



**A PARK AND OPEN
SPACE PLAN FOR THE
VILLAGE OF THIENSVILLE**

**OZAUKEE COUNTY
WISCONSIN**

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Special acknowledgement is due Douglas J. Koehler, SEWRPC Planner,
for his contributions to this report.

COMMUNITY ASSISTANCE PLANNING REPORT
NUMBER 221

**A PARK AND OPEN SPACE PLAN
FOR THE VILLAGE OF THIENSVILLE
OZAUKEE COUNTY, WISCONSIN**

Prepared by the

Southeastern Wisconsin Regional Planning Commission
P. O. Box 1607
Old Courthouse
916 N. East Avenue
Waukesha, Wisconsin 53187-1607

March 1996

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March 27, 1996

Mr. Donald A. Molyneux
President of the Village of Thiensville
and Members of the Board of Trustees
Village of Thiensville
250 Elm Street
Thiensville, Wisconsin 53024

Ladies and Gentlemen:

The Village of Thiensville, on June 22, 1994, requested that the Southeastern Wisconsin Regional Planning Commission assist the Village in the preparation of a park and open space plan, a plan which would provide recommendations concerning the preservation, acquisition, and development of needed park and open space lands in the Village. Acting in response to that request and working with the Village President and Administrator, the Commission staff has now completed the requested park and open space plan for the Village of Thiensville.

This report describes that plan. It sets forth recommended park and open space preservation, acquisition, and development objectives and supporting standards relevant to the needs and values of the citizens of the Village; presents pertinent information on the supply of, and the need for, park, recreation, and related open space lands; and identifies the roles which the Village and other units and agencies of government should play in meeting park and related open space needs in the Village.

Implementation of the plan presented in this report would, over time, provide for an integrated system of parks, open spaces, and recreation trails within the Village, a system that would serve to preserve and enhance the natural resource base while providing opportunities for a range of recreational experiences. The importance of the implementation of this plan to the overall quality of life within the Village cannot be overemphasized. The Village and its immediate environs still contain many high-quality natural resource amenities, including, particularly, the Milwaukee River, Pigeon Creek, and associated riparian areas. These amenities, often taken for granted, are as irreplaceable as they are invaluable and, once lost, will be lost forever. Action taken now will not only preserve these amenities, but will also facilitate the provision of a park and open space system that can provide the residents of the Village with the opportunity to participate in a wide variety of wholesome outdoor recreational activities close to home.

The Regional Planning Commission is pleased to have been of assistance to the Village in planning this important program. The Commission stands ready, upon request, to assist the Village in the implementation of the recommended plan over time.

Sincerely,



Kurt W. Bauer
Executive Director

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Chapter I

INTRODUCTION

PLAN CONTEXT

Broadly defined, recreation is an activity or experience undertaken solely for the pleasure or satisfaction derived from it. Recreation can take place indoors or outdoors. It encompasses a wide variety of human activities, ranging from rest and reflection to learning and teaching; from development of personal and social skills to meeting challenges and recovering from failures. Recreation is enjoyment, including both mental and physical exercise, personal and interpersonal experience, and self-provided and socially observed entertainment. Although recreational preferences may vary from individual to individual, recreation occupies a necessary and significant place in every person's life. For purposes of this report, recreation will be viewed in a somewhat narrower framework as including only those recreational activities typically carried on outdoors.

A variety of parks and recreational facilities, including open space lands, should be provided to offer opportunities for participation in a wide range of active and passive recreational pursuits. The primary purpose of the park and open space plan for the Village of Thiensville as herein presented, then, is to guide the preservation, acquisition, and development of land for park, outdoor recreation, and related open space purposes as needed to satisfy the recreational needs of the population of the Village and to protect and enhance the underlying and sustaining natural resource base.

Because of the importance of both outdoor recreation sites and areas for natural resource protection, park and open space acquisition, development, and use have long been issues of concern to public officials and citizen leaders. On December 1, 1977, the Southeastern Wisconsin Regional Planning Commission adopted SEWRPC Planning Report 27, A Regional Park and Open Space Plan for Southeastern Wisconsin: 2000, which sets forth park and open space objectives and describes a plan intended to guide the preservation, acquisition, and development of lands needed for outdoor recreation, as well as for the protection of the natural resource base of the seven-county Southeastern Wisconsin Region to the year 2000. Following the completion

of the regional plan, and at the specific request of the Ozaukee County Board of Supervisors, the Regional Planning Commission refined and detailed the regional plan as it related to Ozaukee County. That plan, documented in SEWRPC Community Assistance Planning Report 23, A Park and Recreation Plan for Ozaukee County, was adopted by the County in 1978. More recently, on July 1, 1987, Ozaukee County adopted SEWRPC Community Assistance Planning Report 133, A Park and Open Space Plan for Ozaukee County, a plan which updates the regional park and open space plan as that plan relates to Ozaukee County. The regional plan, and therefore the Ozaukee County park and open space plan, also recommended that each local unit of government in the County refine and detail the adopted plan as it relates to its local area of jurisdiction.

VILLAGE REQUEST

The Thiensville Village Administrator, on behalf of the Village Board of Trustees, on June 22, 1994, requested that the Regional Planning Commission assist the Village of Thiensville in the preparation of a park and open space plan for the Village. It is envisioned that the adoption of this plan by the Village Board will make the Village eligible to apply for and receive Federal and State aids in partial support of the acquisition and development of needed park and open space sites and facilities within the Village.

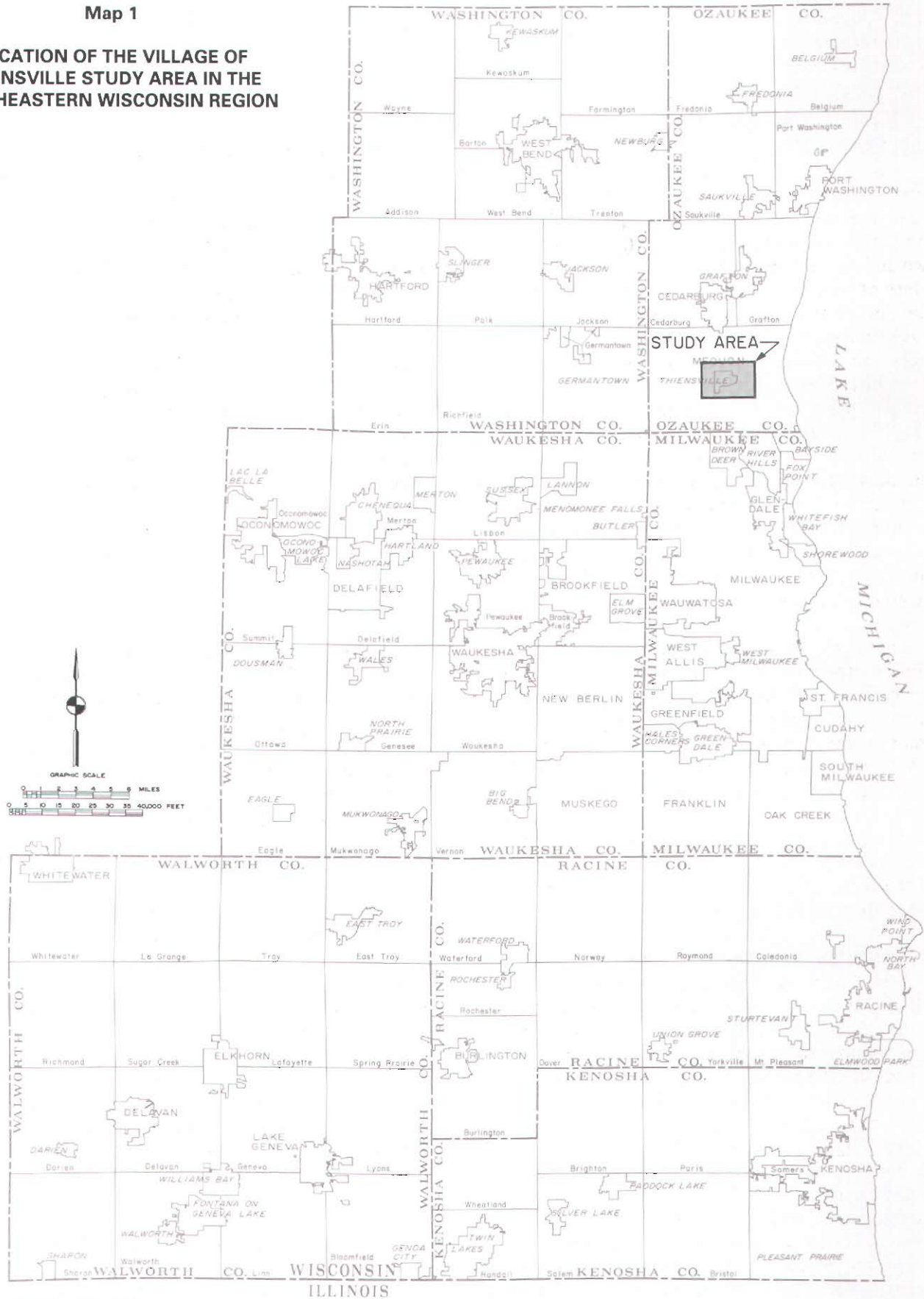
STUDY AREA

The study area for this planning effort, shown on Map 1, is located in southern Ozaukee County. The study area encompasses about 6.0 square miles, and includes the Village of Thiensville and the central portion of the City of Mequon. As shown on Map 1, the Village is bounded on all sides by the City of Mequon. The Village is about 1.0 square mile in area, based on 1990 civil division boundaries, thus occupying about 17 percent of the study area.

It is important to note that certain park and open space sites and facilities in the City of Mequon may serve residents of the Village of Thiensville and affect the need for such sites and facilities in the

Map 1

LOCATION OF THE VILLAGE OF
THIENSVILLE STUDY AREA IN THE
SOUTHEASTERN WISCONSIN REGION



Source: SEWRPC.

Village. Therefore, certain portions of the City of Mequon have been included in the Village of Thiensville study area; relevant park and open space planning data for those portions of the City within the study area are presented in this report.¹

REPORT FORMAT

The findings and recommendations of the requested park and open space planning effort, an effort carried out under the direction of the Village Administrator, are set forth in this report. Following this introductory chapter, Chapter II presents information about the Village pertinent to park and open space planning, including information on the resident population, the land use pattern, and the natural resource base of the Village, together with

information on the existing park sites and open space lands within the Village. Chapter III presents the park and open space preservation, acquisition, and development objectives, principles, and supporting standards which served as the basis for the development of the park and open space plan for the Village. Chapter IV describes park and open space needs in the Village and sets forth the recommended park and open space plan. Chapter V identifies the actions required to carry out the recommended plan.

¹*Specific recommendations for the provision of park and open space sites and facilities in the Village of Thiensville are compatible with the provision of such sites and facilities in the City of Mequon as presented in the City's park, recreation, and open space plan, dated January 28, 1985.*

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Chapter II

INVENTORY FINDINGS

INTRODUCTION

The proper formulation of a sound park and open space plan requires the collection of inventory data on the population and population distribution, the pattern of land use development, the existing park and open space sites and facilities, and the natural resources within the study area. The inventory findings for the Village of Thiensville study area are presented in this chapter.

RESIDENT POPULATION

Resident population levels are an important consideration in any park and open space planning effort. Data on the historic and existing resident population of the study area are presented in Table 1 and shown in Figure 1. The resident population of the study area in 1990 was 6,667 persons, with approximately one-half of that total residing in the Village and approximately one-half residing in that portion of the City of Mequon located within the study area.

As indicated in Table 1 and shown in Figure 2, the resident population of the Village of Thiensville increased steadily between 1920 and 1950, from 334 persons to 897 persons, an increase of 563 persons, or about 170 percent, during the 30-year period. Between 1950 and 1960, the population increased dramatically, from 897 persons to 2,507 persons, an increase of 1,610 persons, or 179 percent. From 1960 to 1970 the population continued to increase, but at a slower rate, to 3,182 persons in 1970. Between 1970 and 1980, the population increased only slightly, to 3,341 persons, a 159-person increase, or 5 percent over the 1970 level. From 1980 to 1990, the population declined slightly, to 3,301 persons, a decrease of 40 persons, or 1 percent, from the 1980 level.

LAND USE BASE

Land use is an important determinant of both the supply of, and the demand for, outdoor recreation and related open space facilities. Accordingly, an understanding of the amount, type, and spatial distribution of urban and rural land uses within the study area, as well as the historic conversion of

rural lands to urban uses, is an important consideration in this park and open space planning effort. This section presents a description of the historic urban development and the existing land use base within the study area.

The history of the development of land in the study area is shown on Map 2. Prior to 1940, urban land uses in the study area were concentrated in the central portion of the Village of Thiensville. The amount of urban development within the study area increased dramatically between 1940 and 1970, with the largest increase, an additional 965 acres, or a 246 percent increase, occurring between 1950 and 1963, both within and adjacent to the Village of Thiensville. In the years following 1970, urban development continued to occur within the study area, but outside the Village corporate limits. Between 1970 and 1980, an additional 156 acres of land, a 10 percent increase over the 1970 urban development area, were developed for urban uses. Between 1980 and 1990, another 459 acres of land, a 27 percent increase over the 1980 urban development area, were developed for urban uses in the areas surrounding the Village.

Information on the amount of land devoted to the various types of land uses in the study area in 1990 is presented in Table 2 and Map 3. Lands devoted to residential use in 1990 encompassed about 1,360 acres, or about 35 percent of the study area and about 57 percent of the urban lands within the study area. Lands devoted to other urban uses, including commercial, industrial, transportation, governmental and institutional, and recreational, together with unused urban lands, encompassed about 1,040 acres, or about 27 percent of the study area and about 43 percent of the urban lands within the study area. Thus, about 2,400 acres, comprising about 62 percent of the study area, were developed for urban use in 1990. Agricultural uses encompassed about 732 acres, or about 19 percent of the study area. Other nonurban land uses, including woodlands, wetlands, and other open lands, together encompassed an approximately equal amount of land, about 735 acres, or about 19 percent of the study area. Thus, about 1,467 acres, or 38 percent of the study area, were devoted to rural uses in 1990.

Table 1

POPULATION WITHIN THE THIENSVILLE STUDY AREA: SELECTED YEARS, 1900-1990

Year	Village of Thiensville			Remainder of Study Area			Study Area Total		
	Population	Change from Preceding Census		Population	Change from Preceding Census		Population	Change from Preceding Census	
		Absolute	Percent		Absolute	Percent		Absolute	Percent
1920	334	--	--	N/A	--	--	N/A	--	--
1930	500	166	49.7	N/A	--	--	N/A	--	--
1940	645	145	29.0	N/A	--	--	N/A	--	--
1950	897	252	39.1	N/A	--	--	N/A	--	--
1960	2,507	1,610	179.5	1,487	--	--	3,994 ^a	--	--
1970	3,182	675	26.9	2,346	859	57.8	5,528	1,534	38.4
1980	3,341	159	5.0	3,031	685	29.2	6,372	844	15.3
1990	3,301	-40	-1.2	3,366	335	11.0	6,667	295	4.6

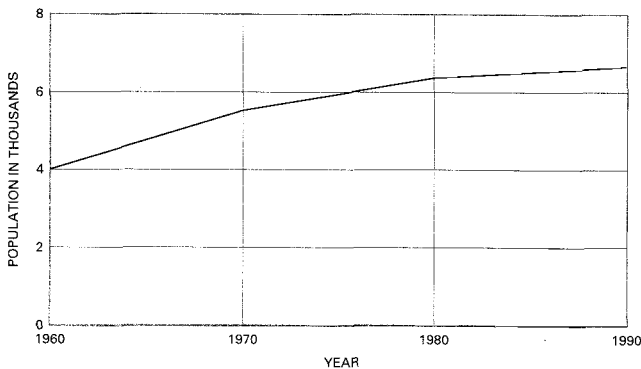
N/A: Not available.

^aRepresents the estimated number of residents in the study area in 1963.

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

Figure 1

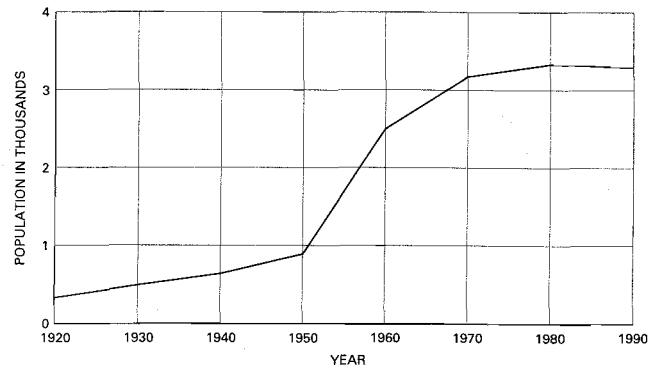
POPULATION WITHIN THE THIENSVILLE STUDY AREA: 1960-1990



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

Figure 2

POPULATION WITHIN THE VILLAGE OF THIENSVILLE: 1920-1990



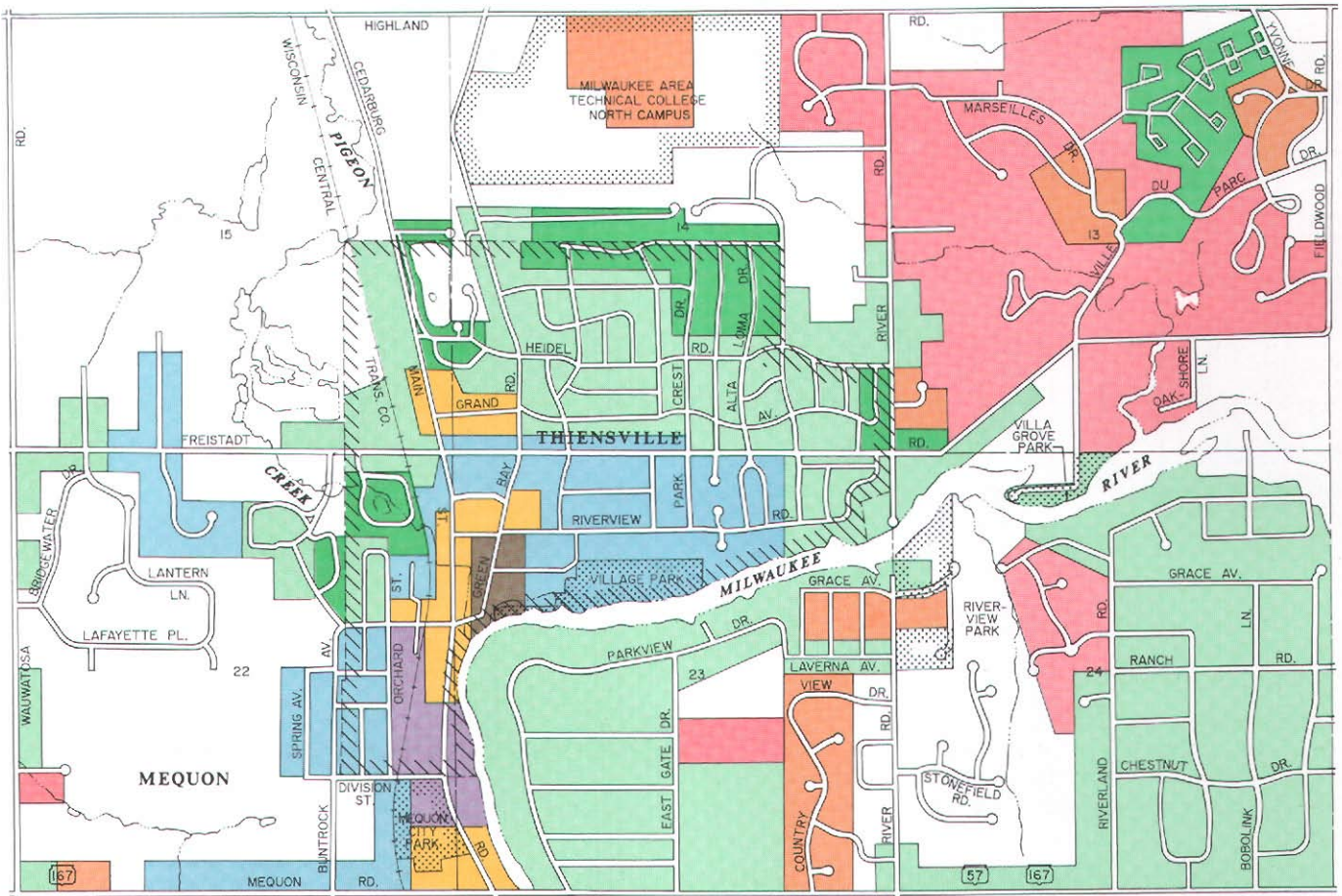
Source: U. S. Bureau of the Census and SEWRPC.

