--	X	--	--	--
	017	Hawthorn Hollow	38	--	--	--	--	--	--	X
	020	Girl Scout Camp	10	--	--	--	X	--	--	--
	468	Shoreland Lutheran High School	8	--	--	--	X	--	--	--
Town of Wheatland										
Public	103	Lilly Lake Park	1	--	--	--	X	--	--	--
	105	Town of Wheatland Ball Park	6	--	--	--	X	--	--	--
	106	New Munster Wildlife Area (part)	651	--	--	--	--	--	--	X
	107	Wheatland Center School	1	--	--	--	X	--	--	--
	113	Toelle Park	1	--	--	--	--	--	--	X
Nonpublic	101	BSA Camp Oh-Da-Ko-Da	177	--	X	--	--	--	--	--
	102	Oakwood Shores Subdivision Park	4	--	--	--	X	--	--	--
	104	Powers Lake Sportsman's Club (part)	20	--	--	--	--	X	--	--
	108	St. Alphonsus School	1	--	--	--	X	--	--	--
	112	Twin Lakes Sportsman's Club	28	--	--	--	--	X	--	--
	136	Wayside Resort	2	--	--	--	X	--	--	--

NOTE: All school-site acreage represents actual area developed for outdoor recreational facilities, and not ownership boundaries.

Source: SEWRPC.

the Town of Salem, and Petrifying Springs Park in the Town of Somers--were in public ownership and encompassed 976 acres. These three sites have been identified as major park sites in the regional park and open space plan.

As further indicated in Table 49, there were 11 Type II general-use outdoor recreation sites, encompassing 1,891 acres, in Kenosha County. Two of these sites--Bristol Woods Park in the Town of Bristol and Fox River Park in the Town of Salem--were in public ownership and encompassed a total of 360 acres.

There were 14 Type III general-use outdoor recreation sites encompassing 712 acres in Kenosha County. Nine of the sites--Alford Park, James Anderson Park, Kennedy Park, Lincoln Park, Poerio Park, Simmons Island Park, Tremper High School Athletic Field, Washington Park, and Washington Park Golf Course, all in the City of Kenosha--were in public ownership and encompassed a total of 488 acres.

There were 185 Type IV general-use outdoor recreation sites, encompassing 771 acres, in Kenosha County. Of this total, 108 sites, encompassing 523 acres, were in public ownership, consisting primarily of neighborhood parks and school-related recreation sites.

Special-Use Sites

Special-use outdoor recreation sites differ significantly from general-use sites in that the special-use sites, as defined by the Regional Planning Commission, are primarily spectator-oriented rather than user-oriented, or provide facilities for unique recreational pursuits. Special-use outdoor recreation sites include spectator-oriented facilities such as outdoor stadiums and special participant-oriented sites such as skeet- and trap-shooting areas. As indicated in Table 49, there were 17 special-use sites, encompassing 811 acres, in Kenosha County in 1985. Of this total, six sites encompassing 38 acres were in public ownership.

Urban Open Space Sites

Urban open space sites are defined by the Commission as those open areas, generally publicly owned, which exist in highly developed or densely populated urban settings. Such sites add variety to, or provide relief from, surrounding urban uses and are usually developed for passive recreational pursuits such as rest and reflection. As indicated in Table 49, there were five urban open space sites totaling 11 acres in Kenosha County in 1985. All of these sites were located in, and owned by, the City of Kenosha.

Rural Open Space Sites

Rural open space sites are those open areas or areas with woodlands, wetlands, prairies, or wildlife habitat acquired by public agencies or private organizations to preserve such lands and natural resource amenities in an essentially open state for resource preservation and limited recreational purposes. It is important to note that the rural open space category includes undeveloped public park sites, which are generally located in recently developed or developing areas on the fringes of urban centers. As indicated in Table 49, there were 81 rural open space sites encompassing 7,715 acres in Kenosha County in 1985. Of this total, 67 sites encompassing 7,358 acres were in public owner-

ship. A single site--the state-owned Bong Recreation Area in the Town of Brighton--encompassed 4,515 acres, and accounted for 61 percent of the public rural open space site acreage in the County.

EDUCATIONAL FACILITIES

Elementary and Secondary Facilities

There were 32 public elementary schools, 5 public junior high schools, and 5 public high schools in Kenosha County in 1984 (see Map 29). Kenosha Unified School District No. 1, which serves the City of Kenosha and the Towns of Pleasant Prairie and Somers, operated 22 elementary schools, 5 junior high schools, and 3 senior high schools, including one "alternative" high school. There were 2 public high schools and 10 public elementary schools in the remainder of the County west of IH 94. Most of the County west of IH 94 was served by two union high school districts--Central/Westosha and Wilmot--and 10 elementary school districts--Brighton, Bristol, Lakewood, Paris, Randall, Riverview, Salem, Trevor, Wilmot, and Wheatland Center. Small portions of the Town of Brighton and Paris were also served by the Union Grove Union High School District.

There were 21 private elementary and secondary schools in Kenosha County, almost all of which were affiliated with religious groups. There were 13 private elementary schools, two private secondary schools, and three private combined elementary and secondary schools in Kenosha County east of IH 94. There were three private elementary schools in Kenosha County west of IH 94.

Higher Educational Facilities

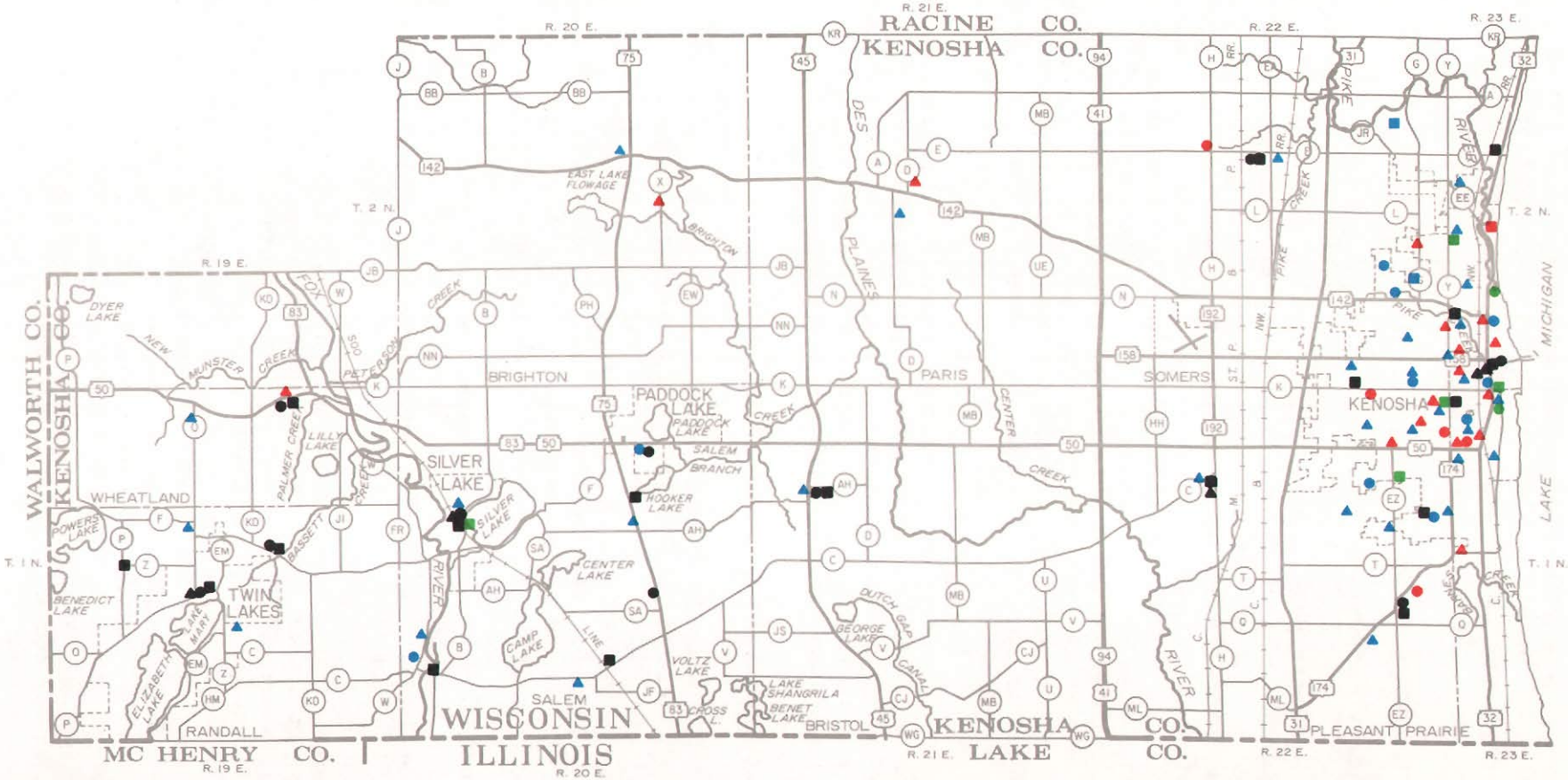
Higher educational facilities in Kenosha County include Gateway Technical Institute, Carthage College, and the University of Wisconsin-Parkside.

Gateway Technical Institute (GTI) is a tax-supported, post-secondary school providing career education for men and women. GTI provides associate degree and diploma programs to persons who are about to enter the job market, or persons who are seeking to upgrade their present skills or change jobs. In addition, a wide variety of adult and continuing education (noncredit) classes are provided for those wishing to expand or augment their occupational skills or otherwise improve their quality of life. GTI has campuses in three counties--Kenosha, Racine, and Walworth. The 57-acre Kenosha campus is located at 3520 30th Avenue in the City of Kenosha.

Carthage College is a four-year, co-educational, liberal arts college associated with the Lutheran Church of America and the American Lutheran Church. Founded in 1846 in Hillsboro, Illinois, Carthage was reestablished in Kenosha in 1960 on an 87-acre site on STH 32. Academic programs at the college include major studies in 39 different areas, all leading to a bachelor of arts degree. In addition, the college offers a master of education degree program with concentrations in areas of study that include: language arts, creative arts, social science, natural science, class counseling and guidance, religion, reading, and computers. Carthage College also offers the surrounding community a full program of evening and summer classes, providing residents with a variety of opportunities for continuing their education.

Map 29

SELECTED COMMUNITY FACILITIES IN KENOSHA COUNTY



LEGEND

- FIRE STATION
- POLICE DEPARTMENT
- CITY / VILLAGE / TOWN HALL
- PUBLIC LIBRARY
- HOSPITAL

COLLEGE / UNIVERSITY

- PUBLIC
- NONPUBLIC

JUNIOR / SENIOR HIGH SCHOOL

- PUBLIC
- NONPUBLIC (INCLUDES COMBINED ELEMENTARY AND HIGH SCHOOLS)

ELEMENTARY SCHOOL

- PUBLIC
- NONPUBLIC

GRAPHIC SCALE
0 1 2 MILES
0 4000 8000 12000 FEET

Source: SEWRPC.

The University of Wisconsin-Parkside, located on Wood Road (CTH G) north of CTH E in northeastern Kenosha County, is one of 13 degree-granting campuses of the University of Wisconsin system. The campus opened in 1968, and in 1984 had an enrollment of about 5,750 undergraduate students and 350 graduate students, and 5,700 alumni. Master of business administration and master of public administration degrees are conferred, as are undergraduate degrees in 33 different majors, with a number of specialties and options within majors available. UW-Parkside also offers preprofessional studies in a wide range of fields, including an accelerated three-year premedical program. The majority of students select career-focused majors in such areas as computer and engineering sciences, business and labor, the physical sciences, or health and preprofessional programs. The remainder choose majors in the behavioral and social sciences, humanities, or fine arts.

PUBLIC LIBRARIES

The Kenosha Public Library, operated by the City of Kenosha, provides extensive library facilities, including four libraries and a bookmobile service. The only other public library in the County is the Community Library located in the Village of Silver Lake and operated through a joint agreement by the Town of Salem and the Village of Paddock Lake. Public library service to those portions of Kenosha County not having their own library is provided by the Kenosha County Library System, which, through its system board, contracts with the Kenosha Public Library, the Community Library in Silver Lake, and the Lakeshores Library System--which represents public libraries in Racine and Walworth Counties--for provision of library services.

LAW ENFORCEMENT AND FIRE PROTECTION SERVICES

Five law enforcement agencies served Kenosha County in 1985. The Kenosha County Sheriff's Department and the City of Kenosha Police Department included about 85 and 154 law enforcement personnel, respectively. The remaining police departments--the police departments of the Villages of Silver Lake and Twin Lakes and the Town of Pleasant Prairie--included a total of about 14 full-time and 27 part-time or auxiliary law enforcement personnel.

There were 11 professional and volunteer fire departments in Kenosha County in 1985, operating from a total of 18 fire stations, as shown on Map 29. The largest fire department in the County is the City of Kenosha Fire Department, which employed 132 full-time fire fighters and maintained five fire stations. The Town of Pleasant Prairie Fire Department employed seven full-time fire fighters, supplemented by volunteer (paid-on-call) fire fighters. The other nine fire departments--Bristol, Randall, Salem, Silver Lake, Somers, Trevor, Twin Lakes, Wheatland, and Wilmot--were manned by a total of just over 400 volunteer fire fighters.

HOSPITALS

There are two hospitals in Kenosha County which are classified as general, acute care inpatient medical facilities--Kenosha Memorial Hospital and St. Catherine's Hospital. Kenosha Memorial Hospital, located in the City of Kenosha, provides general, intensive, and ambulatory care. The hospital has 315 beds and serves approximately 12,000 inpatients per year and some 60,500

outpatients. Affiliated with Kenosha Memorial Hospital is the Westosha Emergency Center, located in Silver Lake, which provides area residents with outpatient emergency services and emergency mobile intensive care services.

St. Catherine's Hospital, also located in the City of Kenosha, is an accredited hospital affiliated with the Medical College of Wisconsin, with a bed capacity of almost 300. Affiliated with St. Catherine's Hospital are: 1) Southeastern Family Practice Center, located at UW-Parkside's Tallent Hall, where physicians are trained in the specialty of family medicine; 2) Family Medical Center at Paddock Lake, offering primary medical care to families living in western Kenosha County; and 3) Benet Lake Treatment Center in south-central Kenosha County, a 20-bed satellite hospital specializing in chemical dependency rehabilitation.

SUMMARY

This chapter has presented information on the man-made environment of Kenosha County. The major findings of this chapter are summarized below.

1. Although Kenosha County is a relatively urbanized county, in 1980 only about 31,100 acres, or about 17 percent of the total area of the County, were devoted to urban land uses. The largest urban land use category, residential, accounted for 15,128 acres, or about 8.5 percent of the total area of the County in 1980, and about 48.6 percent of the developed urban area of the County. Other urban land use categories include commercial--593 acres, or about 0.3 percent of the total area of the County, and about 1.9 percent of the developed area of the County; industrial--888 acres, or 0.5 percent and 2.9 percent, respectively; transportation, communication, and utilities--9,639 acres, or 5.4 percent and 31.0 percent, respectively; governmental and institutional--1,295 acres, or 0.7 percent and 4.2 percent, respectively; recreational land--2,456 acres, or about 1.4 percent and 7.9 percent, respectively; and unused urban lands--1,103 acres, or about 0.6 percent and 3.5 percent, respectively. Rural land in Kenosha County totaled about 147,100 acres, or about 83 percent of the total area of the County in 1980. Agricultural land alone accounted for 107,301 acres, or about 60 percent of the total area of the County. Other rural land use categories include wetlands--15,612 acres, or 8.8 percent of the total area of the County; woodlands--9,572 acres, or 5.4 percent; surface water--4,826 acres, or 2.7 percent; and unused rural and other open land--9,761 acres, or 5.5 percent.

2. The total number of housing units in Kenosha County stood at 47,506 in 1980, following increases of 5,467 housing units, or 16 percent, between 1960 and 1970; and 8,396 housing units, or 21 percent, between 1970 and 1980. Of the total housing stock in Kenosha County in 1980, 45,893 units, or almost 97 percent, were year-round housing units; that is, housing units intended for occupancy throughout the year. The balance--1,613 housing units, or just over 3 percent of the total housing stock--consisted of vacant seasonal and migratory housing units, intended for use only in certain seasons. Of the total year-round housing stock, 43,064 housing units, or 94 percent, were occupied at the time of the federal census in April 1980, while 2,829 housing units, or about 6 percent, were vacant. Of the total occupied year-round housing stock, 30,367 housing units, or 71 percent, were owner-occupied, and 12,697 housing units, or about 29 percent, were renter-occupied.

3. Surface transportation service within Kenosha County is supplied primarily by a highly developed system of streets and highways. More limited transportation service is supplied by public transit and railway freight and passenger service. There were about 934 miles of streets and highways in Kenosha County in 1984. Of this total, 329 miles, or 35 percent, consisted of arterial streets and highways intended to serve the through movement of fast and heavy traffic. Approximately 124 miles, or 38 percent of the arterial street and highway system, were under the jurisdiction of the State, being comprised of interstate and state trunk highways and connecting streets; about 162 miles, or about 49 percent, were under the jurisdiction of the County, being comprised of county trunk highways; and about 43 miles, or 13 percent, were under local jurisdiction, being comprised of local arterial streets and highways.

   Fixed-route bus service in Kenosha County includes intercity service over routes in the eastern portion of the County and local service within the Kenosha urbanized area. The City of Kenosha's federally assisted public transit system--the Kenosha Transit System--provides fixed-route local bus service within the Kenosha urbanized area. Virtually all the city population was served by this system in 1985, with access provided to the downtown area, Carthage College, Gateway Technical Institute, the University of Wisconsin-Parkside, and the major shopping districts. The City of Racine's federally assisted local transit system--The Belle Urban System--also provided fixed-route local bus service within the County in 1985 on one route operated between the University of Wisconsin-Parkside and the Racine central business district.

   Railway passenger train service in Kenosha County is limited to a commuter-oriented service provided by the Regional Transportation Authority of Northeastern Illinois (RTA). Actual operation of this service is provided by the Chicago & North Western Transportation Company (C&NW) by contract with the RTA. Intercity passenger service operated by the National Railroad Passenger Corporation (Amtrak) uses the Milwaukee Road main line through Kenosha County, but does not make any stops within the county limits.

   As of December 1984, railway freight service in Kenosha County was provided by three railway companies. The Chicago & North Western Transportation Company operated in the eastern portion of the County over two north-south main lines in the Chicago-Milwaukee corridor, the first passing through the City of Kenosha and the second located just west of the City of Kenosha in the Towns of Somers and Pleasant Prairie. The C&NW also provided extensive switching service in and around the City and Port of Kenosha. The Chicago, Milwaukee, St. Paul & Pacific Railroad Company (Milwaukee Road) also operated over a north-south main line in the Chicago-Milwaukee corridor, located in the Towns of Somers and Pleasant Prairie. The Soo Line Railroad Company's Chicago-Twin Cities main line passes through the western portion of the County, including the Town of Wheatland and the Village of Silver Lake.

4. There are 13 airports located within Kenosha County, of which four are general aviation facilities open to use by the general public. The remaining nine airports are restricted to private use. General aviation

shopping districts. The City of Racine's federally assisted local transit system--The Belle Urban System--also provided fixed-route local bus service within the County in 1985 on one route operated between the University of Wisconsin-Parkside and the Racine central business district.

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4. There are 13 airports located within Kenosha County, of which four are general aviation facilities open to use by the general public. The remaining nine airports are restricted to private use. General aviation airports are intended to serve business, charter, and air taxi aircraft, as well as aircraft used for agricultural, recreational, sport, and training purposes. The largest general aviation airport in Kenosha County is the publicly owned Kenosha Municipal Airport.

5. Kenosha County is served by a harbor on Lake Michigan that is used for both commercial shipping and recreational boating purposes. The Kenosha Port can accommodate up to five ocean-going vessels at one time. Cargo-handling facilities include approximately 140,000 square feet of warehouse space.

6. There were 16 public sanitary sewerage systems in Kenosha County in 1984. Fifteen of these were served by a total of 11 sewage treatment plants in Kenosha County. Sewage from the remaining system, the KR Utility District located along CTH KR in the Town of Somers, is conveyed to the City of Racine sewage treatment plant for treatment and disposal. In addition, there were 8 private sewage treatment plants serving isolated enclaves of urban development within the County. The public sanitary sewerage systems together served an area of about 30.2 square miles, or about 10.8 percent of the total area of the County. These systems served a resident population of about 101,000 persons, or about 83.3 percent of the county population.

tially open state for resource preservation and limited recreational purposes. Undeveloped public park sites, which are generally located in recently developed or developing areas, are also included in the rural open space category. There were 67 publicly owned rural open space sites, encompassing 7,358 acres, and 14 nonpublic rural open space sites, encompassing 357 acres, in Kenosha County in 1985. A single site--the state-owned Bong Recreation Area in the Town of Brighton--encompassed 4,515 acres, and accounted for 61 percent of the public rural open space site acreage in the County.

