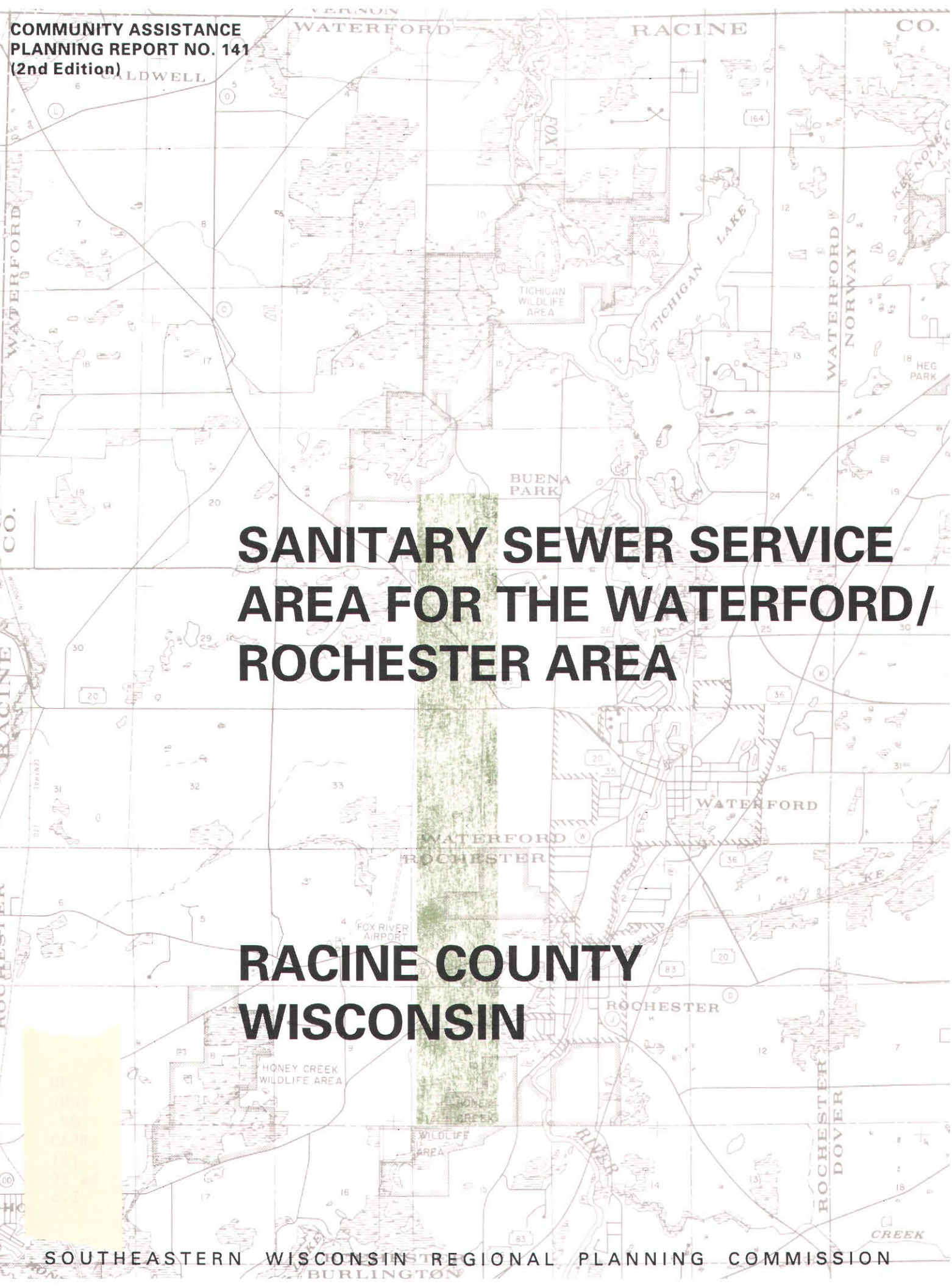
COMMUNITY ASSISTANCE
PLANNING REPORT NO. 141
(2nd Edition)



SANITARY SEWER SERVICE AREA FOR THE WATERFORD/ ROCHESTER AREA

RACINE COUNTY WISCONSIN

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

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Special acknowledgement is due SEWRPC planner Joel E. Dietl for his contribution to this report.

COMMUNITY ASSISTANCE PLANNING REPORT
NUMBER 141 (2nd Edition)

SANITARY SEWER SERVICE AREA FOR THE WATERFORD/ROCHESTER AREA RACINE COUNTY, WISCONSIN

Prepared by the

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April 1996

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April 30, 1996

TO: The Village Boards of the Villages of Rochester and Waterford, the Town Boards of the Towns of Rochester and Waterford, the Town of Waterford Sanitary District No. 1, the Western Racine County Sewerage District, and the County Board of Racine County

The adopted regional water quality management plan for Southeastern Wisconsin identifies, in a preliminary manner, recommended sanitary sewer service areas tributary to each of the existing and proposed sewage treatment plans within the Region. The plan recommends that these service areas be refined and detailed through the cooperative efforts of the local units and agencies of government concerned, so that the service areas properly reflect local, as well as areawide, development objectives. This refinement and detailing is particularly important in light of provisions in the Wisconsin Administrative Code which require that the Wisconsin Department of Natural Resources, with respect to public sanitary sewers, and the Wisconsin Department of Industry, Labor and Human Relations, with respect to private sanitary sewers, make a finding that all proposed sanitary sewer extensions be in conformance with the adopted regional water quality management plan and the sanitary sewer service areas identified in that plan.

These Departments, in carrying out their responsibilities in this respect, require that the Southeastern Wisconsin Regional Planning Commission, as the designated areawide water quality management planning agency for the Southeastern Wisconsin Region, review and comment on each proposed sewer extension as to its relationship to the approved plan and sewer service area. If such review can be based on a refined service area cooperatively identified by the local units of government concerned, then no conflicts concerning sanitary sewer extensions should arise and the entire sewerage system and related land use development process can proceed in a smooth and efficient manner.

Acting in response to the recommendations made in the adopted regional water quality management plan, the Western Racine County Sewerage District on November 25, 1985, requested that the Regional Planning Commission assist the Sewerage District and the local units of government involved, in refining and detailing the recommended sanitary sewer service area tributary to the Western Racine County Sewerage District sewage treatment plant. The Waterford/Rochester area sanitary sewer service area report, as documented in SEWRPC Community Assistance Planning Report No. 141, Sanitary Sewer Service Area for the Waterford/Rochester Area, Racine County, Wisconsin, dated May 1986, the first edition of this report, was adopted by the governing body of the Town of Waterford Sanitary District No. 1 on April 1, 1986; by the governing body of the Western Racine County Sewerage District on May 6, 1986; by the Regional Planning Commission on June 16, 1986; and was endorsed by the Wisconsin Department of Natural Resources on December 9, 1986.

By letter dated November 28, 1995, the Western Racine County Sewerage District requested the Regional Planning Commission to revise and update the currently adopted sanitary sewer service area attendant to the Western Racine County Sewerage District sewage treatment facility as identified in SEWRPC Community Assistance Planning Report No. 141, as amended. This report documents the results of the update and amendment process.

The report contains a map showing, not only the recommended revised and updated sanitary sewer service area, but also the location and extent of the environmental corridors within that area. These environmental corridors contain the best and most important elements of the natural resource base within the sewer service area. Their preservation in essentially natural, open uses is important to the maintenance of the overall quality of the environment in the area, while avoiding the creation of serious and costly developmental problems. Accordingly, urban development should not be encouraged to occur within these corridors, a factor which should be taken into consideration in the extension of sanitary sewer service.

The sanitary sewer service area herein presented is intended to constitute a refinement of the areawide water quality management plan adopted by the Regional Planning Commission in July 1979. Accordingly, upon adoption of this report by the local units and agencies of government concerned, and subsequent adoption by the Regional Planning Commission, this report will be certified to the Wisconsin Department of Natural Resources and the U. S. Environmental Protection Agency as an amendment to the adopted, areawide water quality management plan.

The sanitary sewer service area presented in this report provides a sound guide which can assist the responsible local public officials in the making of sewer service-related development decisions in the Waterford/Rochester area. Accordingly, careful consideration and adoption of this report by all parties concerned is respectfully urged. The Regional Planning Commission stands ready to assist the various units and agencies of government concerned in implementing the recommendations contained in this report.