As indicated in Table 2, the Village of Thiensville in 1990 encompassed about 672 acres, or about 17 percent of the study area. Of this total, about 649 acres, or 97 percent, were in urban uses, including residential uses, which encompassed about 401 acres, or about 60 percent of the area of the Village; commercial, industrial, transportation, and other urban uses together encompassed about 248 acres, or about 37 percent of the Village area. The remaining 23 acres, or 3 percent of the Village area, consist of woodlands, wetlands, and other open lands.

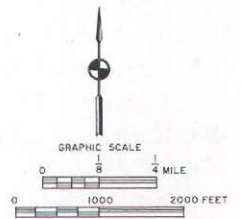
As further indicated in Table 2, the remainder of the study area encompassed 3,195 acres, or about 83 percent of the study area. Of this total, about 1,751 acres, or 54 percent, were in urban uses, including residential uses, which encompassed 960 acres, or about 55 percent of the urban uses in the remainder of the study area; commercial, industrial, transportation, governmental and institutional, and other urban uses, combined, encompassed about 791 acres, or about 45 percent of the urban uses in the remainder of the study area.

Map 2

HISTORIC URBAN GROWTH IN THE VILLAGE OF THIENSVILLE STUDY AREA: SELECTED YEARS, 1900-1990



LEGEND



Source: SEWRPC.

Rural uses encompassed about 1,444 acres, or 45 percent of the remainder of the study area, including agricultural uses, which encompassed 732 acres, or 23 percent of the remainder of the study area, and woodlands, wetlands, and other open land uses, which encompassed the remaining 712 acres, or 22 percent of the remainder of the study area.

The study area is served by a well developed highway transportation system. Important arterial streets and highways serving the study area include STH 57, Freistadt Road, River Road, and Green Bay Road. In addition, the former Chicago, Milwaukee, St. Paul & Pacific Railroad, the Wisconsin Central, Ltd., right-of-way traverses the study area from north to south.

Table 2

EXISTING LAND USE IN THE VILLAGE OF THIENSVILLE STUDY AREA: 1990

Land Use Category	Village of Thiensville				Remainder of Study Area				Study Area Total		
	Acres	Percent of		Percent of Study Area	Acres	Percent of		Percent of Study Area	Acres	Percent of Subtotal	Percent of Study Area
		Subtotal	Village			Subtotal	Remaining				
Urban											
Residential	401	61.8	59.7	10.4	960	54.8	30.0	24.8	1,361	56.7	35.2
Commercial	51	7.8	7.6	1.3	12	0.7	0.4	0.3	63	2.6	1.6
Industrial	7	1.1	1.0	0.2	2	0.1	0.1	0.0	9	0.4	0.2
Transportation	142	21.9	21.2	3.7	274	15.7	8.6	7.1	417	17.3	10.8
Governmental and Institutional	12	1.9	1.8	0.3	176	10.1	5.5	4.6	189	7.9	4.9
Recreational	17	2.6	2.5	0.4	246	14.0	7.7	6.4	263	10.9	6.8
Unused	19	2.9	2.8	0.5	81	4.6	2.5	2.1	100	4.2	2.6
Subtotal	649	100.0	96.6	16.8	1,751	100.0	54.8	45.3	2,402	100.0	62.1
Rural											
Agricultural	0	0.0	0.0	0.0	732	50.7	22.9	18.9	732	49.9	18.9
Woodlands	2	9.6	0.3	0.1	148	10.2	4.6	3.8	150	10.2	3.9
Wetlands	1	3.1	0.1	0.0	126	8.8	4.0	3.3	127	8.7	3.3
Other Open Lands	20	87.3	3.0	0.5	438	30.3	13.7	11.3	458	31.2	11.8
Subtotal	23	100.0	3.4	0.6	1,444	100.0	45.2	37.3	1,467	100.0	37.9
Total	672	--	100.0	17.4	3,195	--	100.0	82.6	3,869	--	100.0

Source: SEWRPC.

PARK AND OPEN SPACE SITES

Existing Park and Open Space Sites

A Commission inventory of existing park and open space sites and outdoor recreation facilities in the study area was conducted in 1994. As shown on Map 4 and indicated in Table 3, there were 12 park and open space sites, encompassing about 352 acres, or about 9 percent of the study area, plus about 2.2 miles of trails, in 1994. Five sites, encompassing 90 acres, or about 26 percent of the total park and open space site acreage, were publicly owned. In addition, two of the trail facilities, totaling about 2.1 miles in length, were also publicly owned. The remaining four sites, encompassing 262 acres, or 74 percent of the park and open space site acreage, and one trail facility of about 0.1 mile in length, were privately owned. As indicated in Table 4, selected outdoor recreational facilities in the Thiensville study area in 1994 included two baseball diamonds, two picnic areas, six playfields, five playgrounds, four league softball diamonds, three sandlot softball diamonds, and 17 tennis courts.

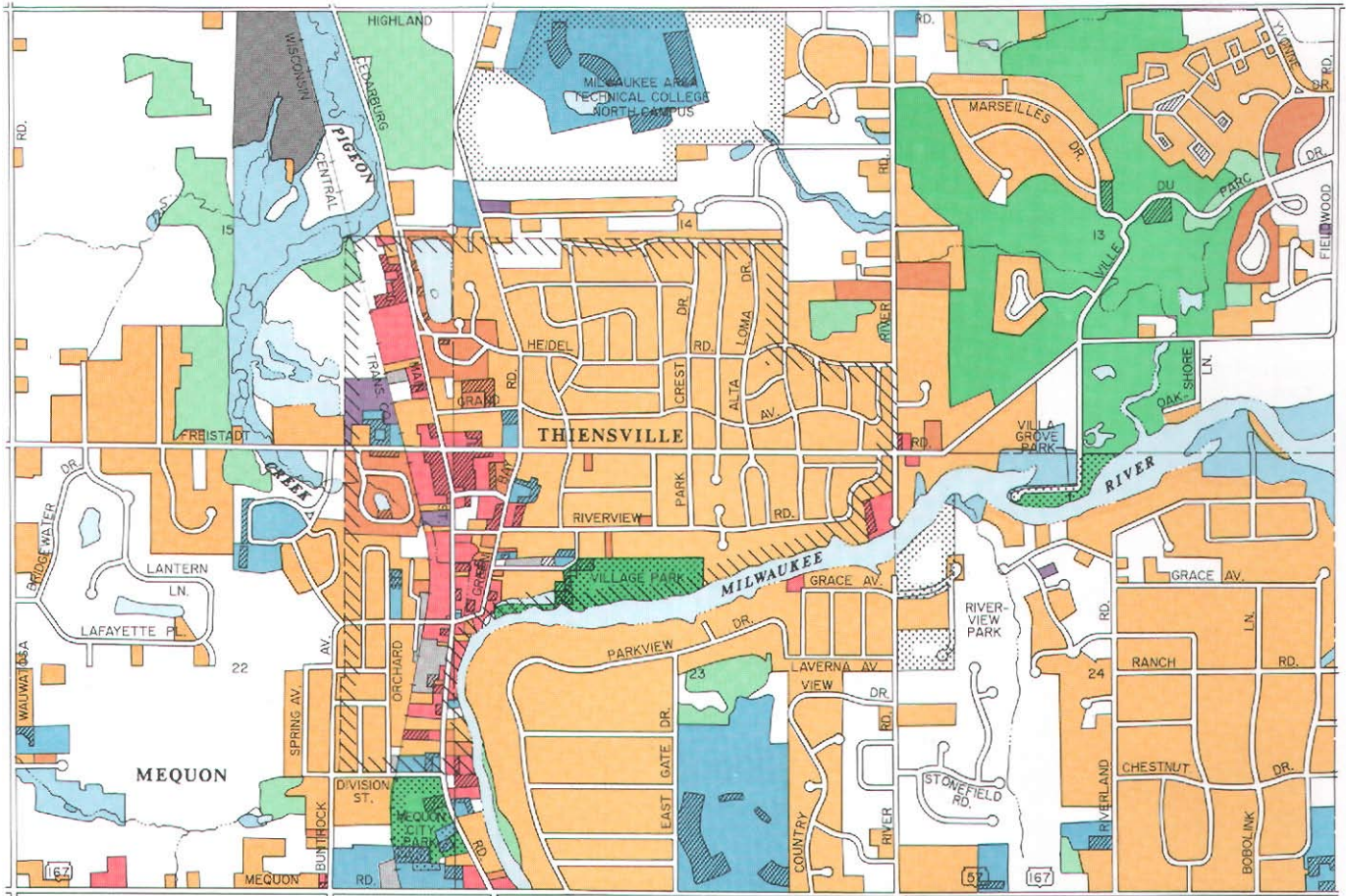
In the Village of Thiensville in 1994, there were three park and open space sites, which together encompassed about 24 acres, or about 1 percent of the study area, and two trail facilities, which total about 1.4 miles in length. As shown on Map 4 and

indicated in Table 3, the Village of Thiensville owned one park and open space site, an 18-acre community park known as Thiensville Park, which is located in the southern portion of the Village, adjacent to the Milwaukee River. As indicated in Table 4, facilities at the park include three softball diamonds, two tennis courts, picnic areas, playfield areas, a children's play area, two sets of horseshoe pits, rest rooms, pavilions, and a boat launch on the Milwaukee River. The Village also has the 1.3-mile Thiensville Recreation Trail, which extends both northward and southward, connecting with the Mequon Recreation Trail. The remaining two sites in the Village, encompassing about three acres, and the 0.1-mile Pigeon Creek Riverwalk, were privately owned.

As further shown on Map 4 and in Table 3, there were six park and open space sites and one trail facility in the remainder of the study area in 1994, which together encompassed about 331 acres, or about 9 percent of the study area, and a trail facility with a total length of about 0.8 miles. Four such sites, encompassing about 72 acres, or about 22 percent of the remainder of the study area, along with the 0.8 mile of the Mequon Recreation Trail within the study area, were publicly owned. The remaining two sites, encompassing 259 acres within the remainder of the study area, were privately owned.

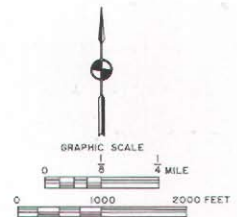
Map 3

EXISTING LAND USE IN THE VILLAGE OF THIENSVILLE STUDY AREA: 1990



LEGEND

- | | |
|---|-----------------------------------|
| SINGLE-FAMILY RESIDENTIAL | GOVERNMENTAL AND INSTITUTIONAL |
| MULTI-FAMILY RESIDENTIAL | PARKS AND RECREATIONAL |
| COMMERCIAL | WETLANDS |
| INDUSTRIAL | WOODLANDS |
| STREETS AND HIGHWAYS | EXTRACTIVE |
| OFF-STREET PARKING | SURFACE WATER AREAS |
| TRANSPORTATION, COMMUNICATION AND UTILITIES | AGRICULTURAL AND OTHER OPEN LANDS |



Source: SEWRPC.

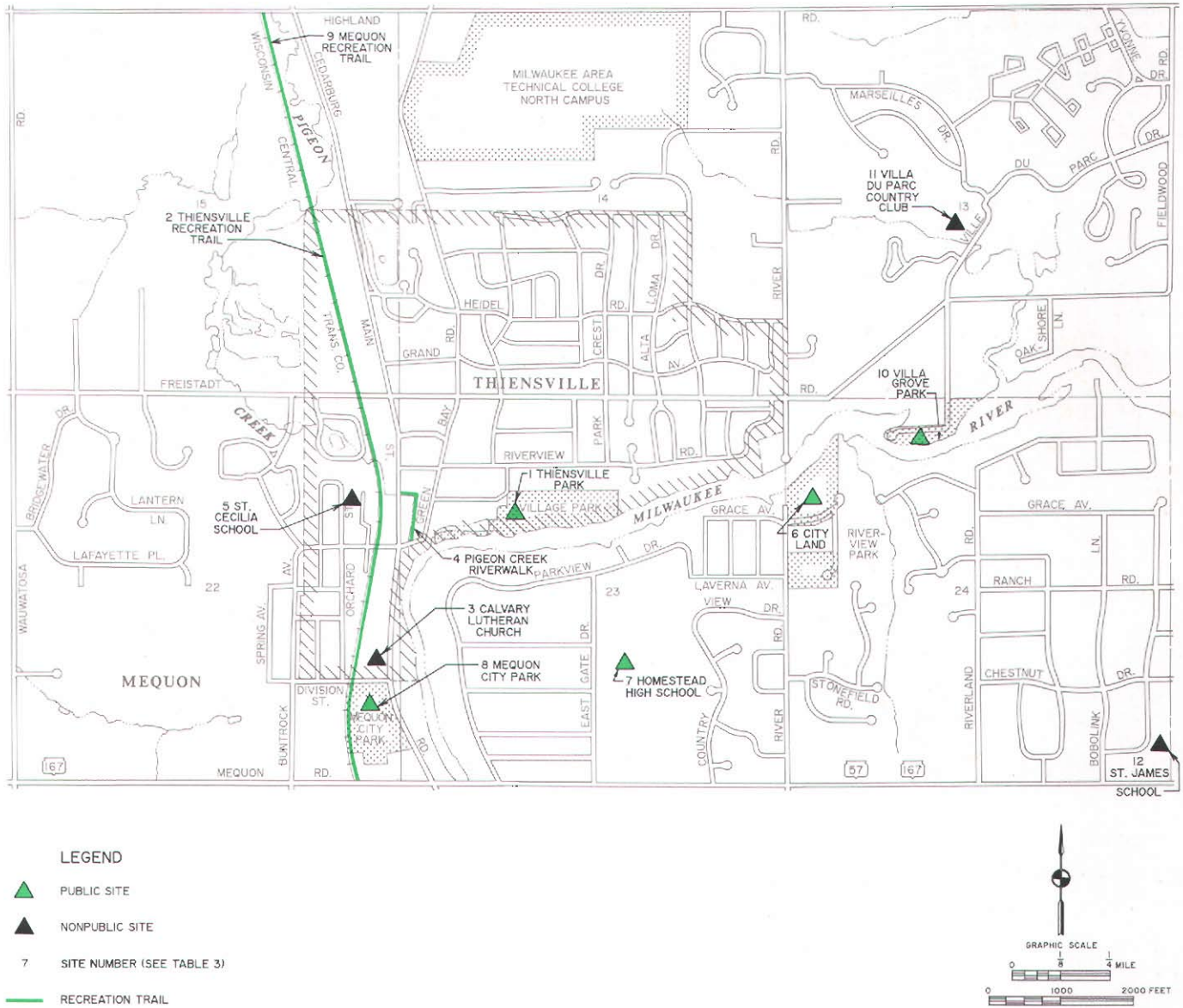
ENVIRONMENTAL CORRIDORS AND PRIME AGRICULTURAL LAND

Ecological balance and natural beauty are important determinants of the ability of an area to provide a pleasant and habitable environment for all forms of life and to maintain its social and

economic well-being. Preservation of the most significant aspects of the natural resource base, including environmental corridors and prime agricultural lands, is therefore essential to the overall health of an area. This section presents a description of the environmental corridors and important agricultural lands in the Village of Thiensville study area.

Map 4

PARK AND OPEN SPACE SITES IN THE VILLAGE OF THIENSVILLE STUDY AREA: 1994



Source: SEWRPC.

Environmental Corridors and Isolated Natural Resource Areas

One of the most important tasks completed under the regional planning program for Southeastern Wisconsin has been the identification and delineation of those areas in the Region in which concentrations of the best remaining elements of the natural resource base occur. The protection and preservation of such areas in essentially natural, open uses is crucial in maintaining both the eco-

logical balance and the natural beauty of the Region and the study area.

Identification of environmental corridors is based upon the presence of one or more of the following important elements of the natural resource base: 1) rivers, streams, lakes, and associated shorelands and floodlands, 2) wetlands, 3) woodlands, 4) prairies, 5) wildlife habitat areas, 6) wet, poorly drained, and organic soils, and 7) rugged terrain and high-

Table 3

PARK AND OPEN SPACE SITES IN THE VILLAGE OF THIENSVILLE STUDY AREA: 1994

Civil Division	Site Name	Number on Map 4	Ownership	Acreage
Village of Thiensville	Public			
	Thiensville Park	1	Village of Thiensville	18
	Thiensville Recreation Trail	2	Village of Thiensville	-- ^a
		(2 sites)	--	18
	Nonpublic			
	Calvary Lutheran Church	3	Private	1
	Pigeon Creek Riverwalk	4	Private	-- ^b
St. Cecilia School	5	Private	2	
	(3 sites)	--	3	
Village Total		(5 sites)	--	21
Remainder of Study Area	Public			
	City Land	6	City of Mequon	12
	Homestead High School	7	Thiensville-Mequon School District	44
	Mequon City Park	8	City of Mequon	11
	Mequon Recreation Trail	9	City of Mequon	-- ^c
	Villa Grove Park	10	City of Mequon	5
		(5 sites)	--	72
	Nonpublic			
	Villa Du Parc Country Club	11	Private	255
	St. James School	12	Private	4
	(2 sites)	--	259	
Remainder of Study Area Total		(7 sites)	--	331
Study Area Total		(12 sites)	--	352

^aThe Thiensville Recreation Trail, which is a segment of the Milwaukee River Recreation Corridor, is located on a Wisconsin Electric Power Company right-of-way and is about 1.3 miles in length.

^bThe Pigeon Creek Trail is located along the east bank of Pigeon Creek, in the secondary environmental corridor east of Green Bay Road and is about 0.1 mile in length.

^cThe Mequon Recreation Trail, which is a segment of the Milwaukee River Recreation Corridor, is located on a Wisconsin Electric Power Company right-of-way and is about 0.8 mile in length within the study area.

Source: SEWRPC.

relief topography. The presence of elements closely related to the natural resource base, including park and open space sites, natural areas, historic sites, and scenic viewpoints, are also considered in the delineation of environmental corridors.

The delineation of these natural resource and 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.¹

Primary environmental corridors include a wide variety of the important natural resource and resource-related elements and are at least 400 acres in size, two miles in length, and 200 feet in width. Secondary environmental corridors generally con-

¹A detailed description of the process of refining the delineation of environmental corridors in South-eastern Wisconsin is presented in SEWRPC *Technical Record*, Vol. 4, No. 2, pages 1 through 21.

Table 4

SELECTED OUTDOOR RECREATION FACILITIES IN THE VILLAGE OF THIENSVILLE STUDY AREA: 1994

Civil Division	Site Name	Number on Map II-3	Number of Selected Facilities									Other Facilities	
			Regulation Baseball Diamond	Basketball Goal	Ice Skating Rink	Picnic Area	Playfield	Playground	Softball Diamond (league)	Softball Diamond (sandlot)	Tennis Court		
Village of Thiensville	Public												
	Thiensville Park	1	--	--	--	X	X	X	3	--	2	Boat launch, horse shoe pits, pavilion	
	Thiensville Recreation Trail	2	--	--	--	--	--	--	--	--	--	1.3-mile trail	
	Subtotal	--	--	--	--	1	1	1	3	--	2	--	
	Nonpublic												
	Calvary Lutheran Church	3	--	--	--	--	X	X	--	--	--	--	
	Pigeon Creek Riverwalk	4	--	--	--	--	--	--	--	--	--	0.1-mile trail	
	St. Cecilia School	5	--	--	--	--	X	X	--	--	--	--	
	Subtotal	--	--	--	--	--	2	2	--	--	--	--	
	Village Total	--	--	--	--	1	3	3	3	--	2	--	
Remainder of Study Area	Public												
	City Land	6	--	--	--	--	--	--	--	--	--	City Nursery	
	Homestead High School	7	1	--	--	--	X	--	1	1	11	Track	
	Mequon City Park	8	1	--	--	X	X	X	--	1	--	Swimming pool	
	Mequon Recreation Trail	9	--	--	--	--	--	--	--	--	--	0.8-mile trail	
	Villa Grove Park	10	--	--	--	--	--	--	--	--	--	Boat Launch	
	Subtotal	--	2	--	--	1	2	1	1	2	11	--	
	Nonpublic												
	Villa Du Parc Country Club	11	--	--	--	--	--	--	--	--	4	Golf course, swimming pool	
	St. James School	12	--	--	--	--	X	X	--	1	--	--	
Subtotal	--	--	--	--	--	1	1	--	1	4	--		
Remainder of Study Area Total	--	2	--	--	1	3	2	1	3	15	--		
Study Area Total	--	2	--	--	2	6	5	4	3	17	--		

Source: SEWRPC.

nect with the primary environmental corridors and are at least 100 acres in size and one mile in length. Isolated natural resource areas consist of smaller concentrations of natural resource base elements, are at least five acres in size, and are separated physically from the environmental corridors by intensive urban and agricultural land uses.