9. There were 32 public elementary schools, 5 public junior high schools, and 5 public senior high schools in Kenosha County in 1984. Kenosha Unified School District No. 1, which serves the City of Kenosha and the Towns of Pleasant Prairie and Somers, operated 22 elementary schools, 5 junior high schools, and 3 senior high schools. There were 2 public high schools and 10 public elementary schools in the remainder of the County west of IH 94. Most of the County west of IH 94 was served by 2 union high school districts--Central/ Westosha and Wilmot--and 10 elementary school districts--Brighton, Bristol, Lakewood, Paris, Randall, Riverview, Salem, Trevor, Wilmot, and Wheatland Center. There were also 21 private elementary and secondary schools in Kenosha County in 1984, including 16 private elementary schools, 2 private secondary schools, and 3 private combined elementary and secondary schools. Higher educational facilities in Kenosha County consisted of Gateway Technical Institute, Carthage College, and the University of Wisconsin-Parkside.

10. The Kenosha Public Library, operated by the City of Kenosha, provided library service through four libraries and a bookmobile service in 1985. The only other public library in the County is the Community Library located in the Village of Silver Lake and operated through a joint agreement by the Town of Salem and the Village of Paddock Lake. Public library service to those portions of the County not having their own library is provided by the Kenosha County Library System, which contracts with the Kenosha Public Library, the Community Library in Silver Lake, and the Lakeshores Library System--which represents public libraries in Racine and Walworth Counties--for the provision of library services.

11. Five law enforcement agencies served Kenosha County in 1985. The Kenosha County Sheriff's Department and the City of Kenosha Police Department included about 85 and 154 law enforcement personnel, respectively. The police departments of the Villages of Silver Lake and Twin Lakes and the Town of Pleasant Prairie included a total of about 14 full-time and 27 part-time or auxiliary law enforcement personnel.

    There were 11 professional and volunteer fire departments in Kenosha County in 1985, operating from a total of 18 fire stations. The largest fire department in the County is the City of Kenosha Fire Department, which employed 132 full-time fire fighters and maintained five fire stations in 1985.

12. There are two hospitals in Kenosha County which are classified as general, acute care inpatient medical facilities--Kenosha Memorial Hospital and St. Catherine's Hospital. Kenosha Memorial Hospital, located in the City of Kenosha, provides general, intensive, and ambulatory care and has 315 beds. St. Catherine's Hospital, also located in the City of Kenosha, has a bed capacity of almost 300.

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Chapter V

ADOPTED PLANS AND LAND USE REGULATIONS

INTRODUCTION

As indicated in Chapter I of this report, much planning for the sound development of Kenosha County has been accomplished during the past two decades, and much progress has been made in the adoption of land use regulations intended to implement such planning. This chapter describes those areawide, county, and local plans affecting the County, and describes the existing land use regulations--including zoning, land subdivision regulations, and official mapping--that have been enacted to guide the use of land in the public interest within the County.

ADOPTED PLANS

Areawide Plans

Areawide plans prepared by the Regional Planning Commission provide a basic framework within which more detailed county and local plans can be prepared. Adopted regional plan elements that are particularly important to the County in the preparation of a county development plan include: 1) the regional land use plan; 2) the regional transportation system plan; 3) the regional water quality management plan; 4) the regional park and open space plan; and 5) the regional airport system plan.

Regional Land Use Plan: The adopted regional land use plan, as documented in SEWRPC Planning Report No. 25, A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin: 2000, is intended to serve as a guide to land use development and redevelopment within the Southeastern Wisconsin Region. The plan provides for the attainment of specific land use development objectives formulated in cooperation with the local, state, and federal units and agencies of government concerned. The plan sets forth recommendations regarding the amount, spatial distribution, and intensity of the various land uses required to serve the needs of the anticipated population and economic activity levels in Kenosha County and the Southeastern Wisconsin Region through the plan design year 2000. The key recommendations of the regional land use plan pertaining to Kenosha County are set forth in Table 51.

Of particular importance in the preparation of a county development plan are the regional plan recommendations concerning the preservation of prime agricultural lands and primary environmental corridors and the location of major commercial, industrial, and outdoor recreation centers. Also important are recommendations encouraging a compact, centralized form of urban development. Some of the recommendations of the regional land use plan have been refined and detailed in subsequent county and local planning programs, as noted later in this chapter.

Regional Transportation System Plan: The adopted regional transportation system plan, also documented in SEWRPC Planning Report No. 25, is intended to serve as a guide to the development of an integrated transportation system, a system which will effectively serve the existing regional land use pattern and promote implementation of the regional land use plan. The plan recommends both functional and jurisdictional arterial street and highway systems for Kenosha County through the plan design year 2000, and includes recommendations regarding the provision of mass transit service within the Kenosha urbanized area. The key recommendations of the regional transportation system plan pertaining to Kenosha County are set forth in Table 52.

As indicated in Table 52, the regional transportation system plan recommends the acquisition of right-of-way for, and construction of, a four-lane, limited access, standard surface arterial highway adjacent to the Chicago & North Western Railway freight line through the Towns of Pleasant Prairie and Somers, extending north through Racine County and into Milwaukee County. It should be noted that the regional transportation plan, as originally adopted, envisioned the eventual conversion of this highway to a freeway, to be known as the Lake Freeway-South. In 1981, after it became apparent that the Wisconsin Department of Transportation would not be able to fund the construction of a freeway in this corridor, the Regional Planning Commission formally amended the regional transportation plan by deleting the recommended conversion to a freeway so that, under the plan, the highway would be constructed as a limited access, standard surface arterial.

The transit element of the regional transportation plan was amended in 1982 with the preparation of a primary transit system plan for the Milwaukee area. This plan--documented in SEWRPC Planning Report No. 33, A Primary Transit System Plan for the Milwaukee Area--includes several recommendations regarding the provision of primary transit service between the Kenosha and Milwaukee urbanized areas. Specifically, the plan recommends that the City of Kenosha, in cooperation with Milwaukee County, provide primary transit service--in the form of buses operating over IH 94--between Kenosha and the Milwaukee central business district. In addition, this plan includes the option of operating commuter rail service on a temporary, demonstration basis between the Cities of Kenosha, Racine, and Milwaukee. Whether or not such a demonstration would be undertaken would be dependent upon the extent of public interest in the re-establishment of commuter rail service in this corridor.

It should also be noted that the local transit recommendations of the regional transportation plan for the Kenosha urbanized area have been supplemented by additional planning, including, most recently, the Kenosha area transit system plan and program. Completed in 1984, the plan was undertaken jointly by the City of Kenosha and the Regional Planning Commission in an effort to identify operational changes which might improve the overall performance of the Kenosha transit system. The plan includes recommendations regarding route structure and service level changes, and identifies the capital investment needs of the transit system over the period 1984 to 1988. The plan is documented in SEWRPC Community Assistance Planning Report No. 101, Kenosha Area Transit System Plan and Program: 1984-1988.

Regional Water Quality Management Plan: The adopted regional water quality management plan, as documented in SEWRPC Planning Report No. 30, Regional Water Quality Management Plan for Southeastern Wisconsin: 2000, describes

Table 51

MAJOR RECOMMENDATIONS OF THE YEAR 2000 REGIONAL LAND USE PLAN AS IT PERTAINS TO KENOSHA COUNTY

1. Promote a compact pattern of urban development in Kenosha County with additional urban growth occurring adjacent to, and outward from, existing urban centers; encourage urban development to occur only in those areas of the County that are covered by soils suitable for urban use, in areas that can be readily served by public sanitary sewerage and water supply facilities, and in areas that are not subject to special hazards such as flooding and erosion; encourage new residential development to occur primarily at medium densities, with a typical single-family lot size of one-quarter acre and a typical multi-family development averaging about 10 dwelling units per acre.

2. Preserve the best remaining elements of the natural resource base, particularly through the preservation of the primary environmental corridors within Kenosha County (see Chapter III for a description of environmental corridors in the County).

3. Preserve prime agricultural lands in Kenosha County (see Chapter III for a description of prime agricultural lands in the County).

4. Maintain and enhance the Kenosha central business district as one of the 16 existing or proposed major retail and service centers in southeastern Wisconsin.

5. Maintain the industrial area in the central portion of the City of Kenosha as a major industrial center and encourage the development of a major industrial center in the Town of Pleasant Prairie.

6. Maintain Brighton Dale County Park and Petrifying Springs County Park as major public outdoor recreation centers and provide for the continued development of Silver Lake County Park and the state-owned Bong Recreation Area.

Source: SEWRPC.

Table 52

MAJOR RECOMMENDATIONS OF THE YEAR 2000 REGIONAL TRANSPORTATION SYSTEM PLAN AS IT PERTAINS TO KENOSHA COUNTY

1. Maintain and preserve the portion of IH 94 in Kenosha County as an integral part of the freeway system in southeastern Wisconsin.

2. Acquire right-of-way for and construct a four-lane, limited access, standard surface arterial highway adjacent to the Chicago & North Western Railway freight line through the Towns of Somers and Pleasant Prairie, extending north through Racine County and into Milwaukee County.

3. Preserve, improve, and expand as necessary other elements of the standard arterial street and highway system in Kenosha County.

4. Maintain a tertiary, or local, level of mass transit service within the Kenosha urbanized area in the form of bus service over existing arterial and collector streets.

5. Establish primary transit service in the form of buses operating over IH 94 between Kenosha and the Milwaukee central business district.

6. Provide commuter rail service on a temporary, demonstration basis between the Cities of Kenosha, Racine, and Milwaukee, if there is sufficient public interest in the re-establishment of commuter rail service in this corridor.

Source: SEWRPC.

existing water quality conditions in southeastern Wisconsin; describes the natural and man-made features which affect water quality; establishes regional water use objectives and related water quality standards; and recommends a comprehensive water quality management plan for the Region. The plan itself consists of a land use plan element, a point source water pollution abatement plan element, a nonpoint source water pollution abatement plan element, a sludge management element, and a water quality monitoring element. The land use element of the water quality plan is the adopted regional land use plan for the design year 2000, described above. The point source pollution abatement plan element includes recommendations concerning the location and extent of sanitary sewer service areas; the location, type, and capacity of sewage treatment facilities and the level of treatment required to meet the recommended water use objectives; the location, configuration, and size of trunk sewers; and the abatement of pollution from industrial waste discharges. The nonpoint source pollution abatement plan element includes recommendations relating to diffuse sources of water pollution. These sources include both urban and rural sources. Urban nonpoint sources include runoff from residential, commercial, industrial, transportation, and recreational land uses; from construction activities; and from onsite septic tank sewage disposal systems. Rural nonpoint sources include runoff from cropland, pasture, and woodlands; atmospheric contributions; and livestock waste. The sludge management plan element includes recommendations regarding the disposal of sludge from public and private sewage treatment plants in southeastern Wisconsin. The water quality monitoring element recommends the steps to be taken to ensure the establishment of a sound program for continuing water quality monitoring within the Region. The major recommendations of the regional water quality management plan as they pertain to Kenosha County are summarized in Table 53.

Of particular importance to the preparation of a county development plan are the sanitary sewer service area recommendations of the water quality plan. The regional water quality management plan identifies recommended sanitary sewer service areas tributary to each of the existing and proposed sewage treatment plants within the Region. The plan recommends that these areas be refined and detailed through the cooperative efforts of the local units and agencies of government concerned so that the service areas ultimately reflect local, as well as areawide, development objectives. Sewer service area refinement plans have been completed for the portion of Kenosha County east of IH 94, as documented in SEWRPC Community Assistance Planning Report No. 106, Sanitary Sewer Service Areas for the City of Kenosha and Environs; for the Town of Salem Utility District No. 2, as documented in SEWRPC Community Assistance Planning Report No. 143, Sanitary Sewer Service Area for the Town of Salem Utility District No. 2 ; and for an area consisting of the Village of Paddock Lake, the Town of Salem Utility District No. 1, and the Town of Bristol Utility District Nos. 1 and 1B as documented in SEWRPC Community Assistance Planning Report No. 145, Sanitary Sewer Service Area for the Town of Salem Utility District No. 1, Village of Paddock Lake, and Town of Bristol Utility District Nos. 1 and 1B. Sewer service area refinement planning programs were also underway in 1986 for the Village of Silver Lake and the Village of Twin Lakes.

Regional Park and Open Space Plan: The adopted regional park and open space plan, documented in SEWRPC Planning Report No. 27, A Regional Park and Open Space Plan for Southeastern Wisconsin: 2000, identifies existing and anticipated future park and open space needs within the Region through the year 2000, and recommends the steps to be taken by local, county, and state

agencies and units of government in an effort to meet those needs. The major recommendations of the regional park and open space plan as they pertain to Kenosha County are set forth in Table 54.

The regional park and open space plan consists of two plan elements--an open space element and an outdoor recreation element. The open space element consists of recommendations regarding the preservation of prime agricultural lands and primary environmental corridors in Kenosha County and the Southeastern Wisconsin Region. Like the regional land use plan, the regional park and open space plan recommends the preservation of most of the remaining prime agricultural lands within the Region through the application of exclusive agricultural zoning. The plan further recommends the preservation of primary environmental corridors through a combination of public acquisition and conservancy zoning.

The outdoor recreation plan element consists of recommendations regarding the maintenance of existing, and the acquisition and development of new, outdoor recreation sites and facilities required to meet outdoor recreation needs in the Region through the year 2000. The plan provides recommendations regarding sites and facilities required for resource-oriented outdoor recreation activities such as camping, picnicking, golf, hiking, and nature study. The plan attempts to meet existing and anticipated future resource-oriented recreation requirements by developing the needed facilities at the best potential recreation sites within the Region. In this effort to ensure the high quality of future recreation sites, however, the plan places a priority on the development of recreation areas that are accessible to existing population centers.

The plan also provides recommendations regarding sites and facilities required for nonresource-oriented outdoor recreation activities such as baseball, basketball, tennis, and ice skating. In comparison to sites and facilities required for resource-oriented activities, sites and facilities for these activities rely less heavily on natural resource amenities, generally meet a greater need in urban areas than in rural areas, and have a relatively small service radius. For these reasons, the plan recommends that nonresource-oriented outdoor recreation sites and facilities be provided primarily in areas of the Region having a significant population concentration.

The regional park and open space plan recommends that local units of government in the Region refine and detail the recommendations of the regional plan, thereby integrating regional and local park plans. In 1980, the Regional Planning Commission, under the direction of the City of Kenosha and Towns of Pleasant Prairie and Somers, completed such a refinement of the regional park and open space plan for the Kenosha Planning District, consisting of the area of Kenosha County east of IH 94. This plan refinement, which is documented in SEWRPC Community Assistance Planning Report No. 41, A Park and Open Space Plan for the Kenosha Planning District, attempts to provide for an integrated system of parks and open spaces within the District--a system that would preserve and enhance the natural resource base while providing adequate opportunities for a wide range of outdoor recreational activities. The recommendations of the park and open space plan for the Kenosha Planning District as they pertain to the City of Kenosha were subsequently refined and updated by the City in 1985.

Table 53

MAJOR RECOMMENDATIONS OF THE REGIONAL WATER QUALITY MANAGEMENT PLAN AS IT PERTAINS TO KENOSHA COUNTY

1. Encourage urban land use development and environmental corridor preservation in accordance with the adopted year 2000 regional land use plan.

2. Provide public sanitary sewer service to major concentrations of urban development as well as to areas proposed for future urban development under the adopted regional land use plan.

3. Apply minimum urban nonpoint source water pollution control practices throughout the entire urban area of Kenosha County. Such practices include septic tank system management, construction erosion control, improved timing and efficiency of street sweeping and leaf collection, and industrial and commercial material storage runoff control. Apply minimum rural nonpoint source water pollution control practices throughout the entire rural area of Kenosha County. Such practices include livestock waste control, better management of fertilizer and pesticide applications, contour cropping, and conservation tillage. Apply additional urban nonpoint source controls in portions of the County, including the Barnes Creek subwatershed and part of the Hooker Lake drainage area. Apply additional rural nonpoint source pollution abatement measures in portions of the County, including the direct drainage areas to George Lake, Benedict/Tombeau Lake, Center Lake, Hooker Lake, and Dyer Lake, and to the Root River Canal.

4. Utilize land application as a means of disposal of sludge generated by sewage treatment plants in Kenosha County within areas identified as being suitable for land application. Landfilling is recommended as a standby disposal process to be used in the event land spreading could not be carried out.

5. Establish a long-term water quality monitoring program throughout the Southeastern Wisconsin Region, including Kenosha County.

Source: SEWRPC.

Table 54

MAJOR RECOMMENDATIONS OF THE REGIONAL PARK AND OPEN SPACE PLAN AS IT PERTAINS TO KENOSHA COUNTY

1. Maintain Brighton Dale County Park and Petrifying Springs County Park as major multi-use outdoor recreation sites; develop Silver Lake County Park as a major multi-use recreation site; and develop the state-owned Bong Recreation Area as a major special-use outdoor recreation site.

2. Develop two recreation corridor segments in Kenosha County, providing trail facilities for such activities as hiking and biking--one segment traversing the eastern portion of the County through the City of Kenosha and Towns of Somers and Pleasant Prairie, and the other traversing the western portion of the County through the primary environmental corridor along the Fox River through the Towns of Salem and Wheatland.

3. Provide local outdoor recreation sites and related facilities, including baseball diamonds, basketball goals, ice skating rinks, playfields, playgrounds, and tennis courts, to meet the overall demand for such facilities in the urban areas of the County through the year 2000.

4. Preserve prime agricultural lands through the application of exclusive agricultural zoning.

5. Preserve primary environmental corridors through a combination of public acquisition and conservancy zoning as appropriate.

Source: SEWRPC.

Regional Airport System Plan: A new regional airport system plan for southeastern Wisconsin was completed by the Commission in 1987. This plan, documented in SEWRPC Planning Report No. 38, A Regional Airport System Plan for Southeastern Wisconsin: 2010, updates and revises the original regional airport plan prepared by the Commission and adopted in 1976. Like the original plan, the second generation plan provides a guide to the development of a safer and more efficient regional air transportation system for southeastern Wisconsin. The plan recommends a system of 11 public use airports, including Kenosha Municipal Airport in Kenosha County.

The major recommendations of the regional airport system plan as they pertain to Kenosha County are set forth in Table 55. As indicated in Table 55, under the regional airport system plan, Kenosha Municipal Airport would be upgraded from a General Utility-Stage I airport to a General Utility-Stage II airport. Attendant improvements recommended under the regional airport plan include the construction of a new 5,500-foot-long paved primary runway, the widening and lengthening to 4,800 feet of the existing primary runway, the construction of parallel taxiways, and the provision of adequate support facilities, including appropriate runway and taxiway lighting and navigational aids to permit precision instrument approaches. In addition, the construction of additional hangars is recommended over the plan design period. At the end of 1985, the City of Kenosha, the airport owner, was in the process of implementing some of these improvements. During 1985 the necessary land easements had been acquired by the City, and the construction of the new 5,500-foot-long primary runway and attendant taxiways, the extension of the existing primary runway to 4,800 feet, and the installation of many of the lighting and navigational aids had been programmed for 1986 through 1989.

The regional airport system plan recommended that airport master planning efforts be undertaken for each of the airports included in the regional plan. A master plan for Kenosha Municipal Airport, refining and detailing the more general systems level recommendations of the original regional airport system plan, was completed by Mead & Hunt, Inc., Consulting Engineers, for the City of Kenosha in 1976. The master plan sets forth detailed recommendations for runway, taxiway, and terminal area improvements and related land acquisition requirements.

In addition, a land use plan for the area immediately adjacent to Kenosha Municipal Airport was prepared by the City of Kenosha in 1985. Major recommendations of the plan include the reservation of land adjacent to the airport for corporate offices and research, engineering, and light production facilities, and the exclusion of additional residential development from areas subject to aircraft noise levels that exceed Federal Aviation Administration standards.

Sub-regional Plans

In addition to the regional plan elements described above, several sub-regional plans--including comprehensive plans for the Fox River, Pike River, and Root River watersheds and a comprehensive plan for the Kenosha Planning District--are also important to the preparation of a county development plan.

Comprehensive Watershed Plans: The Regional Planning Commission has prepared comprehensive plans for three of the five major watersheds partially located in Kenosha County--the Fox River, Pike River, and Root River watersheds. The portions of these watersheds lying within Kenosha County encompass a combined

area of 128.5 square miles, or about 46 percent of the area of the County, with 96.3 square miles, or about 35 percent of the county area, being located in the Fox River watershed; 30.0 square miles, or about 11 percent of the county area, in the Pike River watershed; and 2.2 square miles, or just under 1 percent of the county area, in the Root River watershed.