Respectfully submitted,

Kurt W. Bauer
Executive Director

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Chapter I

INTRODUCTION

BACKGROUND

On July 12, 1979, the Southeastern Wisconsin Regional Planning Commission formally adopted an areawide water quality management plan for Southeastern Wisconsin. The plan is aimed at achieving clean and wholesome surface waters within the seven-county Region, surface waters that are "fishable and swimmable."[1]

The plan has five basic elements: 1) a land use element, consisting of recommendations for the location of new urban development in the Region and for the preservation of primary environmental corridors and prime agricultural lands, 2) a point source pollution abatement element, including recommendations concerning the location and extent of sanitary sewer service areas; the location, type, and capacity of, and the level of treatment to be provided at, sewage treatment facilities; the location and configuration of intercommunity trunk sewers; and the abatement of pollution from sewer system overflows and from industrial wastewater discharges, 3) a nonpoint source pollution abatement element, consisting of recommendations for the control of pollutant runoff from rural and urban lands, 4) a sludge management element, consisting of recommendations for the handling and disposal of sludges from sewage treatment facilities, and 5) recommendations for the establishment of continuing water quality monitoring efforts in the Region.

The plan was formally certified over the period from July 23 to September 20, 1979, to all of the local units of government in the Region and to the concerned State and Federal agencies. The plan was formally endorsed by the Wisconsin Natural Resources Board on July 25, 1979. Such endorsement is particularly important because, under State law and administrative rules, certain actions by the Wisconsin Department of Natural Resources (DNR) must be found to be in accordance with the adopted and endorsed plan. These actions include, among others, DNR approval of waste discharge permits, DNR approval of State and Federal grants for the construction of wastewater treatment and conveyance facilities, and DNR approval of locally proposed sanitary sewer extensions.

NEED FOR REFINEMENT AND DETAILING OF LOCAL SANITARY SEWER SERVICE AREAS

The adopted regional water quality management plan includes recommended sanitary sewer service areas attendant to each recommended sewage treatment facility (see Map 1). There were in the plan, as initially adopted, a total of 85 such identified sanitary sewer service areas. The initially recommended sanitary sewer service areas were based upon the urban land use configuration identified in the Commission-adopted regional land use plan for the year 2000. As such, the delineation of the areas was necessarily general, and may not have reflected detailed local planning considerations.

Section NR 110.08(4) and Section ILHR 82.20(4) of the Wisconsin Administrative Code require that the Wisconsin Department of Natural Resources, with respect to public sanitary sewers, and the Wisconsin Department of Industry, Labor and Human Relations, with respect to private sanitary sewers, make a finding that all proposed sanitary sewer extensions be in conformance with adopted areawide water quality management plans and the sanitary sewer service areas identified in such plans. These Departments, in carrying out their responsibilities in this respect, require that the Southeastern Wisconsin Regional Planning Commission, as the designated areawide water quality management planning agency for the Southeastern Wisconsin Region, review and comment on each proposed sewer extension as to its relationship to the approved plan and sewer service areas. In order properly to reflect local, as well as areawide, planning concerns in the execution of this review responsibility, the Regional Planning Commission, in adopting the areawide water quality management plan, recommended that steps be taken to refine and detail each of the 85 sanitary sewer service

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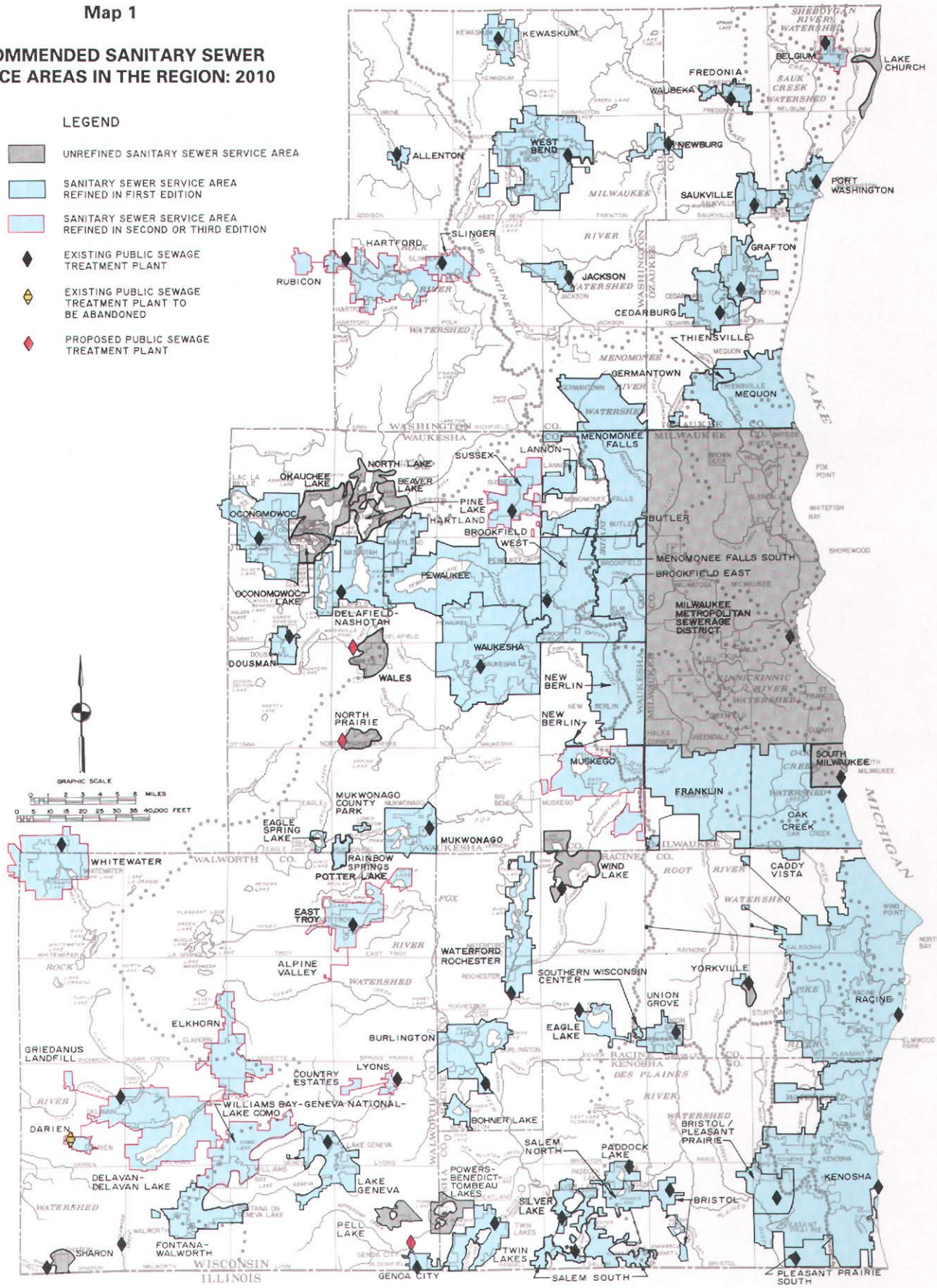
[1] *The adopted areawide water quality management plan is documented in SEWRPC Planning Report No. 30, A Regional Water Quality Management Plan for Southeastern Wisconsin: 2000, Volume One, Inventory Findings, September 1978; Volume Two, Alternative Plans, February 1979; and Volume Three, Recommended Plan, June 1979.*

Map 1

RECOMMENDED SANITARY SEWER SERVICE AREAS IN THE REGION: 2010



Source: SEWRPC.

areas delineated in the plan in cooperation with the local units of government concerned. The refinement and detailing process consists of the following seven steps:

1. Preparing of a base map at an appropriate scale for each sanitary sewer service area identified in the areawide water quality management plan.

2. Delineating on that base map of a sanitary sewer service area as set forth in the adopted regional water quality management plan.[2]

3. Conducting intergovernmental meetings involving the local or areawide unit or units of government operating the sewage treatment facility or facilities concerned and the other local units of government that are to be provided sanitary sewer service by the sewage treatment facility or facilities concerned. At these meetings, the initial sanitary sewer service area delineation is to be presented and discussed and the positions of each of the units of government concerned solicited.

4. Preparing modifications to the initially proposed sanitary sewer service area to reflect the agreements reached at the intergovernmental meetings, meeting to the fullest extent practicable the objectives expressed both in the adopted areawide water quality management and regional land use plans and in any adopted local land use and sanitary sewerage system plans.

5. Holding a public hearing jointly by the Commission and the local or areawide unit or units of government operating the treatment facility or facilities concerned to obtain public reaction to site-specific sewer service area issues that might be raised by the proposed sewer service area delineation.

6. Preparing of a final sanitary sewer service area map and accompanying report.

7. Adopting the final sewer service area map by the Commission and certification of the map to the Wisconsin Department of Natural Resources and the U. S. Environmental Protection Agency as an amendment to the adopted areawide water quality management plan. Desirably, such adoption by the Commission would follow endorsement of the map by the local or areawide unit or units of government operating the sewage treatment facility or facilities concerned and by the governing bodies of the local units of government that are to be served by the sewage treatment facility or facilities. While such a consensus by the local governments concerned will always be sought by the Commission, it is recognized that in some cases unanimous support of the refined and detailed sanitary sewer service areas may not be achieved. In those cases, the Commission will have to weigh the positions of the parties concerned and make a final determination concerning the issues involved.