In any consideration of environmental corridors and isolated natural resource areas, it is important to note that the preservation of such resources can assist in flood flow attenuation, water pollution abatement, and favorable climate modification. In addition, because of the many interacting relationships between living organisms and their environment, the destruction or deterioration of any one element of the natural resource base may lead to a chain reaction of deterioration and destruction of other elements. The draining and filling of wetlands, for example, may destroy fish spawning grounds, wildlife habitat, groundwater recharge

areas, and the natural filtration action and flood-water storage functions of interconnecting stream systems. The resulting deterioration of surface water quality may, in turn, lead to deterioration of the quality of groundwater, which serves as a source of domestic, municipal, and industrial water supply and on which low flows in rivers and streams may depend. Similarly, the destruction of woodland cover may result in soil erosion and stream siltation, more rapid stormwater runoff and attendant increased flood flows and stages, and destruction of wildlife habitat.

Although the effects of any one of these environmental changes may not in and of itself be overwhelming, the combined effects will eventually create serious environmental and developmental problems. These problems include flooding, water pollution, deterioration and destruction of wildlife habitat, loss of groundwater recharge areas, and destruction of the unique natural beauty of the area.

The need to maintain the integrity of the remaining environmental corridors and isolated natural areas thus becomes apparent.

Primary Environmental Corridors: As shown on Map 5, the primary environmental corridors within the study area are located adjacent to the area's major streams and rivers. These corridors encompass about 530 acres, or about 14 percent of the study area. Of this total, about 60 acres, comprising about 11 percent of the land within primary environmental corridors, are located within the Village of Thiensville. As indicated in Table 5, of the 60 acres of primary environmental corridor within the Village, about 16 acres, or about 27 percent, are publicly owned; the remaining 44 acres are privately owned. Primary environmental corridor lands within the Village lie along the Milwaukee River and along Pigeon Creek.

About 470 acres, or about 89 percent, of the primary environmental corridors are located in the remainder of the study area, along the Milwaukee River and Pigeon Creek. As indicated in Table 5, of the 70 acres of primary environmental corridors located in the remainder of the study area, about 13 acres, or about 3 percent, are held in public ownership. The remaining 457 acres are held in nonpublic ownership. In total, as indicated in Table 5, of the 530 total acres of primary environmental corridor lands in the study area, 29 acres were in public ownership; the remaining 501 acres were privately owned.

The primary environmental corridors include the best remaining woodlands, wetlands, and wildlife habitat areas and are, in effect, a composite of the best remaining elements of the natural resource base of the study area. These corridors have truly immeasurable environmental and recreational value. The protection of the primary environmental corridors from intrusion by incompatible rural and urban uses, and thereby from degradation and destruction, should be one of the principal objectives of the Village park and open space plan. Their preservation in an essentially open, natural state, including park and open space uses, limited agricultural uses, and very-low-density residential uses, will serve to maintain a high level of environmental quality in the study area, protect its natural beauty, and provide valuable recreation opportunities.

Secondary Environmental Corridors and Isolated Natural Resource Areas: In addition to the primary environmental corridors, other concentrations of natural resource base elements exist within the study area. Although separate from the primary environmental corridors, secondary environmental corridors and isolated natural resource areas may provide surface water drainage, maintain pockets of natural resource features, provide wildlife habitat and corridors for the movement of wildlife, and provide good locations for local parks, natural areas, and the development of local trails. Although not as important as primary environmental corridors, secondary environmental corridors and isolated natural resource areas should also be preserved in essentially open, natural uses to the extent practicable.

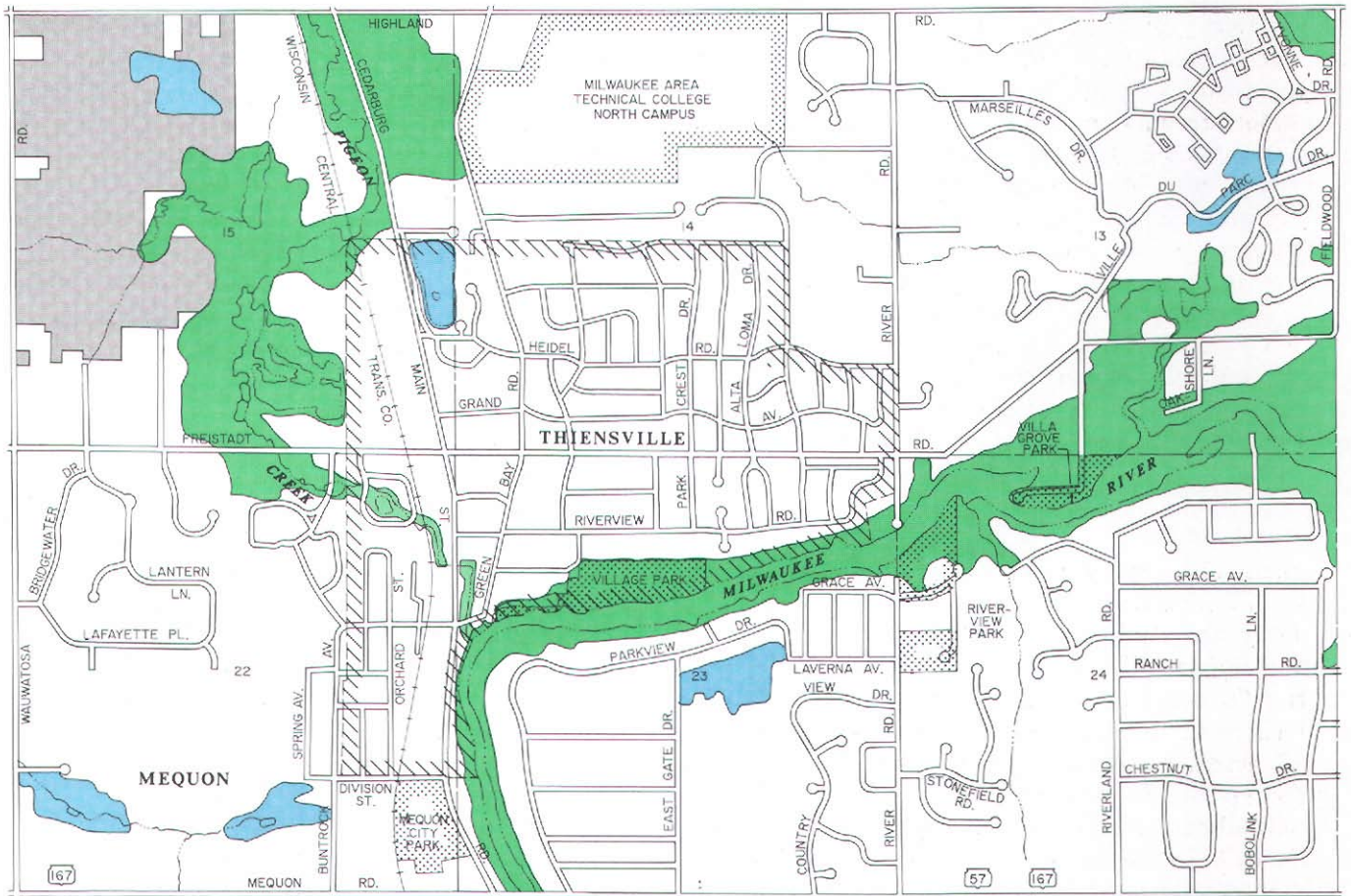
As shown in Map 5 and indicated in Table 5, secondary environmental corridors in the study area, encompassing a total of about 10 acres, or less than 1 percent of the study area, are located along Pigeon Creek, a perennial stream tributary to the Milwaukee River. These 10 acres of secondary environmental corridor are all within the Village of Thiensville and are privately owned. In addition, as further shown on Map 5 and indicated in Table 5, there are 68 acres of isolated natural resource areas within the study area, of which about 10 acres, or about 12 percent, are located within the Village of Thiensville, and, as indicated, are privately owned. The isolated natural resource areas in the remainder of the study area encompass 58 acres, eight acres of which are publicly owned.

Prime Agricultural Land

It is useful for planning purposes to distinguish between prime agricultural lands and other farming areas. Prime agricultural lands are those lands which, in terms of farm size, the total area being farmed, and soil characteristics, are best suited for the production of food and fiber. A number of important public purposes are served by the preservation of prime agricultural lands. Such public purposes include maintenance of agricultural reserves, conservation of energy, maintenance of open space, protection of environmentally significant areas, control of public costs, preservation of the local economic base, and preservation of the rural lifestyle. Prime agricultural lands within the study area are shown on Map 5. In 1990, these areas encompassed about 187 acres, or about 5 percent of the study area. There are no prime agricultural lands within the Village of Thiensville.

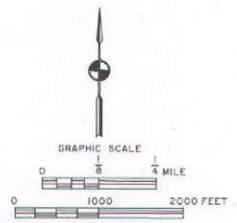
Map 5

ENVIRONMENTAL CORRIDORS, ISOLATED NATURAL RESOURCE AREAS, AND PRIME AGRICULTURAL LANDS IN THE VILLAGE OF THIENSVILLE STUDY AREA



LEGEND

- PRIMARY ENVIRONMENTAL CORRIDOR
- SECONDARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREA
- PRIME AGRICULTURAL LANDS



Source: SEWRPC.

SUMMARY

This chapter has presented a general description of the Village of Thiensville study area, including a description of population levels and land use, existing park and open space sites, and environmental corridors and prime agricultural lands. In 1990, the resident population of the study area was 6,667 persons, with 3,301 persons residing in the Village and 3,366 persons residing in the remainder of the study area.

An inventory of land uses in the study area in 1990 indicated that about 2,400 acres, comprising about 62 percent of the study area, were developed for urban uses, including residential, commercial, industrial, transportation, governmental and institutional, and recreational land uses. Residential uses accounted for the largest percentage of lands developed for urban uses, encompassing about 1,360 acres, or about 35 percent of the study area and about 57 percent of the urban lands within the study area, in 1990. The remaining 1,467 acres,

Table 5

**OWNERSHIP OF ENVIRONMENTAL CORRIDORS AND ISOLATED
NATURAL RESOURCE AREAS IN THE VILLAGE OF THIENSVILLE STUDY AREA**

Natural Resource Feature	Civil Division	Existing Park and Open Space Sites										Other Nonpublic Ownership		Total	
		Public Ownership				Nonpublic Ownership				Subtotal		Acres	Percent of Total	Acres	Percent
		Park (acres)	School (acres)	Subtotal (acres)	Percent of Total	Recreation Site (acres)	School (acres)	Subtotal (acres)	Percent of Total	Acres	Percent of Total				
Primary Environmental Corridor	Village of Thiensville	16	--	16	3.0	--	--	--	--	16	3.0	44	8.3	60	11.3
	Remainder of Study Area	13	--	13	2.5	44	--	44	8.3	57	10.8	413	77.9	470	88.7
	Total	29	--	29	5.5	44	--	44	8.3	73	13.8	457	88.2	530	100.0
Secondary Environmental Corridor	Village of Thiensville	--	--	--	--	--	--	--	--	--	--	10	100.0	10	100.0
	Remainder of Study Area	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Total	--	--	--	--	--	--	--	--	--	--	10	100.0	10	100.0
Isolated Natural Resource Area	Village of Thiensville	--	--	--	--	--	--	--	--	--	--	10	14.7	10	14.7
	Remainder of Study Area	--	8	8	11.8	8	--	8	11.8	16	23.8	42	61.7	58	85.3
	Total	--	8	8	11.8	8	--	8	11.8	16	23.8	52	76.4	68	100.0

Source: SEWRPC.

comprising 38 percent of the study area, were devoted to rural uses in 1990. Agricultural uses occupied a significant portion of the study area, covering about 732 acres, or about 19 percent of the study area. Other nonurban land uses, including woodlands, wetlands, and other open lands, together encompassed an approximately equal amount of land, about 735 acres, or about 19 percent of the study area.

In 1990, the Village of Thiensville proper encompassed about 672 acres. Of this total, about 649 acres, or about 97 percent, were in urban uses, including residential uses, which encompassed about 401 acres, or about 60 percent, of the area of the Village, and commercial, industrial, transportation, and other urban uses, which together encompassed about 248 acres, or about 37 percent, of the Village. The remaining 23 acres, about 3 percent, of the Village, were in rural uses.

An inventory of the existing park and open space sites and outdoor recreation facilities in the study area in 1994 found that there were nine such sites, which together encompassed about 352 acres, or about 9 percent of the study area. There were also three trail facilities, totaling about 2.2 miles in length, within the study area. Five sites and 90 acres, or 56 percent of the sites and 26 percent of the area devoted to park and open space sites, and two trail facilities, totaling about 2.1 miles in

length, were publicly owned. Of these publicly owned sites, the Village of Thiensville owned one park and open space site, an 18-acre community park known as Thiensville Park, and one trail facility, the 1.3-mile Thiensville Recreation Trail. The remaining four park and open space sites in the study area, encompassing 262 acres, and the remaining 0.1-mile trail facility were privately owned.

Primary environmental corridors within the study area in 1990 encompassed about 530 acres, or about 14 percent of the study area. About 60 acres, or about 11 percent of the land within primary environmental corridors, are located in the Village of Thiensville. Primary environmental corridors within the study area are located along the Milwaukee River and Pigeon Creek.

The primary environmental corridors include the best remaining woodlands, wetlands, and wildlife habitat areas and are, in effect, a composite of the best remaining residual elements of the natural resource base of the study area. These corridors have truly immeasurable environmental and recreational value. The protection of the primary environmental corridors from intrusion by incompatible rural and urban uses, and thereby from degradation and destruction, should be one of the principal objectives of the Village park and open space plan.

Their preservation in an essentially open, natural state, including park and open space uses, and very-low-density residential uses, will serve to maintain a high level of environmental quality in the study area, protect its natural beauty, and provide valuable recreation opportunities.

Secondary environmental corridors in the study area are located along Pigeon Creek, a perennial stream tributary to the Milwaukee River, and encompass a total of about 10 acres, or less than 1 percent of the study area. The 10 acres of secondary environmental corridor are all within the Village of Thiensville. These corridors, while not as important as the primary environmental corridors, should also be preserved in essentially open, natural uses. Secondary environmental corridors serve as ideal locations for urban stormwater detention areas and associated drainageways and for the development of local trails.

In addition to the environmental corridors, other small pockets of concentrations of natural resource

base elements exist within the study area. These areas, known as isolated natural resource areas, may provide the only available wildlife habitat in an area, provide good locations for local parks and natural areas, and lend unique and aesthetic character and natural diversity to an area. The isolated natural resource areas are located throughout the study area and encompass about 68 acres, or about 1 percent of the study area. Of this total, about 10 acres, or about 12 percent, are located within the Village of Thiensville. These areas should be preserved in open, natural uses to the extent practicable.

Although there are no agricultural lands remaining in the Village, such lands do constitute an important resource in the study area. In 1990, agricultural lands encompassed about 732 acres, or about 19 percent, of the study area. Of this total, about 187 acres, comprising about 5 percent of the study area, were identified as prime agricultural lands.

Chapter III

PARK AND OPEN SPACE PRESERVATION, ACQUISITION, AND DEVELOPMENT OBJECTIVES, PRINCIPLES, AND STANDARDS

Planning is a rational process for formulating objectives and, through the preparation and implementation of plans, meeting those objectives. The formulation of objectives, therefore, is an essential task which must be undertaken before plans can be prepared. Objectives guide the preparation of plans and, when converted to specific measures of plan effectiveness, termed standards, provide the structure for evaluating the design of the plan.

The Regional Planning Commission, as part of the regional park and open space planning program completed in 1977, formulated a comprehensive set of park and related open space preservation, acquisition, and development objectives. Because that study viewed all park and open space facilities as an integral part of an areawide system, the objectives addressed community and neighborhood, as well as regional, park and open space facilities.

The following seven park and open space preservation, acquisition, and development objectives, which were originally formulated under the regional park and open space planning program, were adapted to, and were used in, the development of the park and open space plan for the Village of Thiensville.

1. The provision of an integrated system of public outdoor recreation sites and related open space areas which will afford the resident population of the Village adequate opportunities to participate in a wide range of outdoor recreational activities.
2. The provision of sufficient outdoor recreation facilities to afford the resident population of the Village adequate opportunities to participate in intensive nonresource-oriented outdoor recreation activities.
3. The provision of sufficient outdoor recreation facilities to afford the resident population of the Village adequate opportunities to participate in intensive resource-oriented outdoor recreation activities.

4. The provision of sufficient outdoor recreation facilities to afford the resident population of the Village adequate opportunities to participate in extensive land-based outdoor recreation activities.
5. The provision of sufficient surface water access areas to afford the resident population of the Village adequate opportunities to participate in extensive water-based outdoor recreation activities, consistent with safe and enjoyable inland lake and river use and the maintenance of good water quality.
6. The preservation of sufficient lands in essentially natural, open uses to assure the protection of the underlying and sustaining natural resource base and to enhance the social and economic well-being and environmental quality of the Village.
7. The efficient and economical satisfaction of outdoor recreation and related open space needs, meeting all other objectives at the lowest possible cost.

Complementing each of the foregoing objectives is a planning principle and a set of planning standards. Each of these objectives, together with the supporting principles and standards, is set forth in Appendix A. Each set of standards serves to facilitate the quantitative application of the objective in plan design and evaluation.

It should be noted that while the attainment of all objectives is considered desirable to provide the residents of the Village of Thiensville with the fullest possible opportunity for high-quality recreational experiences, the responsibility for providing the necessary parks, open space land, and associated recreational facilities is shared by the private and public sectors, the latter being composed of the various levels, units, and agencies of government operating in the Thiensville area. In this regard, under the adopted regional park and open space plan, the responsibility for the provision of open

space, large resource-oriented parks, recreation corridors, and resource-oriented recreational facilities is delegated to the State of Wisconsin and to Ozaukee County units of government, while the responsibility for the provision of smaller com-

munity and neighborhood parks and associated intensive nonresource-oriented recreational facilities and for the protection of certain natural features within their area of jurisdiction is delegated to local units of government.

Chapter IV

PARK AND OPEN SPACE SITE AND FACILITY NEEDS

INTRODUCTION

The primary purpose of the park and open space planning program for the Village of Thiensville is the preparation of a sound and workable plan to guide the acquisition and development of lands and facilities needed to satisfy the outdoor recreation demands of the resident population of the Village and to protect and enhance the underlying and sustaining natural resource base. Important preliminary steps in the development of such a plan include determination of the probable size and distribution of the resident population to be served with park and open space sites and facilities, determination of the number and type of outdoor recreation sites and facilities needed to satisfy the future recreation demands of that population, and identification of the areas that should be protected from development to preserve and enhance the underlying and sustaining natural resource base.

Chapter III of this report has indicated that different types of park and outdoor recreation facilities should be provided by the different levels of government. Resource-oriented outdoor recreation facilities requiring the provision of large parks, trail facilities, and water-access facilities for activities such as hunting, fishing, and boating should be provided by the State and by county levels of government; nonresource-oriented outdoor recreation facilities requiring the provision of smaller parks for such activities as softball, tennis, soccer, and children's playground activities should be provided by the local level of government. The protection of important natural resource features, such as environmental corridors, isolated natural resource areas, and prime agricultural lands, should be the responsibility of all levels of government.