The watershed plans are intended to help protect and restore the environmental quality of the watersheds and to resolve serious and costly flooding problems. The plans include integrated proposals for water pollution abatement, flood control, and land use within the respective watersheds. The land use elements of the watershed plans are specifically intended to avoid the intensification of existing and the creation of new developmental and environmental problems, while achieving a more orderly and economic pattern of development. The comprehensive plans for the Fox River, Pike River, and Root River watersheds are documented in SEWRPC Planning Report No. 12, A Comprehensive Plan for the Fox River Watershed; SEWRPC Planning Report No. 35, A Comprehensive Plan for the Pike River Watershed; and SEWRPC Planning Report No. 9, A Comprehensive Plan for the Root River Watershed. The major recommendations of the Fox River, Pike River, and Root River watershed plans as they pertain to Kenosha County are set forth in Table 56.

Kenosha Planning District Plan: The Kenosha Planning District plan was prepared for the City of Kenosha and the Towns of Pleasant Prairie and Somers by the Regional Planning Commission, with the assistance of Harland Bartholomew and Associates, as a guide to the orderly growth and development of the Kenosha Planning District, consisting of all of Kenosha County east of IH 94. The primary purpose of the planning program was to provide the city and the towns in the District with a comprehensive community development plan which could be cooperatively adopted and jointly implemented, containing recommended proposals for land use, transportation, and community facility and public utility development. While the plan was prepared in 1967 and thus certain elements of the plan have been updated and refined by subsequent regional, county, and local planning work, the plan continues to provide an overall framework for growth and development within the Planning District. The plan is documented in SEWRPC Planning Report No. 10, A Comprehensive Plan for the Kenosha Planning District.

Countywide Plans

Countywide plans and county planning activities which are relevant to the formulation of a development plan for Kenosha County include the farmland preservation plan; the overall economic development program plan; the solid waste management planning program; and the large-scale topographic mapping and control survey program and an automated mapping and land information system.

Farmland Preservation Plan: As its name implies, the farmland preservation plan is intended to serve as a guide to the preservation of agricultural land in Kenosha County. While the focus of the planning program is on the preservation of farmland, the plan addresses urban development and natural resource preservation objectives as well. The plan was prepared by the Regional Planning Commission working with the Kenosha County Office of Planning and Zoning Administration under the guidance of an advisory committee consisting of farmers, county agricultural agents, and representatives of the U. S. Department of Agriculture. The findings and recommendations of the farmland preservation

Table 55

MAJOR RECOMMENDATIONS OF THE REGIONAL AIRPORT SYSTEM PLAN AS IT PERTAINS TO KENOSHA COUNTY

1. Upgrade Kenosha Municipal Airport--as one of the 11 public use airports specifically included in the regional airport system plan--from a General Utility-Stage I airport to a General Utility-Stage II airport.

2. Provide needed improvements to Kenosha Municipal Airport. These improvements include the construction of a new northeast-southwest primary runway, the extension and widening of the existing northwest-southeast runway, and the installation of a precision instrument landing system and other airfield lighting and navigation aids.

3. Acquire additional land adjacent to Kenosha Municipal Airport to accommodate airport site improvements and clear zone protection.

Source: SEWRPC.

Table 56

MAJOR RECOMMENDATIONS OF THE FOX RIVER, PIKE RIVER, AND ROOT RIVER WATERSHED PLANS AS THEY PERTAIN TO KENOSHA COUNTY

1. Promote a more orderly and economic land use pattern, thereby avoiding the intensification of existing and the creation of new developmental and environmental problems. More specifically, encourage new urban development to occur in areas that are physically suitable for such development, that are not subject to special hazards such as flooding, and to which a full range of public utilities and urban services can be provided; preserve primary environmental corridors through a combination of public acquisition and conservancy zoning, as appropriate; and preserve prime agricultural land through exclusive agricultural zoning.

2. Reduce existing flooding problems and avoid the creation of new problems through the following: a) stream channel improvements, including improvements along the Pike River north of its confluence with Pike Creek in the Town of Somers, along Pike Creek south of its confluence with the Somers Branch in the Towns of Pleasant Prairie and Somers, along the Airport Branch and the tributary to the Airport Branch in the Town of Somers, and along a portion of Hoosier Creek in the Town of Brighton; b) channel clearance and maintenance along the East Branch of the Root River Canal in the Town of Paris and along Pike Creek just south of its confluence with the Pike River in the Town of Somers; c) the replacement of selected bridges having inadequate waterway openings; d) the removal of existing homes located in the floodway of the main stem of the Fox River in the Towns of Salem and Wheatland and the Village of Silver Lake; e) the floodproofing of other homes and structures within flood-prone areas as appropriate; and f) the application of floodplain regulations to preserve the floodwater conveyance and storage capacity of remaining undeveloped floodplain areas.

3. Implement a variety of measures directed at the abatement of water pollution, including pollution from municipal and private sewage treatment plants, from industrial waste discharges, and from diffuse sources.

Source: SEWRPC.

planning program are documented in SEWRPC Community Assistance Planning Report No. 45, A Farmland Preservation Plan for Kenosha County, Wisconsin.

As noted above, the farmland preservation plan was prepared to preserve prime farmlands in Kenosha County, particularly through the application of exclusive agricultural zoning. As noted in Chapter III, such lands were identified on the basis of the agricultural capabilities of the soils, the size of the individual farm unit, and the size of the overall farming area. Specifically, to be considered prime agricultural land, farm units must meet the following criteria: 1) the farm unit must be at least 35 acres in area; 2) at least 50 percent of the farm unit must be covered by soils which meet the U. S. Department of Agriculture, Soil Conservation Service, standards for national prime farmland or farmland of statewide importance; and 3) the farm unit must occur in blocks of similar farmland of at least 100 acres in size. As further noted in Chapter III, in 1980 farmland meeting these criteria encompassed about 76,300 acres, or about 71 percent of all farmland in Kenosha County (see Map 19 in Chapter III).

The farmland preservation plan recognized that certain lands designated as prime agricultural lands lie in areas that could be expected to be developed for urban use by the year 2000. Under the farmland preservation plan, such lands--encompassing about 6,400 acres, or about 8 percent of the prime agricultural lands in the County--were identified as "transitional" farmland. The plan recommended that such lands be preserved in agricultural use until sufficient demand for additional urban development has been demonstrated, and the essential urban utilities, facilities, and services can be readily and economically provided.

Kenosha County Overall Economic Development Program Plan: An overall economic development program plan is a locally initiated planning process designed to create employment opportunities, foster more stable and diversified local economies, and provide a mechanism for guiding and coordinating the efforts of public and private interests concerned with the economic development of an area. An initial overall economic development program document was prepared for Kenosha County in the early 1960's and subsequently updated in 1977, 1981, and 1986. The 1986 Kenosha County overall economic development program update was prepared with the assistance of the Regional Planning Commission under the guidance of the Kenosha County Council on Economic Development, and is documented in SEWRPC Community Assistance Planning Report No. 74 (2nd Edition), Kenosha County Overall Economic Development Program (OEDP) Plan--1986 Update.

The 1986 economic development program update identifies constraints on and potentials for economic development in Kenosha County, and sets forth an action-oriented strategy for improving economic conditions in the County. The plan establishes economic development goals and objectives for the County and outlines a course of action which the Office of Kenosha Area Economic Development may pursue to achieve the established goals.

Solid Waste Management Planning Program: Work was initiated on a solid waste management planning program for Kenosha County in 1985. Primary staff work on the study is being done by the Regional Planning Commission under the guidance of an advisory committee consisting of elected and appointed officials from throughout the County.

A comprehensive solid waste management plan for Kenosha County is intended to provide an assessment of countywide solid waste management needs, and a general strategy for meeting those needs while providing for the protection of public health and the environment from the potential adverse effects of improper solid waste disposal. The plan is intended to identify the existing solid waste management facilities and practices within the County; to evaluate the ability of the existing facilities and practices to meet the existing and probable future needs; to evaluate alternative means for meeting the unmet needs; and to recommend the most cost-effective means for adoption and implementation. Particular attention is to be given in the planning effort to the disposal of sludge generated by the Kenosha wastewater treatment plant and the other publicly owned sewage treatment facilities within the County. The plan is also intended to identify the existing and potential roles of the various units and agencies of government operating within the County in the development of the most cost-effective and environmentally sound solid waste management system. The solid waste management plan is expected to be completed in 1987.

Large-Scale Topographic Mapping and Control Survey Program and Automated Mapping and Land Information System: Kenosha County began a large-scale topographic mapping and control survey program in 1980. This program, administered for the County by the Regional Planning Commission, is designed to prepare 1 inch equals 200 feet scale, 2-foot contour interval topographic maps. The maps are prepared photogrammetrically to National Map Accuracy standards and are based upon a Regional Planning Commission-recommended monumented control survey network, which relates the U. S. Public Land Survey System to the State Plane Coordinate System. By 1985, large-scale topographic maps had been completed or were under preparation for 238 square miles of the County, or about 86 percent of the total area of the County. In addition, 1,089 U. S. Public Land Survey corners, or about 90 percent of all such corners in the County, had been located, monumented, and placed on the State Plane Coordinate System. The large-scale topographic maps are extremely useful in many aspects of county and local planning, zoning, and public works engineering, as well as in the private land development process.

The large-scale topographic mapping and control survey program described above provides a foundation for the creation of a modern, automated land records system. In this regard, Kenosha County, with the assistance of the Regional Planning Commission, has completed work on a demonstration project for an automated mapping and land information system for the Town of Randall and the Village of Twin Lakes. Land-related information incorporated into that system includes: 1) property ownership and assessment records maintained by the County Assessor's office; 2) land use; 3) zoning districts; 4) soil units; 5) flood hazard areas; and 6) shoreland areas. The demonstration project--which was supported in part by a grant from the Wisconsin Department of Development, with additional support provided by Kenosha County and the Regional Planning Commission--is documented in SEWRPC Technical Report No. 30, The Development of an Automated Mapping and Land Information System: A Demonstration Project for the Town of Randall, Kenosha County. Kenosha County has appropriated funds for the extension of this automated mapping and land information system into the Town of Wheatland and a portion of the Town of Salem.

Local Plans

Two minor civil divisions in Kenosha County, the Town of Pleasant Prairie and the City of Kenosha, have prepared local land use plans or plan components which warrant consideration in the formulation of a county development plan.

Town of Pleasant Prairie Planning Efforts: Three planning documents pertaining to the Town of Pleasant Prairie are particularly relevant to the formulation of the county development plan. A document entitled "Housing and Development Forecast, 1985-2005, Town of Pleasant Prairie, Kenosha County, Wisconsin," adopted by the Town of Pleasant Prairie Plan Commission in 1985, sets forth projections regarding the number of additional dwelling units which may be expected to be constructed in the Town through the year 2005, and indicates which areas of the Town may be expected to be most impacted by the anticipated growth. A land use plan--documented on a map entitled "Pleasant Prairie Des Plaines Basin Land Use Plan"--initially prepared in 1971 and most recently amended in 1981, recommends an arrangement of residential, commercial, industrial, recreational, and agricultural and other open space land uses in the portion of the Town of Pleasant Prairie lying within the Des Plaines River watershed.

The Chiwaukee Prairie-Carol Beach area land use management plan--prepared by the Regional Planning Commission in response to a request from the Town of Pleasant Prairie and Kenosha County and documented in SEWRPC Community Assistance Planning Report No. 88, A Land Use Management Plan for the Chiwaukee Prairie-Carol Beach Area of the Town of Pleasant Prairie, Kenosha County, Wisconsin--represents a guide to land use development and open space preservation within that portion of the Town of Pleasant Prairie lying east of STH 32, south of the City of Kenosha. The area is characterized by a beach dune ridge and swale complex, with high-quality prairies and wetlands being associated with the ridges and swales. Despite its natural resource values, a large portion of the area has been platted for single-family residential development. Wet soils and other physical development limitations, however, have significantly restricted urban development in much of the area.

The Chiwaukee Prairie-Carol Beach land use management planning program attempted to achieve a sound balance between open space preservation objectives and urban development objectives attendant to the area. The resulting plan attempts to accommodate significant urban development within the area while preserving its most important natural features. An important element of the plan is an open space acquisition program under which owners of land within the proposed open space preservation area will have the opportunity to sell their land at fair market value to the State or to private conservancy interests. The acquisition program would ensure the preservation of an environmental corridor traversing the entire length of the approximately four-and-one-half-mile-long study area.

City of Kenosha Planning Efforts: Plans for the City of Kenosha that should be considered in the formulation of a county development plan include the City of Kenosha downtown land use and transportation strategy; plans prepared for developing neighborhoods in the City; and the City of Kenosha harbor area master plan.

In 1986 the City of Kenosha completed a downtown land use and transportation strategy intended to refine a master plan prepared for the Kenosha central business district in 1981 but never adopted by the City of Kenosha. The downtown land use and transportation strategy was developed as a guide to land use development and redevelopment, traffic circulation, and parking in the downtown area of the City of Kenosha--consisting of an area generally bounded

on the north by 49th Street, on the east by Lake Michigan, on the south by 60th Street, and on the west by 13th Avenue.

Neighborhood development plans have been prepared for two neighborhoods in the City of Kenosha. The City of Kenosha has prepared and adopted a neighborhood plan for the Westview Neighborhood, located on the west side of the City of Kenosha within an area bounded on the west by STH 31, on the north by 67th street, on the east by the Wisconsin Electric Power Company right-of-way located just east of 57th Avenue, and on the south by STH 50. The plan consists of land use and related zoning recommendations and a proposed street pattern for the Westview Neighborhood.

A plan for the Whittier Neighborhood located just south of the Westview Neighborhood was prepared by the Regional Planning Commission at the request of the City of Kenosha in 1977. The Whittier Neighborhood is located in the Town of Pleasant Prairie and the City Kenosha in an area bounded on the west by STH 31, on the north by STH 50, on the east by 51st Avenue, and on the south by 85th Street. The plan for the Whittier Neighborhood is a precise neighborhood plan consisting of recommendations regarding future land use, local and collector streets, drainage patterns, and school and park facilities to guide the development of this area. The plan, which is documented in SEWRPC Community Assistance Planning Report No. 16, A Plan for the Whittier Neighborhood, has not, however, been formally adopted by the City of Kenosha.

The City of Kenosha harbor area master plan analyzes the potential for commercial port facilities and recreational marina facilities in the Kenosha harbor, and sets forth appropriate recommendations. The plan, documented in Harbor Area Master Plan, City of Kenosha, Wisconsin, recommends that the City develop a new recreational boating marina for approximately 600 boats and allow for the development of additional facilities as required to serve the proposed marina. The plan also recommends that the City accommodate expansion of the harbor's commercial shipping facilities, as dictated by long-term market conditions, by reserving an area within the U. S. Army Corps of Engineers' confined dredged material disposal area for port facility development or, at a minimum, for open storage. Finally, the plan recommends that the City investigate alternative measures to reduce heavy wave turbulence within the harbor channel and turning basin.

LAND USE REGULATIONS

Local, general-purpose units of government--towns, villages, cities, and counties--have many legal powers that enable them to implement physical plans. Discussed here are the important police power regulatory measures of zoning, including general as well as shoreland and floodplain zoning, subdivision control, and official mapping as they are applied within Kenosha County.

General Zoning

Zoning ordinances represent one of the most important means available to county and local units of government for managing land use in the public interest. Moreover, in the absence of adopted land use plans, zoning ordinances and zoning district maps may provide the best representation of local

land use development objectives. A summary of zoning regulations within Kenosha County is presented herein.

Cities in Wisconsin are granted general zoning powers under Section 62.23(7) of the Wisconsin Statutes. The same powers are granted to villages under Section 61.35 of the Statutes. The City of Kenosha and the Villages of Paddock Lake, Silver Lake, and Twin Lakes have each adopted general zoning ordinances as authorized under these statutes.

Counties in Wisconsin are granted general zoning powers under Section 59.97 of the Wisconsin Statutes. Kenosha County adopted a new zoning ordinance in 1983, replacing a zoning ordinance adopted by the County in 1959. Entitled "Kenosha County General Zoning and Shoreland/Floodplain Zoning Ordinance," the new ordinance combines the County's general zoning ordinance and shoreland and floodplain zoning regulations into one document. The new shoreland and floodplain zoning regulations went into effect throughout the unincorporated area of Kenosha County upon approval of the County Board, publication, and posting in 1983. The general zoning provisions of the ordinance, however, become effective only within those towns which act to approve the ordinance. Of the six towns that had been under the jurisdiction of the 1959 County Zoning Ordinance, four towns--Randall, Somers, Wheatland, and Pleasant Prairie--have adopted the new County Zoning Ordinance. The other two towns under the jurisdiction of the 1959 County Zoning Ordinance--Brighton and Bristol--have not yet adopted the new County Zoning Ordinance. Except for those portions of these towns lying within the statutory shoreland zoning jurisdiction area, these two towns are presently unzoned. Within the shoreland areas of the Towns of Brighton and Bristol, the zoning districts established on the Kenosha County zoning map are in effect.

The two towns that were not under the jurisdiction of the 1959 County Zoning Ordinance--Paris and Salem--continue to administer their own zoning ordinances. As discussed later, within the shoreland areas, there are some conflicts between the districts established under the Salem zoning ordinance and the districts established under the County Zoning Ordinance. It should also be noted that Kenosha County has raised questions concerning the legality of both the Paris and Salem zoning ordinances and has initiated litigation contesting the legality of the Paris zoning ordinance.

In order to provide an overview of current zoning within Kenosha County, the individual zoning districts established under the above zoning ordinances have been placed into general zoning district categories and mapped. The resulting generalized zoning pattern is shown on Map 30. The amount of land included in the general zoning district categories is presented for the overall County in Table 57 and for the individual city, villages, and towns in the County in Table 58. A description of the pattern of existing zoning by major zoning district category follows.[1]

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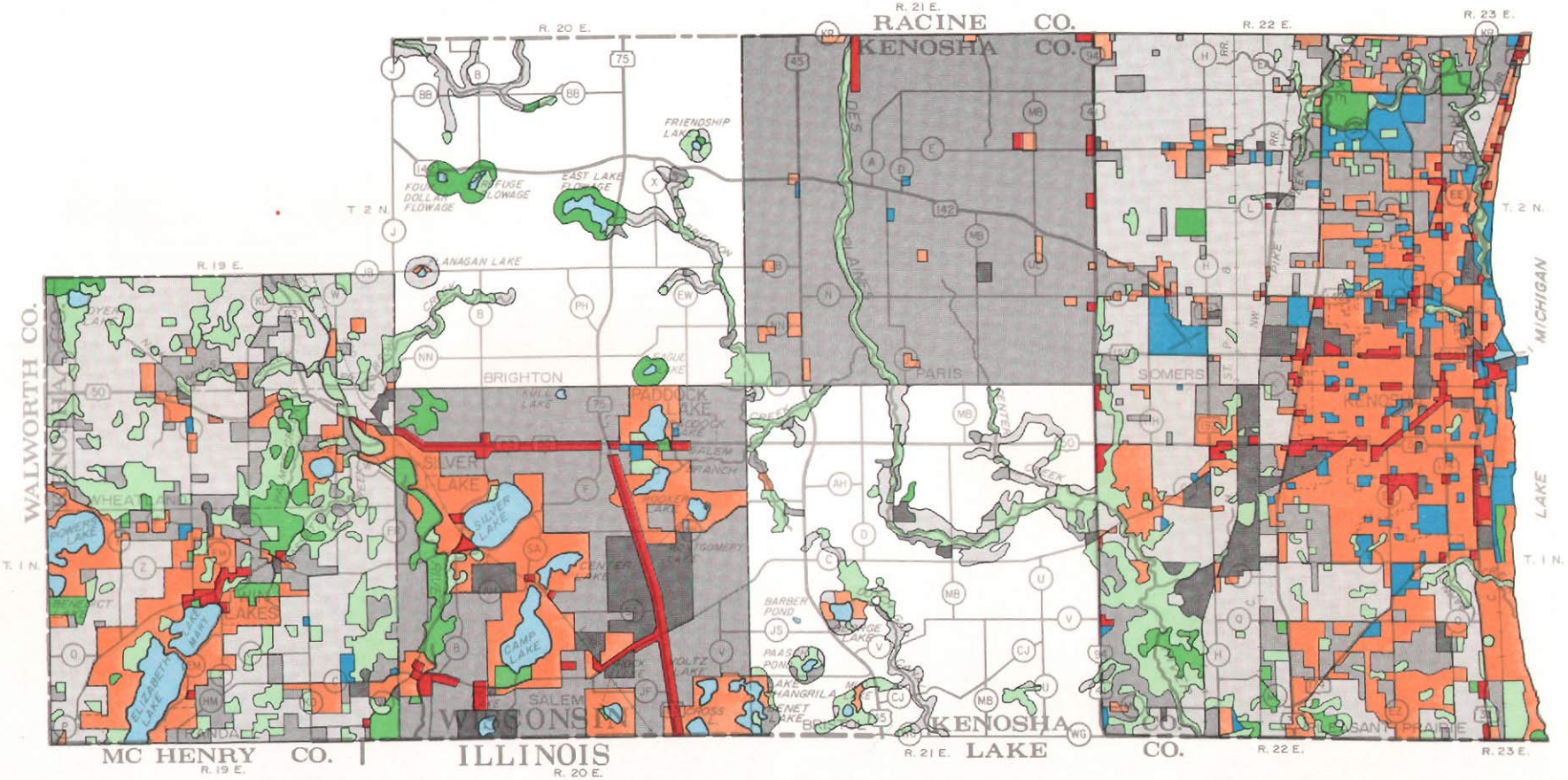
[1]Map 30 and Tables 57 and 58 describe the existing pattern of zoning under the City of Kenosha, Village of Paddock Lake, Village of Silver Lake, Village of Twin Lakes, Town of Paris, and Town of Salem zoning ordinances, and under the Kenosha County Zoning Ordinance as it pertains to the Towns of Pleasant Prairie, Randall, Somers, and Wheatland and the shoreland areas of the Towns of Brighton and Bristol.