THE WATERFORD/ROCHESTER SANITARY SEWER SERVICE AREA REFINEMENT PROCESS

The process of refining and detailing the sanitary sewer service areas in Southeastern Wisconsin was initiated after the Commission's adoption of the regional water quality management plan in July 1979. By letters dated September 5, 1985, and November 25, 1985, the Town of Waterford Sanitary District No. 1 and the Western Racine County Sewerage District, respectively, requested that the Regional Planning Commission undertake the refinement and detailing of the proposed year 2000 sanitary sewer service area tributary to the Western Racine County Sewerage District sewage treatment facility. Subsequent to the completion of the draft report, two public hearings were held on this matter, one on January 11, 1986, and one on January 29, 1986. The Waterford/Rochester sanitary sewer service area plan, as documented in SEWRPC Community Assistance Planning Report No. 141, Sanitary Sewer Service Area for the Waterford/Rochester Area, Racine County, Wisconsin, dated May 1986, the first edition of this report, was adopted by the governing body of the Town of Waterford Sanitary District No. 1 on April 1, 1986; by the governing body of the Western Racine County Sewerage District on May 6, 1986; and by the Regional Planning Commission on June 16, 1986; and was endorsed by the Wisconsin Department of Natural Resources on December 9, 1986.

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[2]*The sanitary sewer service area for the Waterford/Rochester area, initially identified in the water quality management plan, has subsequently been amended as set forth in SEWRPC Community Assistance Planning Report No. 141, Sanitary Sewer Service Area for the Waterford/Rochester Area, Racine County, Wisconsin, May 1986.*

The Regional Planning Commission subsequently adopted further amendments to the sanitary sewer service area attendant to the Western Racine County Sewerage District sewage treatment facility as this area was documented in the first edition of SEWRPC Community Assistance Planning Report No. 141. These amendments are, respectively, Amendment to the Regional Water Quality Management Plan—2000, Western Racine County Sewerage District, dated September 1988, which amendment re-delineated the Waterford/Rochester sanitary sewer service area to reflect the final system design of a new sanitary sewerage system serving the Town of Waterford Sanitary District No. 1, and was adopted by the Town of Waterford Sanitary District No. 1 on August 1, 1988, and by the Regional Planning Commission on September 12, 1988, and which was endorsed by the Wisconsin Department of Natural Resources on December 16, 1988; Amendment to the Regional Water Quality Management Plan—2000, Western Racine County Sewerage District, dated December 1989, which amendment deleted certain lands from an identified primary environmental corridor in order to accommodate development, with public sanitary sewer service, of the proposed Hidden Harbor Subdivision; it was adopted by the Regional Planning Commission on December 4, 1989, and endorsed by the Wisconsin Department of Natural Resources on February 20, 1990, and Amendment to the Regional Water Quality Management Plan—2000, Town of Rochester, dated September 1991, which amendment deleted certain lands from an identified primary environmental corridor in order to accommodate development, with public sanitary sewer service, of a long-standing platted subdivision; it was adopted by the Regional Planning Commission on September 11, 1991, and was endorsed by the Wisconsin Department of Natural Resources on November 26, 1991.

The Regional Planning Commission recognizes that, like other long-range plans, sanitary sewer service area plans should be reviewed periodically to assure that they continue to reflect properly regional and local urban development objectives of the communities involved, especially as such objectives may relate to the amount and spatial distribution of new urban development requiring sewer service. By letter dated November 28, 1995, the Western Racine County Sewerage District requested the Regional Planning Commission to refine further the currently adopted Waterford/Rochester sanitary sewer service area tributary to the Sewerage District's sewage treatment facility.

Copies of the draft of this report setting forth a preliminarily revised sanitary sewer service area plan were provided to the Towns of Rochester and Waterford; the Town of Rochester Utility District No. 1; the Town of Waterford Sanitary District No. 1; the Villages of Rochester and Waterford; the Western Racine County Sewerage District; Racine County; and the Wisconsin Department of Natural Resources for review and comment prior to the public hearing held on the plan proposal. A public hearing was held on April 10, 1996. The public reaction to the proposed sanitary sewer service area plan, as documented in the minutes contained in Appendix A, is summarized later in this report. The final, agreed-upon, revised sanitary sewer service area attendant to the Western Racine County Sewerage District sewage treatment facility is described in Chapter III of this report. The delineation of this area reflects the pertinent comments made at the public hearing held on this matter.

Chapter II

STUDY AREA DESCRIPTION

LOCATION

The study area considered for determining a revised Waterford/Rochester sanitary sewer service area is shown on Map 2. The area consists of all the lands encompassed within the corporate limits of the Villages of Rochester and Waterford, together with portions of the Towns of Rochester and Waterford. As indicated in Table 1, the total study area is about 26.9 square miles in extent, of which 16.0 square miles, or about 60 percent, lie within the Town of Waterford, about 8.2 square miles, or about 30 percent, lie within the Town of Rochester, about 2.2 square miles, or about 8 percent, lie within the Village of Waterford, and about 0.5 square mile, or about 2 percent, lie within the Village of Rochester. These areas are based on 1995 civil division boundaries.

POPULATION

The estimated resident population of the entire study area in 1990 was about 7,909 persons (see Table 1). Of this total, about 3,500 persons, or about 44 percent, resided in the Town of Waterford; 2,431 persons, or about 31 percent, resided in the Village of Waterford; about 1,000 persons, or about 13 percent, resided in the Town of Rochester; and 978 persons, or about 12 percent, resided in the Village of Rochester. Of these totals, about 2,400 persons, virtually the entire population of the Village of Waterford, were served by sanitary sewers extended from the Western Racine County Sewerage District sewage treatment facility. In addition, approximately 2,700 persons within the Town of Waterford Sanitary District No. 1, about 900 persons in the Village of Rochester, and about 400 persons within the Town of Rochester Utility District No. 1 were also served by sanitary sewers extended from the Western Racine County Sewerage District sewage treatment facility. The remaining 1,500 persons in the study area were served by onsite soil-absorption sewage disposal systems or by sewage holding tanks.

The forecast of probable future resident population levels for small geographic areas such as the Waterford/Rochester study area is a difficult task, accompanied by uncertainties and subject to periodic revision as new information becomes available. The practice that typically has been followed in forecasting population levels for physical development planning is the preparation of a single population forecast believed to be the most representative of future conditions. This traditional approach works well in periods of social and economic stability, when historic trends can be anticipated to continue relatively unchanged over the plan design period. During periods of major change in social and economic conditions, however, when there is great uncertainty as to whether historic trends will continue, alternatives to this traditional approach may be required. One such alternative approach proposed in recent years and utilized to a limited extent at the national level for public and quasi-public planning purposes, is termed "alternative futures." Under this approach, the development, test, and evaluation of alternative plans is based not upon a single, most probable forecast of socio-economic conditions, but upon a number of alternative futures chosen to represent a range of conditions which may be expected to occur over the plan design period.

Recognizing the increasing uncertainty inherent in estimating future population levels under the rapidly changing socio-economic conditions existing in the United States, the Regional Planning Commission began to incorporate the alternative futures approach into its planning program in the late 1970s, the first known attempt to apply this approach to areawide and local planning in the United States. In the exploration of alternative futures for the Southeastern Wisconsin Region, an attempt was made first to identify all those external factors which may be expected to directly or indirectly affect development conditions in the Region, together with the likely range of prospects for these factors. Thus, the preparation of the Commission's new year 2010 regional land use plan incorporated a consideration of three alternative scenarios for regional growth and change, involving different assumptions regarding three major external factors: the cost and availability of energy, population, lifestyles, and economic conditions. Two of these scenarios, the high-growth and low-growth scenarios, are intended to represent the upper and lower extremes of possible future regional growth

and change, while the third is intended to represent an intermediate future between the two extremes. A set of population and employment projections was then developed for each of the three scenarios.

The Commission's year 2010 land use plan also considered alternative development patterns for accommodating the incremental population and employment levels envisioned under the aforedescribed growth scenarios. Two development patterns were considered in the preparation of the alternative land use plans: a centralized development pattern, which, like the first- and second-generation adopted regional land use plans, accommodated increases in population and economic activity by promoting a more compact regional settlement pattern, moderating to the extent practicable the current trend toward diffusion of population, employment, and attendant urban development, and a decentralized development pattern, which accommodated the continued diffusion of population and employment levels but in a manner consistent with the protection of the natural resource base of the Region.