AREAWIDE PLAN CONSIDERATIONS

The regional park and open space plan contains recommendations which, if implemented, would provide residents of the Region and of Ozaukee County, including residents of the Village of Thiensville, with opportunities to participate in a wide range of resource-oriented outdoor recreation activities. Those recommendations are concerned with the provision of major parks, which provide opportuni-

ties for intensive resource-oriented outdoor recreation activities, such as camping, golfing, swimming, and picnicking; the provision of recreation corridors, which provide opportunities for various trail-oriented outdoor recreation activities, including hiking, biking, cross-country skiing, and horseback riding; and the provision of water-access facilities. In addition, the plan contains recommendations for the preservation of environmentally and economically important lands, including primary environmental corridors and prime agricultural lands. A graphic summary of the recommendations contained in the regional plan as it relates to Ozaukee County is presented on Map 6.¹

Major Parks and Trail Facilities

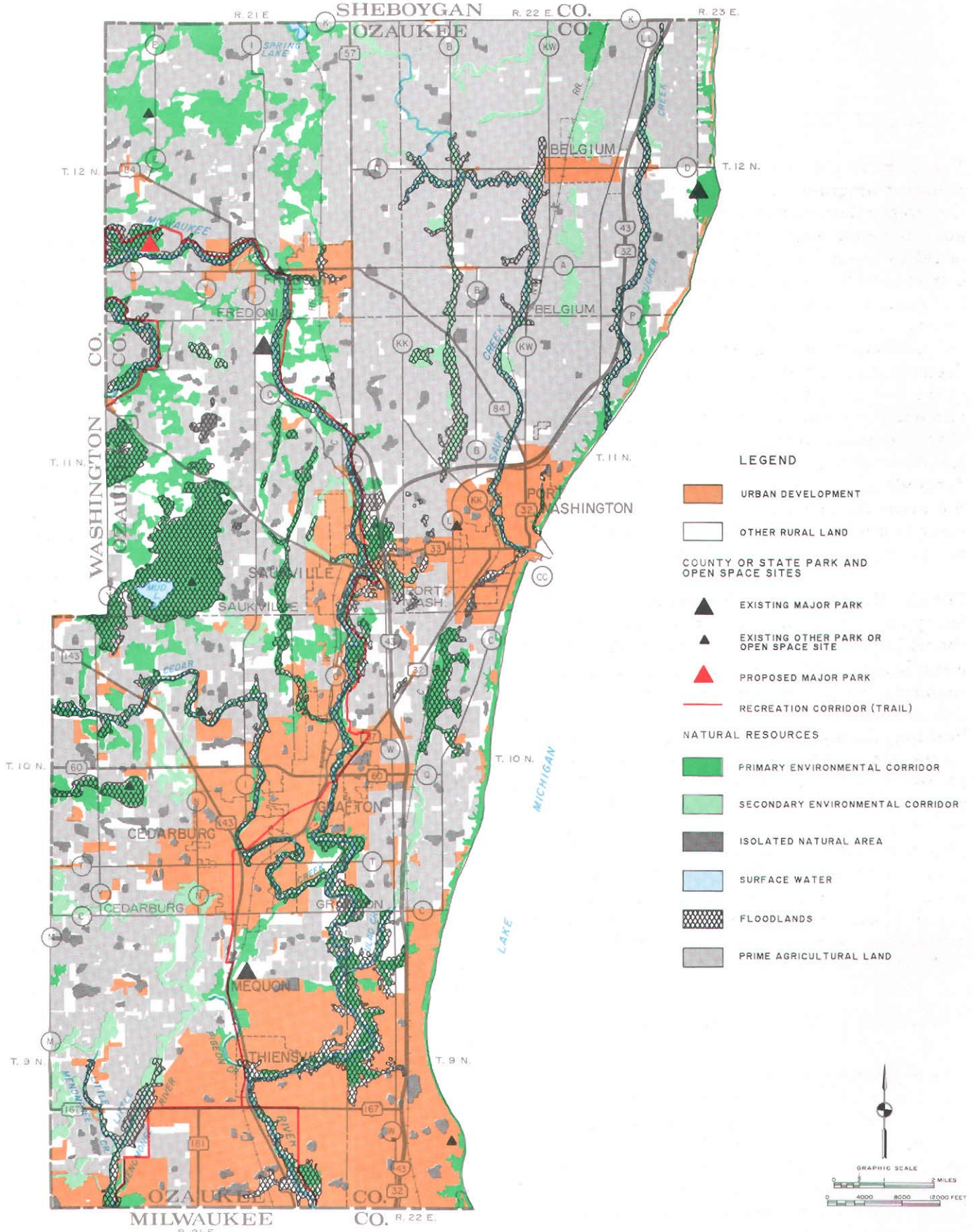
The regional plan recommends that the State and county levels of government assume responsibility for the provision of major parks,² including four major outdoor recreation sites in the County: 1) Mee Kwon Park, a 239-acre County-owned park located north of the study area, in the City of Mequon, providing a regulation 18-hole golf course, a winter sports area, and a nature trail, 2) Hawthorne Hills Park, a 285-acre County-owned park located north of the study area, in the Town of Saukville, providing a regulation 18-hole golf course, a winter sports area, a group camping area, a picnic area, and a nature trail, 3) Harrington Beach Park, a 636-acre State-owned park located along the Lake Michigan shoreline, in the Town of Belgium,

¹*The Regional Planning Commission staff, in cooperation with the staff of the Ozaukee County Park and Planning Commission, has completed an update of the regional park and open space plan as that plan applies to Ozaukee County. The County plan, adopted by the Ozaukee County Board in July 1987, serves as an amendment to the initial regional plan and is documented in SEWRPC Community Assistance Planning Report No. 133, A Park and Open Space Plan for Ozaukee County.*

²*Major parks (or Type I and Type II parks) are defined as large, public, general-use outdoor recreation sites which provide opportunities for such resource-oriented activities as camping, golfing, picnicking, and swimming and have a large area containing significant natural resource amenities.*

Map 6

RECOMMENDED PARK AND OPEN SPACE PLAN FOR OZAUKEE COUNTY



Source: SEWRPC.

providing a swimming beach, picnic areas, trails, and other facilities; and 4) a 165-acre major park located along the Milwaukee River, in the Town of Fredonia, proposed for acquisition and development by Ozaukee County. It is anticipated that these State- and County-owned major parks will provide adequate opportunities for intensive resource-oriented outdoor recreation activities for the residents of Ozaukee County, including the residents of the Village of Thiensville.

The regional plan also recommends that the State and Ozaukee County provide about 38 miles of recreational trails in the County as part of an interconnected 500-mile system of recreation corridors³ in Southeastern Wisconsin. Within Ozaukee County, the proposed Milwaukee River Recreation Corridor⁴ would traverse the study area and provide, within the Village, approximately 1.3 miles of trails for hiking and biking. It is anticipated that the recreation corridors in the County would provide adequate opportunities for participation in trail-oriented outdoor recreation activities for the residents of the County, including the residents of the Village of Thiensville.

Open Space Preservation

The regional plan recommends that the important natural resources of the Region, particularly those within the primary environmental corridors, be preserved and protected in essentially natural, open uses through a combination of public land acquisition and land use regulation. The location and extent of the important natural resources, including those encompassed by the primary and secondary environmental corridors and isolated natural resource areas, are described in Chapter II of this report. It is recommended that these open space lands in the County, including 19,591 acres of primary environmental corridor, 60 acres, or 0.3 percent, of which occur in the Village; 4,777 acres of secondary environmental corridor, 10 acres, or 0.2 percent, of which occur in the Village; and 3,417 acres of isolated natural resource areas, 10 acres,

³A recreation corridor is defined as a trail at least 15 miles in length located within areas of scenic, scientific, historic, or other cultural interest which provides opportunities for biking, hiking, horseback riding, nature study, and cross-country skiing.

⁴The Milwaukee River Recreation Corridor is a Countywide corridor of which the Thiensville Recreation Trail and the Mequon Recreation Trail are contributing segments.

or 0.3 percent, of which occur in the Village, be preserved in order to maintain a high level of environmental quality in, and protect the natural beauty of, the area, as well as to provide valuable recreation opportunities for residents. Such preservation would also help to avoid the creation of serious and costly environmental and developmental problems. The regional plan also recommends that the 67,900 acres of prime agricultural land in Ozaukee County be protected in order to preserve the rural lifestyle, maintain agricultural reserves, and maintain open space in the County. It should be noted that there are no prime agricultural lands within the Village of Thiensville.

VILLAGE OF THIENSVILLE PLAN CONSIDERATIONS

Local units of government, including the Village of Thiensville, are responsible for providing urban community and neighborhood parks and intensive nonresource-oriented facilities, such as ball diamonds, children's play areas, and tennis courts. The need to provide local parks and outdoor recreation facilities is dependent upon both the existing and probable future size and also the distribution of the resident population of the Village. This section, therefore, describes such population levels and distribution in the Village of Thiensville and identifies the need for local parks and outdoor recreation facilities.

Existing and Probable Future Population Levels and Distribution

The need for outdoor recreation sites and facilities is defined, for purposes of this report, as the shortfall in the number, size, and spatial distribution of recreation sites and in the number and type of recreation facilities, as indicated by a comparison of the existing supply of such sites and facilities with the existing and probable future demands for such sites and facilities. The existing supply of recreation sites and facilities has been described in Chapter II of this report. The existing and anticipated future demand for recreation sites and facilities was determined by applying the adopted planning standards presented in Appendix A of this report to the existing and probable future resident population levels of the Village of Thiensville. Because the existing and probable future population levels and distribution within the Village are important determinants of existing and probable future outdoor recreation needs, data on the existing size and distribution of the population, together with corresponding data on the future size and distribution of population, are required.

Information on the size and distribution of the existing resident population of the Village was presented in Chapter II of this report. Forecasts of the size and distribution of the resident population of the Village to the year 2010 are presented in this section. Based upon the information presented in SEWRPC Technical Report No. 11 (2nd Edition), The Population of Southeastern Wisconsin, it was determined that the year 2010 resident population of the Village could be as high as about 4,100 persons, under a high-growth forecast and decentralized land use scenario, or as low as about 3,000 persons, under the low-growth forecast and decentralized land use scenario. The intermediate-growth decentralized land use scenario resident population forecast of about 3,450 persons by the year 2010 was selected for use in the preparation of this park and open space plan. This forecast envisions an increase of about 150 persons, or about 4 percent, over the 1990 population level of about 3,300 persons. The increase in population would result from a modest increase in housing units, as well as an envisioned increase in household size, in the Village as elderly residents move out of their homes and are replaced by young families with children.

In addition to information on the overall size of the anticipated future population in the Village of Thiensville, information on existing and planned future population distribution is important to a determination of existing and probable future outdoor recreation needs, including the need for neighborhood parks and outdoor recreational facilities. Such sites and facilities should be provided in the urban residential areas of the Village. The 1990 land use inventory, presented in Chapter II of this report, served as the basis for the identification of the location and extent of the existing residential lands in the Village, while the zoning map of the Village of Thiensville served as a basis for the identification of planned residential lands in the Village. These lands are identified on Map 7.

Outdoor Recreation Site and Facility Needs

The park and open space objectives presented in Chapter III of this report are concerned with the provision of adequate outdoor recreation sites and facilities for the resident population of the Village. The accompanying standards, as set forth in Appendix A of this report under Objectives Nos. 1 and 2, specify per capita acreage and accessibility recommendations for urban outdoor recreation sites and facilities.

Park and open space development Objective No. 1 calls for the provision of an integrated system of

public parks and related open space areas which will offer the resident population adequate opportunities to participate in a wide variety of outdoor recreation activities. Urban parks and outdoor recreation sites which provide facilities for intensive nonresource-oriented recreation activities have been termed general-use outdoor recreation sites. Type III general-use sites, generally referred to as "community" parks, may range in size from 25 to 99 acres and are intended to have a communitywide service area, while Type IV general-use sites, usually referred to as "neighborhood" parks, may range in size from five to 24 acres and are intended to have a neighborhoodwide service area. Such sites typically provide opportunities for such nonresource-oriented activities as baseball, softball, and tennis. These sites generally attract users from a small service area and are provided primarily to meet the outdoor recreation demands of residents of urban areas, which in the year 2010 will include the entire Village of Thiensville.

Urban Outdoor Recreation Site Per Capita and Accessibility Needs: As indicated in Table 6, in that there are no public general-use sites provided by schools in the Village of Thiensville, application of the total standard acreage requirement must be met by the public park sites in the Village. Application of the standard acreage requirements to the 1990 and plan design year 2010 Village population indicates that four additional acres of park land are needed in the Village of Thiensville.

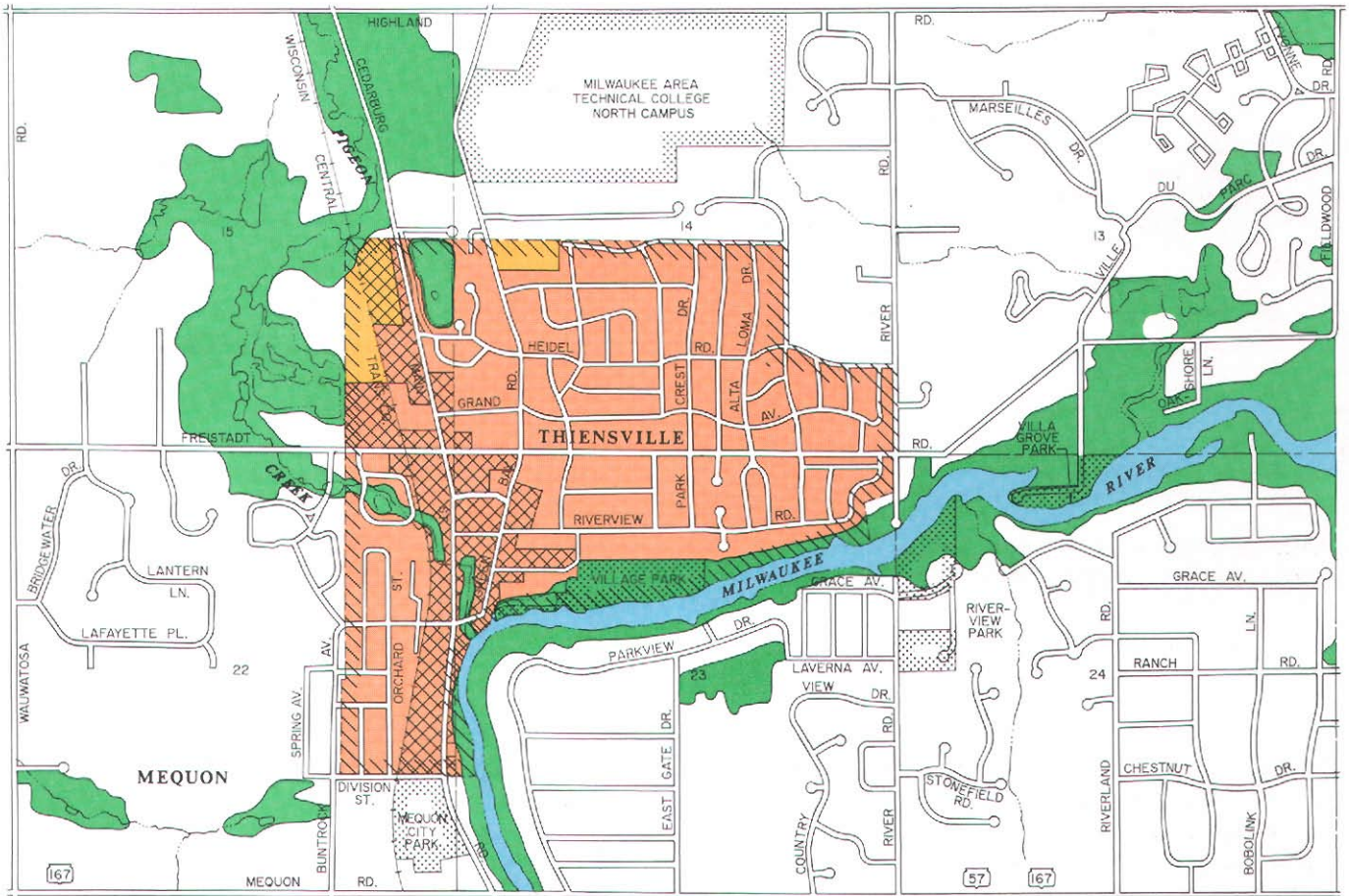
Urban areas may also need additional urban parks if the spatial distribution of existing parks does not provide adequately convenient access for residents of the Village. Accordingly, in order to determine which portions of the Village of Thiensville lack adequate access to urban parks, appropriate service areas were delineated around existing parks. The existing and planned residential portions of the Village of Thiensville not adequately served were thus identified.

According to standards prescribed under Objective No. 1, community parks, which may range in size from 25 to 99 acres and provide community-oriented facilities, such as baseball diamonds, softball diamonds, and swimming pools, should be provided within two miles of each resident of an urban area. Thiensville Park, the Village's community park, adequately serves the entire Village.

According to the standards prescribed under Objective No. 1, the service radius of neighborhood parks varies with population density. In this regard, the

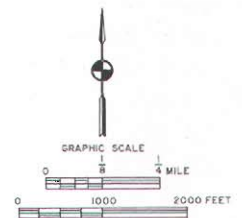
Map 7

EXISTING AND PLANNED URBAN DEVELOPMENT WITHIN THE VILLAGE OF THIENSVILLE



LEGEND

- EXISTING URBAN DEVELOPMENT
- PLANNED URBAN DEVELOPMENT
- GENERALIZED NONRESIDENTIAL URBAN DEVELOPMENT
- ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS
- OTHER LANDS OUTSIDE OF THE VILLAGE OF THIENSVILLE
- MILWAUKEE RIVER



Source: SEWRPC.

service radius of a neighborhood park is 0.5 mile in a high-density urban area, 0.75 mile in a medium-density urban area, and 1.0 mile in a low-density urban area. The existing and planned future urban density within the Village of Thiensville may be classified generally as medium-density; thus the 0.75-mile service radius for neighborhood parks

was applied. Village Park was also considered to meet the need for a neighborhood park, and, therefore, was included in the neighborhood park accessibility analysis (see Map 8). Mequon City Park, located adjacent to the southern boundary of the Village, was also considered as serving as a neighborhood park for portions of the Village.

Table 6

**PER CAPITA ACREAGE REQUIREMENTS FOR URBAN
OUTDOOR RECREATION SITES IN THE VILLAGE OF THIENSVILLE**

Public General-Use Outdoor Recreation Sites	Minimum Standard Net Acreage Requirement (acres per 1,000 persons) ^a	Existing Net Acres	Per Capita Acreage Requirements			
			1990 (Existing Village Population: 3,301)		Plan Design Year 2010 (Planned Village Population: 3,450)	
			Net Acreage Requirement ^b	Net Acreage Need ^c	Net Acreage Requirement ^c	Net Acreage Need ^c
Parks	3.9	18.0	12.8	--	13.2	--
Schools	2.5	0.0	8.2	8.2	8.5	8.5
Total	6.4	18.0	21.0	3.0	21.7	3.7

^aStandard per capita acreage requirements are set forth under Objective No. 1 in Appendix A.

^bThe acreage requirement for public, general-use outdoor recreation sites was determined by multiplying the standard acreage requirements times the appropriate population in thousands of persons. Since there are no schools in the Village of Thiensville, parks will be depended upon to provide the total recreation acreage requirement of both parks and school sites.

^cAcreage need was determined by subtracting the existing acres from the acreage requirement. If the remainder was a negative number, the minimum acreage requirement was exceeded, and no per capita acreage need was identified. Since there was a public general-use outdoor recreation requirement of 21.7 acres total, and the Village has only 18 acres, there is a need of four additional acres for recreation.

Source: SEWRPC.

Neighborhood park sites generally provide facilities for children's outdoor recreation activities, such as playground and playfield activities, ice-skating, basketball, and other court games. Such facilities should be accessible through a convenient and safe pedestrian circulation pattern. Therefore, in the accessibility analysis for neighborhood parks, certain natural and man-made features which physically separate urban residential areas from neighborhood parks and outdoor recreation facilities were considered as barriers preventing pedestrian access. STH 57 was identified as a physical barrier within the Village.