Map 30

EXISTING ZONING DISTRICTS IN KENOSHA COUNTY: 1985



LEGEND

- RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL AND EXTRACTIVE
- GOVERNMENTAL AND INSTITUTIONAL
- RECREATIONAL
- CONSERVANCY
- AGRICULTURAL – MINIMUM PARCEL SIZE LESS THAN 35 ACRES (INCLUDES RURAL ESTATE RESIDENTIAL)
- AGRICULTURAL – MINIMUM PARCEL SIZE OF 35 ACRES
- UNZONED
- WATER

GRAPHIC SCALE
0 1/2 1 2 MILES
0 4000 8000 12000 FEET

Source: SEWRPC.

Table 57

EXISTING ZONING BY GENERALIZED DISTRICT CATEGORIES IN KENOSHA COUNTY: 1985

Zoning Category	Acres	Percent of Total
Residential		
High Density[a]	7,040	3.9
Medium Density[b]	12,840	7.2
Low Density[c]	3,548	2.0
Suburban Density[d]	453	0.3
Rural Estate[e]	826	0.5
Mobile Home	242	0.1
Subtotal Residential	24,949	14.0
Commercial	3,261	1.8
Industrial	4,844	2.7
Governmental and Institutional	3,810	2.1
Recreational	4,320	2.4
Extractive	737	0.4
Lowland Conservancy	10,634	6.0
Upland Conservancy	3,501	2.0
Agricultural		
Minimum Parcel Size of Less than 5 Acres or Minimum Parcel Size Not Specified	11,361	6.4
Minimum Parcel Size of 10 Acres	34,444	19.3
Minimum Parcel Size of 35 Acres	34,125	19.2
Subtotal Agricultural	79,930	44.9
Water[f]	4,017	2.3
Unzoned	38,171	21.4
Total	178,174	100.0

[a]Requires less than 6,000 square feet of lot area per dwelling unit.

[b]Requires 6,000-19,999 square feet of lot area per dwelling unit.

[c]Requires 20,000 square feet to 1.4 acres of lot area per dwelling unit.

[d]Requires 1.5 to 4.9 acres of lot area per dwelling unit.

[e]Requires 5 acres or more of lot area per dwelling unit.

[f]The treatment of surface water areas varies from community to community --in some cases being placed in a conservancy or recreational district, and in other cases being unzoned. In order to lend consistency to this analysis of existing zoning, larger surface water bodies--including major and minor lakes and the Fox River--were simply identified on Map 30 and reported in Tables 57 and 58 as water.

Source: SEWRPC.

Table 58

SUMMARY OF EXISTING ZONING BY MINOR CIVIL DIVISION IN KENOSHA COUNTY: 1985

Generalized Zoning Category	City of Kenosha			Village of Paddock Lake			Village of Silver Lake			Village of Twin Lakes		
	Local Zoning District	Acres	Percent of Total	Local Zoning District	Acres	Percent of Total	Local Zoning District	Acres	Percent of Total	Local Zoning District	Acres	Percent of Total
Residential High Density[a]	RS-3 RD RM-1 RM-2 RG-1 RG-2	3,948	36.8	Rm-1	3	0.3	A Residence B Residence	620	70.4	Residential Multiple Dwelling	2,329	58.2
Medium Density[b]	RS-1 RS-2	2,124	19.8	Rs-1 Rs-2 Rs-3	424	37.8	--	--	--	--	--	--
Low Density[c]	--	--	--	--	--	--	--	--	--	--	--	--
Suburban Density[d]	--	--	--	--	--	--	--	--	--	--	--	--
Rural Estate[e]	--	--	--	--	--	--	--	--	--	--	--	--
Mobile Home	--	--	--	--	--	--	--	--	--	--	--	--
Subtotal Residential	--	6,072	56.6	--	427	38.1	--	620	70.4	--	2,329	58.2
Commercial	B-1 B-2 B-3	986	9.2	B-1	61	5.5	Business	85	9.7	Commercial	179	4.5
Industrial	M-1 M-2	1,369	12.7	--	--	--	Industrial	15	1.7	Industrial	32	0.8
Governmental and Institutional	I-P[g]	2,117	19.7	I-1	57	5.1	--	--	--	--	--	--
Recreational	--	--	--	P	24	2.1	--	--	--	Recreational Park	158	3.9
Extractive	--	--	--	--	--	--	--	--	--	--	--	--
Lowland Conservancy	FW	168	1.6	C	75	6.7	Floodway Conservancy Floodplain	152	17.3	Conservancy Floodway Floodplain Conservancy	276	6.9
Upland Conservancy	--	--	--	--	--	--	--	--	--	--	--	--
Agricultural												
Minimum Parcel Size of Less than 5 Acres or Minimum Parcel Size Not Specified	--	--	--	--	--	--	--	--	--	Agricultural[h]	41	1.0
Minimum Parcel Size of 10 Acres	--	--	--	A-A	339	30.2	--	--	--	--	--	--
Minimum Parcel Size of 35 Acres	--	--	--	--	--	--	--	--	--	--	--	--
Subtotal Agricultural	--	--	--	--	339	30.2	--	--	--	--	41	1.0
Water	--	20	0.2	--	138	12.3	--	8	0.9	--	987	24.7
Unzoned	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	10,732	100.0	--	1,121	100.0	--	880	100.0	--	4,002	100.0

Generalized Zoning Category	Town of Brighton			Town of Bristol			Town of Paris			Town of Pleasant Prairie[i]		
	Local Zoning District	Acres	Percent of Total	Local Zoning District	Acres	Percent of Total	Local Zoning District	Acres	Percent of Total	Local Zoning District	Acres	Percent of Total
Residential High Density[a]	--	--	--	--	--	--	--	--	--	R-9 R-10 R-11	65	0.3
Medium Density[b]	--	--	--	R-4 R-6	153	0.7	--	--	--	R-4 R-5 R-6 R-8	4,926	21.5
Low Density[c]	R-2	16	0.1	R-2 R-3	80	0.3	--	--	--	R-2 R-3	417	1.8
Suburban Density[d]	--	--	--	--	--	--	Country Home	453	2.0	--	--	--
Rural Estate[e]	R-1	19	0.1	R-1	2	--[f]	--	--	--	R-1	99	0.4
Mobile Home	--	--	--	R-12	2	--[f]	--	--	--	R-12	122	0.5
Subtotal Residential	--	35	0.2	--	237	1.0	--	453	2.0	--	5,629	24.5
Commercial	--	--	--	B-1 B-3	13	0.1	Service Center	191	0.8	B-1 B-2 B-3 B-4	385	1.7
Industrial	--	--	--	M-1 M-2	31	0.1	Industrial	52	0.2	M-1 M-2	1,027	4.5
Governmental and Institutional	I-1	3	--[f]	I-1	4	--[f]	Government	32	0.1	I-1	541	2.4
Recreational	PR-1	763	3.3	PR-1	46	0.2	--	--	--	PR-1	691	3.0
Extractive	M-3	6	--[f]	M-3	86	0.4	--	--	--	M-3	375	1.6
Lowland Conservancy	C-1	703	3.1	C-1	1,481	6.4	Conservancy	544	2.4	C-1	3,018	13.1
Upland Conservancy	C-2	121	0.5	C-2	226	1.0	--	--	--	C-2	677	2.9
Agricultural												
Minimum Parcel Size of Less than 5 Acres or Minimum Parcel Size Not Specified	--	--	--	--	--	--	--	--	--	--	--	--
Minimum Parcel Size of 10 Acres	A-2	136	0.6	A-2	642	2.8	Agricultural	21,725	94.5	A-2	3,070	13.4
Minimum Parcel Size of 35 Acres	A-1	1,203	5.2	A-1 A-4 --	1,912	8.2	--	--	--	A-1 A-4	7,548	32.9
Subtotal Agricultural	--	1,339	5.8		2,554	11.0	--	21,725	94.5	--	10,618	46.3
Water	--	213	0.9	--	188	0.8	--	--	--	--	--	--
Unzoned	--	19,815	86.2	--	18,356	79.0	--	--	--	--	--	--
Total	--	22,998	100.0	--	23,222	100.0	--	22,997	100.0	--	22,961	100.0

Table 58 (continued)

Generalized Zoning Category	Town of Randall			Town of Salem			Town of Somers			Town of Wheatland		
	Local Zoning District	Acres	Percent of Total	Local Zoning District	Acres	Percent of Total	Local Zoning District	Acres	Percent of Total	Local Zoning District	Acres	Percent of Total
Residential												
High Density[a]	R-9	5	--[f]	--	--	--	R-9 R-10 R-11	70	0.3	--	--	--
Medium Density[b]	R-4 R-5 R-6 R-8	368	3.2	Residential A Residential B	4,092	19.3	R-4 R-5 R-6 R-8	502	2.4	R-4 R-5	251	1.6
Low Density[c]	R-2 R-3 R-7	763	6.7	--	--	--	R-2 R-3 R-7	1,628	7.7	R-2 R-3 R-7	644	4.2
Suburban Density[d]	--	--	--	--	--	--	--	--	--	--	--	--
Rural Estate[e]	R-1	443	3.9	--	--	--	R-1	220	1.0	R-1	43	0.3
Mobile Home	--	--	--	--	--	--	R-12	80	0.4	R-12	38	0.2
Subtotal Residential	--	1,579	13.8	--	4,092	19.3	--	2,500	11.8	--	976	6.3
Commercial	B-1 B-2 B-3	35	0.3	Commercial	1,034	4.9	B-1 B-2 B-3	232	1.1	B-1 B-2 B-3	60	0.4
Industrial	M-1 M-2	25	0.2	Industrial	2,082	9.8	M-1 M-2 A-3	177	0.8	M-1 A-3	34	0.2
Governmental and Institutional	I-1	134	1.2	--	--		I-1	891	4.2	I-1	31	0.2
Recreational	PR-1	581	5.1	Recreational	871	4.1	PR-1	752	3.5	PR-1	434	2.8
Extractive	M-3	163	1.4	--	--	--	M-3	12	0.1	M-3	95	0.6
Lowland Conservancy	C-1	1,021	9.0	--	--	--	C-1	721	3.4	C-1	2,475	16.1
Upland Conservancy	C-2	998	8.7	--	--	--	C-2	388	1.8	C-2	1,091	7.1
Agricultural												
Minimum Parcel Size of Less than 5 Acres or Minimum Parcel Size Not Specified	--	--	--	Agricultural[J]	11,320	53.5	--	--	--	--	--	--
Minimum Parcel Size of 10 Acres	A-2	1,555	13.6	--	--	--	A-2	4,833	22.7	A-2	2,144	13.9
Minimum Parcel Size of 35 Acres	A-1 A-4	4,889	42.9 42.9	--	--	--	A-1 A-4	10,759	50.6	A-1	7,814	50.7
Subtotal Agricultural	--	6,444	56.5	--	11,320	53.5	--	15,592	73.3	--	9,958	64.6
Water	--	429	3.8	--	1,771	8.4	--	--	--	--	263	1.7
Unzoned	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	11,409	100.0	--	21,170	100.0	--	21,265	100.0	--	15,417	100.0

[a]Requires less than 6,000 square feet of lot area per dwelling unit.

[b]Requires 6,000-19,999 square feet of lot area per dwelling unit.

[c]Requires 20,000 square feet to 1.4 acres of lot area per dwelling unit.

[d]Requires 1.5 to 4.9 acres of lot area per dwelling unit.

[e]Requires 5 acres or more of lot area per dwelling unit.

[f]Less than 0.1 percent.

[g]The City of Kenosha I-P Institutional-Park District is intended to provide areas for both institutional and recreational uses. For purposes of this analysis, the I-P Institutional-Park District has been included in the "Governmental and Institutional" zoning category.

[h]No minimum farm parcel size is specified for the Agricultural District in the Village of Twin Lakes zoning ordinance. Uses of the Residential District and other uses are permitted.

[i]The Kenosha County Zoning Ordinance includes a UHO Urban Land Holding Overlay District which indicates that the land is expected to undergo urban development in accordance with the underlying zoning district, but that such development is not permitted at the present time because of one or more deficiencies, such as the lack of essential services or the need to provide access to landlocked areas. New uses are not permitted in such areas until the overlay district is removed. The UHO Urban Land Holding Overlay District has been applied to certain areas zoned for future urban use in the Town of Pleasant Prairie--including about 2,390 acres, or 42 percent, of town land placed in residential zoning districts; and about 30 acres, or 8 percent, of town land placed in business districts.

[j]No minimum farm parcel size is specified for the Agricultural District in the Town of Salem zoning ordinance. Uses are restricted to general farming. No more than two single-family dwellings, each used in connection with the farm, are permitted.

Source: SEWRPC.

Residential Zoning: A total of 24,949 acres in Kenosha County, or about 14 percent of the County, have been placed in residential zoning districts. As indicated in Table 57, areas zoned to permit high-density residential development, requiring less than 6,000 square feet of lot area per dwelling unit, encompassed 7,040 acres in 1985, or about 4 percent of the County. Areas zoned to permit medium-density residential development, requiring 6,000 to 19,999 square feet of lot area per dwelling unit, encompassed 12,840 acres, or about 7 percent of the County. Areas zoned to permit low-density residential development, requiring 20,000 square feet to 1.4 acres of lot area per dwelling unit, encompassed 3,548 acres, or about 2 percent of the County. Areas zoned to permit suburban-density residential development, requiring 1.5 to 4.9 acres of lot area per dwelling unit, encompassed 453 acres, or 0.3 percent of the County. Areas zoned to permit rural estate-type residential development, requiring a minimum lot size of five acres, encompassed 826 acres, or 0.5 percent of the County. Areas zoned to permit mobile home development encompassed 242 acres, or 0.1 percent of the County. As indicated in Table 58, among the minor civil divisions in the County--excluding the Towns of Brighton and Bristol, which are only partially zoned--the proportion of land zoned for residential use ranged from a low of 2.0 percent in the Town of Paris to 70.4 percent in the Village of Silver Lake.

Commercial, Industrial, Governmental and Institutional, Recreational, and Mineral Extraction Zoning: A total of 16,972 acres in Kenosha County, or 9.4 percent of the County, have been placed in commercial, industrial, governmental and institutional, recreational, and mineral extraction zoning districts. Specifically, 3,261 acres, or 1.8 percent of the County, have been placed in commercial zoning districts; 4,844 acres, or 2.7 percent of the County, in industrial zoning districts; 3,810 acres, or 2.1 percent of the County, in governmental and institutional zoning districts; 4,320 acres, or 2.4 percent of the County, in recreational zoning districts; and 737 acres, or 0.4 percent of the County, in zoning districts permitting mineral extraction and landfill operations.

Conservancy Zoning: A total of 14,135 acres, or 8.0 percent of the County, have been placed in a conservancy zoning district. This total includes 10,634 acres, representing 6.0 percent of the County, that have been placed in lowland conservancy districts, which generally prohibit the filling and development of wetlands in low-lying areas. The remaining 3,501 acres, or 2.0 percent of the County, have been placed in upland conservancy districts, which are generally intended to protect woodlands and areas of rough topography and which limit development primarily to residential development on lots five acres or more in size.

Agricultural Zoning: A total of 79,930 acres, or 44.9 percent of the total area of the County, have been placed in agricultural zoning districts. Of this total, 34,125 acres, representing 19.2 percent of the County, consist of areas zoned for agricultural use with a minimum parcel size of 35 acres. Such zoning substantially ensures the preservation of farmland areas to which it is applied. Moreover, such zoning meets the basic criteria for "exclusive agricultural" zoning, as defined in Chapter 91 of the Wisconsin Statutes, and makes the owner of the farmland so zoned eligible to apply for property tax relief under the

farmland preservation program. In Kenosha County, such zoning is in effect only within those areas that are subject to the County Zoning Ordinance.[2]

A total of 34,444 acres, representing 19.3 percent of the area of the County, are zoned for agricultural use with a minimum parcel size of 10 acres. In Kenosha County, such zoning is in effect within areas subject to the County Zoning Ordinance, as well as within the Village of Paddock Lake and the Town of Paris.

The remaining agricultural zoning districts in Kenosha County occur in the Town of Salem and the Village of Twin Lakes, and encompass a total of 11,361 acres, or 6.4 percent of the County. Most of these lands, 11,320 acres, occur in the Town of Salem--having been placed in the Town's agricultural zoning district. This district restricts uses to general farming, but specifies no minimum farm parcel size. Under this district, up to two single-family dwellings, each with a minimum lot size of 25,000 square feet, are permitted in conjunction with farming operations.

A total of about 41 acres of land in the Village of Twin Lakes have been placed in the Village's agricultural zoning district. This district permits, in addition to general farming, urban residential development--with a minimum lot size of 8,400 square feet for single-family dwellings and 10,000 square feet for two-family structures--and other urban uses.

Conflicts Between Town Zoning and County Zoning in Shoreland Areas: As noted above, the two towns in Kenosha County that were not under the jurisdiction of the 1959 County Zoning Ordinance, Paris and Salem, currently administer their own zoning ordinances. The zoning districts established under the town zoning ordinances are reflected on the generalized zoning map (Map 30) for Kenosha County. It should be recognized, however, that there are, in effect, two sets of zoning districts--town and county--within the statutory shoreland areas of these towns.

In order to facilitate a comparison of town and county zoning within the shoreland areas of the Towns of Paris and Salem, the zoning districts of the Kenosha County Zoning Ordinance and the zoning districts of the Towns of Paris and Salem were categorized as "urban" districts, which permit urban residential, commercial, industrial, institutional, and other forms of urban development; and "open space" districts, which permit agricultural, conservancy, rural estate, and other open space uses. Zoning districts established under the town zoning ordinances were then compared with those established under the County Zoning Ordinance within the shoreland area.

---

[2]Before a farmer may apply for the farmland preservation program tax credit, the exclusive agricultural zoning provisions of the civil division in which his land is located must be certified by the Wisconsin Land Conservation Board as complying with the standards of Chapter 91 of the Wisconsin Statutes. The zoning maps of the Towns of Pleasant Prairie, Randall, Somers, and Wheatland have been certified by the State as being in compliance with the exclusive agricultural zoning standards of Chapter 91.

The results of the comparison of the town and county zoning within shoreland areas are presented in Table 59. The comparison suggests that town and county zoning are basically consistent within the shoreland areas of the Town of Paris. As indicated in Table 59, shoreland areas, excluding surface water, encompass about 1,820 acres in the Town of Paris, or 7.9 percent of the Town. Of this total, 1,813 acres, or 99.6 percent, have been placed in similar zoning districts under town and county zoning. Areas with potentially conflicting zoning--which have been placed in urban districts under town zoning but in open space districts under county zoning--comprise only about 7 acres, or 0.4 percent of the Town of Paris shoreland area (see Map 31).

As further indicated in Table 59, inconsistencies between town and county zoning are more prevalent in the Town of Salem. Shoreland areas, excluding surface water, encompass about 5,260 acres, or 24.8 percent of the Town of Salem. Of this total, 3,710 acres, or 70.5 percent, have been placed in similar zoning districts under town and county zoning. Areas with potentially conflicting zoning comprised about 1,550 acres, or 29.5 percent of the Town of Salem shoreland area. In this regard, 1,315 acres, or 25.0 percent of the shoreland area, have been placed in urban districts under town zoning but in open space districts under county zoning, while 235 acres, or 4.5 percent of the shoreland area, have been placed in open space districts under town zoning but in urban districts under county zoning (see Map 32).

Shoreland Zoning

Section 59.971 of the Wisconsin Statutes requires counties in Wisconsin to enact ordinances to regulate all shoreland areas within the unincorporated areas of the counties. The regulations apply to lands within the following distances from the ordinary high water mark of navigable waters: 1,000 feet from a lake, pond, or flowage, and 300 feet from a river or stream, or to the landward side of a floodplain, whichever distance is greater. The standards and criteria for the ordinances are set forth in Chapter NR 115 of the Wisconsin Administrative Code. They include sanitary regulations, and restrictions on lot sizes, on building setbacks, and on filling, grading, and dredging. Moreover, under Chapter NR 115, all counties in the State must place wetlands five acres or more in size and located within the statutory shoreland zoning jurisdiction area in a shoreland-wetland zoning district to ensure their preservation.