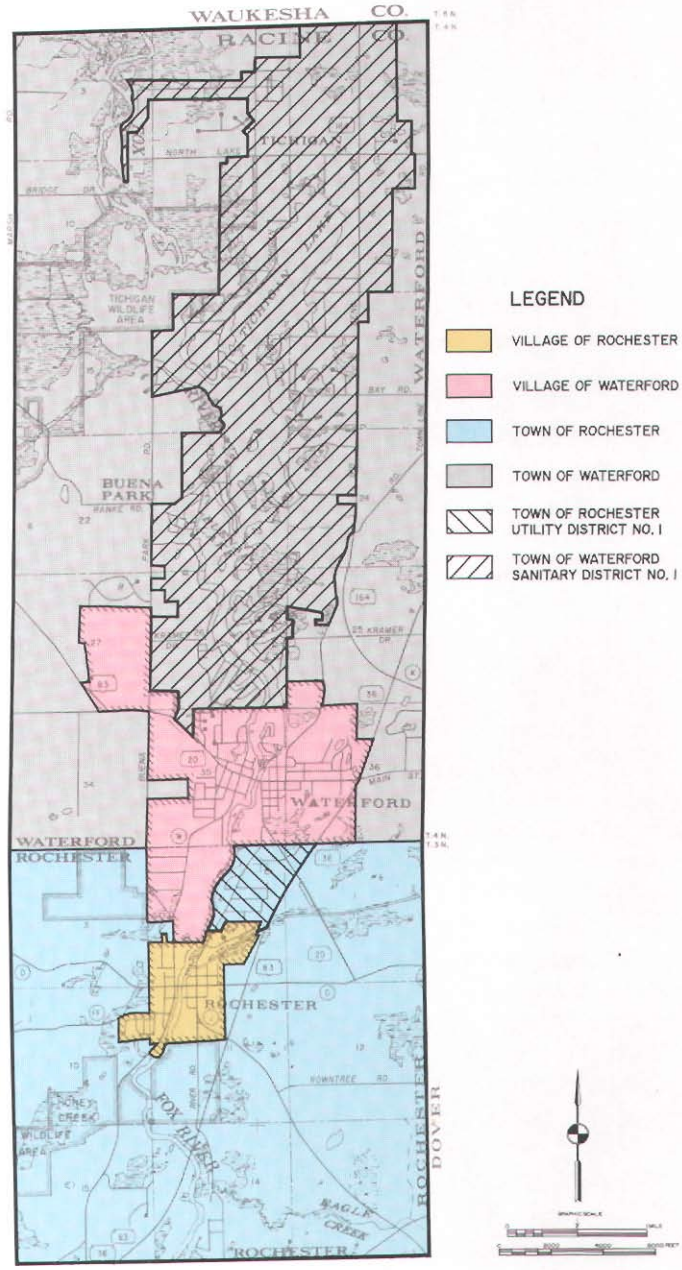
The intermediate-growth centralized land use plan, the Commission-adopted land use plan, would accommodate a year 2010 resident population level of about 9,600 persons in the Waterford/Rochester study area. Under the alternative futures approach utilized by the Commission for its work, however, by the year 2010 the population level within the study area could be as high as 11,800 persons under the high-growth, decentralized land use plan.

ENVIRONMENTALLY SIGNIFICANT LANDS

Environmental corridors are defined as linear areas in the landscape containing concentrations of natural resource and resource-related amenities. These corridors generally lie along the major stream valleys, around major lakes, and in the Kettle Moraine area of Southeastern Wisconsin. Almost all the remaining high-value wetlands, woodlands, wildlife habitat areas, major bodies of surface water, and delineated floodlands and shorelands are contained within these corridors. In addition, significant groundwater recharge and discharge areas, many of the most important recreational and scenic areas, and the best remaining potential park sites are located within the environmental corridors. Such corridors are, in effect, a composite of the most important individual elements of the natural resource base in southeastern Wisconsin, and have immeasurable environmental, ecological, and recreational value.

Map 2

STUDY AREA IDENTIFIED FOR PURPOSES OF REVISING THE WATERFORD/ROCHESTER SANITARY SEWER SERVICE AREA



Source: SEWRPC.

The land use element of the adopted regional water quality management plan recommends that lands identified as primary environmental corridors not be developed for intensive urban use. Accordingly, the plan further recommends that sanitary sewers not be extended into such corridors for the purpose of accommodating urban development in the corridors.

Table 1

STUDY AREA INFORMATION BY CIVIL DIVISION

Civil Division	Area		1990 Population		Population Served by Public Sanitary Sewer	
	Square Miles	Percent of Total	Number	Percent of Total	Number	Percent of Total
Village of Rochester	0.5	1.8	978	12.4	900	14.1
Village of Waterford	2.2	8.2	2,431	30.7	2,400	37.5
Town of Rochester	8.2	30.5	1,000[a]	12.6	400	6.2
Town of Waterford	16.0	59.5	3,500[a]	44.3	2,700	42.2
Study Area	26.9	100.0	7,909[b]	100.0	6,400[b]	100.0

[a] *Estimated.*

[b] *Does not include a seasonal population of about 400 persons.*

Source: U. S. Bureau of the Census, Wisconsin Department of Administration, and SEWRPC.

It was recognized in the plan, however, that it would be necessary in some cases to construct sanitary sewers across and through primary environmental corridors and that certain land uses requiring sanitary sewer service could be properly located in the corridors, including park and outdoor recreation facilities and certain institutional uses. In some cases, very-low-density residential development at a density not to exceed one housing unit per five acres of upland corridor, compatible with the preservation of the corridors in essentially natural, open uses, may also be permitted to occupy corridor lands; it may be desirable to extend sewers into the corridors to serve such uses. Basically, however, the adopted regional land use plan seeks to ensure that the primary environmental corridor lands are not destroyed through conversion to intensive urban uses.

One of the first steps in refining the Waterford/Rochester sanitary sewer service area was to map in detail the environmentally significant lands in the study area. Accordingly, Commission inventories were reviewed and updated as necessary with respect to the following elements of the natural resource base: lakes, streams, and associated shorelands and floodlands, wetlands, woodlands, wildlife habitat areas, areas of rugged terrain and high-relief topography, wet, poorly drained, and organic soils, and remnant prairies. In addition, inventories were reviewed and updated as necessary with respect to such natural resource-related features as existing parks, potential park sites, sites of historic and archaeological value, areas offering scenic vistas or viewpoints, and areas of scientific value.

Each of these natural resource and resource-related elements was mapped on one inch equals 400 feet scale, ratioed and rectified aerial photographs. A point system for value rating the various elements of the resource base was established (see Table 2). The primary environmental corridors were delineated using this rating system. To qualify for inclusion in a primary environmental corridor, an area must exhibit a point value of 10 or more. In addition, a primary environmental corridor must be at least 400 acres in size, be at least two miles long, and have a minimum width of 200 feet. This environmental corridor refinement process is more fully described in SEWRPC Technical Record, Vol. 4, No. 2, in an article entitled, "Refining the Delineation of Environmental Corridors in Southeastern Wisconsin." The primary environmental corridors as delineated in the Waterford/Rochester study area are shown on Map 3.

In addition, Map 3 identifies secondary environmental corridors. The secondary environmental corridors, while not as significant as the primary environmental corridors in terms of overall resource values, should be considered for preservation as the process of urban development proceeds, because such corridors often provide economical drainageways, as well as needed "green" space, through

developing residential neighborhoods. To qualify for inclusion in a secondary environmental corridor, an area must exhibit a point value of 10 or more, and have a minimum area of 100 acres and a minimum length of one mile.

Also identified on Map 3 are isolated natural resource areas. Isolated natural resource areas generally consist of those natural resource base elements that have inherent natural value, such as wetlands, woodlands, wildlife habitat areas, and surface water areas, but are separated physically from the primary and secondary environmental corridors by intensive urban or agricultural land uses. Since isolated natural resource areas may provide the only available wildlife habitat in an area, provide good locations for local parks and nature study areas, and lend aesthetic character and natural diversity to an area, they should also be protected and preserved in a natural state to the extent practicable. An isolated natural resource area must be at least five acres in size.

Lands encompassed within the primary environmental corridors of the Waterford/Rochester study area in 1995 totaled 8.3 square miles, including the entire surface-water area of Buena and Tichigan Lakes, or about 31 percent of the total study area. Lands encompassed within the secondary environmental corridors totaled about 0.1 square mile, or less than 1 percent of the study area. Lands encompassed within isolated natural resource areas totaled about 0.7 square mile, or about 3 percent of the study area. Thus, all environmentally significant lands in the Waterford/Rochester study area comprise about 9.1 square miles, or about 34 percent of the study area.