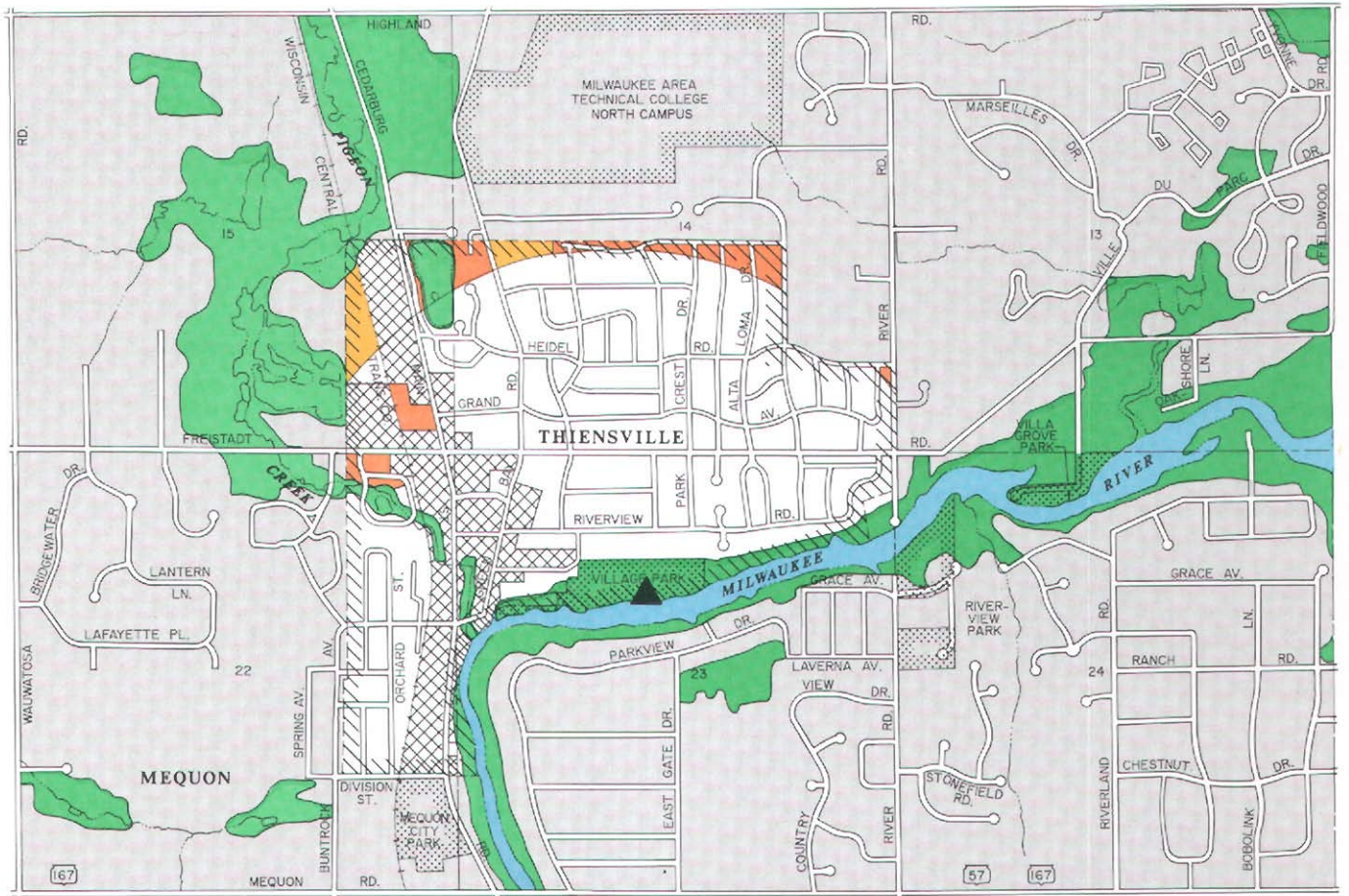
As shown on Map 8, application of the accessibility standards for existing neighborhood parks serving the Village of Thiensville indicates that only scattered northern portions of the existing residential area are beyond the 0.75-mile service radius of such parks. It is also important to recognize that some of these areas not served by a neighborhood park, particularly in the northeastern portion of the urban service area, are already fully developed; thus open lands may not be available for the acquisition and development of needed parks and outdoor recreation facilities.

Urban Outdoor Recreation Facility Per Capita and Accessibility Needs: Objective No. 2 calls for the provision of sufficient outdoor recreation facilities to allow residents adequate opportunity to participate in intensive nonresource-oriented outdoor recreation activities, such as baseball, softball, and tennis. The standards for selected facilities under Objective No. 2 were applied to both the existing 1990 and also to the plan design year 2010 population of the Village of Thiensville. A summary of the application of these standards is presented in Table 7. As indicated in Table 7, the per capita standards for baseball, playground, softball, and tennis facilities have been met; however, there is a need for an additional playfield and four basketball goals for the existing and planned Village population. As shown in Table 7, even though the Village does not provide a regulation baseball diamond, no need is identified since the population size of the Village does not warrant such a facility. Village residents, however, are adequately served by two baseball fields outside the Village of Thiensville, one at Homestead High School and one at Mequon City Park, whose service areas, 2.0 miles, cover the entire Village.

Urban areas may need additional outdoor recreation facilities if the spatial distribution of existing facili-

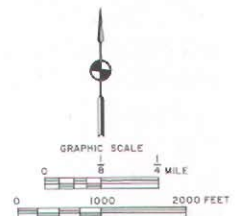
Map 8

RESIDENTIAL AREAS IN THE VILLAGE OF THIENSVILLE NOT ADEQUATELY SERVED BY A NEIGHBORHOOD PARK



LEGEND

-  EXISTING NEIGHBORHOOD PARK
-  EXISTING RESIDENTIAL AREA NOT ADEQUATELY SERVED BY A NEIGHBORHOOD PARK
-  PLANNED RESIDENTIAL AREA NOT ADEQUATELY SERVED BY A NEIGHBORHOOD PARK
-  EXISTING OR PLANNED NONRESIDENTIAL URBAN DEVELOPMENT
-  ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS
-  OTHER LANDS OUTSIDE OF THE VILLAGE OF THIENSVILLE
-  MILWAUKEE RIVER



Source: SEWRPC.

ties does not provide sufficient access for residents of the area. Accordingly, the service radius standards set forth in Objective No. 2 were applied to determine if all residential areas of the Village have adequate access to such basic outdoor recreational facilities as softball and baseball diamonds, tennis courts, basketball goals, playgrounds, and playfields.

Application of the service standard of 1.0 miles for softball diamonds and tennis courts indicates that the Village of Thiensville is adequately served by these facilities. Application of the service radius standard of 0.5 miles for playfields, playgrounds, and basketball goals indicates that the northern portions of the Village are inadequately served by the existing distribution of playfields and play-

Table 7

PER CAPITA REQUIREMENTS FOR SELECTED
OUTDOOR RECREATION FACILITIES IN THE VILLAGE OF THIENSVILLE

Facility	Number of Existing Facilities ^a	Minimum Standard Requirement (facility per 1,000 persons) ^b	1990 Existing Village Population: 3,301		Plan Design Year 2010 Village Population: 3,450	
			Facility Requirement ^c	Facility Need ^d	Facility Requirement ^c	Facility Need ^d
Baseball Diamond	0	0.10	0.30	--	0.30	--
Playfield	1	0.50	1.60	1	1.80	1
Playground	1	0.42	1.40	--	1.40	--
Softball Diamond	3	0.60	2.00	--	2.00	--
Tennis Court	2	0.60	2.00	--	2.00	--
Basketball Goal	0	1.13	3.70	4	3.80	4

^aThis total includes only facilities at public sites within the Village.

^bStandard per capita facility requirements are set forth under Objective No. 2 in Appendix A.

^cThe facility requirement was determined by multiplying the minimum standard requirement by the appropriate population in thousands of persons.

^dFacility need was determined by subtracting the existing quantity of facility from the facility requirement and rounding the remainder to the nearest integer. If the remainder was a negative number, the minimum facility requirement was exceeded; no per capita facility need was identified.

Source: SEWRPC.

grounds (see Map 9) and that the entire Village is unserved by basketball goals.

Other Site and Facility Need Considerations: The preceding section described per capita and accessibility needs for urban parks and selected outdoor recreation facilities. These needs were based on the application of standards presented under Objectives Nos. 1 and 2 in Appendix A of this report. In addition, other park site and facility needs have been identified by the Village of Thiensville staff. Specifically, such additional needs include improvements at Thiensville Park to meet requirements for accessibility under the Americans with Disabilities Act, including new playground equipment and new restroom facilities. In addition, lighting for softball fields, a paved path along the river, and the addition of a fishing pier were needs also identified. There is also a need for an expansion of Thiensville Park to accommodate additional parking. In addition, the Village staff concurred with the need identified through application of the service radius standards for more playfield space in the northern portion of the Village.

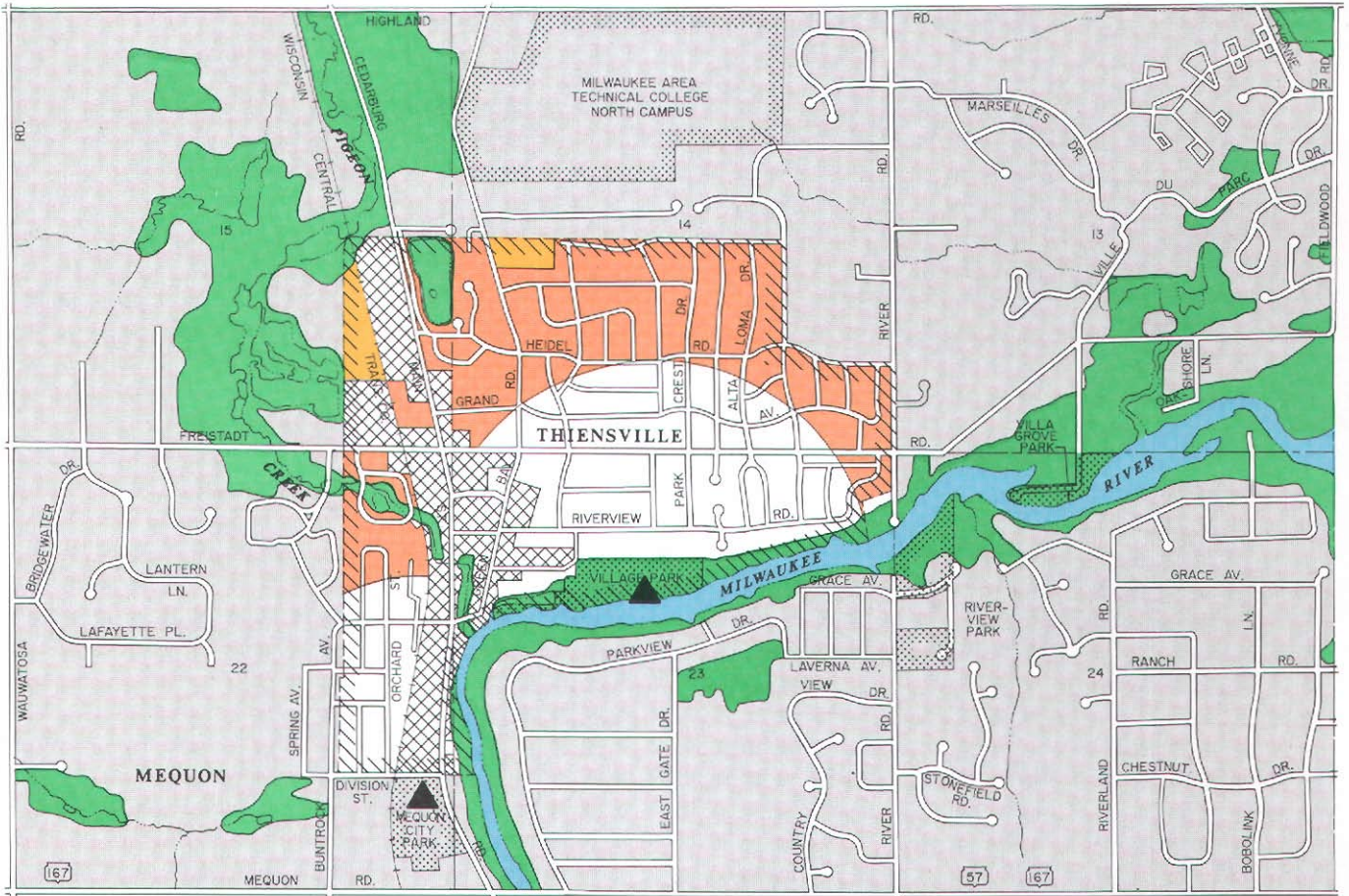
Open Space Preservation Needs

In the previous section of this chapter, an analysis of needs relating to Objectives Nos. 1 and 2 was conducted by applying recreation site and facility standards to the existing and planned population in the Village of Thiensville. It is important to note that there are equally important needs relating to the considerations addressed by Objective No. 6, that is, the need to preserve and protect the underlying and sustaining natural resource base of the Village.

As already noted, the environmental corridors and isolated natural resource areas in the Village of Thiensville encompass a wide variety of valuable natural resources, described in Chapter II of this report. By protecting these resources, flood damage can be reduced, soil erosion abated, water supplies protected, air cleansed, wildlife populations enhanced, and continued opportunities provided for scientific, educational, and recreational pursuits. Conversely, the intrusion of urban land uses into these corridors can, because of the soil limitations, high groundwater table, and flood hazards, result

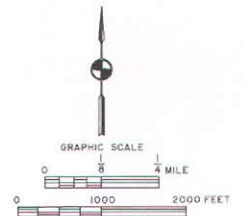
Map 9

**RESIDENTIAL AREAS IN THE VILLAGE OF THIENSVILLE
NOT ADEQUATELY SERVED BY PLAYFIELD AND PLAYGROUND FACILITIES**



LEGEND

-  EXISTING PUBLIC PLAYGROUNDS AND PLAYFIELDS
-  EXISTING RESIDENTIAL AREA NOT ADEQUATELY SERVED BY PLAYFIELDS AND PLAYGROUNDS
-  PLANNED RESIDENTIAL AREA NOT ADEQUATELY SERVED BY PLAYFIELDS AND PLAYGROUNDS
-  EXISTING OR PLANNED NONRESIDENTIAL URBAN DEVELOPMENT
-  ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS
-  OTHER LANDS OUTSIDE OF THE VILLAGE OF THIENSVILLE
-  MILWAUKEE RIVER



Source: SEWRPC.

in the creation of serious and costly construction and maintenance problems, such as failing foundations for pavements and buildings, wet basements, excessive clear water infiltration and inflow into sanitary sewerage systems, and poor drainage.

The preservation of high-quality open space lands to protect the underlying and sustaining natural

resource base and to enhance the general social and economic well-being and environmental quality of the Village can be achieved through the maintenance of the existing primary and secondary environmental corridors and isolated natural resource areas in essentially natural open uses. The need to protect these features cannot be related to per capita or accessibility requirements, since the

achievement of the open space preservation objective is essentially independent of any population level or distribution and relates rather to the location, character, and extent of the various elements of the natural resource base.

SUMMARY

This chapter has presented information concerning the existing and probable future need for park and open space sites in the Village of Thiensville. The existing and probable future need for parks and associated outdoor recreation facilities was determined by applying park and open space objectives and supporting standards to existing (1990) resident population levels and distribution and to the plan year 2010 forecast resident population level and distribution. In 1990, the resident population of the Village of Thiensville was about 3,300 persons. The plan year 2010 forecast resident population would approximate 3,450 persons.

Analysis of the need for community and neighborhood parks and associated recreation facilities consisted of an analysis of both per capita and accessibility needs for such parks and facilities. Application of the adopted per capita park standards to existing and planned future population levels indicates that there is a sufficient quantity of parkland within the Village. However, application of the accessibility standards for such parks indicates that there is a need for neighborhood park sites to serve both existing and planned areas of urban development in the northern portion of the Village.

Application of the per capita standards for intensive nonresource-oriented recreation facilities indicates that while there are an adequate number of playgrounds and facilities for baseball, softball, and tennis, there is a need for one additional playfield and four basketball goals. In addition, application of the accessibility standards for such facilities indicates that a large portion of the Village is not adequately served by playfields, playgrounds, and basketball goals.

Additional specific park site and facility needs were identified by the Village of Thiensville staff, including such improvements at Thiensville Park as new playground equipment, additional lighting for softball fields, new restroom facilities, a paved path along the river, and a fishing pier. The staff also identified a need for an expansion of Thiensville Park to provide for additional parking.

It is important to recognize that there are equally important objectives and needs relating to the preservation and protection of the underlying and sustaining natural resource base of the Village. The need to protect the natural resources of the Village cannot be related to per capita or accessibility requirements, since the achievement of the open space preservation objective is essentially independent of a population level or distribution, but relates, rather, to the location, character, and extent of the natural resource base of the Village. The maintenance of the primary and secondary environmental corridors and isolated natural resource areas in natural, open uses would generally serve to meet open space preservation needs.

Chapter V

RECOMMENDED PLAN

INTRODUCTION

The primary purpose of the park and open space planning program for the Village of Thiensville is the preparation of a sound and workable plan to guide the acquisition of lands and development of facilities needed to meet the outdoor recreation demands of the resident population of the Village and to protect and enhance the underlying and sustaining natural resource base. Important preliminary steps in the development of such a plan include the collection of the necessary planning data, presented in Chapter II of this report; the preparation of park and open space acquisition and development objectives, presented in Chapter III; and the identification of park and open space needs, presented in Chapter IV.

This chapter sets forth the recommended park and open space plan for the Village of Thiensville. The first part of this chapter summarizes the areawide plan recommendations for the provision of resource-oriented outdoor recreation sites and facilities and for the protection of the environmental corridors and isolated natural resource areas within the Village of Thiensville. The second section of this chapter sets forth the recommendations for local park and open space sites and facilities for the Village of Thiensville. The third section outlines the steps required to implement the recommended plan.

AREAWIDE PARK AND OPEN SPACE RECOMMENDATIONS

The regional park and open space plan, as amended by the park and open space plan for Ozaukee County, contains recommendations which, if implemented, would provide residents of Ozaukee County, including residents of the Village of Thiensville, opportunities to participate in a wide range of resource-oriented outdoor recreational activities. These recommendations, which are incorporated in the park and open space plan for the Village of Thiensville, are concerned with the provision of major parks, which provide opportunities for such resource-oriented outdoor recreational activities as camping, picnicking, and swimming and the provision of recreation corridors, which provide opportunities for various trail-oriented

recreational activities, including hiking, biking, and cross-country skiing. In addition, the plan contains recommendations for the preservation of open space lands, including the natural resource features located within the environmental corridors and isolated natural resource areas described in Chapter II.

Major Parks and Trail Facilities

The Ozaukee County park and open space plan recommends that the State and County levels of government assume responsibility for the provision of major parks.¹ The County plan recommends that four major public outdoor recreation sites be provided in the County, including the maintenance or development of three existing parks, Harrington Beach State Park, Hawthorne Hills Park, and Mee-Kwon Park, and the acquisition and development by the County of one new park in the northwestern portion of the County. While no major parks are located in the Village of Thiensville, such parks are available to residents of the Village to participate in a wide range of resource oriented outdoor recreation activities.

The County plan also recommends that the County provide about 38 miles of recreational trails within two recreation corridors, the Milwaukee River and the Little Menomonee River corridors, as part of an interconnected 500-mile system of recreation corridors² in Southeastern Wisconsin. Under the plan, a segment of the Milwaukee River Recreation Corridor would be located in the Village. The Village has developed a trail within that segment of the recreation corridor located within the Village. The

¹Major parks (or Type I and Type II parks) are defined as large, publicly owned, general-use outdoor recreation sites which provide opportunities for such resource-oriented activities as camping, golfing, picnicking, and swimming and have a large area containing significant natural resource amenities.

²A recreation corridor is defined as a trail at least 15 miles in length located within areas of scenic, scientific, historic, or other cultural interest which provides opportunities for such linear outdoor recreation activities as biking, hiking, and cross-country skiing.

trail, known as the Thiensville Recreation Trail, traverses the western portion of the Village and connects to trails within the City of Mequon at both the north and south Village corporate limits.

Open Space Preservation

The location and extent of the important open space lands in the Village of Thiensville, including the important surface water, wetlands, floodlands, and woodlands within the environmental corridors and isolated natural resource areas, are described in Chapter II of this report. The preservation of these open space lands in essentially natural, open uses would serve to maintain a high level of environmental quality in, and protect the natural beauty of, the Village of Thiensville, as well as to provide valuable recreational opportunities for residents of the Village. Such preservation will also help to avoid the creation of serious and costly environmental and developmental problems within the Village.

Primary Environmental Corridors: As described in Chapter II of this report, primary environmental corridors within the County encompass about 31 square miles, or about 13 percent, of the total area of the County. Within the Village such corridors encompass about 60 acres, or about 9 percent, of the total area of the Village. The County park and open space plan recommends that all primary environmental corridors be preserved in essentially natural, open uses for natural resource preservation, flood control, and limited outdoor recreation purposes. Specific recommendations for protection of primary environmental corridor lands as they affect the Village of Thiensville are set forth in the implementation section of this chapter.