In 1982, the State Legislature extended shoreland-wetland zoning requirements to cities and villages in Wisconsin. Under Sections 62.231 and 61.351, respectively, cities and villages are also required to place wetlands five acres or more in size and located within the shoreland zoning jurisdiction area in a shoreland-wetland zoning district. Administrative rules pertaining to city and village shoreland-wetland zoning are set forth in Chapter NR 117 of the Wisconsin Administrative Code.

The process of implementing the shoreland-wetland zoning established under the Wisconsin Administrative Code is similar for counties, cities, and villages. Major steps in the process include the following: 1) preparation of preliminary wetland inventory maps by the Wisconsin Department of Natural Resources (DNR); 2) review of the preliminary wetland inventory maps by the concerned county or local zoning agency, including a public hearing to solicit public comments on the preliminary maps; 3) submittal to the DNR of any locally proposed changes

Table 59

COMPARISON OF TOWN AND COUNTY ZONING DISTRICTS WITHIN THE SHORELAND AREAS OF THE TOWNS OF PARIS AND SALEM

Condition	Shoreland Area (land area)			
	Town of Paris		Town of Salem	
	Acres	Percent	Acres	Percent
Similar Districts Under Town and County Zoning	1,813	99.6	3,710	70.5
Urban District Under Town Zoning, Open Space District Under County Zoning	7	0.4	1,315	25.0
Open Space District Under Town Zoning, Urban District Under County Zoning	--	--	235	4.5
Total	1,820	100.0	5,260	100.0

NOTE: For purposes of this analysis, Kenosha County zoning districts and zoning districts of the Towns of Paris and Salem were categorized as "urban" districts and "open space" districts as indicated below:

1. For the Town of Paris, urban zoning districts include the Country Home, Service Center, and Industrial Districts; and open space zoning districts include the Agricultural and Conservancy Districts.

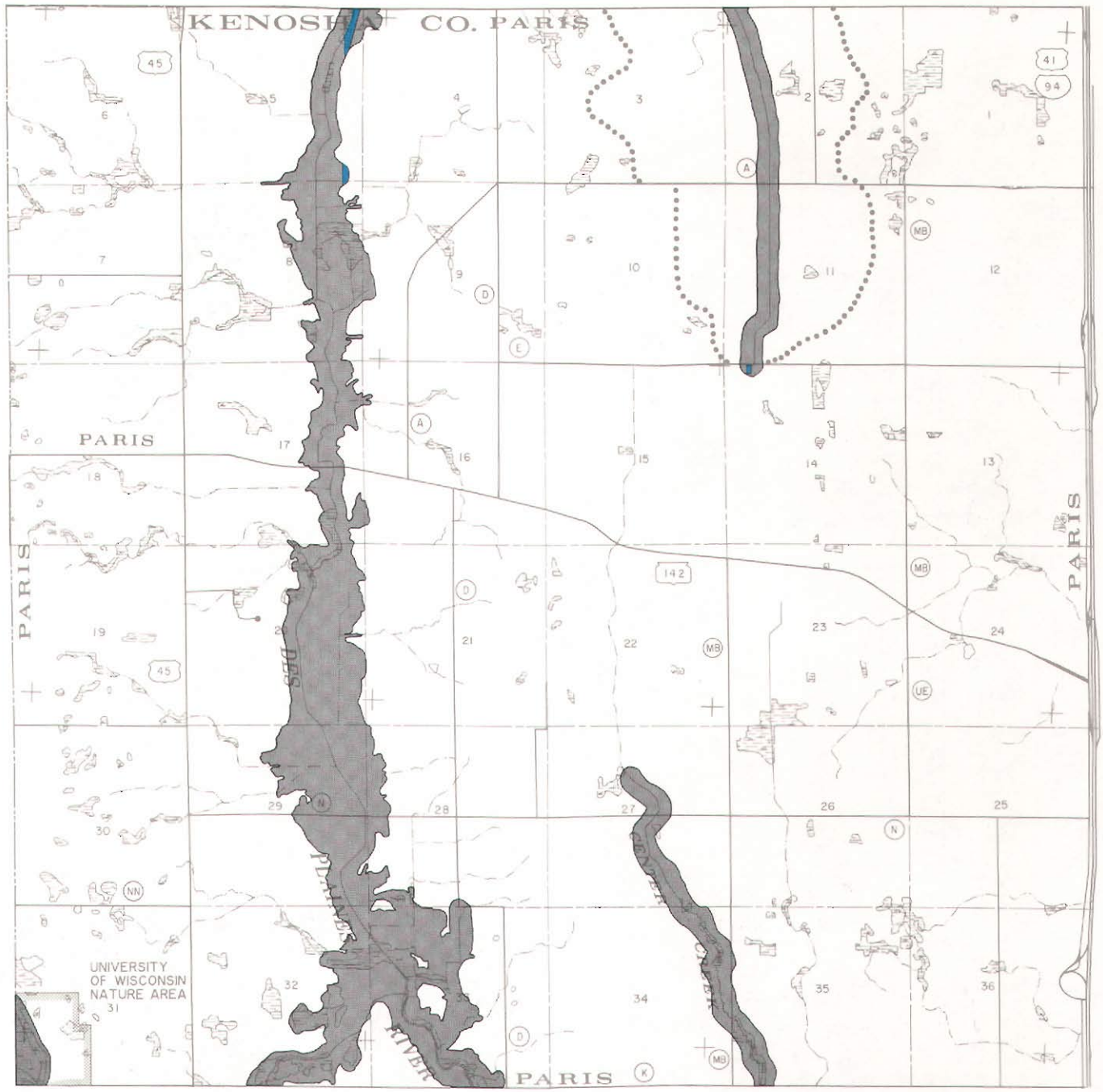
2. For the Town of Salem, urban zoning districts include the Residential "A," Residential "B," Commercial, and Industrial Districts; and open space zoning districts include the Recreational and Agricultural Districts.

3. For Kenosha County, urban zoning districts include the following: R-2 Suburban Single-Family Residential; R-3, R-4, R-5, and R-6 Urban Single-Family Residential; R-7 Suburban Two-Family and Three-Family Residential; R-8 Urban Two-Family Residential; R-9, R-10, and R-11 Multiple-Family Residential; R-12 Mobile Home Park/Subdivision Residential; B-1 Neighborhood Business; B-2 Community Business; B-3 Highway Business; B-4 Planned Business; M-1 Limited Manufacturing; M-2 Heavy Manufacturing; M-3 Mineral Extraction and Landfill; I-1 Institutional; and A-3 Agricultural Related Manufacturing, Warehousing, and Marketing. For Kenosha County, open space zoning districts include the following: C-1 Lowland Resource Conservancy; C-2 Upland Resource Conservancy; A-1 Agricultural Preservation; A-2 General Agricultural; A-4 Agricultural Land Holding; and R-1 Rural Residential. The PR-1 Park-Recreational District permits both intensive recreational facility development and open space uses, and, for purposes of this analysis, was considered to be consistent with both "urban" and "open space" town zoning districts.

Source: SEWRPC.

Map 31

COMPARISON OF TOWN AND COUNTY ZONING DISTRICTS IN THE SHORELAND AREA OF THE TOWN OF PARIS



LEGEND

SHORELAND AREA

SIMILAR DISTRICTS UNDER TOWN AND COUNTY ZONING

URBAN DISTRICT UNDER TOWN ZONING, OPEN SPACE DISTRICT UNDER COUNTY ZONING

(NONE) OPEN SPACE DISTRICT UNDER TOWN ZONING, URBAN DISTRICT UNDER COUNTY ZONING

GRAPHIC SCALE

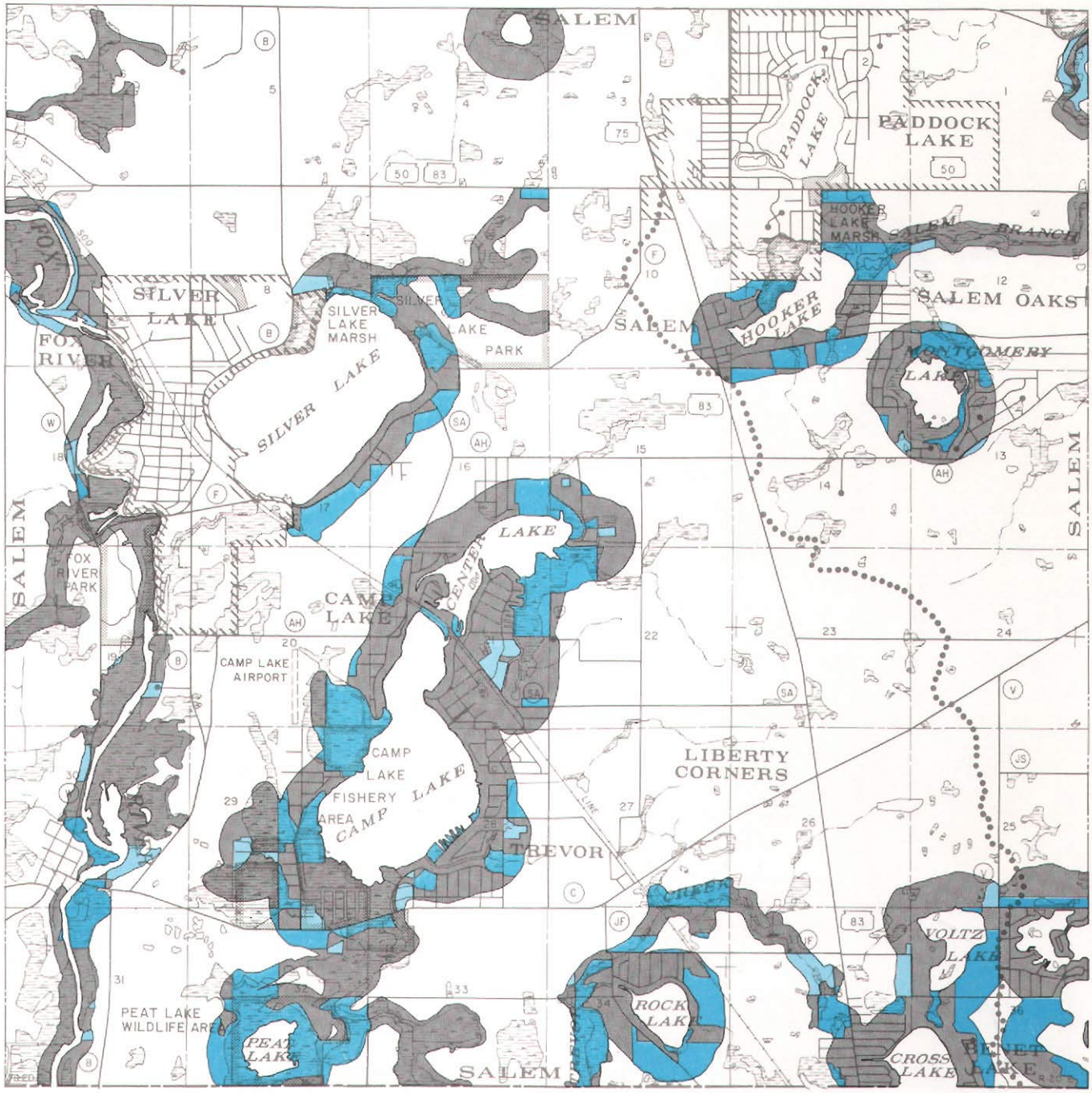
0 1 MILE

0 2000 4000 6000 FEET

Source: SEWRPC.

Map 32

COMPARISON OF TOWN AND COUNTY ZONING DISTRICTS IN THE SHORELAND AREA OF THE TOWN OF SALEM



LEGEND

SHORELAND AREA

- SIMILAR DISTRICTS UNDER TOWN AND COUNTY ZONING
- URBAN DISTRICT UNDER TOWN ZONING, OPEN SPACE DISTRICT UNDER COUNTY ZONING
- OPEN SPACE DISTRICT UNDER TOWN ZONING, URBAN DISTRICT UNDER COUNTY ZONING

GRAPHIC SCALE

0 1 MILE

0 2000 4000 6000 FEET

Source: SEWRPC.

to the preliminary maps; 4) preparation of a final wetland inventory map by the DNR; and 5) adoption of the zoning ordinance text and map amendments as required to appropriately zone the shoreland-wetlands.

In 1971, Kenosha County adopted a shoreland zoning ordinance establishing the required restrictions on building setbacks, earth movements, and tree cutting and shrub clearing. In 1983, as previously noted, the county shoreland ordinance was incorporated into the General Zoning and Shoreland/Floodplain Zoning Ordinance. It should be noted that Kenosha County has received final wetland inventory maps for the unincorporated areas of the County, and has since appropriately zoned all shoreland-wetlands in compliance with state law.

The process leading to the development of final wetland inventory maps and the application of shoreland-wetland zoning was underway in 1986 for the City of Kenosha and the Villages of Silver Lake and Twin Lakes. The process has not yet been initiated in the Village of Paddock Lake. Preliminary wetland inventory maps are not scheduled to be made available to the Village by the DNR until 1987.

Floodplain Zoning

In Wisconsin, counties, along with cities and villages, are required by State Statute to adopt and administer floodplain regulations within identified flood hazard areas. Such regulations are intended to preserve the floodwater conveyance and storage capacity of existing floodplains, to minimize damages due to flooding, and to protect the natural resource base within floodplain areas. The minimum criteria which the regulations must meet are set forth in Chapter NR 116 of the Wisconsin Administrative Code.

Kenosha County adopted floodplain regulations conforming to the standards of NR 116 in 1971. In 1983, the floodplain regulations were incorporated into the Kenosha County General Zoning and Shoreland/Floodplain Zoning Ordinance. The floodplain regulations apply within the 100-year recurrence interval flood hazard areas in the unincorporated areas of Kenosha County shown on Map 14 in Chapter III of this report.

The City of Kenosha and the Villages of Silver Lake and Twin Lakes have also adopted floodplain zoning regulations in conformance with Chapter NR 116 of the Wisconsin Administrative Code. Conversely, the Department of Natural Resources has determined that there are no 100-year floodplains in the Village of Paddock Lake, and the Village is therefore not required to adopt floodplain zoning.

Subdivision Control Ordinances

Cities, villages, towns, and counties in Wisconsin are authorized to enact subdivision control ordinances under Section 236.45 of the Wisconsin Statutes. Such ordinances regulate the manner in which land is subdivided and prepared for development. Subdivision control ordinances regulate the form of urban development through detailed design standards regarding streets and the layout of lots and blocks; through requirements regarding the installation of public facilities; and through requirements regarding the dedication or reservation

of land for public purposes. Such ordinances set forth procedures to be followed by the owner/developer in the submission of preliminary and final subdivision plats, as well as procedures to be followed in the plat review process.

In Kenosha County, subdivision control ordinances have been adopted by the City of Kenosha; the Villages of Paddock Lake, Silver Lake, and Twin Lakes; and the Towns of Bristol, Paris, Pleasant Prairie, Salem, and Somers (see Map 33). Kenosha County has adopted a subdivision control ordinance which regulates land subdivision throughout the unincorporated area of the County. In the case of overlapping jurisdiction, the more restrictive requirements control.

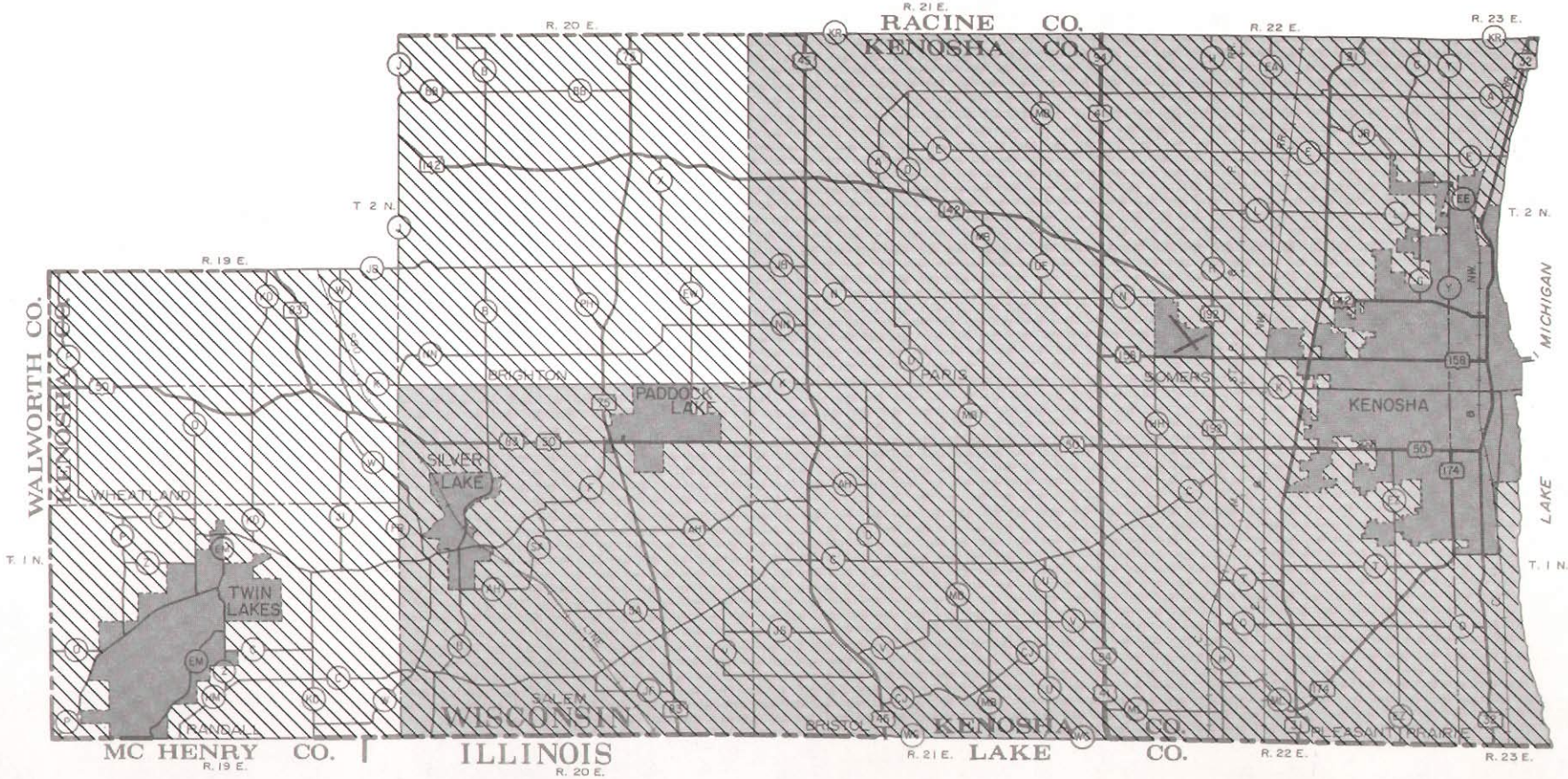
As noted above, land subdivision control ordinances may require the developer to install public improvements, such as hard-surfaced streets, curbs and gutters, sanitary sewer and water supply facilities, street drainage facilities, sidewalks, and street trees. Under some local ordinances, the improvement requirements are not absolute, but are determined by the local unit of government based upon a consideration of the physical characteristics of the proposed site, the nature and intensity of existing and proposed development in areas within and adjacent to the proposed site, and the desired characteristics of the proposed neighborhood. A summary of the land improvement requirements set forth in subdivision control ordinances in Kenosha County is presented in Table 60. It should be noted that, while the Towns of Brighton, Randall, and Wheatland have not enacted town subdivision control ordinances, each has enacted an ordinance regulating the design and construction of any roads to be accepted by the Town. The relevant provisions of these ordinances are also indicated in Table 60.

As indicated in Table 60, the Kenosha County Subdivision Control Ordinance, which is in effect throughout the unincorporated area of Kenosha County, requires that the developer of a subdivision install the following improvements: sanitary sewer and water supply facilities to each lot when such facilities are available to the proposed subdivision; stormwater drainage facilities adequate to serve the subdivision; street signs; and street trees. The County Subdivision Control Ordinance specifies that the individual towns may require the installation of curbs and gutters, sidewalks, and street lights, and, in addition, specifies that street surfacing should be done in accordance with the plans and specifications approved by each town.

As further indicated in Table 60, most local units of government in Kenosha County require that, during the land subdivision process, the developer install, at a minimum, basic street improvements appropriate for a permanent rural section--including blacktop (bituminous concrete) streets and roadside ditches. In a number of communities, the subdivision control ordinance specifies that the community requires, or may require, other improvements typically found in urban areas, including sanitary sewer and water supply facilities when such facilities are available to the subdivision, curbs and gutters, sidewalks, street lights, and street trees. The City of Kenosha, it should be noted, imposes relatively few improvement requirements upon the subdivider. In this regard, the City requires that the developer install sanitary sewer and water supply facilities to all sites, as well as gravel-surfaced streets and street lights. The City, in turn, assumes responsibility for the installation of storm sewers, street surfacing, curbs and gutters, and sidewalks. The City bears the cost of storm sewer installation but assesses the cost of street surfacing,

Map 33

SUBDIVISION CONTROL ORDINANCES IN KENOSHA COUNTY: 1985



LEGEND

- CITY, VILLAGE SUBDIVISION CONTROL ORDINANCE
- TOWN SUBDIVISION CONTROL ORDINANCE
- COUNTY SUBDIVISION CONTROL ORDINANCE

Source: SEWRPC.