While the adopted regional water quality management plan places great emphasis upon the protection of the lands identified as primary environmental corridors in essentially natural, open uses, it recognizes that there may be situations in which the objective of preserving the corridor lands directly conflicts with other legitimate regional and local development objectives. For example, the regional plan recognizes that if a community were to determine the need for a strategic arterial street extension through the primary environmental corridor lands in order to service an important local development project, the street extension may be considered to be of greater community benefit than the preservation of a small segment of the primary environmental corridor. When such conflicts in legitimate community development objectives occur, it is important that they be resolved sensitively and that any damage to the natural environment in the corridors be minimized.

While almost all the delineated floodlands in the Waterford/Rochester study area are contained within the environmental corridors, there are small areas of the floodlands utilized for agricultural

Table 2

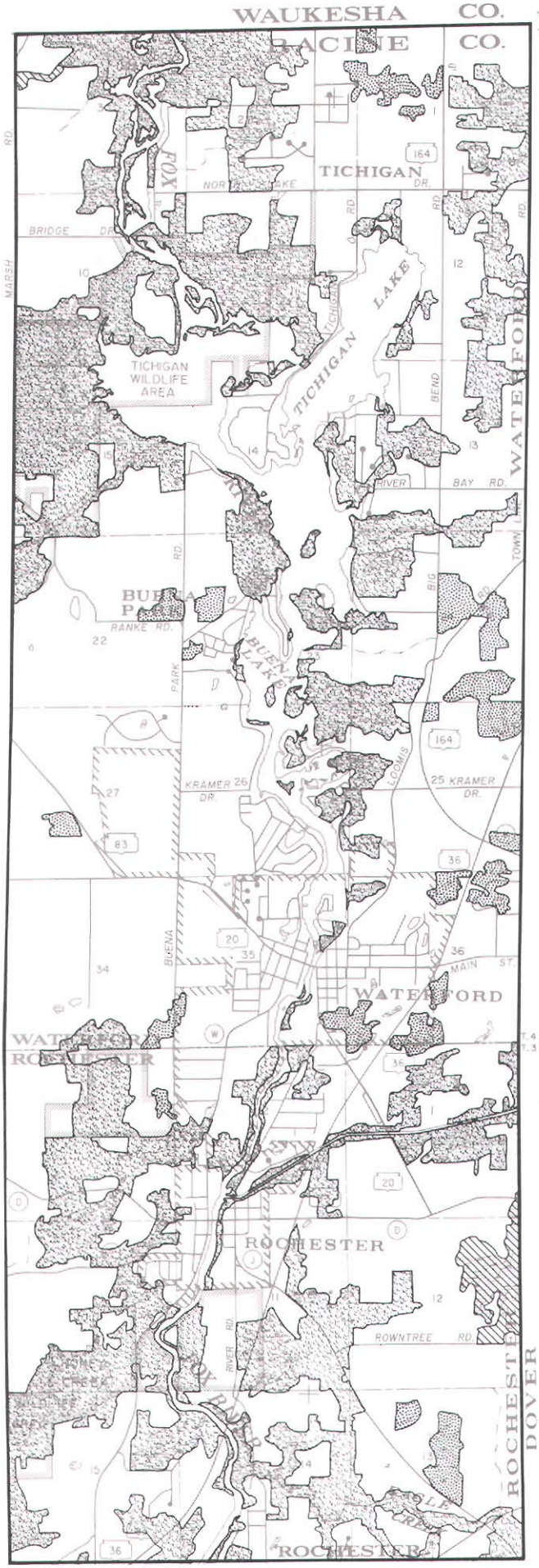
VALUES ASSIGNED TO NATURAL RESOURCE BASE AND RESOURCE BASE-RELATED ELEMENTS IN THE PROCESS OF DELINEATING PRIMARY AND SECONDARY ENVIRONMENTAL CORRIDORS

Resource Base or Related Element	Point Value
Natural Resource Base	
Lake	
Major (50 acres or more)	20
Minor (5 to 49 acres)	20
Rivers or Streams (perennial)	10
Shoreland	
Lake or Perennial River or Stream	10
Intermittent Stream	5
Floodland (100-year recurrence interval)	3
Wetland	10
Wet, Poorly Drained, or Organic Soil	5
Woodland	10
Wildlife Habitat	
High-Value	10
Medium-Value	7
Low-Value	5
Steep Slope	
20 Percent or More	7
13 to 19 Percent	5
Prairie	10
Natural Resource Base-Related	
Existing Park or Open Space Site	
Rural Open Space Site	5
Other Park and Open Space Site	2
Potential Park Site	
High-Value	3
Medium-Value	2
Low-Value	1
Historic Site	
Structure	1
Other Cultural	1
Archaeological	2
Scenic Viewpoint	5
Scientific Area	
State Scientific Area	15
State Significance	15
County Significance	10
Local Significance	5

Source: SEWRPC.

Map 3

ENVIRONMENTALLY SIGNIFICANT LANDS IN THE WATERFORD/ROCHESTER STUDY AREA



Source: SEWRPC.

or other open space uses located outside such corridors. The Regional Planning Commission recognizes that such floodlands are generally unsuitable for intensive urban development owing to poor soil conditions and periodic flood inundation. The Commission thus recommends that, as development of lands located within urban areas and adjacent to these floodland areas occurs, such floodland areas be preserved in essentially natural, open space uses, and become, over time, part of the adjacent environmental corridor.

In addition, the adopted regional water quality management plan recognizes that certain secondary environmental corridors and isolated natural resource areas may, at the discretion of local units of government, be converted to urban uses over the plan design period. Current Federal, State, and local regulations may, however, effectively preclude development of such areas. Of particular importance in this regard are natural resource protection regulations dealing with wetlands, floodplains, shorelands, stormwater runoff, and erosion control. Therefore, it is important that the developer or local unit of government concerned determine if it is necessary to obtain any applicable Federal, State, or local permits prior to any proposed disturbance of wetlands, floodplains, or other regulated lands.

Chapter III

PROPOSED SANITARY SEWER SERVICE AREA

SIGNIFICANCE OF SANITARY SEWER SERVICE AREA DELINEATION

As noted earlier in this report, changes in the Wisconsin Department of Natural Resources (DNR) and Wisconsin Department of Industry, Labor and Human Relations (DILHR) rules governing the extension of sanitary sewers have made the delineation of local sanitary sewer service areas an important process for local units of government and private land developers. Prior to the rule changes, DNR and DILHR review and approval of locally proposed sanitary sewer extensions was confined primarily to engineering considerations and was intended to ensure that the sewers were properly sized and constructed. The rule changes significantly expanded the scope of the State review process to include water quality-oriented land use planning considerations. Before the two State agencies concerned can approve a locally proposed sanitary sewer extension, they must make a finding that the lands to be served by the proposed extension lie within an approved sanitary sewer service area. Such areas are identified in the Commission's adopted areawide water quality management plan and any subsequent amendments thereto. If a locally proposed sanitary sewer extension is designed to serve areas not recommended for sewer service in an areawide water quality management plan, the State agencies concerned must deny approval of the extension. Consequently, it is important that an intergovernmental consensus be reached in the delineation of proposed sanitary sewer service areas.

CURRENTLY APPROVED WATERFORD/ROCHESTER SANITARY SEWER SERVICE AREA

The design year 2000 Waterford/Rochester sanitary sewer service area tributary to the Western Racine County Sewerage District sewage treatment facility, as set forth in the currently adopted sanitary sewer this report, and as amended, is shown on Map 4. This service area totals about 9.3 square miles, or about 35 percent of the total study area of 26.9 square miles,[1] and encompasses about 3.6 square miles of primary environmental corridor lands and about 0.2 square miles of isolated natural resource area lands. There were no secondary environmental corridor lands identified within this area. Thus, a total of 3.8 square miles, or about 41 percent of the currently adopted Waterford/Rochester sewer service area, would be within identified environmentally sensitive lands consisting of primary environmental corridors and isolated natural resource areas.

In addition, the Waterford/Rochester sanitary sewer service area had, in 1990, a resident population of about 6,700 persons.[2] As previously noted, in 1990, approximately 6,400 persons, or about 96 percent of the 6,700 persons within the currently approved sewer service area, were provided sanitary sewer service by the Western Racine County Sewerage District sewage treatment plant.

Furthermore, the currently adopted Waterford/Rochester sanitary sewer service area plan would accommodate a design year 2000 resident population level of about 9,400 persons at an average overall density of about 2.6 dwelling units per net residential acre.

REVISED WATERFORD/ROCHESTER SANITARY SEWER SERVICE AREA

A comprehensive review of the Waterford/Rochester sanitary sewer service area was last undertaken during the preparation of SEWRPC Community Assistance Planning Report No. 141, first edition, in May 1986. The purpose of this refinement effort is to review once again, comprehensively, the sewer service needs of lands envisioned to be tributary to the Western Racine County Sewerage District sewage treatment facility and to adjust and extend, as necessary, the sewer service area boundaries to accommodate the design year 2010 population levels envisioned for this service area.