Secondary Environmental Corridors: Secondary environmental corridors within the County encompass about seven square miles, or about 3 percent, of the total area of the County. Within the Village such corridors encompass about 10 acres, or about 1.5 percent, of the total area of the Village. It is recommended that these secondary environmental corridors be preserved in essentially natural, open uses and protected through appropriate public land use regulations.

Isolated Natural Resource Areas: Isolated natural resource areas within the County encompass about five square miles, or about 2 percent, of the total area of the County. Within the Village such corridors encompass about 10 acres, or about 1.5 percent, of the total area of the Village. It is recommended that such areas also be preserved in essentially

natural, open uses and protected through appropriate public land use regulations.

VILLAGE PARK AND OPEN SPACE RECOMMENDATIONS

The park and open space planning objectives set forth in Chapter III of this report call for the provision of sufficient recreation sites and facilities to provide residents of the Village with adequate opportunities to participate in such nonresource-oriented activities as softball, tennis, soccer, and children's playground activities. Such sites and facilities are typically provided by the local, rather than by the county or State levels of government. Accordingly, the amount and distribution of non-resource-oriented recreational sites and facilities within the Village were analyzed and compared to the recreation standards set forth in Appendix A.

The results of the analysis of outdoor recreation needs, presented in Chapter IV of this report, indicated that there is a need in the Village of Thiensville for an additional outdoor recreation site in the northern portion of the Village to serve the needs for a neighborhood playground and for additional playfields. The analysis also identified a need for basketball goals at the existing Thiensville Park.

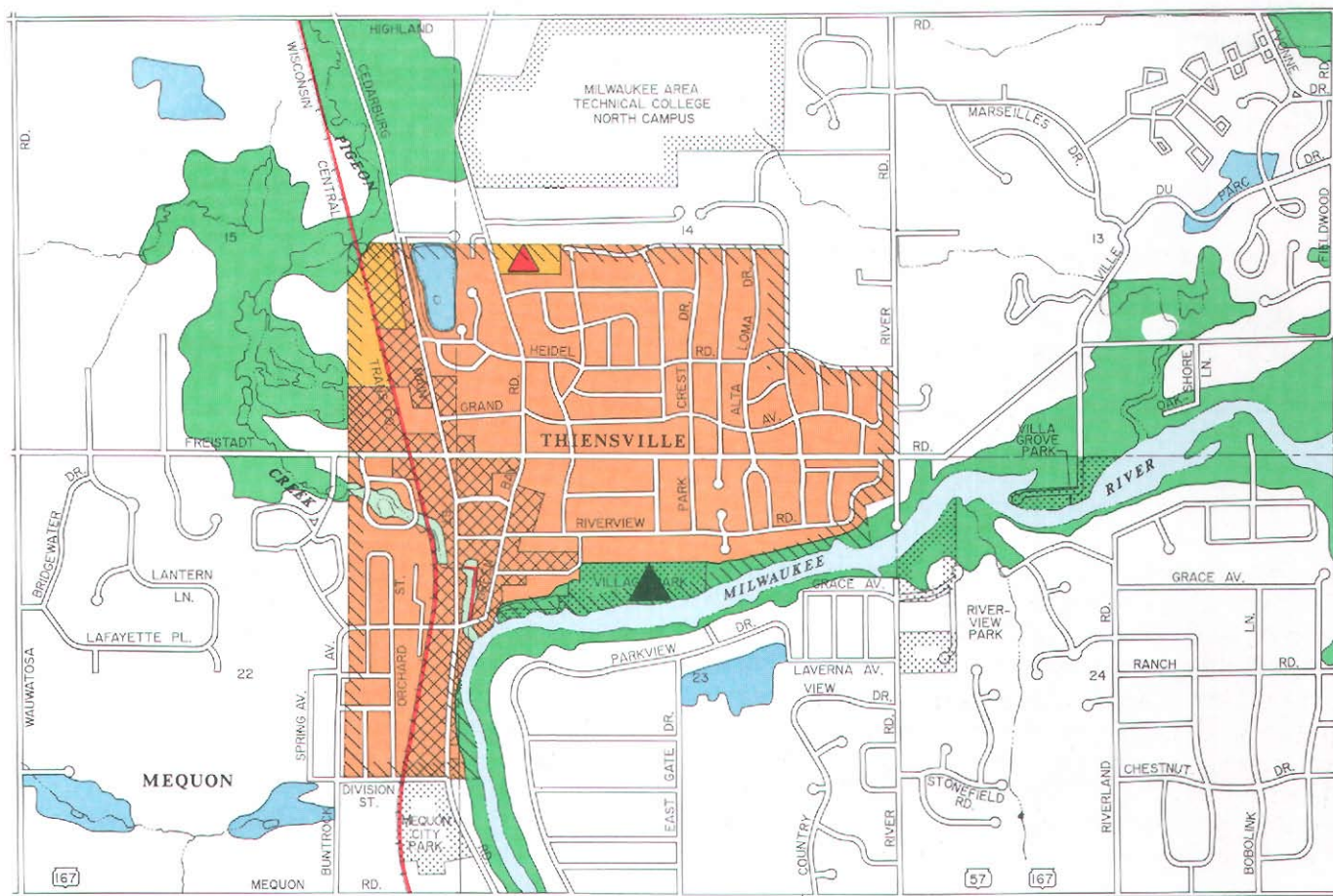
To meet the identified needs, the park and open space plan for the Village of Thiensville recommends the acquisition and development of one new neighborhood park and the development of outdoor recreation facilities at the existing Thiensville Park. The recommended plan is shown in graphic summary form on Map 10. The recommendations contained in the plan with respect to park and open space site acquisition and development are presented in the following section of this chapter, which also describes means for implementing those recommendations.

PLAN RECOMMENDATIONS AND MEANS OF IMPLEMENTATION

The recommended park and open space plan is not complete until the steps required to implement the plan have been specified. Accordingly, this section of the chapter sets forth not only the plan recommendations, but also the means for implementation of those recommendations. This section thus serves as a guide for carrying out the recommended park and open space plan, as well as a listing of the plan recommendations. The section includes a description of required actions by the Wisconsin Department of Natural Resources

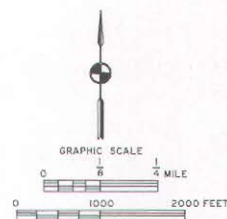
Map 10

A PARK AND OPEN SPACE PLAN FOR THE VILLAGE OF THIENSVILLE



LEGEND

	EXISTING URBAN DEVELOPMENT		SECONDARY ENVIRONMENTAL CORRIDOR
	PLANNED URBAN DEVELOPMENT		ISOLATED NATURAL RESOURCE AREA
	GENERALIZED NONRESIDENTIAL URBAN DEVELOPMENT		MILWAUKEE RIVER
	LANDS OUTSIDE OF THE VILLAGE OF THIENSVILLE		EXISTING COMMUNITY PARK
	PRIMARY ENVIRONMENTAL CORRIDOR		PROPOSED NEIGHBORHOOD PARK
			EXISTING TRAIL FACILITY



Source: SEWRPC.

and Ozaukee County, as well as by the Village of Thiensville.

Wisconsin Department of Natural Resources

The Wisconsin Department of Natural Resources (DNR) has authority and responsibility for park development, natural resource protection, water quality management, and water use regulation. Certain DNR functions have particular importance in the implementation of park and open space plans. The Department has the obligation to prepare a comprehensive Statewide outdoor recreation plan

and to develop long-range water resource management plans; the authority to protect, develop, and regulate the use of State parks, forests, fish and game, lakes and streams, certain plant life, and other natural resources; and the authority to administer, within the State, the Federal grant program known as the Land and Water Conservation (LAWCON) fund program and the Wisconsin Stewardship Program. These two programs are intended to assist in the acquisition and development of local parks and urban green spaces. The DNR also has the responsibility to establish standards for floodland

and shoreland zoning and the authority to adopt, in the absence of satisfactory local action, shoreland and floodland zoning ordinances.

More specifically, in relation to the implementation of the Village park and open space plan, it is important that the Department endorse the plan, thus qualifying the Village to apply for and receive available State and Federal outdoor recreation grants in support of plan implementation.

Ozaukee County

Ozaukee County has the authority and responsibility for the acquisition, development, and maintenance of the major parks and trails within the County. It is recommended that Ozaukee County pursue acquisition and development of trails within the primary environmental corridor along the Milwaukee River as recommended in SEWRPC Community Assistance Planning Report No. 133, A Park and Open Space Plan for Ozaukee County, adopted by Ozaukee County Board on July 1, 1987. It should be noted that the Village of Thiensville and the City of Mequon have developed that portion of the recreational trail within the Milwaukee River Recreation Corridor from the south County line to Highland Road in the City of Mequon. The County should act to acquire needed lands and to develop the remainder of the trail within Ozaukee County.

The Ozaukee County park and open space plan further recommends that the County acquire primary environmental corridor lands along Pigeon Creek, which would include about four acres in the far northwestern corner of the Village. The remainder of the riparian areas adjacent to that portion of Pigeon Creek lying within the Village are classified as secondary environmental corridor lands and are recommended to be protected through Village zoning, as described in the next section of this chapter.

Village of Thiensville

Under the recommended plan, the Village of Thiensville would have responsibility for the provision of a variety of outdoor recreation sites and facilities, including the acquisition and development of one neighborhood park, additional acquisition and facility development at the existing Village park, the maintenance of existing park sites and facilities, and the provision of a recreational trail to connect with such trails in neighboring communities. In addition, the Village would be responsible for the protection of the important natural resource

features within its borders. Implementation of these recommendations would result in the attainment of park acquisition and development and open space preservation objectives presented in Chapter III of this report. Specific implementation activities recommended to be undertaken by the Village for the acquisition and development of park and outdoor recreation sites and facilities and for the preservation of important natural resources are presented below.

Parks and Outdoor Recreation Facilities:

Proposed New Park Sites: The Village park and open space plan recommends that the Village acquire and develop one new neighborhood park. The location of the new Village park is shown on Map 10. Recommended facility development and associated acquisition costs at the site are summarized in Table 8. The new site is proposed to be located in U. S. Public Land Survey Section 14, in the northwestern portion of the Village. The site would encompass approximately eight acres, five acres of which are currently owned by the Village and serve as a detention basin. Facilities proposed for this site include a playground and two basketball goals. It is also recommended that the detention basin be used for informal playfields during dry weather.

As indicated in Table 8, the acquisition and development costs for the proposed neighborhood park are estimated to total about \$173,000. About \$75,000, or about 43 percent of this total cost, would be required for park site acquisition; about \$98,000, or the remaining 57 percent, would be required for site development (see Table 8). Facilities at the proposed new Village park should be designed and constructed to comply with the accessibility requirements of the Federal Americans with Disabilities Act of 1990.

Existing Outdoor Recreation Sites and Facilities:

The Village park and open space plan also recommends that the Village provide additional outdoor recreation facilities at Thiensville Park, an existing 18-acre community park located along the Milwaukee River, in the southern portion of the Village. The location of this park is also shown on Map 10. Recommended facility development and associated acquisition cost at this site are also summarized in Table 8. It is recommended that new playground equipment, new rest room facilities, additional lighting for softball fields, two basketball goals, a paved path along the river, and

Table 8

**PROPOSED ACQUISITION AND DEVELOPMENT COSTS UNDER THE
PARK AND OPEN SPACE PLAN FOR THE VILLAGE OF THIENSVILLE**

Park Site	Proposed Facility Development	Estimated Development Costs	Estimated Acquisition Costs	Total Cost
Proposed Neighborhood Park	Playground	\$ 20,000		
	Playfield	20,000		
	Two basketball goals	10,000		
	General development	48,000		
	Subtotal	\$ 98,000	\$ 75,000	\$173,000
Thiensville Park	Playground	\$ 65,000		
	Two basketball goals	10,000		
	Lighting for softball field	50,000		
	Restrooms	55,000		
	Paved path (1,300 ft.)	25,000		
	Fishing pier	10,000		
	Parking lot expansion	5,000	80,000	
	Subtotal	\$220,000	\$ 80,000	\$300,000
--	Total	\$318,000	\$155,000	\$473,000

Source: SEWRPC.

a fishing pier be added at this site. It is also recommended that land be acquired to accommodate additional needed automobile parking.

As indicated in Table 8, the acquisition and development costs for the improvements to Thiensville Park are estimated to total about \$300,000. About \$80,000, or about 27 percent of this total cost, would be required for acquisition, while about \$220,000, or about 73 percent, would be required for new development. New facilities proposed at Thiensville Park should be designed and constructed to meet the accessibility requirements of the Federal Americans with Disabilities Act of 1990.

It is further recommended that the Village maintain existing facilities at Thiensville Park, including, as may be necessary, the repaving and resurfacing of parking lots and walkways; resurfacing of court areas, such as volleyball, basketball, and tennis courts; provision, repair, or replacement of such support facilities as sports-field lighting, park benches, picnic tables, and drinking fountains; provision, repair, or replacement of footbridges, rest room facilities, water supply facilities, maintenance buildings, picnic shelters, and community buildings; and the maintenance of lawns, gardens, and other

landscape plantings. In addition, it is recommended that any existing outdoor recreation facility not meeting the accessibility requirements set forth under the Federal Americans with Disabilities Act be brought into compliance with the Act in a timely fashion.

Recreation Trail: As already noted, the recommended 500-mile regionwide system of recreation corridors in Southeastern Wisconsin would provide opportunities for such trail activities as hiking, biking, and cross-country skiing. Under the park and open space plan for the Village of Thiensville, it is recommended that the Village continue to maintain the Thiensville Recreation Trail, which serves as a segment of the Milwaukee River recreation corridor and connects with trails in other communities along the Milwaukee River to the north and south. It is also recommended that the Pigeon Creek Riverwalk continue to be maintained in private ownership. If proposals are made to dispose of, or otherwise close, this trail to the public, the Village of Thiensville should consider acquisition of this now privately owned trail facility.

Open Space Preservation: Under the recommended plan, the Village of Thiensville would also be

responsible for the protection of certain open space lands within the Village. Generally, upon full implementation of the plan, all primary and secondary environmental corridors and isolated natural resource areas within the Village of Thiensville would be held in public ownership for resource protection, flood control, and outdoor recreation use or, if in private ownership, be preserved in essentially natural, open uses through public land use regulations.

Primary Environmental Corridors: Primary environmental corridors, as described in Chapter II, encompass about 60 acres in the Village. Of these 60 acres, it is recommended that 16 acres, or 27 percent, be maintained in existing Village ownership as part of Thiensville Park. Of the remaining 44 acres, it is recommended that the 40 acres lying along the Milwaukee River be maintained in private ownership and preserved in open space use through continued application of Village floodland zoning. The remaining four acres of primary environmental corridors are located in the northwestern portion of the Village adjacent to Pigeon Creek and are recommended to be acquired by Ozaukee County.

Secondary Environmental Corridors: Secondary environmental corridors encompass about 10 acres in the Village. Under the plan, it is recommended that these 10 acres be preserved in open space use through continued application of Village floodland zoning.

Isolated Natural Resource Areas: Isolated natural resource areas encompass about 10 acres in the Village. These 10 acres are recommended to be preserved in natural, open uses through application of appropriate Village conservancy zoning.

Other Plan Implementation Considerations: The park and open space plan for the Village of Thiensville proposes that the Village develop a new neighborhood park, provide additional land and facilities at its existing community park, continue to provide a recreational trail along the Milwaukee River, and provide for the preservation of important natural resource features in the Village. The adopted Village zoning district map serves to protect most lands proposed for parks and for natural resource protection from incompatible urban encroachment. Changes to this zoning district

map should be made to reflect more completely the proposed neighborhood park east of Green Bay Road.

Plan Costs: Implementation of the recommended park and open space plan for the Village of Thiensville as presented herein and summarized in Table 8 would entail a total cost to the Village of about \$473,000 over the fifteen-year implementation period. As indicated in Table 8, of this total cost, about \$173,000, or about 37 percent, would be required for the acquisition and development of the proposed new neighborhood park and about \$300,000, or about 63 percent, would be required for additional development and acquisition at Thiensville Park.

The estimated acquisition and development costs of \$473,000 would be distributed over a 15-year implementation period. The average annual acquisition and development cost would be about \$31,500, or, assuming an average resident population within the Village of about 3,400 persons, about \$9.26 per capita per annum. It should be noted that through the use of alternative means of land acquisition, including dedication and through the use of available State and Federal grants for park and open space acquisition and development, these costs could be significantly reduced.

CONCLUSION

The primary purpose of the park and open space planning program for the Village of Thiensville is the preparation of a sound and workable plan to guide the acquisition and development of lands and facilities needed to meet the outdoor recreation needs of the existing and probable future population of the Village and to protect and enhance the underlying and sustaining natural resource base of the Village. Implementation of the recommended plan presented herein would assure the protection and preservation of the environmental corridors and isolated natural resource areas remaining within the Village and the provision of a variety of outdoor recreation facilities geographically well distributed throughout the Village, thereby meeting the outdoor recreation needs of the residents of the Village of Thiensville.

APPENDIX

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Appendix A

OUTDOOR RECREATION AND OPEN SPACE PLANNING OBJECTIVES, PRINCIPLES, AND STANDARDS

OBJECTIVE NO. 1

The provision of an integrated system of public general-use outdoor recreation sites and related open space areas which will allow the resident population of the Region adequate opportunity to participate in a wide range of outdoor recreation activities.

PRINCIPLE

Attainment and maintenance of good physical and mental health is an inherent right of all residents of the Region. The provision of public general-use outdoor recreation sites and related open space areas contributes to the attainment and maintenance of physical and mental health by providing opportunities to participate in a wide range of both intensive and extensive outdoor recreation activities. Moreover, an integrated park and related open space system properly related to the natural resource base, such as the existing surface water network, can generate the dual benefits of satisfying recreational demands in an appropriate setting while protecting and preserving valuable natural resource amenities. Finally, an integrated system of public general-use outdoor recreation sites and related open space areas can contribute to the orderly growth of the Region by lending form and structure to urban development patterns.

A. PUBLIC GENERAL-USE OUTDOOR RECREATION SITES

PRINCIPLE

Public general-use outdoor recreation sites promote the maintenance of proper physical and mental health both by providing opportunities to participate in such athletic recreational activities as baseball, swimming, tennis, and ice-skating, activities that facilitate the maintenance of proper physical health because of the exercise involved, as well as opportunities to participate in such less athletic activities as pleasure walking, picnicking, or just rest and reflection. These activities tend to reduce everyday tensions and anxieties and thereby help maintain proper physical and mental well being. Well designed and properly located public general-use outdoor recreation sites also provide a sense of community, bringing people together for social and cultural as well as recreational activities, and thus contribute to the desirability and stability of residential neighborhoods and therefore the communities in which such facilities are provided.

STANDARDS

1. The public sector should provide general-use outdoor recreation sites sufficient in size and number to meet the recreation demands of the resident population. Such sites should contain the natural resource or man-made amenities appropriate to the recreational activities to be accommodated therein and be spatially distributed in a manner which provides ready access by the resident population. To achieve this standard, the following public general-use outdoor recreation site requirements should be met as indicated below:

Site Type	Size (gross acres)	Publicly Owned General-Use Sites							
		Parks		Schools ^a					
		Minimum Per Capita Public Requirements (acres per 1,000 persons) ^d	Typical Facilities	Maximum Service Radius (miles) ^b		Minimum Per Capita Public Requirements (acres per 1,000 persons) ^f	Typical Facilities	Maximum Service Radius (miles) ^c	
				Urban ^e	Rural			Urban ^e	Rural
I ^g Regional	250 or more	5.3	Camp sites, swimming beach, picnic areas, golf course, ski hill, ski touring trail, boat launch, nature study area, playfield, softball diamond, passive activity area ^h	10.0	10.0	--	--	--	--
II ⁱ Multi-Community	100-249	2.6	Camp sites, swimming pool or beach, picnic areas, golf course, ski hill, ski touring trail, boat launch, nature study area, playfield, softball and/or baseball diamond, passive activity area ^h	4.0 ^l	10.0 ^l	--	--	--	--
III ^k Community	25-99	2.2	Swimming pool or beach, picnic areas, boat launch, nature study area, softball and/or baseball diamonds, soccer and other playfields, tennis court, passive activity area ^h	2.0 ^l	--	0.9	Soccer and other playfield, baseball diamond, softball diamond, tennis court	0.5-1.0 ^m	--
IV ⁿ	Less than 25	1.7	Wading pool, picnic areas, softball and/or baseball diamonds, soccer and other playfields, tennis court, playground, basketball goal, ice-skating rink, passive activity area ^h	0.5-1.0 ^o	--	1.6	Soccer and other playfield, playground, baseball diamond, softball diamond, tennis court, basketball goal	0.5-1.0 ^m	--

2. Public general-use outdoor recreation sites should, as much as possible, be located within the designated primary environmental corridors of the Region.