GRAPHIC SCALE
0 1 2 MILES
0 4000 8000 12000 FEET

Table 60

LAND DEVELOPMENT REGULATIONS BY MINOR CIVIL DIVISION IN KENOSHA COUNTY: 1985

Unit of Government	Land Development Requirement													
	Sanitary Sewers		Water Supply				Street Surface							
	To All Sites	When Available	To All Sites	When Available	Street Drainage	Curbs and Gutters	Concrete	Bituminous Concrete	Bituminous Macadem	Gravel Only	Sidewalks	Street Lights	Street Signs	Street Trees
City of Kenosha	Required	--	Required	--	--	--	--	--	--	Required	--	Required	--	--
Village of Paddock Lake	--	Required	--	Required	Required	May be required[b]	--[c]	--[c]	--[c]	--[c]	May be required[d]	Required	Required	Required
Village of Silver Lake	--	Required	--	Required	Required	May be required	--	Required	--	--	May be required	May be required	Required	Required
Village of Twin Lakes	Required	--	--	--	Required	May Be required[e]	--	Required	--	--	May be required[e]	--	--	--
Town of Brighton	--	--	--	--	Required	--	--	Required	--	--	--	--	May be required	--
Town of Bristol[a]	--	May be required	--	May be required	Required	--	--	--	Required[f]	--	--	--	--	--
Town of Paris	--	May be required	--	May be required	Required	--	--	--	Required[g]	--	--	--	--	--
Town of Pleasant Prairie	--	Required	--	Required	Required	--	--	Required	--	--	--	--	--	--
Town of Randall	--	--	--	--	Required	--	--	Required	--	--	--	--	--	--
Town of Salem	--	Required	--	Required	Required	May be required[h]	--	Required[i]	--	--	May be required[d]	Required	Required	Required
Town of Somers	--	Required	--	Required	Required	May be required	--	Required	--	--	May be required	May be required	Required	Required
Town of Wheatland	--	--	--	--	Required	--	--	Required	--	--	--	--	May be required	--
Kenosha County	--	Required	--	Required	Required	Towns may require	--[j]	--[j]	--[j]	--[j]	Towns may require	Towns may require	Required	Required

NOTE: Improvement requirements for the Towns of Brighton, Randall, and Wheatland are set forth in local road ordinances. Improvement requirements for the other local units of government are generally set forth in local subdivision control ordinances.

[a] Land development requirements for the Town of Bristol are those set forth in the subdivision ordinance adopted by the Town in 1964.

[b] The Village of Paddock Lake subdivision control ordinance specifies that the subdivider shall construct concrete curbs and gutters, but provides that this requirement may be waived where a permanent rural street section has been approved.

[c] The Village of Paddock Lake subdivision control ordinance specifies that street surfacing shall be done in accordance with plans and standard specifications approved by the village engineer. No particular surfacing material is specified in the ordinance.

[d] The Village of Paddock Lake and Town of Salem subdivision control ordinances require that the subdivider install sidewalks on one side of all frontage streets and on both sides of all other streets, but provide that the plan commission may permit the construction of sidewalks along one side of the street in areas where lots have 100 feet or more of frontage, and provide, further, that the sidewalk requirement may be waived where lots have 150 feet or more of frontage. Officials of each community indicated that the sidewalk requirement may be waived entirely.

[e] The Village of Twin Lakes subdivision control ordinance specifies that the subdivider shall install curbs and gutters and sidewalks. The village clerk indicated, however, that these requirements may in practice be waived.

[f] The Town of Bristol subdivision control ordinance requires that roadways be surfaced with crushed gravel and a seal coat.

[g] The Town of Paris subdivision control ordinance requires that roadways be surfaced with crushed gravel and a seal coat.

[h] The Town of Salem subdivision control ordinance requires that the subdivider construct concrete curbs and gutters, but provides that this requirement may be waived where a permanent rural street section has been approved.

[i] The Town of Salem subdivision control ordinance requires that street surfacing be done in accordance with plans and standard specifications approved by the town engineer or building inspector. The chairman of the town plan commission indicated that, in practice, bituminous concrete surfacing is required.

[j] The Kenosha County Subdivision Control Ordinance requires that the subdivider surface all roadways in accordance with plans and standard specifications approved by the town boards.

Source: SEWRPC.

of the construction of curbs and gutters, and of the construction of sidewalks, if provided, against the benefiting property.

Subdivision control ordinances may also establish land dedication or fee in lieu of dedication requirements to help meet the need for additional school, park, playground, or other open space lands which the development may be expected to generate. A summary of such requirements established under subdivision control ordinances in Kenosha County is set forth in Table 61. While, as previously noted, the Towns of Randall and Wheatland have not adopted subdivision control ordinances, both towns have enacted public site ordinances which establish dedication or fee in lieu of dedication requirements for park and recreation areas.

As indicated in Table 61, nine of the 12 communities in Kenosha County impose a land dedication or fee in lieu of dedication requirement for playgrounds, parks, or other open space sites. In two communities, the land dedication or fee in lieu of dedication requirement explicitly pertains to school sites as well as to park and open space sites.

Finally, the review of the adopted subdivision control ordinances in Kenosha County indicated that a number of the ordinances include a requirement that the plat be tied to the State Plane Coordinate System--as well as to the U. S. Public Land Survey System as is required by Wisconsin law. As previously noted, about 90 percent of all U. S. Public Land Survey corners in Kenosha County have been relocated, monumented, and placed on the State Plane Coordinate System. The Kenosha County Subdivision Control Ordinance and the subdivision control ordinances of the Villages of Paddock Lake and Silver Lake and the Towns of Salem and Somers require that the plat be tied to one of the section or quarter corners where a plat is located within a quarter section having relocated and monumented corners, with the state plane coordinates of that corner being displayed on the plat map. The plat is thereby clearly referenced to both the U. S. Public Land Survey and State Plane Coordinate Systems. The Village of Twin Lakes subdivision control ordinance includes a similar requirement for certified survey maps but not for subdivision plats.

Official Mapping

Cities and villages in Wisconsin have clearly expressed official mapping powers under Sections 62.23(6) and 61.35 of the Wisconsin Statutes. Towns that have adopted village powers, including all towns in Kenosha County, have the same official mapping powers as do cities and villages.

It should be understood that the term "official map" as used herein pertains only to that map properly adopted pursuant to Section 62.23(6) of the Wisconsin Statutes. Its basic purpose is to prohibit the construction of buildings or structures and their associated improvements on land that has been designated for current or future public use, including streets, highways, drainageways, parkways, parks, and playgrounds. The official map must be adopted by the governing body of the local unit of government concerned pursuant to Section 62.23(6)(b) of the Wisconsin Statutes, and only after such adoption does it assume its legal force.

Although the official map is a very effective and efficient device for reserving land for future public use, it is historically an underutilized plan

Table 61

LAND DEDICATION OR FEE IN LIEU OF DEDICATION REQUIREMENTS FOR PLAYGROUNDS, PARKS, OR OTHER OPEN SPACE SITES FOR THE CITY, VILLAGES, AND TOWNS IN KENOSHA COUNTY: 1985

Civil Division	Land Dedication	Fee in Lieu of Land Dedication
City of Kenosha[a]	Up to 5 percent of subdivision	$100 per lot
Village of Paddock Lake[b]	One acre per 15 dwelling units	Amount of fee not specified
Village of Silver Lake	One acre per 120 dwelling units	$150 per dwelling unit
Village of Twin Lakes	Amount of land equal in value to 10 percent of value of lots created[c]	Fee equal to value of the required dedication
Town of Pleasant Prairie	Five hundred square feet for each multiple-family dwelling unit; and 1,000 square feet for each single-family dwelling unit. Subdivider must also develop the dedicated lands to standards established by the Town[d]	Fee equal to value of the required dedication plus the estimated development cost
Town of Randall	Amount of land equal in value to $200 per lot or 2.5 percent of the land value, whichever is higher	Fee equal to value of the required dedication
Town of Salem[b]	One acre per 15 dwelling units	$200 per dwelling unit
Town of Somers	One acre per 120 dwelling units	$200 per dwelling unit
Town of Wheatland	Amount of land equal in value to $200 per lot or 2.5 percent of the land value, whichever is higher.	Fee equal to value of the required dedication

NOTE: Land dedication and fee in lieu of dedication requirements for the Towns of Randall and Wheatland are set forth in local public site ordinances. Land dedication and fee in lieu of dedication requirements for the other local units of government are set forth in local subdivision control ordinances.

[a] The City of Kenosha subdivision control ordinance also specifies that in areas where unplatted or unsubdivided land is developed and where no other fee for public sites or open spaces is required, the developer shall pay to the City the sum of $50 per dwelling unit. In such developments of 20 acres or more, the City may require, in lieu of this fee, land dedication comparable to that required in platted subdivisions.

[b] Land dedication and fee in lieu of dedication requirements for the Village of Paddock Lake and Town of Salem pertain to school sites as well as to parks and playgrounds.

[c] The Village of Twin Lakes subdivision control ordinance also specifies that, for multiple-family or apartment housing, an amount of land equal in value to 10 percent of the annual rental value of the proposed units shall be dedicated.

[d] The Town of Pleasant Prairie subdivision control ordinance also specifies that the Town may accept, in lieu of dedication, the permanent reservation of private land for recreational use, provided that the benefiting property owners are required to pay site development and maintenance costs.

Source: SEWRPC.

implementation tool. In Kenosha County, a total of three local units of government--the City of Kenosha and the Villages of Silver Lake and Twin Lakes--have prepared and adopted official maps (see Map 34).

SUMMARY

This chapter has described those areawide, county, and local plans which warrant consideration in the preparation of a development plan for Kenosha County, along with the existing body of land use controls which regulate the use of land in the County. The major findings of this chapter are summarized on a point-by-point basis below:

1. Areawide plans important to Kenosha County in the preparation of a county development plan are the the regional land use plan, regional transportation system plan, regional water quality management plan, regional park and open space plan, and regional airport system plan. The regional land use plan represents an overall framework for growth and development in the Southeastern Wisconsin Region, including Kenosha County, providing for the attainment of generally accepted land use development objectives. It sets forth recommendations regarding the amount, spatial distribution, and intensity of the various land uses required to serve the needs of the anticipated future population in Kenosha County and the Southeastern Wisconsin Region through the year 2000.

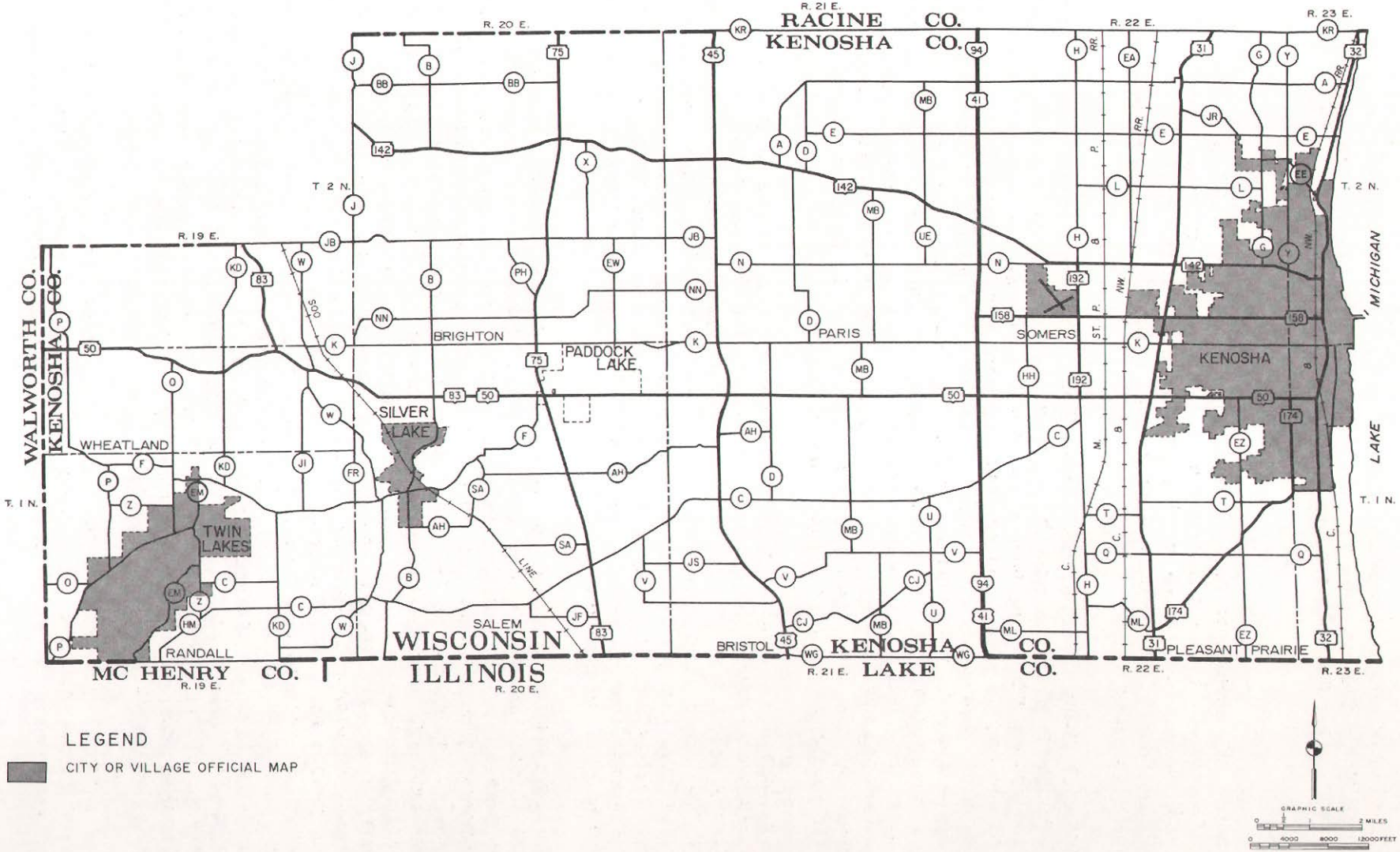
   The adopted regional transportation system plan serves as a guide to the development of an integrated transportation system intended to effectively serve the existing regional land use pattern and promote implementation of the regional land use plan. The plan recommends a functional and jurisdictional system of arterial streets and highways in the Region and in Kenosha County through the year 2000, and includes recommendations regarding the provision of public transit service within the Kenosha urbanized area.

   The regional water quality management plan establishes regional water use objectives and related water quality standards and recommends a comprehensive water quality management plan for southeastern Wisconsin, addressing both point and nonpoint sources of water pollution. Of particular importance to the preparation of the county development plan are the sanitary sewer service area recommendations of the regional water quality management plan. The plan identifies recommended sanitary sewer service areas tributary to each of the existing and proposed sewage treatment plants in Kenosha County and the Southeastern Wisconsin Region. The preliminary sewer service area recommendations of the regional plan have been refined and detailed through local sewer service area planning programs for the portion of Kenosha County east of IH 94, for the Town of Salem Utility District No. 2, and for an area including the Village of Paddock Lake, the Town of Salem Utility District No. 1, and the Town of Bristol Utility District Nos. 1 and 1B. Sewer service area refinement planning programs were also underway in 1986 for the Village of Silver Lake and the Village of Twin Lakes.

   The regional park and open space plan identifies existing and anticipated future outdoor recreation and open space needs within the Region and recommends the steps to be taken by local, county, and state agencies

Map 34

OFFICIAL MAPS IN KENOSHA COUNTY: 1985



LEGEND

CITY OR VILLAGE OFFICIAL MAP

Source: SEWRPC.

and units of government to meet those needs. The regional park and open space plan includes two plan elements--an open space element, consisting of recommendations for the preservation of prime agricultural lands and primary environmental corridors; and an outdoor recreation element, consisting of recommendations for the maintenance of existing, and the acquisition and development of new, outdoor recreation site and facilities required to meet outdoor recreation needs in the Region through the year 2000.

The regional airport system plan was developed as a guide to a safer and more efficient regional air transportation system for southeastern Wisconsin. The plan recommends a system of 11 public use airports, including one airport, Kenosha Municipal Airport, in Kenosha County. Under the regional plan, Kenosha Municipal Airport would be upgraded from a General Utility-Stage I airport to a General Utility-Stage II airport. The recommendations of the regional airport system plan for Kenosha Municipal Airport have been refined and detailed in an airport master plan. In addition, a land use plan for the area immediately adjacent to Kenosha Municipal Airport was prepared by the City of Kenosha in 1985.

2. In addition to the regional plan elements described above, several subregional plans--including comprehensive watershed plans and a plan for the Kenosha Planning District--are important to the preparation of a county development plan. The Regional Planning Commission has prepared comprehensive plans for three of the five major watersheds partially located in Kenosha County--the Fox River, the Pike River, and the Root River watersheds. The portions of these watersheds lying within Kenosha County encompass about 128.5 square miles, or about 46 percent of the area of the County. The watershed plans are intended to help protect and restore the environmental quality of the watersheds and to resolve serious and costly flooding problems.

   The Kenosha Planning District plan was developed as a guide to the orderly growth and development of the Kenosha Planning District, consisting of all of Kenosha County east of IH 94. The plan was intended to provide the City of Kenosha and the Towns of Somers and Pleasant Prairie with a comprehensive community development plan which could be cooperatively adopted and jointly implemented, containing recommended proposals for land use, transportation, and community facility and public utility development. While the plan was prepared in 1967 and thus certain elements of the plan have been updated and refined through subsequent planning work, the plan continues to provide an overall framework for growth and development of the Planning District.

3. Countywide plans which are relevant to the formulation of a development plan for Kenosha County include the Kenosha County farmland preservation plan, the Kenosha County overall economic development program plan, and the Kenosha County solid waste management plan, currently in preparation. As its name implies, the farmland preservation plan is intended to serve as a guide to the preservation of agricultural land in Kenosha County, seeking to preserve, to the maximum extent possible, identified prime agricultural land. The plan also addresses urban development and natural resource preservation objectives.

The Kenosha County overall economic development program plan identifies constraints on, and potentials for, economic development in Kenosha County, and sets forth an action-oriented strategy for improving economic conditions in the County. The plan establishes economic development goals and objectives for the County and outlines a course of actions which the Office of Kenosha Area Economic Development may pursue in achieving the established goals.

Work was initiated on a solid waste management planning program for Kenosha County in 1985. Primary staff work on the study is being done by the Regional Planning Commission under the guidance of an advisory committee consisting of elected and appointed officials from throughout the County. The solid waste management plan is intended to provide an assessment of countywide solid waste management needs, and a strategy for meeting those needs, while providing for the protection of public health and the environment from the potential adverse impacts of improper solid waste disposal. The solid waste management plan is expected to be completed in 1987.

4. Two minor civil divisions in Kenosha County, the Town of Pleasant Prairie and the City of Kenosha, have prepared local land use plans or plan components which warrant consideration in the formulation of a county development plan. The Town of Pleasant Prairie plans or plan components relevant to the formulation of a county development plan include the Town of Pleasant Prairie housing and development forecast for the period 1985 to 2005, the Town of Pleasant Prairie Des Plaines River Basin land use plan, and the Chiwaukee Prairie-Carol Beach area land use management plan. Relevant plans for the City of Kenosha include the City's downtown land use and transportation strategy, neighborhood development plans for the Westview and Whittier Neighborhoods, and the City of Kenosha harbor area master plan.

5. Zoning ordinances represent one of the most important means available to county and local units of government for managing land use in the public interest. Zoning arrangements vary somewhat among the minor civil divisions in Kenosha County. The City of Kenosha and the Villages of Paddock Lake, Silver Lake, and Twin Lakes have each adopted general zoning ordinances. Four towns, Randall, Somers, Wheatland, and Pleasant Prairie, have approved and are governed by the Kenosha County Zoning Ordinance which was adopted by Kenosha County in 1983, replacing the zoning ordinance adopted by the County in 1959. Two towns, Brighton and Bristol, which were previously under the jurisdiction of the 1959 County Zoning Ordinance, have not yet adopted the 1983 County Zoning Ordinance. As a result, the Towns of Brighton and Bristol are presently unzoned except for those portions of the Towns lying within the statutory shoreland area, where the county zoning districts are in effect. Finally, the two towns that were not under the jurisdiction of the 1959 County Zoning Ordinance, Paris and Salem, continue to administer their own zoning ordinances.