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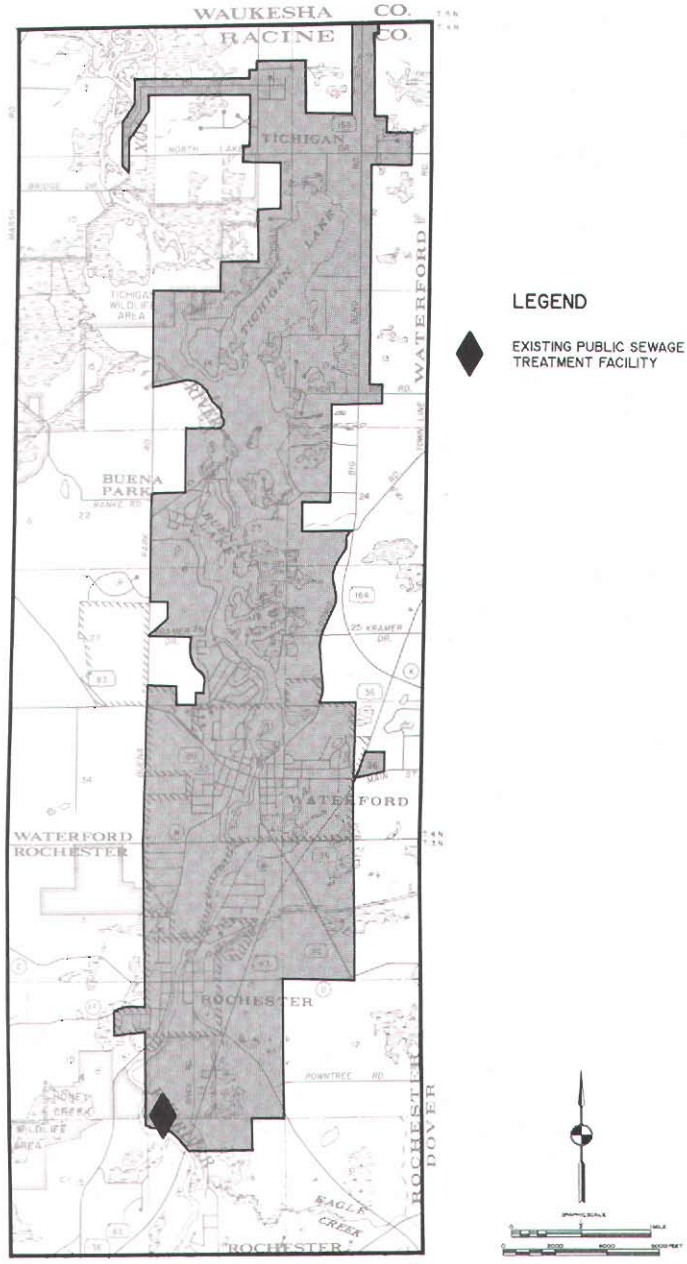
[1] *Includes approximately 862 acres of surface water associated with Buena and Tichigan Lakes.*

[2] *Does not include a seasonal population of about 400 persons.*

Map 4

WATERFORD/ROCHESTER SANITARY SEWER SERVICE AREA AS DEFINED IN SEWRPC COMMUNITY ASSISTANCE PLANNING REPORT NO. 141 (FIRST EDITION), AS AMENDED



Source: SEWRPC.

Factors taken into account in the delineation of the revised Waterford/Rochester sanitary sewer service area included the currently adopted sanitary sewer service area, as shown on Map 4; the design year 2010 regional land use plan adopted by the Regional Planning Commission on September 23, 1992, as documented in SEWRPC Planning Report No. 40, A Regional Land Use Plan for Southeastern Wisconsin: 2010, dated January 1992; and the proposals set forth by representatives of the Village of Waterford. All of the other concerned local units of government expressed satisfaction with the presently adopted sanitary sewer service area boundary.

The refinement effort also considered the location, type, and extent of existing urban development; the location and extent of gravity drainage areas tributary to major sewerage system pumping stations and to sewage treatment facilities; the location and capacity of existing and planned trunk sewers; the location of existing property ownership boundaries; and certain pertinent aspects of the natural resource base, including the location and extent of soils suitable for urban development, the location and extent of primary and secondary environmental corridors, and the location and extent of prime agricultural lands.

As previously noted, the Commission, as part of its regional planning program, including the delineation of sanitary sewer service areas and the subsequent refinements thereof, utilizes the "alternative futures" concept to deal with the uncertainties regarding factors affecting future growth and development within the Region. The sewer service area refinement effort for the Waterford/Rochester area thus incorporates a range of population levels, with the most reasonable lower end of the population range based upon the Commission's intermediate-growth centralized land use plan and most reasonable upper end of the population range based upon the Commission's high-growth decentralized land use plan.

Local sanitary sewer service area and sewerage facility planning work should consider a range of population levels in the evaluation of alternative facility plans in order to identify alternatives which perform well under a reasonable range of possible future conditions. Construction of such facilities and mechanical and electrical components as pumps, compressors, and chemical-feed equipment of sewage treatment facilities are typically based upon relatively short-term population and loading forecasts. These facilities are often replaced or rebuilt at intervals of 10 to 15 years and are amenable to expansion in a staged manner. Accordingly, capital investments in such facilities are often limited to those components relatively certain to be needed

over a 15 to 20-year design period. The use of the intermediate population forecast, thus, may be most appropriate for use in the design of such facilities.

Consideration of a high-growth population forecast, however, may be appropriate in delineating a service area and in the design of certain components of the sewerage system that have a longer life, including gravity-flow conveyance facilities and such treatment plant components such as hydraulic conduits and tanks. With respect to the size of the service area, the high-growth population forecast may be the most logical to use since the Commission forecasting methodology analyses indicate that such a level is indeed potentially achievable within the Southeastern Wisconsin Region. A sanitary sewer service area size based upon that level may also be desirable in order to provide flexibility to communities in determining the spatial distribution of anticipated new urban development and to facilitate the operation of the urban land market. With respect to the design of certain components of the sewerage system, the use of the high-growth population forecast may also be desirable where the physical life of the facilities is substantially greater than 20 years. Thus, facility construction based upon the high-growth forecast and loading levels may be warranted where the physical life of the facilities extends beyond the 20-year planning period.

Under the foregoing conditions, the population levels of the area tributary to the Western Racine County Sewerage District sewage treatment facility would range from about 8,600 persons, under the Commission's recommended land use plan, to about 10,700 persons, under the Commission's high-growth decentralized land use plan.[3] It should be noted however, that the Town of Waterford has recently completed a land use plan, as set forth in SEWRPC Community Assistance Planning Report No. 217, A Land Use Plan for the Town of Waterford: 2010, Racine County, Wisconsin, dated May 1995, which plan indicates that based upon current growth trends being experienced within the Town in general and within the Town of Waterford Sanitary District No. 1 in particular, the year 2010 population levels in the Town of Waterford could exceed even the population forecasts envisioned under the Commission's high-growth decentralized land use scenario. Based upon this finding, by the design year 2010, about 11,600 persons could be accommodated within the Waterford/Rochester sanitary sewer service area.

The revised year 2010 Waterford/Rochester sanitary sewer service area anticipated to be tributary to the Western Racine County Sewerage District sewage treatment facility, together with existing trunk sewers, as submitted to public hearing, is shown on Map 5. The proposed changes to the currently approved Waterford/Rochester sewer service area are highlighted on Map 6. The gross revised Waterford/Rochester sanitary sewer service area encompasses about 10.3 square miles,[4] or about 38 percent of the total study area of 26.9 square miles. This gross sewer service area includes about 3.2 square miles of primary environmental corridors and about 0.2 square mile of isolated natural resource areas. There were no secondary environmental corridor lands identified within this area. Therefore, a total of about 3.4 square miles, or about 33 percent of the sewer service area, would be encompassed in environmentally sensitive areas, consisting of primary environmental corridor and isolated natural resource area lands.