B. RECREATION RELATED OPEN SPACE

PRINCIPLE

Effective satisfaction of recreation demands within the Region cannot be accomplished solely by providing public general-use outdoor recreation sites. Certain recreational pursuits such as hiking, biking, pleasure driving, and ski touring are best provided for through a system of recreation corridors located on or adjacent to linear resource-oriented open space lands. A well designed system of recreation corridors offered as an integral part of linear open space land also can serve to physically connect existing and proposed public parks, thus forming a truly integrated park and recreation related open space system. Such open space lands, in addition, satisfy the human need for natural surroundings, serve to protect the natural resource base, and ensure that many scenic areas of natural, cultural, or historic interest assume their proper place as form determinants for both existing and future land use patterns.

STANDARDS

The public sector should provide sufficient open space lands to accommodate a system of resource-oriented recreation corridors to meet the resident demand for extensive trail-oriented activities. To fulfill these requirements the following recreation-related open space standards should be met:

1. A minimum of 0.16 linear mile of recreation related open space consisting of linear recreation corridors^P should be provided for each 1,000 persons in the Region.
2. Recreation corridors should have a minimum length of 15 miles and a minimum width of 200 feet.
3. The maximum travel distance to recreation corridors should be five miles in urban areas and 10 miles in rural areas.
4. Resource-oriented recreation corridors should maximize the use of:
 - a. Primary environmental corridors as locations for extensive trail-oriented recreation activities.
 - b. Outdoor recreation facilities provided at existing public park sites.
 - c. Existing recreation trail-type facilities within the Region.

OBJECTIVE NO. 2

The provision of sufficient outdoor recreation facilities to allow the resident population of the Region adequate opportunity to participate in intensive nonresource-oriented outdoor recreation activities.

PRINCIPLE

Participation in intensive nonresource-oriented outdoor recreation activities including basketball, baseball, soccer, ice-skating, playfield and playground activities, softball, pool swimming, and tennis provides an individual with both the opportunity for physical exercise and an opportunity to test and expand his physical capability. Such activities also provide an outlet for mental tension and anxiety as well as a diversion from other human activities. Competition in the various intensive nonresource-related activities also provides an opportunity to share recreational experiences, participate in team play, and gain understanding of other human beings.

STANDARD

A sufficient number of facilities for participation in intensive nonresource-oriented outdoor recreation activities should be provided throughout the Region. To achieve this standard, the following per capita requirements and design criteria for various facilities should be met as indicated below:

Minimum Per Capita Facility Requirements ⁴				Design Standards					Service Radius of Facility (miles) ⁷
Activity	Facility	Owner	Facility per 1,000 Urban Residents	Typical Location of Facility	Facility Requirements (acres per facility)	Additional Suggested Support Facilities	Support Facility Requirements (acres per facility)	Total Land Requirement (acres per facility)	
Baseball	Diamond	Public Nonpublic Total	0.09 0.01 0.10 ⁸	Types II, III, and IV general-use site	2.8 acres per diamond	Parking (30 spaces per diamond) Night lighting [†] Concessions and bleachers [†] Buffer and landscape	0.28 acre per diamond -- 0.02 acre minimum 1.40 acres per diamond	4.5	2.0
Basketball	Goal	Public Nonpublic Total	0.91 0.22 1.13	Type IV general-use site	0.07 acre per goal	--	--	0.07	0.5
Ice-Skating	Rink	Public Nonpublic Total	0.15 ⁴ -- 0.15	Type IV general-use site	0.30 acre per rink minimum	Warming house	0.05 acre --	0.35 minimum	0.5
Playfield Activities	Playfield	Public Nonpublic Total	0.39 0.11 0.50	Type IV general-use site	1.0 acre per playfield minimum	Buffer area	0.65 acre minimum	1.65 minimum	0.5
Playground Activities	Playground	Public Nonpublic Total	0.35 0.07 0.42	Type IV general-use site	0.25 acre per playground minimum	Buffer and landscape	0.37 acre	0.62 minimum	0.5
Softball	Diamond	Public Nonpublic Total	0.53 0.07 0.60	Types II, III, and IV general-use site	1.70 acre per diamond	Parking (20 spaces per diamond) Night lighting [†] Buffer	0.18 acre per diamond -- 0.80 acre per diamond	2.88	1.0
Swimming	Pool	Public Nonpublic Total	0.015 ⁵ -- 0.015	Types II and III general-use site	0.13 acre per pool minimum	Bathhouse and concessions Parking (400 square feet per space) Buffer and landscaping	0.13 acre minimum 0.26 acre minimum 0.70 acre minimum	1.22 minimum	3.0 3.0
Tennis	Court	Public Nonpublic Total	0.50 0.10 0.60	Types II, III, and IV general-use site	0.15 acre per court	Parking (2.0 spaces per court) Night lighting [†] Buffer	0.02 acre per court -- 0.15 acre per court	0.32	1.0

OBJECTIVE NO. 3

The provision of sufficient outdoor recreation facilities to allow the resident population of the Region adequate opportunity to participate in intensive resource-oriented outdoor recreation activities.

PRINCIPLE

Participation in intensive resource-oriented outdoor recreation activities including camping, golf, picnicking, downhill skiing, and stream and lake swimming provides an opportunity for individuals to experience the exhilaration of recreational activity in natural surroundings as well as an opportunity for physical exercise. In addition, the family can participate as a unit in certain intensive resource-oriented activities such as camping, picnicking, and beach swimming.

STANDARD

A sufficient number of facilities for participation in intensive resource-oriented outdoor recreation activities should be provided throughout the Region. To meet this standard, the following per capita requirements and design criteria for various facilities should be met as indicated below:

Minimum Per Capita Facility Requirement ^W					Design Standards					Service Radius of Facility (miles) ^X	
Activity	Facility	Owner	Per Capita Requirements (facility per 1,000 residents)		Typical Location of Facility	Facility Requirements (acres per facility)	Additional Suggested Support Facilities	Support Facility Requirements (acres per facility)	Total Land Requirements (acres per facility)		Resource Requirements
Camping	Camp site	Public	0.35		Types I and II general-use sites	0.33 acre per camp site	Rest rooms - showers Utility hookups Natural area backup lands	..	1.83	Ungrazed wooded area Presence of surface water Suitable topography and soils	25.0
		Nonpublic	1.47					1.5 acres per camp site			
Golf	Regulation 18 hole course	Public	0.013		Types I and II general-use sites	135 acres per course	Clubhouse, parking, maintenance Practice area Woodland-water areas Buffer acres	8.0 acres per course	185.0	Suitable topography and soils Presence of surface water Form-giving vegetation desirable	10.0
		Nonpublic	0.027					5.0 acres per course			
Picnicking	Tables	Public	6.35 ^Y		Types I, II, III, and IV general-use sites	0.07 acre per table minimum	Parking Shelters and grills Buffer and parking overflow	0.02 acre per table (1.5 spaces per table)	0.11	Topography with scenic views Shade trees Presence of surface water desirable Suitable soils	10.0
		Nonpublic	2.39					0.02 acre per table			
Skiing	Developed slope (acres)	Public	0.010		Types I, II, and III general-use sites	1.0 acre per acre of developed slope	Chalet Parking Ski tows (and lights) Buffer and maintenance Landscape	0.13 acre minimum	2.1	Suitable topography and soils (20 percent slope minimum) North or northeast exposure	25.0
		Nonpublic	0.090					0.25 acre per acre of slope			
Swimming	Beach (linear feet)	Public			Types I, II, and III general-use sites	40 square feet per linear foot (average)	Parking Bathhouse-concessions Buffer areas	0.2 acre per acre of beach	.2	Natural beach Good water quality	10.0
		Nonpublic						0.10 acre minimum			
		Total	18	16				10 square feet per linear foot			

OBJECTIVE NO. 4

The provision of sufficient outdoor recreation facilities to allow the resident population of the Region adequate opportunity to participate in extensive land-based outdoor recreation activities.

PRINCIPLE

Participation in extensive land-based outdoor recreation activities including bicycling, hiking, horseback riding, nature study, pleasure driving, ski touring, and snowmobiling provides opportunity for contact with natural, cultural, historic, and scenic features. In addition, such activities can increase an individual's perception and intensify awareness of the surroundings, contribute to a better understanding of the environment, and provide a wider range of vision and comprehension of all forms of life both as this life may have existed in the past and as it exists in the present. Similar to intensive resource-oriented activity, the family as a unit also can participate in extensive land-based recreation activities; such participation also serves to strengthen social relationships within the family. For activities like bicycling, hiking, and nature study, participation provides an opportunity to educate younger members of the family in the importance of environmental issues which may become of greater concern as they approach adulthood.

STANDARD

A sufficient number of facilities for participation in extensive land-based outdoor recreation activities should be provided throughout the Region. Public facilities provided for these activities should be located within the linear resource-oriented recreation corridors identified in Objective No. 1. To meet this standard, the following per capita requirements and design criteria for various facilities should be met as indicated below:

Minimum Per Capita Public Facility Requirements ^{aa}			Design Standards				
Activity	Facility	Per Capita Requirements (linear mile per 1,000 residents)	Typical Location of Facility	Minimum Facility Requirements (acres per linear mile)	Suggested Support Facilities and Backup Lands	Minimum Support Facility Requirements (acres per linear mile)	Resource Requirements
Biking	Route Trail	0.16	Scenic roadways Recreation corridor	-- 1.45	Route markers Backup lands with resource amenities	-- 24.2	-- Diversity of scenic, historic, natural, and cultural features Suitable topography (5 percent slope average maximum) and soils
Hiking	Trail	0.16	Recreation corridor	0.73	Backup lands with resource amenities	24.2	Diversity of scenic, historic, natural, and cultural features Suitable topography and soils
Horseback Riding	Trail	0.05	Recreation corridor Type I general-use site	1.21	Backup lands with resource amenities	24.2	Diversity of scenic, historic, natural, and cultural features Suitable topography and soils
Nature Study	Center	1 per county	Types I, II, and III general-use sites	--	Interpretive center building Parking	--	Diversity of natural features, including a variety of plant and animal species Suitable topography and soils
	Trail	0.02	Recreation corridor Types I, II, and III general-use sites	0.73	Backup lands with resource amenities	24.2	Diversity of natural features, including a variety of plant and animal species Suitable topography and soils
Pleasure Driving	Route	-- ^{cc}	Scenic roadways recreation corridor	--	Route markers	--	--
Ski Touring	Trail	0.02	Recreation corridor Types I and II general-use sites	0.97	Backup lands with resource amenities	24.2	Suitable natural and open areas Rolling topography
Snowmobiling	Trail	0.11	Private lands (leased for public use)	1.45	Backup lands, including resource amenities and open lands	24.2	Suitable natural and open areas Suitable topography (8 percent slope average maximum) and soils

OBJECTIVE NO. 5

The provision of opportunities for participation by the resident population of the Region in extensive water-based outdoor recreation activities on the major inland lakes and rivers and on Lake Michigan, consistent with safe and enjoyable lake use and maintenance of good water quality.

PRINCIPLE

The major inland lakes and rivers of the Region and Lake Michigan accommodate participation in extensive water-based recreation activities, including canoeing, fishing, ice fishing, motorboating, sailing, and water skiing, which may involve unique forms of physical exercise or simply provide opportunities for rest and relaxation within a particularly attractive natural setting. Participation in extensive water-based recreation activities requires access to the major inland lakes and rivers and Lake Michigan and such access should be available to the general public.

STANDARDS

1. The maximum number of public access points consistent with safe and enjoyable participation in extensive water-based recreation activities should be provided on the major inland lakes throughout the Region. To meet this standard the following guidelines for access points available for use by the general public on various sized major inland lakes should be met as indicated below:

Size of Major Lake (acres)	Minimum Number of Access Points, Public and Private	Optimum Number of Parking Spaces
50-199	1	$\frac{A}{16.6} - \frac{D^{dd}}{10}$ Minimum: ^{ee} 6
200 or More	Minimum of 1 or 1 per 1,000 acres of usable surface ^{ff}	$\frac{A}{15.9} - \frac{D^{gg}}{10}$ Minimum: ^{ee} 12

2. The proper quantity of public access points consistent with safe and enjoyable participation in the various extensive water-based recreation activities should be provided on major rivers throughout the Region. To meet this standard the maximum interval between access points on canoeable rivers^{hh} should be 10 miles.

3. A sufficient number boat launch ramps consistent with safe and enjoyable participation in extensive water-based outdoor recreation activities should be provided along the Lake Michigan shoreline within harbors-of-refuge. To meet this standard the following guidelines for the provision of launch ramps should be met:

Minimum Per Capita Facility Requirements (ramps per 1,000 residents)	Design Standards				Maximum Distance Between Harbors of Refuge
	Typical Location of Facility	Facility Area Requirements	Suggested Support Facilities, Services, and Backup Lands	Support Facility Area Requirements	
0.025	Types I, II, and III general-use sites	0.015 acre per ramp	Rest rooms Parking (40 car and trailer spaces per ramp)	-- 0.64 acre per ramp minimum	15 miles

4. A sufficient number of boat slips consistent with safe and enjoyable participation in extensive water-based outdoor recreation activities should be provided at marinas within harbors-of-refuge along the Lake Michigan shoreline. To meet this standard the following guidelines for the provision of boat slips should be met:

Minimum Per Capita Facility Requirements (boat slips per 1,000 residents)	Design Standards			Support Facility Area Requirements
	Typical Location of Facility	Facility Area Requirements	Suggested Support Facilities, Services, and Backup Lands	
1.3	Types I, II, and III general-use sites	--	Fuel, concessions, rest rooms Parking Storage and maintenance	-- 0.01 acre per boat slip 0.01 acre per boat slip

OBJECTIVE NO. 6

The preservation of sufficient high-quality open-space lands for protection of the underlying and sustaining natural resource base and enhancement of the social and economic well being and environmental quality of the Region.

PRINCIPLE

Ecological balance and natural beauty within the Region are primary determinants of the ability to provide a pleasant and habitable environment for all forms of life and to maintain the social and economic well being of the Region. Preservation of the most significant aspects of the natural resource base, that is, primary environmental corridors and prime agricultural lands, contributes to the maintenance of ecological balance, natural beauty, and economic well being of the Region.

A. PRIMARY ENVIRONMENTAL CORRIDORS

PRINCIPLE

The primary environmental corridors are a composite of the best individual elements of the natural resource base including surface water, streams, and rivers and their associated floodlands and shorelands; woodlands, wetlands, and wildlife habitat; areas of groundwater discharge and recharge; organic soils, rugged terrain, and high relief topography; and significant geological formations and physiographic features. By protecting these elements of the natural resource base, flood damage can be reduced, soil erosion abated, water supplies protected, air cleansed, wildlife population enhanced, and continued opportunities provided for scientific, educational, and recreational pursuits.

STANDARD

All remaining nonurban lands within the designated primary environmental corridors in the Region should be preserved in their natural state.

B. PRIME AGRICULTURAL LANDS

PRINCIPLE

Prime agricultural lands constitute the most productive farm lands in the Region and, in addition to providing food and fiber, contribute significantly to maintaining the ecological balance between plants and animals; provide locations close to urban centers for the production of certain food commodities which may require nearby population concentrations for an efficient production-distribution relationship; provide open spaces which give form and structure to urban development; and serve to maintain the natural beauty and unique cultural heritage of Southeastern Wisconsin.

STANDARDS

1. All prime agricultural lands should be preserved.
2. All agricultural lands should be preserved that surround adjacent high-value scientific, educational, or recreational sites and are covered by soils rated in the regional detailed operational soil survey as having very slight, slight, or moderate limitations for agricultural use.

OBJECTIVE NO. 7

The efficient and economical satisfaction of outdoor recreation and related open space needs meeting all other objectives at the lowest possible cost.

PRINCIPLE

The total resources of the Region are limited, and any undue investment in park and open space lands must occur at the expense of other public investment.

STANDARD

The sum total of all expenditures required to meet park demands and open space needs should be minimized.

^aIn urban areas facilities for intensive nonresource-oriented activities are commonly located in Type III or Type IV school outdoor recreation sites. These facilities often provide a substitute for facilities usually located in parks by providing opportunities for participation in intensive nonresource-oriented activities. It is important to note, however, that school outdoor sites do not generally contain natural areas which provide space for passive recreation use.

^bThe identification of a maximum service radius for each park type is intended to provide another guideline to assist in the determination of park requirements and to assure that each resident of the Region has ready access to the variety of outdoor recreation facilities commonly located in parks, including space and facilities for both active and passive outdoor recreational use.

^cThe identification of a maximum service radius for each school site is intended to assist in the determination of active outdoor recreation facility requirements and to assure that each urban resident has ready access to the types of active intensive nonresource-oriented facilities commonly located in school recreation areas.

^dFor Type I and Type II parks, which generally provide facilities for resource-oriented outdoor recreation activities for the total population of the Region, the minimum per capita acreage requirements apply to the total resident population of the Region. For Type III and Type IV sites, which generally provide facilities for intensive nonresource-oriented outdoor recreation activities primarily in urban areas, the minimum per capita acreage requirements apply to the resident population of the Region residing in urban areas.

^eUrban areas are defined as areas containing a closely spaced network of minor streets which include concentrations of residential, commercial, industrial, governmental, or institutional land uses having a minimum total area of 160 acres and a minimum population of 500 persons. Such areas usually are incorporated and are served by sanitary sewerage systems. These areas have been further classified into the following densities: low-density urban areas or areas with 0.70 to 2.29 dwelling units per net residential acre, medium-density urban areas or areas with 2.30 to 6.99 dwelling units per net residential acre, and high-density urban areas or areas with 7.00 to 17.99 dwelling units per net residential acre.

^fFor public school sites, which generally provide facilities for intensive nonresource-oriented outdoor recreation activities, the minimum per capita acreage requirements apply to the resident population of the Region residing in urban areas.

^gType I sites are defined as large outdoor recreation sites having a multi-county service area. Such sites rely heavily for their recreational value and character on natural resource amenities and provide opportunities for participation in a wide variety of resource-oriented outdoor recreation pursuits. Figure A-1 provides an example of a Type I park.

^hA passive activity area is defined as an area within an outdoor recreation site which provides an opportunity for such less athletic recreational pursuits as pleasure walking, rest and relaxation, and informal picnicking. Such areas generally are located in parks or in urban open space sites, and usually consist of a landscaped area with mowed lawn, shade trees, and benches.

ⁱType II sites are defined as intermediate size sites having a countywide or multi-community service area. Like Type I sites, such sites rely for their recreational value and character on natural resource amenities. Type II parks, however, usually provide a smaller variety of recreation facilities and have smaller areas devoted to any given activity. Figure A-2 provides an example of a Type II park.

^jIn general, each resident of the Region should reside within 10 miles of a Type I or Type II park. It should be noted, however, that within urban areas having a population of 40,000 or greater, each urban resident should reside within four miles of a Type I or Type II park.

^kType III sites are defined as intermediate size sites having a multi-neighborhood service area. Such sites rely more on the development characteristics of the area to be served than on natural resource amenities for location. Figure A-3 provides an example of a Type III park.

^lIn urban areas the need for a Type III park is met by the presence of a Type II or Type I park. Thus, within urban areas having a population of 7,500 or greater, each urban resident should be within two miles of a Type III, II, or I park.

^mThe service radius of school outdoor recreation sites, for park and open space planning purposes, is governed primarily by individual outdoor recreation facilities within the school site. For example, school outdoor recreation sites which provide such facilities as playfields, playgrounds, and basketball goals typically have a service radius of one-half mile, which is the maximum service radius assigned to such facilities (see standards presented under Objective No. 2). As another example, school outdoor recreation sites which provide tennis courts and softball diamonds typically have a service radius of one mile, which is the maximum service radius assigned to such facilities (see standards presented under Objective No. 2). It is important to note that areas which offer space for passive recreational use are generally not provided at school outdoor recreation sites, and therefore Type III and Type IV school sites generally do not meet Type III and Type IV park accessibility requirements.