6. An analysis of existing zoning districts in the County indicated that in 1985, a total of 24,949 acres in Kenosha County, or 14.0 percent of the County, had been placed in residential zoning districts; 3,261 acres, or 1.8 percent of the County, in commercial zoning districts; 4,844 acres, or 2.7 percent of the County, in industrial zoning districts; 3,810

acres, or 2.1 percent of the County, in governmental and institutional zoning districts; 4,320 acres, or 2.4 percent of the County, in recreational zoning districts; 737 acres, or 0.4 percent of the County, in zoning districts permitting mineral extraction and landfill operations; 14,135 acres, or 8.0 percent of the County, in conservancy zoning districts; and 79,930 acres, or 44.9 percent of the County, in agricultural zoning districts, including 34,125 acres in exclusive agricultural zoning districts providing a minimum parcel size of 35 acres. Unzoned lands within the Towns of Brighton and Bristol encompassed about 38,171 acres, or 21.4 percent of the County. The balance of the County--4,017 acres, or 2.3 percent--consisted of surface water areas, including major and minor lakes and the Fox River (see Map 30 and Tables 57 and 58).

7. Counties in Wisconsin are required by State Statute to enact ordinances regulating shoreland areas, defined as lands within the following distances from the ordinary high water mark of navigable waters: 1,000 feet from a lake, pond, or flowage, and 300 feet from a river or stream, or to the landward side of a floodplain, whichever distance is greater. The required regulations, as set forth in Chapter NR 115 of the Wisconsin Administrative Code, include the placement of all shoreland-wetlands five acres or more in size in a conservancy zoning district.

   In 1971, Kenosha County adopted a shoreland zoning ordinance establishing restrictions on building setbacks, earth movements, and tree cutting and shrub clearing. In 1983, the shoreland ordinance was incorporated into the County's General Zoning and Shoreland/Floodplain Zoning Ordinance. Kenosha County has appropriately zoned all shoreland-wetlands in compliance with state law.

   In 1982, the State extended shoreland-wetland zoning requirements to cities and villages in Wisconsin. The process leading to the development of final wetland inventory maps and the application of shoreland-wetland zoning was underway in 1986 for the City of Kenosha and the Villages of Silver Lake and Twin Lakes.

8. In Wisconsin, counties, along with cities and villages, are required by State Statute to adopt and administer floodplain regulations within identified 100-year recurrence interval flood hazard areas. The City of Kenosha, the Villages of Silver Lake and Twin Lakes, and Kenosha County have adopted such floodplain regulations--the Kenosha County regulations governing floodplains throughout the unincorporated area of the County. The Wisconsin Department of Natural Resources has determined that there are no 100-year floodplains in the Village of Paddock Lake, and the Village is therefore not required to adopt floodplain zoning.

9. Subdivision control ordinances regulating the manner in which land is subdivided and prepared for development have been adopted by the City of Kenosha; the Villages of Paddock Lake, Silver Lake, and Twin Lakes; and the Towns of Bristol, Paris, Pleasant Prairie, Salem, and Somers. Kenosha County has adopted a subdivision control ordinance which regulates land subdivision throughout the unincorporated area of the County. In the case of overlapping jurisdiction, the more restrictive requirements control. Subdivision control ordinances regulate the form of urban development through detailed standards regarding streets and the layout

of lots and blocks; requirements regarding the installation of public facilities; and requirements regarding the dedication of land for public purposes. A summary of the land improvement requirements and land dedication or fee in lieu of dedication requirements set forth in the adopted subdivision control ordinances in Kenosha County is set forth in Tables 60 and 61 of this chapter.

10. The official map is a very effective, but historically underused, plan implementation tool. Its basic purpose is to prohibit the construction of buildings or structures and their associated improvements on land that has been designated for current or future public use, including streets, highways, drainageways, parkways, parks, and playgrounds. In Kenosha County, a total of three local units of government--the City of Kenosha and the Villages of Silver Lake and Twin Lakes--have prepared and adopted official maps.

Chapter VI

SUMMARY

INTRODUCTION

Under Section 59.97(3) of the Wisconsin Statutes, counties in Wisconsin are authorized to prepare plans for the physical development of the unincorporated area of the county and for the incorporated jurisdictions whose governing bodies agree to have those jurisdictions included in the county development plan. As envisioned under the Statutes, county development plans are intended to be comprehensive plans addressing a wide range of physical development considerations. In this regard, the Statutes indicate that the county development plan may "identify goals and objectives for the future physical development of the county with respect to: public and private use of land and other natural resources; highways including bridges, viaducts, parkways, and other public ways; parks, playgrounds, hunting and fishing grounds, forests, and other facilities of a recreational nature; public buildings and institutions including schools; sanitary and storm sewers, drainage, and measures for disposal of refuse and waste; reducing and preventing stream and lake pollution; flood control; public and private utilities including water, light, heat, transportation, pipelines, and other services; industrial and commercial sites; and other factors which will improve the physical and economic situation of the County."

Much planning has already been accomplished for the sound development of Kenosha County through various regional, county, and local planning efforts. The numerous planning programs completed to date for the County have been documented in a number of planning reports which were completed at different points in time, some of which are now out of date, and some of which cover areas larger or smaller than the County. Kenosha County has determined that this previous planning work could provide a more effective guide to decision-making by the County, the local units of government, and the private sector if the results of the previous work were brought forward and synthesized in a single, coherent report, constituting the county development plan. The County has sought the assistance of the Regional Planning Commission in the preparation of such a planning report.

This report sets forth in two volumes the desired county development plan. This, the first volume of the report, sets forth the basic planning and engineering data essential to the formulation of a viable county development plan. The information is drawn from previous planning work undertaken within the County, with key data being updated as appropriate. Basic inventory data regarding the demographic and economic base, the natural resource base, the cultural resource base, and adopted plans and land use regulations for the County are presented in the foregoing chapters of this volume of the report. The most important inventory findings are summarized below.

POPULATION

The resident population of Kenosha County stood at 123,137 persons in 1980, representing about 3 percent of the population of the State and 7 percent of the population of the Southeastern Wisconsin Region. The Kenosha County population ranked ninth among the 72 counties in the State in 1980.

Between 1950 and 1980, the resident population of Kenosha County increased by 47,899 persons, or 64 percent. Net in-migration of 11,339 persons combined with a natural increase of 14,038 persons resulted in a substantial increase of 25,377 persons, or 34 percent, in the population of the County during the 1950's. During the 1960's, a natural increase of 15,125 persons exceeded that for the previous decade, but net in-migration decreased to 2,177 persons, resulting in an overall population increase of 17,302 persons, or 17 percent. During the 1970's, a natural increase of 7,757 persons combined with a net out-migration of 2,537 persons resulted in a very modest increase of 5,220 persons, or 4 percent, in the population of the County. The 1970 to 1980 decade was the first since the Depression years of the 1930's in which Kenosha County experienced a net out-migration of population.

There were 43,064 households in Kenosha County in 1980. The number of households in the County increased by about 20 percent between 1960 and 1970 and by about 21 percent between 1970 and 1980. The relative increase in the number of households thus exceeded the increase in the county population of about 17 percent during the 1960's, and about 4 percent during the 1970's. The increase in the number of households during the 1960's and 1970's was accompanied by a decrease in average household size. Between 1960 and 1970, the average household size in Kenosha County decreased from 3.36 to 3.26 persons per household, or by about 3 percent. Between 1970 and 1980, the average household size decreased further, from 3.26 to 2.80 persons per household, or by about 14 percent.

ECONOMY

The labor force is that segment of the resident population which can be most closely related to the economy. By definition, the labor force of an area consists of all of its residents 16 years of age or older who are either employed at one or more jobs or temporarily unemployed. The civilian labor force of Kenosha County increased from 32,535 persons in 1950 to 39,726 persons in 1960, an increase of 22 percent; to 47,171 persons in 1970, an increase of 19 percent; and to 59,625 persons in 1980, an increase of 26 percent.

The distribution of employment opportunities, or jobs, by major industry category provides insight into the structure of an area's economy. Employment in Kenosha County has historically been heavily concentrated in manufacturing. Manufacturing employment accounted for about 37 percent of all jobs in Kenosha County in 1980, compared with about 30 percent in the Region, about 25 percent in the State, and about 20 percent in the United States. The concentration of jobs in manufacturing is directly related to the location of the American Motors Corporation (AMC) in the City of Kenosha.

The 1980 census reported a per capita income of $7,756 for Kenosha County. The 1980 county per capita income was slightly lower than that for the Region, $8,154, and slightly higher than that for the State, $7,243, and the United

States, $7,298. The median family income in Kenosha County in 1980 was $23,161, also slightly lower than the figure for the Region, $23,515, and somewhat higher than the figures for the State, $20,915, and the United States, $19,917.

NATURAL RESOURCE BASE

The physiographic features, or surficial land forms, of Kenosha County have been determined largely by the underlying bedrock and the overlying glacial deposits. The Niagara cuesta on which the County lies is a gently eastward-sloping bedrock surface, with the bedrock surface generally being lower along the eastern border of the County than along the western border--by about 200 to 250 feet. Glacial deposits overlying the bedrock formations form the irregular surface topography of the County, characterized by rounded hills--particularly in the western one-third of the County--and by broad undulating plains. Substantial areas of the County are covered by poorly drained wetlands. Surface elevations within the County range from a high of approximately 990 feet above National Geodetic Vertical Datum (NGVD)--mean sea level datum--in western Kenosha County to approximately 580 feet above NGVD at the shoreline of Lake Michigan.

Surface water resources, consisting of lakes and streams and their associated floodlands, form a particularly important element of the natural resource base of Kenosha County. There are 16 major lakes--that is, lakes having a surface water area of 50 acres or more--in the County, ranging in size from 52 acres (Voltz Lake) to 682 acres (Elizabeth Lake). In addition, there are 12 named lakes and ponds in the County having less than 50 acres of surface water. In 1980, there were approximately 106 miles of major streams in the County. Floodlands, consisting of areas subject to inundation by the 100-year recurrence interval flood event, encompass about 12,300 acres, or about 7 percent of the area of Kenosha County.

In 1980, woodlands covered a combined area of 9,572 acres in Kenosha County, or about 5 percent of the County. Woodlands in the County serve scenic, wildlife habitat, open space, educational, and recreational uses, and contribute to the quality of the environment as measured in terms of clean air, clean water, and scenic beauty.

In 1980, wetlands covered a combined area of 15,612 acres in Kenosha County, or about 9 percent of the total area of the County. Wetlands contribute to the maintenance of good water quality and the prevention of flooding, provide wildlife habitat, and are important for overall environmental health and diversity. Conversely, wetlands have severe limitations for residential, commercial, and industrial development. In general, these limitations are related to the high compressibility and instability, high water table, low bearing capacity, and high shrink-swell potential of wetland soils.

In 1980, wildlife habitat areas in Kenosha County encompassed 22,065 acres, or about 12 percent of the total area of the County. The remaining habitat, and the wildlife residing therein, provide important opportunities for recreational, educational, and scientific activities, and constitute an important aesthetic asset to the County.

The most important elements of the underlying and sustaining natural resource base--including the best remaining woodlands, wetlands, prairies, surface water and associated undeveloped shorelands and floodlands, wet or poorly drained soils, wildlife habitat, and areas of rugged terrain or high-relief topography--when combined, are found to occur in essentially linear patterns. These patterns have been termed "environmental corridors" by the Regional Planning Commission. The preservation of these corridors is important to the maintenance of a high level of environmental quality in the County, to the protection of its natural beauty, and to the provision of opportunities for scientific, educational, and recreational activities. The exclusion of urban development from these corridors will also help to avoid the creation of serious and costly developmental problems such as wet and flooded basements, foundation failures, and excessive clearwater infiltration and inflow into sanitary sewerage systems.

Primary environmental corridors include a wide variety of important resource and related elements and are, by definition, at least 400 acres in size, two miles long, and 200 feet wide. In 1980, primary environmental corridors encompassed 27,970 acres in Kenosha County, or 16 percent of the total area of the County.

Secondary environmental corridors generally connect primary environmental corridors and are, by definition, at least 100 acres in size and one mile long. In 1980, secondary environmental corridors encompassed 6,134 acres in Kenosha County, or 3 percent of the total area of the County.

Agricultural lands, including lands used for croplands, pastures, orchards and nurseries, and farm buildings, encompassed about 107,300 acres in Kenosha County in 1980, or 60 percent of the total area of the County. In 1981, Kenosha County, with the assistance of the Regional Planning Commission, completed a county farmland preservation plan, the primary purpose of which was the identification of those farmlands which should be preserved for continued agricultural use. Under that planning program, prime agricultural lands were identified on the basis of the agricultural capabilities of the soils, the size of the individual farm units, and the size of the overall farming areas. Specifically, to be considered prime agricultural lands, farm units must meet the following criteria: 1) The farm unit must be at least 35 acres in area; 2) at least 50 percent of the farm unit must be covered by soils which meet the U. S. Department of Agriculture, Soil Conservation Service, standards for national prime farmland or farmland of state importance; and 3) the farm unit must occur in blocks of similar farmland of at least 100 acres in size. Such areas encompassed a total of 76,252 acres in 1980, or about 71 percent of all farmland in Kenosha County and 43 percent of the total area of the County.

MAN-MADE ENVIRONMENT

Although Kenosha County is a relatively urbanized county, in 1980 only about 31,100 acres, or about 17 percent of the total area of the County, were devoted to urban land uses. The largest urban land use category, residential, accounted for about 15,100 acres in 1980, or about 8 percent of the total area of the County, and about 49 percent of the developed urban area of the County. Rural land uses in Kenosha County still occupied about 147,100 acres in 1980, or about 83 percent of the total area of the County. Agricultural land alone

accounted for about 107,300 acres, or about 60 percent of the total area of the County, and about 73 percent of the rural area of the County.

The total number of housing units in Kenosha County stood at 47,506 in 1980, following increases of 5,467 housing units, or 16 percent, between 1960 and 1970; and 8,396 housing units, or 21 percent, between 1970 and 1980. Of the total housing stock in Kenosha County in 1980, 45,893 units, or almost 97 percent, were year-round housing units--that is, housing units intended for occupancy throughout the year. The balance--1,613 housing units, or just over 3 percent of the total housing stock--consisted of vacant seasonal and migratory housing units, intended for use only in certain seasons. Of the total year-round housing stock, 43,064 housing units, or 94 percent, were occupied at the time of the federal census in April 1980, while 2,829 housing units, or about 6 percent, were vacant. Of the total occupied year-round housing stock, 30,367 housing units, or 71 percent, were owner-occupied, and 12,697 housing units, or about 29 percent, were renter-occupied.

There were about 934 miles of streets and highways in Kenosha County in 1984. Of this total, 329 miles, or about 35 percent, consisted of arterial streets and highways intended to serve the through movement of fast and heavy traffic. Approximately 124 miles, or 38 percent of the arterial street and highway system, were under the jurisdiction of the State, being comprised of interstate and state trunk highways and connecting streets; about 162 miles, or about 49 percent, were under the jurisdiction of the County, being comprised of county trunk highways; and about 43 miles, or 13 percent, were under local jurisdiction, being comprised of local arterial streets and highways.

Mass transit service in Kenosha County is provided in the form of fixed-route bus service, railway passenger train service, and demand-responsive service for the elderly and handicapped. Fixed-route bus service in Kenosha County includes intercity service over routes in the eastern portion of the County and local service within the Kenosha urbanized area. The City of Kenosha's federally assisted public transit system--the Kenosha Transit System--provides fixed-route local bus service within the Kenosha urbanized area. Virtually all the city population was served by this system in 1985. The City of Racine's federally assisted local transit system--The Belle Urban System--also provided fixed-route local bus service within the County in 1985 on one route operated between the University of Wisconsin-Parkside and the Racine central business district.

Railway passenger train service in Kenosha County is limited to a commuter service between the City of Kenosha and the Chicago metropolitan area provided by the Regional Transportation Authority of Northeastern Illinois (RTA). Actual operation of this service is provided by the Chicago & North Western Transportation Company by contract with the RTA.

Special carrier, nonfixed-route transit service for the elderly and handicapped is provided within the County primarily through a program administered by the Kenosha County Department on Aging.

There are 13 airports located within Kenosha County, of which four are general aviation facilities open to use by the general public. The remaining nine airports are restricted to private use. The largest general aviation airport in Kenosha County is the publicly owned Kenosha Municipal Airport.

Kenosha County is served by a harbor on Lake Michigan that is used for both commercial shipping and recreational boating purposes. The Kenosha Port can accommodate up to five ocean-going vessels at one time. Cargo-handling facilities include approximately 140,000 square feet of warehouse space.

There were 16 public sanitary sewerage systems in Kenosha County in 1984. Fifteen of these were served by a total of 11 sewage treatment plants in the County. Sewage from the remaining system, the KR Utility District located along CTH KR in the Town of Somers, is conveyed to the City of Racine sewage treatment plant for treatment and disposal. In addition, there were eight private sewage treatment plants serving isolated enclaves of urban development within the County. The public sanitary sewerage systems together served an area of about 30.2 square miles, or about 10.8 percent of the total area of the County. These systems served a resident population of about 101,000 persons, or about 83.3 percent of the county population.

There were five public water utilities in Kenosha County in 1984, serving a combined area of about 21.1 square miles, or about 7.6 percent of the county area, and a resident population of about 88,200 persons, or 72.8 percent of the county population. In addition to publicly owned water utilities, there were 22 special-purpose water utilities providing water supply service on a limited basis to isolated residential enclaves.

Kenosha County encompasses a wide range of public and private outdoor recreation and related open space sites. In 1985 there were 200 public outdoor recreation and open space sites, encompassing 9,754 acres, in Kenosha County. One of the sites, the state-owned Bong Recreation Area in the Town of Brighton, encompassed 4,515 acres, or 46 percent of the total public outdoor recreational site acreage. In addition, there were 117 private outdoor recreation and open space sites encompassing 3,385 acres in 1985.

There were 32 public elementary schools, 5 public junior high schools, and 5 public senior high schools in Kenosha County in 1984. There were also 21 private elementary and secondary schools, including 16 private elementary schools, 2 private secondary schools, and 3 private combined elementary and secondary schools. Higher educational facilities in Kenosha County consisted of Gateway Technical Institute, Carthage College, and the University of Wisconsin-Parkside.

Five law enforcement agencies served Kenosha County in 1985. The Kenosha County Sheriff's Department and the City of Kenosha Police Department included about 85 and 154 law enforcement personnel, respectively. The police departments of the Villages of Silver Lake and Twin Lakes and the Town of Pleasant Prairie included a total of about 14 full-time and 27 part-time or auxiliary law enforcement personnel.

There were 11 professional and volunteer fire departments in Kenosha County in 1985, operating from a total of 18 fire stations. The largest fire department in the County is the City of Kenosha Fire Department, which employed 132 full-time fire fighters and maintained five fire stations in 1985.

ADOPTED PLANS

Areawide plans important to Kenosha County in the preparation of a county development plan include the regional land use, transportation system, water

quality management, park and open space, and airport system plans. The regional land use plan provides an essential overall framework for land use development and redevelopment in the Southeastern Wisconsin Region, including Kenosha County, providing for the attainment of generally accepted land use development objectives. It sets forth recommendations regarding the amount, spatial distribution, and intensity of the various land uses required to serve the needs of the anticipated future population in Kenosha County and the Southeastern Wisconsin Region through the year 2000.

The adopted regional transportation system plan serves as a guide to the development of an integrated transportation system intended to effectively serve the existing regional land use pattern and promote implementation of the regional land use plan. The plan recommends a functional and jurisdictional system of arterial streets and highways in the Region and in Kenosha County through the year 2000, and includes recommendations regarding the provision of mass transit service within the Kenosha urbanized area.

The regional water quality management plan establishes regional water use objectives and related water quality standards, and recommends a comprehensive water quality management plan for southeastern Wisconsin, addressing both point and nonpoint sources of water pollution. Of particular importance to the preparation of the county development plan are the sanitary sewer service area recommendations of the regional water quality management plan. The plan identifies, in a preliminary manner, recommended sanitary sewer service areas tributary to each of the existing and proposed sewage treatment plants in Kenosha County and the Region. The preliminary sewer service area recommendations of the regional plan have been refined and detailed through local sewer service area planning programs for the portion of Kenosha County east of IH 94; for the Town of Salem Utility District No. 2; and for an area including the Village of Paddock Lake, the Town of Salem Utility District No. 1, and the Town of Bristol Utility District Nos. 1 and 1B. Sewer service area refinement planning programs were also underway in 1986 for the Village of Silver Lake and the Village of Twin Lakes.

The regional park and open space plan identifies existing and anticipated future outdoor recreation and open space needs within the Region, and recommends the steps to be taken by local, county, and state agencies and units of government in an effort to meet those needs. The regional park and open space plan includes two plan elements--an open space element, consisting of recommendations regarding preservation of prime agricultural lands and primary environmental corridors; and an outdoor recreation element, consisting of recommendations regarding the maintenance of existing, and the acquisition and development of new, outdoor recreation sites and facilities required to meet outdoor recreation needs in the Region through the year 2000.