The revised year 2010 sanitary sewer service area tributary to the Western Racine County Sewerage District sewage treatment facility would accommodate a design year 2010 resident population of about 11,600 persons, with a seasonal population of about 600 persons.[5] The incremental population and housing unit levels envisioned in the Waterford/Rochester sewer service area would be accom-

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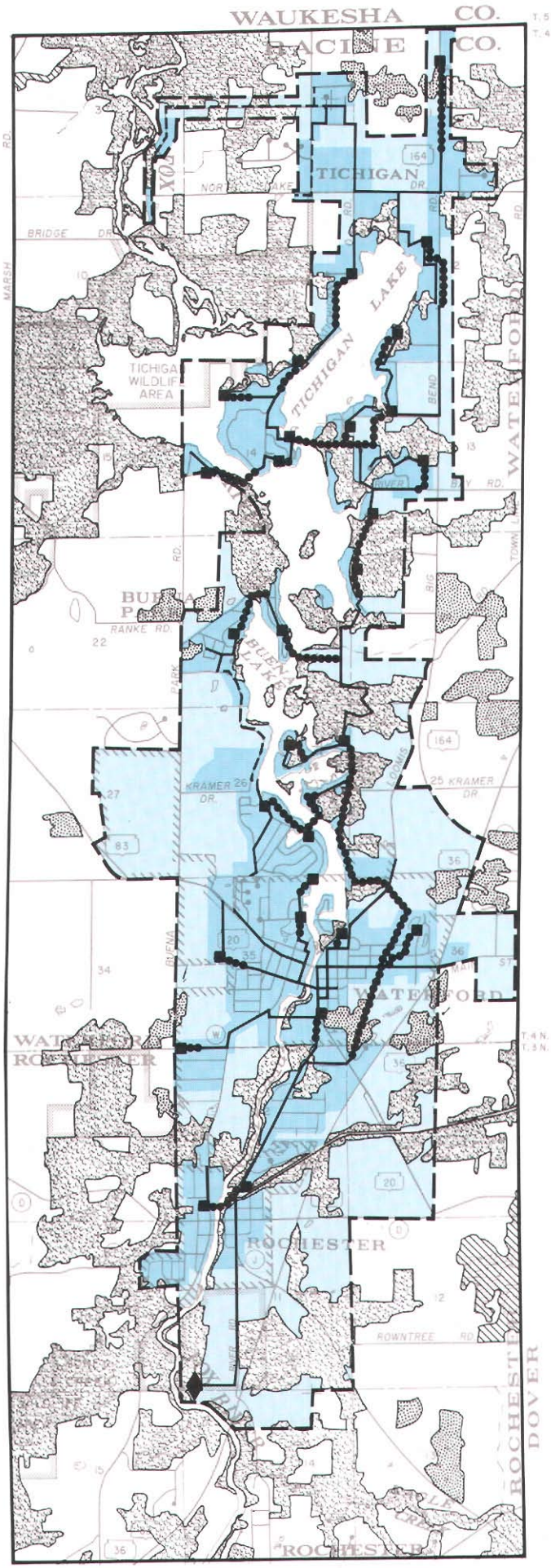
[3]*Does not include estimated seasonal populations of about 500 persons and 600 persons, respectively.*

[4]*It should be noted that this area includes the 862 acres of surface water associated with Buena and Tichigan Lakes.*

[5]*It is important to note that the aforereferenced Town of Waterford land use plan envisions that in addition to those Town lands located within the adopted Waterford/Rochester sanitary sewer service area, certain other lands, currently located outside the planned sanitary sewer service area but within the legally defined limits of the Town of Waterford Sanitary District No. 1, would also eventually be served with centralized public sanitary sewer service extended from the Western Racine County Sewerage District sewage treatment facility. With such extensions, about 13,100 persons could be accommodated within the Waterford/Rochester sanitary sewer service area by the design year 2010.*

Map 5

REVISED WATERFORD/ROCHESTER SANITARY SEWER SERVICE AREA



LEGEND

- PRIMARY ENVIRONMENTAL CORRIDOR
- SECONDARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREA
- NET SANITARY SEWER SERVICE AREA (EXISTING)
- NET SANITARY SEWER SERVICE AREA (2010)
- GROSS SANITARY SEWER SERVICE AREA BOUNDARY
- EXISTING SEWAGE TREATMENT FACILITY
- EXISTING FORCE MAIN
- EXISTING PUMPING STATION
- EXISTING GRAVITY SEWER
- EXISTING SEWER PRESSURE SYSTEM

GRAPHIC SCALE

0 1/4 1/2 MILE

0 2000 4000 FEET

Source: SEWRPC.

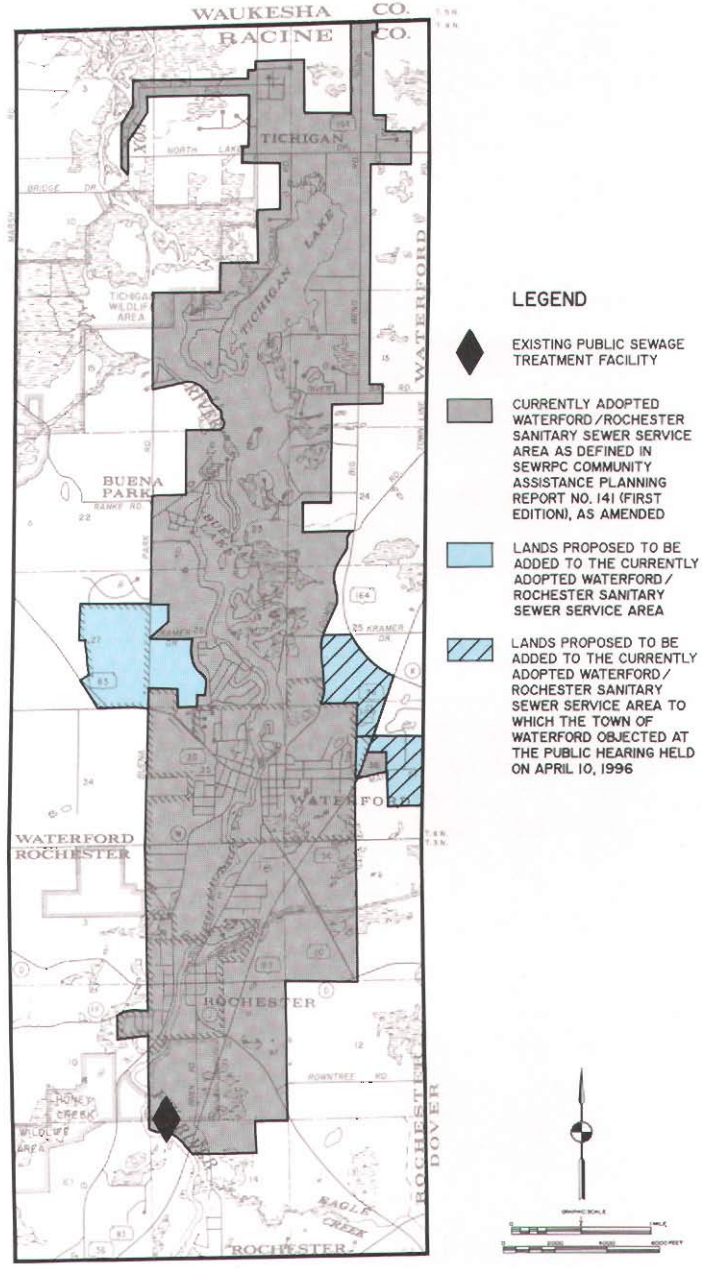
modated at a density of about 1.8 dwelling units per net residential acre.[6] This density lies within the recommended density range for the Waterford/ Rochester area of the Region as identified in the Commission-adopted regional land use plan for the year 2010.

WATER QUALITY IMPACTS

Under the adopted regional water quality management plan and the revised sanitary sewer service area plan herein set forth, it is envisioned that all urban lands within the planned urban service area would receive sanitary sewer service. It is also envisioned that all lands identified as primary environmental corridors would not be developed for intensive urban use. It is recognized, however, that certain land uses requiring sanitary sewer service could be properly located in the primary environmental corridors, including park and outdoor recreation facilities, certain institutional uses, and, in some cases, very-low-density residential development at a density not to exceed one housing unit per five acres of upland corridor land, compatible with the preservation of the corridors in essentially natural, open uses. These plans also recognize that certain secondary environmental corridors and isolated natural resource areas may, at the discretion of the local unit of government, be converted to urban uses over the plan design period. However, current Federal, State, and local regulations may effectively preclude development of such areas. Of particular importance in this regard are natural resource protection regulations dealing with wetlands, floodplains, shorelands, stormwater runoff, and erosion control. Therefore, it is

Map 6

PROPOSED REVISIONS TO THE WATERFORD/ROCHESTER SANITARY SEWER SERVICE AREA



Source: SEWRPC.