ⁿType IV sites are defined as small sites which have a neighborhood as the service area. Such sites usually provide facilities for intensive nonresource-oriented outdoor recreation activities and are generally provided in urban areas. Recreation lands at the neighborhood level should most desirably be provided through a joint community-school district venture, with the facilities and recreational land area required to be provided on one site available to serve the recreation demands of both the school student and resident neighborhood population. Using the Type IV park standard of 1.7 acres per thousand residents and the school standard of 1.6 acres per thousand residents, a total of 3.3 acres per thousand residents or approximately 21 acres of recreation lands in a typical medium-density neighborhood would be provided. These acreage standards relate to lands required to provide for recreation facilities typically located in a neighborhood and are exclusive of the school building site and associated parking area and any additional natural areas which may be incorporated into the design of the park site such as drainageways and associated stormwater retention basins, areas of poor soils, and floodland areas. Figure A-4 provides a design for typical Type IV combined park-school sites.

^oThe maximum service radius of Type IV parks is governed primarily by the population densities in the vicinity of the park. In high-density urban areas, each urban resident should reside within 0.5 mile of a Type IV park; in medium-density urban areas, each resident should reside within 0.75 mile of a Type IV park; and in low-density urban areas, each resident should reside within one mile of a Type IV park. It should be noted that the requirement for a Type IV park also is met by a Type I, II, or III park within 0.5-1.0 mile service radius in high-, medium-, and low-density urban areas, respectively. Further, it should be noted that in the application of the service radius criterion for Type IV sites, only multi-use parks five acres or greater in area should be considered as satisfying the maximum service radius requirement. Such park sites generally provide areas which offer space for passive recreational uses, as well as facilities which provide opportunities for active recreational uses.

^pA recreation corridor is defined as a publicly owned continuous linear expanse of land which is generally located within scenic areas or areas of natural, cultural, or historical interest and which provides opportunities for participation in trail-oriented outdoor recreation activities especially through the provision of trails designated for such activities as biking, hiking, horseback riding, nature study, and ski touring.

^qFacilities for intensive nonresource-oriented outdoor recreation activities generally serve urban areas. The minimum per capita requirements for facilities for intensive nonresource-oriented outdoor recreation activities, therefore, apply to the total resident population in each urban area of the Region.

^rFor each facility for intensive nonresource-oriented activity, the service radius indicates the maximum distance a participant should have to travel from his place of residence to participate in the corresponding activity.

^sEach urban area having a population of 2,500 or greater should have at least one baseball diamond.

^tSupport facilities such as night lighting, concessions, and bleachers generally should not be provided in Type IV sites. These sites typically do not contain sufficient acreage to allow adequate buffer between such support facilities and surrounding neighborhood residences.

^uEach urban area should have at least one ice-skating rink.

^vEach urban area having a population of 7,500 or greater should have one public swimming pool or beach.

^wFacilities for intensive resource-oriented activities serve both rural and urban residents of the Region. The minimum per capita requirements for facilities for intensive resource-oriented activities, therefore, apply to the total resident population of the Region.

^xParticipants in intensive resource-oriented outdoor recreation activity travel relatively long distances from their home. The approximate service radius indicates the normal maximum distance a participant in the respective resource-oriented activity should have to travel from his place of residence to participate in the corresponding activity.

^yThe allocation of the 6.35 picnic tables per thousand residents to publicly owned general-use sites is as follows: 3.80 tables per thousand residents of the Region to be located in Type I and Type II parks to meet the resource-oriented picnicking needs of the Region and 2.55 tables per thousand residents of urban areas in the Region to be located in Type III and Type IV parks to meet local picnicking needs in urban areas of the Region.

^zA picnic area is commonly provided adjacent to a swimming beach as a support facility. Thus, the total amount of acreage required for support facilities must be determined on a site-by-site basis.

^{aa}Both urban and rural residents of the Region participate in extensive land-based outdoor recreation activities. Thus, minimum per capita requirements for trails for extensive land-based activities apply to the total resident population of the Region.

^{bb}Bike routes are located on existing public roadways; therefore, no requirement is provided.

^{cc}Pleasure driving routes are located on existing public roadways; therefore, no requirement is provided. However, a recreation corridor may provide a uniquely suitable area for the development of a system of scenic driving routes.

^{dd}The survey of boat owners conducted under the regional park study indicated that for lakes of 50-199 acres, the typical mix of fast boating activities is as follows: waterskiing, 49 percent; motor boating, 35 percent; and sailing, 16 percent. The minimum area required per boat for safe participation in these activities is as follows: waterskiing, 20 acres; motor boating, 15 acres; and sailing, 10 acres. Assuming the current mix of boating activities in conjunction with the foregoing area requirements, it is found that 16.6 acres of "usable" surface water are required per boat on lakes of 50-199 acres. The number of fast boats which can be accommodated on a given lake of this size range is the usable surface area of that lake expressed in acres (A) divided by 16.6. The optimum number of parking spaces for a given lake is the number of fast boats which the lake can accommodate reduced by the number of fast boats in use at any one time by owners of property with lake frontage. The latter figure is estimated as 10 percent of the number of dwelling units (D) on the lake.

^{ee}The minimum number of parking spaces relates only to parking to accommodate slow boating activities such as canoeing and fishing and is applicable only in the event that the application of the standard indicated a need for less than six parking spaces for fast boating activities. No launch ramp facilities would be provided for slow boating activities.

^{ff}Usable surface water is defined as that area of a lake which can be safely utilized for motor boating, sailing, and waterskiing. This area includes all surface water which is a minimum distance of 200 feet from all shorelines and which is free of submerged or surface obstacles and at least five feet in depth.

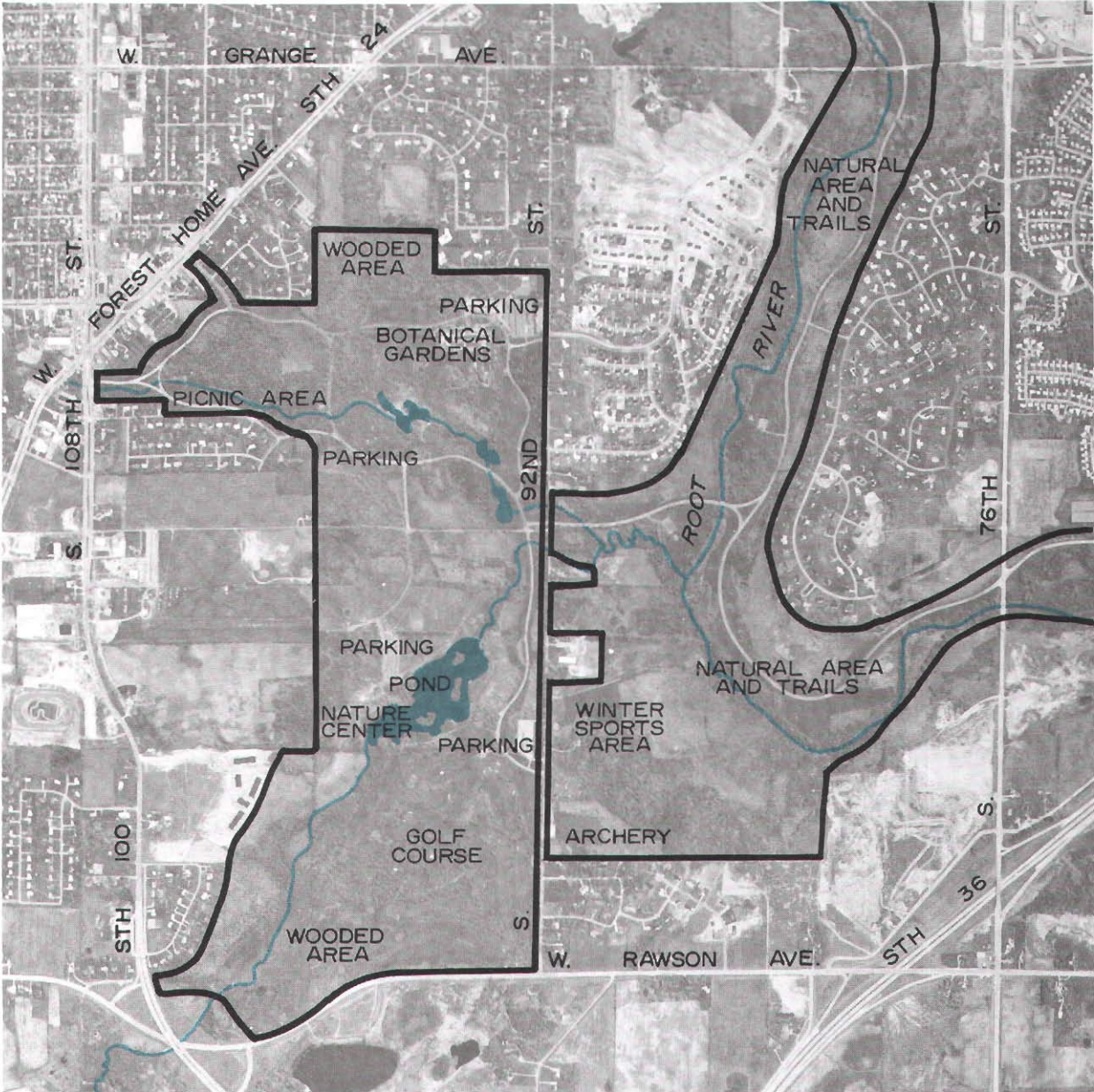
^{gg}The survey of boat owners conducted under the regional park study indicated that, for lakes of 200 acres or more, the typical mix of fast boating activities is as follows: waterskiing, 43 percent; motor boating, 33 percent; and sailing, 24 percent. The minimum area required per boat for safe participation in these activities is as follows: waterskiing, 20 acres; motor boating, 15 acres; and sailing, 10 acres. Assuming the current mix of boating activities in conjunction with the foregoing area requirements, it is found that 15.9 acres of "usable" surface water are required per boat on lakes of 200 acres or more. The number of fast boats which can be accommodated on a given lake of this size range is the usable surface area of that lake expressed in acres (A) divided by 15.9. The optimum number of parking spaces for a given lake is the number of fast boats which the lake can accommodate reduced by the number of fast boats in use at any one time by owners of property with lake frontage. The latter figure is estimated as 10 percent of the number of dwelling units (D) on the lake.

^{hh}Canoeable rivers are defined as those rivers which have a minimum width of 50 feet over a distance of at least 10 miles.

Source: SEWRPC.

Figure A-1

TYPICAL TYPE I PARK, WHITNALL PARK, MILWAUKEE COUNTY



Source: SEWRPC.

Figure A-2

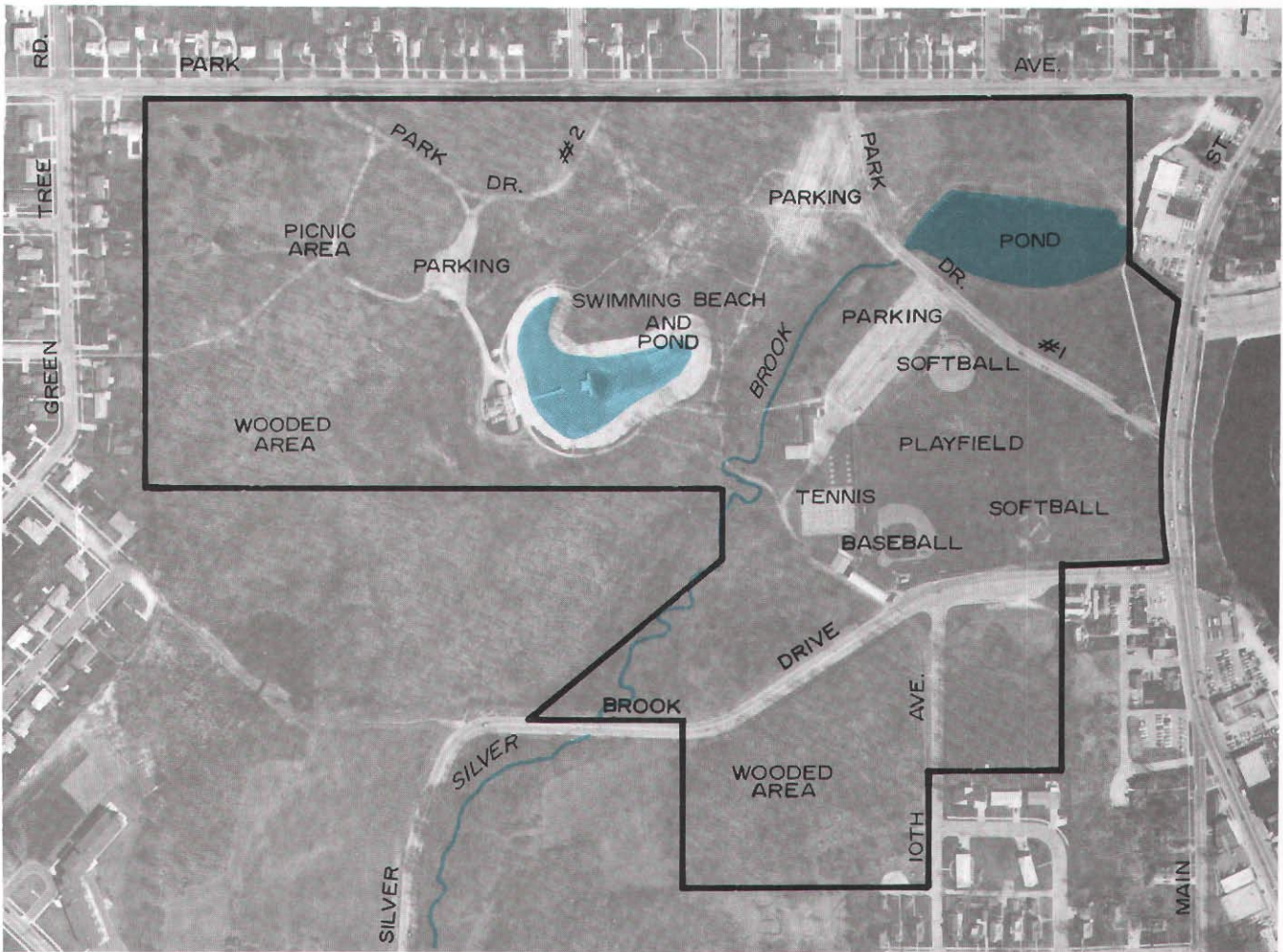
TYPICAL TYPE II PARK, MUSKEGO PARK, WAUKESHA COUNTY



Source: SEWRPC.

Figure A-3

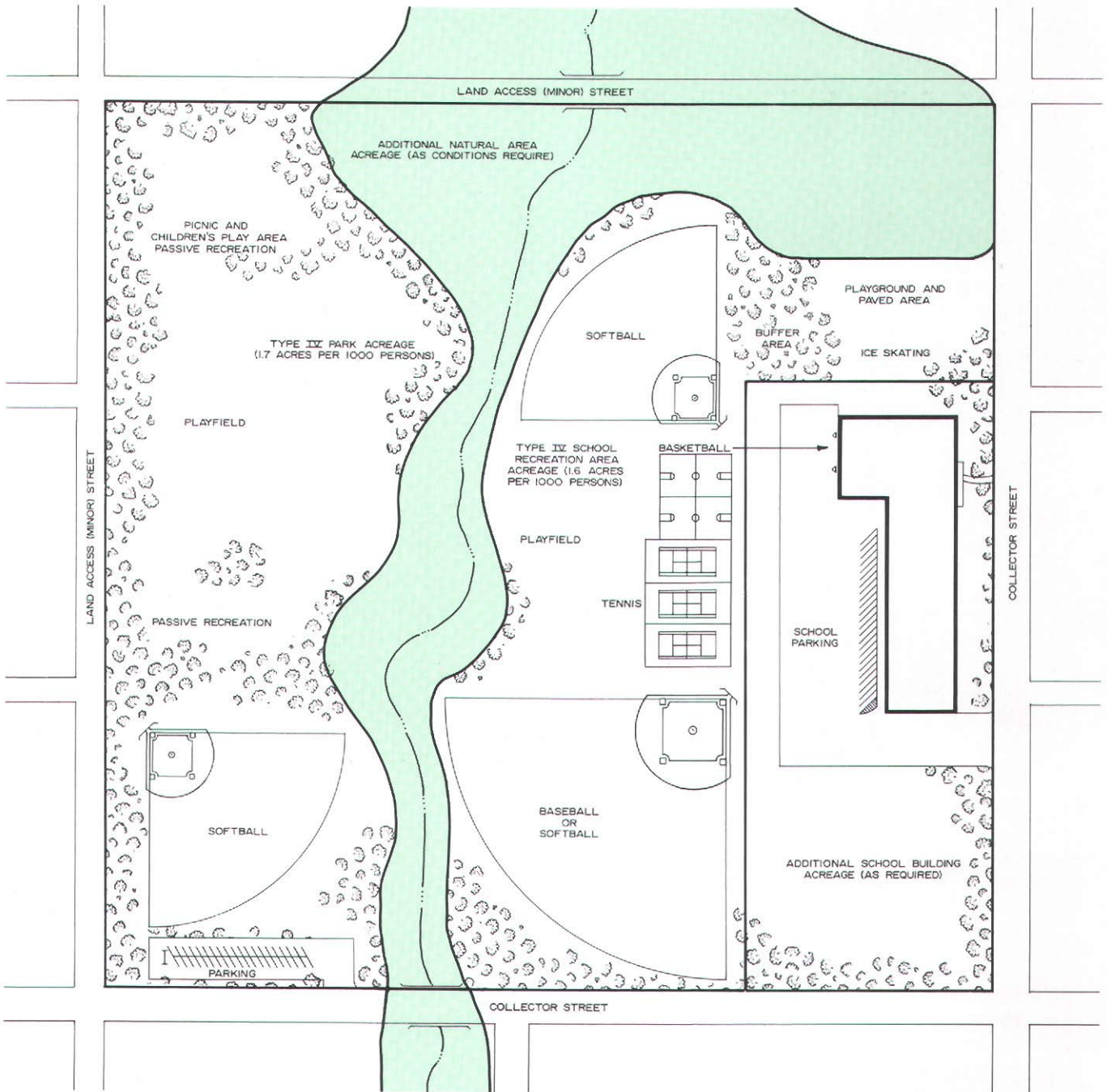
TYPICAL TYPE III PARK, REGNER PARK, WEST BEND, WASHINGTON COUNTY



Source: SEWRPC.

Figure A-4

TYPICAL TYPE IV NEIGHBORHOOD PARK AND SCHOOL RECREATION AREA



NOTE: See page 51 for the application of selected facility standards to a typical Type IV neighborhood park and school recreation area.

Source: SEWRPC.

A. Assumptions:

- 1) Neighborhood Density: Medium (2.30 to 6.99 dwelling units per net residential acre)
- 2) Population: 6,500
- 3) Area: One Square Mile

B. Outdoor Recreation Site Requirements:

Site Type	Minimum Standard Acreage Requirement	Total Acreage Required
Park	1.7 per 1,000	11.05
School	1.6 per 1,000	10.40
Park and School Combined	3.3 per 1,000	21.45

C. Outdoor Recreation Facility Requirements:

Facility	Minimum Standard Public Facility Requirement	Number of Facilities Required	Total Acreage Required
Baseball Diamond	0.09 per 1,000	0.59 = 1 ^a	4.5
Basketball Goal	0.91 per 1,000	5.9 = 6	0.42
Ice-Skating Rink	0.15 per 1,000	0.98 = 1	0.35 minimum
Playfield	0.39 per 1,000	2.5 = 3	4.95 minimum
Playground	0.35 per 1,000	2.3 = 2	1.24 minimum
Softball Diamond	0.53 per 1,000	3.4 = 2 ^a	5.36
Tennis Court	0.50 per 1,000	3.3 = 3	0.96
		Subtotal	17.78 minimum
Passive Recreation Area	(+10 percent)		1.8
Other Recreation Area	(+10 percent)		1.8
Total			21.38 minimum

In addition, facilities for picnicking should be provided in Type IV parks.

D. Additional Acreage Requirements:

- 1) **School Building:** The acreage requirement for the school building should be considered an addition to the Type IV park-school acreage standard.

In the typical Type IV site shown on page 50, the area for this use is approximately seven acres.

- 2) **Natural Areas:** Natural areas may be incorporated into the design of Type IV sites. However, acreages for areas with steep slopes, poor soils, floodwater storage, and drainageways, should be considered as additions to the Type IV park-school acreage standard.

In the typical Type IV site shown on page 50, the area for this use is approximately seven acres.

^aThough the provision of a baseball diamond is not strictly required through application of the standards, one baseball diamond replaced a softball diamond in the typical Type IV site shown on page 50.