A new regional airport system plan for southeastern Wisconsin was completed by the Commission in 1987. This plan updates and revises the original regional airport plan prepared by the Commission and adopted in 1976. Like the original plan, the new plan was developed as a guide to a safer and more efficient regional air transportation system for southeastern Wisconsin. The plan recommends a system of 11 public use airports, including one such airport, Kenosha Municipal Airport, in Kenosha County. Under the regional plan, Kenosha Municipal Airport would be upgraded from a General Utility-Stage I airport to a General Utility-Stage II airport. The recommendations of the original regional

airport system plan for Kenosha Municipal Airport were refined and detailed in an airport master plan. In addition, a land use plan for the area immediately adjacent to Kenosha Municipal Airport was prepared by the City of Kenosha in 1985.

In addition to the regional plan elements described above, several subregional plans--including comprehensive watershed plans and a plan for the Kenosha Planning District--are important to the preparation of a county development plan. The Regional Planning Commission has prepared comprehensive plans for three of the five major watersheds partially located in Kenosha County--the Fox River, Pike River, and Root River watersheds. The portions of these watersheds lying within Kenosha County encompass about 128.5 square miles, or about 46 percent of the area of the County. The watershed plans are intended to help protect and restore the environmental quality of the watersheds and to resolve serious and costly flooding problems.

The Kenosha Planning District plan was developed as a guide to the orderly growth and development of the Kenosha Planning District, consisting of all of Kenosha County east of IH 94. The plan was intended to provide the City of Kenosha and the Towns of Pleasant Prairie and Somers with a comprehensive community development plan which could be cooperatively adopted and jointly implemented, containing recommended proposals for land use, transportation, and community facility and public utility development. Although the plan was prepared in 1967 and certain elements of the plan have thus been updated and refined through subsequent planning work, the plan continues to provide a helpful overall framework for growth and development of the Planning District.

Countywide plans which are relevant to the formulation of a development plan for Kenosha County include the Kenosha County farmland preservation plan, the Kenosha County overall economic development program plan, and the solid waste management plan currently in preparation. As its name implies, the farmland preservation plan is intended to serve as a guide to the preservation of agricultural land in Kenosha County, seeking to preserve, to the maximum extent possible, identified prime agricultural land. The plan also addresses urban development and natural resource preservation objectives.

The Kenosha County overall economic development program plan identifies constraints on and potentials for economic development in Kenosha County, and sets forth an action-oriented strategy for improving economic conditions in the County. The plan establishes economic development goals and objectives for the County and outlines a course of actions which the Office of Kenosha Area Economic Development may pursue in achieving the established goals.

Work was initiated on a solid waste management planning program for Kenosha County in 1985. The plan, being prepared with the assistance of the Regional Planning Commission, is intended to provide an assessment of countywide solid waste management needs and a strategy for meeting those needs while providing for the protection of public health and the environment from the potential adverse impacts of improper solid waste management. The solid waste management plan is expected to be completed in 1987.

Two minor civil divisions in Kenosha County, the Town of Pleasant Prairie and the City of Kenosha, have prepared local land use plans or plan components which warrant consideration in the formulation of a county development plan. The Town of Pleasant Prairie plans or plan components relevant to the formula-

tion of a county development plan include the Town of Pleasant Prairie housing and development forecast for the period 1985 to 2005; the Town of Pleasant Prairie Des Plaines River Basin land use plan; and the Chiwaukee Prairie-Carol Beach area land use management plan. Relevant plans for the City of Kenosha include the City's downtown land use and transportation strategy, neighborhood development plans for the Westview and Whittier Neighborhoods, and the City of Kenosha harbor area master plan.

LAND USE REGULATIONS

Zoning ordinances represent one of the most important means available to county and local units of government for managing land use in the public interest. Zoning arrangements vary somewhat among the minor civil divisions in Kenosha County. The City of Kenosha and the Villages of Paddock Lake, Silver Lake, and Twin Lakes have each adopted general zoning ordinances. Four towns--Randall, Somers, Wheatland, and Pleasant Prairie--have approved and are governed by the Kenosha County Zoning Ordinance which was adopted by Kenosha County in 1983, replacing the zoning ordinance adopted by the County in 1959. Two towns, Brighton and Bristol, which were previously under the jurisdiction of the 1959 County Zoning Ordinance, have not yet adopted the 1983 County Zoning Ordinance. As a result, the Towns of Brighton and Bristol are presently unzoned except for those portions of the towns lying within the statutory shoreland area, where the County zoning districts are in effect. Finally, the two towns that were not under the jurisdiction of the 1959 County Zoning Ordinance, Paris and Salem, continue to administer their own zoning ordinances.

An analysis of existing zoning districts[1] in the County indicated that in 1985, a total of 24,949 acres, or 14.0 percent of Kenosha County, had been placed in residential zoning districts; 3,261 acres, or 1.8 percent of the County, in commercial zoning districts; 4,844 acres, or 2.7 percent of the County, in industrial zoning districts; 3,810 acres, or 2.1 percent of the County, in governmental and institutional zoning districts; 4,320 acres, or 2.4 percent of the County, in recreational zoning districts; 737 acres, or 0.4 percent of the County, in zoning districts permitting mineral extraction and landfill operations; 14,135 acres, or 8.0 percent of the County, in conservancy zoning districts; and 79,930 acres, or 44.9 percent of the County, in agricultural zoning districts, including 34,125 acres in exclusive agricultural zoning districts providing a minimum parcel size of 35 acres. Unzoned lands within the Towns of Brighton and Bristol encompassed about 38,171 acres, or 21.4 percent of the County. The balance of the County--4,017 acres, or 2.3 percent--consisted of surface water areas, including major and minor lakes and the Fox River.

Counties in Wisconsin are required by State Statute to enact ordinances regulating shoreland areas within unincorporated areas. Shoreland areas are defined

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[1]This analysis reflects the existing pattern of zoning under the City of Kenosha, Village of Paddock Lake, Village of Silver Lake, Village of Twin Lakes, Town of Paris, and Town of Salem zoning ordinances, and under the Kenosha County Zoning Ordinance as it pertains to the Towns of Pleasant Prairie, Randall, Somers, and Wheatland, and the shoreland areas of the Towns of Brighton and Bristol.

as lands within the following distances from the ordinary high water mark of navigable waters: 1,000 feet from a lake, pond, or flowage, and 300 feet from a river or stream, or to the landward side of a floodplain, whichever distance is greater. The required regulations, as set forth in Chapter NR 115 of the Wisconsin Administrative Code, include the placement of all shoreland-wetlands five acres or more in size in a conservancy zoning district.

In 1971, Kenosha County adopted a shoreland zoning ordinance establishing restrictions on building setbacks, earth movements, and tree cutting and shrub clearing. In 1983, the shoreland ordinance was incorporated into the County's General Zoning and Shoreland/Floodplain Zoning Ordinance. Kenosha County has appropriately zoned all shoreland-wetlands in compliance with state law.

In 1982 the State extended shoreland-wetland zoning requirements to cities and villages in Wisconsin. The process leading to the development of final wetland inventory maps and the application of shoreland-wetland zoning was underway in 1986 for the City of Kenosha and Villages of Silver Lake and Twin Lakes.

In Wisconsin, counties, along with cities and villages, are required by State Statute to adopt and administer floodplain regulations within identified 100-year recurrence interval flood hazard areas. The City of Kenosha, the Villages of Silver Lake and Twin Lakes, and Kenosha County have adopted such floodplain regulations--the Kenosha County regulations governing floodplains throughout the unincorporated area of the County. The Wisconsin Department of Natural Resources has determined that there are no 100-year floodplains in the Village of Paddock Lake, and the Village is therefore not required to adopt floodplain zoning.

Subdivision control ordinances regulating the manner in which land is subdivided and prepared for development have been adopted by the City of Kenosha; the Villages of Paddock Lake, Silver Lake, and Twin Lakes; and the Towns of Bristol, Paris, Pleasant Prairie, Salem, and Somers. Kenosha County has adopted a subdivision control ordinance which regulates land subdivision throughout the unincorporated area of the County. In the case of overlapping jurisdiction, the more restrictive requirements control.

The official map is a very effective, but historically underused, plan implementation tool. Its basic purpose is to prohibit the construction of buildings or structures and their associated improvements on land that has been designated for current or future public use, including streets, highways, drainageways, parkways, parks, and playgrounds. In Kenosha County, a total of three local units of government--the City of Kenosha and the Villages of Silver Lake and Twin Lakes--have prepared and adopted official maps.

CONCLUSIONS

As noted above and as described in detail in Chapter V in this volume of this report, much progress has been made in planning for the sound development of Kenosha County. The regional land use plan provides recommendations regarding the amount, spatial distribution, and general arrangement of the various land uses required to serve the needs of the anticipated future population and economic activity levels. The regional transportation system plan recommends

functional and jurisdictional systems of arterial streets and highways through the plan design year 2000 and, in addition, provides a guide to the provision of mass transit service. The regional park and open space plan serves as a guide to recreation site and facility development and open space preservation, including, importantly, the preservation of environmental corridors. The regional water quality management plan provides recommendations regarding the location and extent of sanitary sewer service areas, as well as the location, type, and capacity of sewage treatment facilities and the level of treatment required to meet established water use objectives. The regional airport system plan includes recommendations for the improvement of Kenosha Municipal Airport as part of a system of 11 public use airports in southeastern Wisconsin. Comprehensive plans prepared for the Fox, Pike, and Root River watersheds provide recommendations intended to help protect and restore the environmental quality of the watersheds and to resolve serious and costly flooding problems. The county farmland preservation plan serves as an important guide to the preservation of prime agricultural land in Kenosha County. As indicated in Chapter V, a number of the areawide plans and plan components have been refined and detailed for subareas of Kenosha County.

It is clear that the planning programs completed to date for Kenosha County have addressed most of the issues and problems which the Wisconsin Statutes indicate should be considered in a county development plan, and have done so at a level of detail quite adequate for county planning purposes. Given the extensive planning work already completed, a comprehensive county development plan itself could be readily developed by collating the plan recommendations of the previous planning programs into a single plan document, including, importantly, a map displaying the key features of the various plans, refining and detailing the various plan elements as may be necessary or desirable. Such a county development plan, developed by collating and synthesizing previous planning work in this manner, is presented in Volume Two of this report.

It should be noted that, while previous planning efforts provide a sound basis for the preparation of a county development plan, Kenosha County may in the future wish to undertake additional planning work which would refine and detail certain elements of the overall county plan, thereby promoting implementation of that plan. First, Kenosha County may wish to develop an official map for the County. Such a map would establish the locations and widths of state and county trunk highways included in the arterial street and highway system plan for Kenosha County. The map would show the proposed widening of existing highways, while the locations and widths of any proposed highways would be added to the map as necessary route location studies are completed.

Second, the County may wish to refine the land use recommendations of the regional land use plan and related plans by preparing detailed land use plans for older "crossroad" communities and similar enclaves of urban development within the County which display basic urban characteristics but which are not intended to be provided with sanitary sewer, public water supply, or other urban services. Prepared in cooperation with the towns concerned, such detailed land use plans would provide a useful guide to day-to-day decision-making regarding the continued development and redevelopment of such areas.

Third, recent state legislation requires that any county, city, village, and town which has a development plan identify on that plan any publicly owned or operated airport along with the attendant "airport-affected area." The

airport-affected area is to be established by agreement between the concerned county, city, village, or town and the airport. This area may not extend more than three miles beyond the boundaries of the airport. In the absence of such an agreement, the airport-affected area includes all of the area located within three miles of the boundaries of the airport. Within the airport-affected area, the airport owner or operator is granted the right to protest any proposed zoning change.

As indicated in Chapter IV of this volume, Kenosha Municipal Airport is the only publicly owned or operated airport in Kenosha County. Kenosha County, in cooperation with the City of Kenosha, may wish to identify an airport-affected area attendant to Kenosha Municipal Airport and incorporate this area into the county development plan, preparing a detailed land use plan for the area. The recommendations of the land use plan recently completed by the City of Kenosha as they pertain to the area adjacent to Kenosha Municipal Airport would be incorporated into such a plan. The detailed plan would also provide recommendations for other portions of the airport-affected area, as appropriate.

APPENDICES

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Appendix A-1

SELECTED CHARACTERISTICS OF MAJOR LAKES IN KENOSHA COUNTY

Lake	Lake Type[a]	Water Color	Adjoining Wetlands (acres)	Shoreline in Public Ownership (miles)	Trophic Status[b]
Benedict.....	Drained	Clear	0	0	Mesotrophic
Benet/Shangrila....	Drained	Turbid	6.4	Less than 0.1	Hypereutrophic
Camp.....	Drainage	Clear	268.8	2.5	Eutrophic
Center.....	Drained	Clear	N/A	Less than 0.1	Hypereutrophic
Cross.....	Drained	Clear	8.3	0	Mesotrophic
Dyer.....	Drained	Clear	10.2	0	Mesotrophic
East Lake Flowage..	Drainage	Turbid	94.7	2.7	Eutrophic
Elizabeth.....	Drainage	Clear	133.1	0	Mesotrophic
George.....	Drained	Turbid	0	0.3	Eutrophic
Hooker.....	Drained	Turbid	84.1	0.6	Eutrophic
Lilly.....	Seepage	Clear	0	0.2	Eutrophic
Mary.....	Drained	Turbid	0	0.1	Mesotrophic
Paddock.....	Drained	Clear	0	0.1	Eutrophic
Powers.....	Drainage	Clear	217.6	0	Mesotrophic
Silver.....	Drainage	Clear	19.8	1.3	Mesotrophic
Voltz.....	Drained	Turbid	0	0	Eutrophic

NOTE: N/A indicates data not available.

[a]Lake types are as follows:

Drainage--Level controlled primarily by discharge of outflowing and inflowing stream(s).
Seepage--Water loss by seepage primarily through walls and floor of basin (landlocked).
Drained--Level controlled by discharge of an outflowing stream(s).

[b]Trophic classifications are as follows:

Oligotrophic--Lakes in this class have relatively low indexes of fertility and usually have large volumes of dissolved oxygen in the hypolimnion in midsummer. Algal blooms and macrophytic vegetation problems are minimal. Their waters are relatively deep, cold, and clear, with high Secchi disc readings. Naturally reproducing populations of lake trout, shallow water cisco, brown trout, brook trout, largemouth and smallmouth bass, and walleye can be expected. Characteristic forage fish species may include emerald and mimic shiners. There are no lakes in this category in Kenosha County.

Mesotrophic--Lakes in this class have medium indexes of fertility and limited volumes of dissolved oxygen in the hypolimnion in midsummer. Algal blooms and extensive macrophytic vegetation problems are uncommon. Maximum depth and volume are adequate to permit complete stratification. Transparency is usually good and Secchi disc readings are medium to high. Characteristic gamefish species include largemouth and smallmouth bass, walleye, and northern pike. Lakes in the upper stratum of this class may have large enough volumes of cold, well-oxygenated water in the hypolimnion in midsummer to support a "put and take" brown and rainbow trout fishery on a limited basis. Such lakes are referred to as "two story" lakes.

Eutrophic--Lakes in this class have medium to high indexes of fertility. They normally have very low or nonexistent volumes of dissolved oxygen in the hypolimnion in midsummer. Algal blooms and extensive macrophytic vegetation problems are common. Maximum depth and volume are usually adequate to permit complete stratification; however, light transparency varies and Secchi disc readings are poor to fair. Characteristic gamefish species include largemouth bass, northern pike, and sometimes walleye. A large portion of the total fish production is panfish such as bullhead, crappie, perch, and bluegill. Fish populations tend to be dominated by rough fish such as carp, buffalo, quillback, and sucker. A characteristic species combination in some of the larger southern Wisconsin waters in this class is walleye, carp and/or buffalo, crappie, and white bass. The fish populations in the shallowest lakes in this class are commonly subject to periodic winterkill and/or summerkill.

Hypereutrophic--Lakes in this class have relatively high indexes of fertility, are typically very shallow, and normally do not stratify in summer and therefore have no hypolimnion. When a lake does not stratify, the water temperature tends to reflect ambient air temperature. This limits the production of species that require relatively cool waters with high concentrations of dissolved oxygen such as northern pike, smallmouth bass, and walleye. Annually recurring algal blooms and macrophytic vegetation are major problems. Any fish populations in these waters can be expected to winterkill and/or summerkill almost annually. Fish species combinations commonly found in these lakes are bullhead and forage fish, and carp and bullhead, and sometimes these lakes contain forage fish only.

Source: Wisconsin Department of Natural Resources, Surface Water Resources of Kenosha County, 1982.

Appendix A-2

PUBLIC ACCESS SITES ON KENOSHA COUNTY LAKES: 1982

Lake	Location				Owner	Type of Access	Parking Spaces		Type of Ramp
	Township	Range	Section	Quarter Section			Car and Trailer	Car	
Benedict	1N	18E	24	4	Town	Car-top boat[a]	4	2	--
Camp	1N	20E	28	1	Town	Boat ramp	6	5	Gravel
	1N	20E	28	3	Town	Boat ramp	20	15	Gravel
	1N	20E	29	2	Town	Boat ramp	4	0	Gravel
	1N	20E	21	3	Town	Boat ramp	4	0	Gravel
	1N	20E	21	2	Town	Boat ramp	8	0	Gravel
Center	1N	20E	21	3	Town	Boat ramp	4	4	Gravel
	1N	20E	21	1	Town	Car-top boat	0	6	--
Elizabeth	1N	19E	29	3	Town	Car-top boat	0	2	--
	1N	19E	32	2	Town	Car-top boat	6	0	--
	1N	19E	32	2	Town	Boat ramp	3	0	Dirt
	1N	19E	32	3	Town	Boat ramp	0	4	Dirt
	1N	19E	32	3	Town	Boat ramp	0	4	Dirt
George	1N	21E	20	4	Town	Roadside	2	0	Dirt
Hooker	1N	20E	11	1	Village	Boat ramp	6	0	Dirt
	1N	20E	11	4	Town	Boat ramp	3	0	Gravel
	1N	20E	11	3	Village	Boat ramp	4	0	Gravel
Mary	1N	19E	21	4	Village	Boat ramp	30	40	Blacktop
	1N	19E	28	2	Town	Car-top boat	0	2	--
Montgomery	1N	20E	13		Town	Boat ramp	4	2	Other
Paddock	1N	20E	2	4	Village	Boat ramp	10	0	Gravel
Powers	1N	19E	18	4	Town	Car-top	0	4	--
Benet/Shangrila	1N	21E	31	2	Town	Boat ramp	4	2	Dirt
Silver	1N	20E	8	4	State	Boat ramp	23	0	Cement plank
	1N	20E	17	2	Village	Boat ramp	15	0	Gravel
	1N	20E	17	2	Village	Car-top boat	0	6	--

[a]Car top access located on Lake Tombeau, Walworth County.

Source: Wisconsin Department of Natural Resources, Surface Water Resources of Kenosha County, 1982.

Appendix A-3

PRIVATELY OWNED PUBLIC ACCESS SITES ON KENOSHA COUNTY LAKES: 1982

Lake	Location				Type of Access	Parking Spaces		Type of Ramp	Number of Rental Units
	Township	Range	Section	Quarter Section		Car and Trailer	Car		
Benedict	1N	19E	19	2	Boat ramp	50	20	Blacktop	--
Camp	1N	20E	28		Boat rental	0	15	None	12
	1N	20E	21	2	Boat rental	0	12	None	12
Center	1N	20E	21	2	Boat rental	0	15	None	15
Elizabeth	1N	19E	32	4	Boat ramp and boat rental	40	32	Gravel	32
	1N	19E	32	4	Boat ramp and boat rental	10	40	Concrete	12
	1N	19E	32	1	Boat rental	0	120	None	20
Mary	1N	19E	21	4	Boat rental	0	25	None	16
	1N	19E	21	3	Boat rental	0	6	None	7
	1N	19E	21	3	Boat ramp	20	10	Gravel	--
Powers	1N	18E	13	4	Boat ramp and boat rental	6	10	Gravel	21
	1N	18E	13	4	Boat ramp and boat rental	10	20	Gravel	17
	1N	19E	18	1	Boat ramp and boat rental	6	10	Concrete	15
	1N	19E	18	1	Boat rental	0	20	None	16
Rock	1N	20E	34	4	Boat rental	0	5	None	5
	1N	20E	34	4	Boat ramp and boat rental	100	200	Sand	25
Benet/Shangrila	1N	21E	31	2	Boat ramp and boat rental	5	15	Sand	19
	1N	20E	36	1	Boat ramp and boat rental	0	15	Cement plank	18
Silver	1N	20E	17	2	Boat rental	0	25	None	19
	1N	20E	17	2	Boat rental	0	30	Gravel	26
	1N	20E	17	3	Boat ramp	10	4	Gravel	--
	1N	20E	17	2	Boat ramp	50	--	Gravel	--

Source: Wisconsin Department of Natural Resources, Surface Water Resources of Kenosha County, 1982.