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[6] *Net incremental residential density in the revised Waterford / Rochester sanitary sewer service area is determined by dividing the total number of incremental dwelling units anticipated in the sewer service area in the design year by the net incremental residential land area anticipated within that area. The total number of incremental dwelling units anticipated in the Waterford / Rochester sewer service area in the design year, 1,934 units, divided by the incremental net residential land within the sewer service area, 1,057 acres, results in an incremental net residential density of 1.8 dwelling units per acre.*

However, it should be noted that the Town of Waterford portion of the planned Waterford / Rochester sanitary sewer service area would approximate an incremental residential density of about 1.3 dwelling units per acre, consistent with the recommendations contained in the aforereferenced Town of Waterford land use plan; while the remainder of the Waterford / Rochester sanitary sewer service area would approximate an incremental residential density of about 2.8 dwelling units per acre, consistent with the Waterford / Rochester area of the Region, as identified in the Commission adopted regional land use plan.

important that the developer or the local unit of government concerned determine if it is necessary to obtain any applicable Federal, State, or local permits before any proposed disturbance of wetlands, floodplains, or other regulated lands.[7]

In addition, provision of public sewer service to that portion of the revised sanitary sewer service area currently developed, but not yet served by public sewers, will reduce the pollutant loadings from the onsite sewage disposal systems to both surface water and groundwater.

Accordingly, assuming that any applicable Federal, State, and local permits are obtained and that proper site development and construction practices are employed, there should be no significant adverse water quality impacts attributable to the development of the planned sanitary sewer service area.

COST-EFFECTIVENESS ANALYSIS OF SEWAGE CONVEYANCE AND TREATMENT ALTERNATIVES

The planned sewer service area set forth for the Waterford /Rochester area in this report is about 1.0 square mile larger than the currently approved sewer service area, as set forth in SEWRPC Community Assistance Planning Report No. 141. All of the planned sewer service area lies adjacent to the current Waterford/Rochester sewer service area. The other public sanitary sewer systems nearest to the planned Waterford/Rochester sewer service area are the Town of Norway Sanitary District No. 1 system, located about one mile east of the Waterford/Rochester sewer service area, and the City of Burlington system, located about two miles south of the Waterford/Rochester sewer service area. Clearly, the most cost-effective means of providing public sewer service to the entire service area is through the Western Racine County Sewerage District's sewerage system.

SEWAGE TREATMENT PLANT CAPACITY IMPACT ANALYSIS

The Western Racine County Sewerage District sewage treatment plant was improved and expanded in 1987. The basic design data[8] utilized for that plant improvement and expansion provided a hydraulic loading capacity of 1.0 million gallons per day (mgd) on an average annual flow basis and 3.0 mgd on a peak hourly flow basis and an organic loading capacity of 1,700 pounds per day (ppd) of biochemical oxygen demand (BOD) on an average annual loading basis. In 1994, the District conducted a reevaluation of the plant capacity utilizing plant loading and performance data, unit sizing, and current design criteria.[9] That analysis resulted in a conclusion that the plant has an hydraulic loading capacity of 1.3 mgd and an organic loading capacity of 2,300 ppd of BOD for an indeterminate sustained period of wet-weather flow. This wet-weather capacity rating was approved by the Wisconsin Department of Natural Resources; this capacity is reflected in the current Wisconsin Pollution Discharge Elimination System Permit for the plant. A summary of the current design capacity of the sewage treatment plant and appurtenant sewerage system components is set forth in Table 3.

The estimated current and projected loadings to the Western Racine County Sewerage District sewerage system are summarized by designated management agency in Table 4 and Map 7. These loadings for the individual designated management agencies are approximate, based upon limited available data. The planned increase in sewered population served by public sewers is envisioned to be from about 7,800 permanent residents, plus 400 seasonal residents, in 1995, to about 11,600 permanent residents, and about 600 seasonal residents, by the design year

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[7]*It should be noted that the sanitary sewer service area map set forth herein, particularly the environmental corridors and isolated natural resource areas shown thereon, are a representation of conditions at the time of map preparation and that such physical features may change over time from natural or human causes. Therefore, the presence and location of wetlands, navigable water, floodplains, and similar site features should be verified by developers, and applicable permits obtained prior to any land-disturbing activity.*

[8]*See Foth & Van Dyke, Western Racine County Sewerage District Facilities Plan for Wastewater Treatment, Addendum No. 1, March 1986.*

[9]*See Strand Associates, Inc., letter reports to Wisconsin Department of Natural Resources dated August 23, 1994 and September 2, 1994.*

Table 3

SELECTED DESIGN DATA FOR THE WESTERN RACINE COUNTY SEWERAGE DISTRICT SEWERAGE SYSTEM: 1996

Year of Construction and Major Modifications	1968, 1987
Sewage Treatment Plant	
Design Hydraulic Loading Capacity	
Average Annual Flow Basis	1.0 mgd[a]
Sustained Wet Weather Flow Capacity	1.3 mgd[b]
Peak Hourly Flow Capacity	3.0 mgd[a]
Design Organic Loading	
Average Annual Loading Basis	1,700 ppd[a]
Sustained Wet Weather Loading Basis	2,300 ppd[b]
Conveyance System Hydraulic Capacity	
Influent Pumping Station	5.0 mgd [c,d]
Trunk Sewer Downstream of Pumping Station No. 1	5.6 mgd
Pumping Station No. 1	4.0 mgd[c]
Trunk Sewer Upstream of Pumping Station No. 1	3.5 mgd

[a] *Based upon March 1986 facility plan. Not specifically reevaluated in 1994.*

[b] *Based upon 1994 plant rating evaluation.*

[c] *Capacity with one pump out of service.*

[d] *Firm pumping capacity less 1.0 mgd for return activated sludge hydraulic loading.*

Source: SEWRPC.

2010. It is estimated to result in a flow rate of about 1.15 mgd on an average annual flow basis, about 1.50 mgd on a maximum monthly flow basis, and about 3.50 mgd on a peak hourly flow basis. The organic loading is expected to reach about 2,100 ppd of BOD on an average annual flow basis and 2,300 ppd on a maximum monthly loading basis, not including the loading associated with accepted septage and holding tank wastes. In 1995, that loading was estimated to contribute between 500 and 700 ppd of organic loading on an average annual loading basis. The septage and holding tank waste loadings could be reduced in the future, if needed, to provide additional organic loading capacity for the sewer area connected to the public sewer system.

Given the aforedescribed planned year 2010 estimated loadings and assuming continued steady growth in the area, facility planning for plant expansion and modifications will probably have to be initiated sometime between the years 2000 and 2005. It is expected that such facility planning will consider such options for increasing the plant capacity as the following: interim measures such as increasing sludge storage capacity and provision of wastewater storage or a major plant expansion increasing the plant capacity by approximately 50 percent.

PUBLIC REACTION TO THE REVISED SANITARY SEWER SERVICE AREA

A public hearing was held on April 10, 1996, for the purpose of receiving comments on the proposed new Waterford/Rochester sanitary sewer service area plan as shown on Map 5. This hearing was jointly sponsored by the Western Racine County Sewerage District and the Regional Planning Commission. Summary minutes of the public hearing are presented in Appendix A.

The proposed revisions to the sewer service area plan for the Waterford-Rochester area were presented with the aid of posted maps prior to receiving public comment. The significance of the environmentally sensitive lands within the service area insofar as the future extension of sewer service are concerned was also presented. In addition, the probable impacts of the planned development within the entire proposed sewer service area on the capacities of the sewage treatment plant and on the major sewage conveyance facilities were summarized. Comments on the proposed revisions were then solicited.

Review of the public hearing record indicates that several individuals expressed concern about certain aspects of the planning process and the overall extent of the urban development envisioned. The Planning and Development Director of Racine County expressed concern over the lack of an agreed-upon land use plan that would serve as the basis for an expanded sewer service area, noting that, within the Sewerage District, only the Town of Waterford had prepared such a plan. He observed that the lack of an agreed-upon land use plan for the four communities concerned, together with the lack of an agreement upon the sharing of future costs associated with a treatment plant expansion, may put some landowners in the sewer service area, as well as the local governments concerned, in a difficult position in future years. That difficulty, he said, relates to an implied promise to all landowners within the planned sewer service area to provide centralized sanitary sewer service and the potential inability a number of years hence on the part of the Western Racine County Sewerage District to readily fulfill that promise without a major capital investment in sewage treatment plant capacity.

Table 4

SELECTED SEWERAGE SYSTEM LOADING DATA FOR THE WESTERN RACINE COUNTY SEWERAGE DISTRICT SEWERAGE SYSTEM: 1990-2010

Designated Management Agency[a]	Existing 1990											
	Resident Population Served		Average Hydraulic Loading		Maximum Monthly Loading		Peak Hydraulic Loading		Average Organic Loading		Maximum Monthly Organic Loading	
	Number	Percent of Total	(mgd)[b]	Percent of Total	(mgd)[b]	Percent of Total	(mgd)[c]	Percent of Total	(ppd)[d]	Percent of Total	(ppd)[d]	Percent of Total
Village of Rochester	900	14	0.07	10	0.10	10	0.23	10	130	10	140	10
Village of Waterford	2,400[e]	38	0.32	45	0.45	46	1.20	50	580	45	630	45
Town of Rochester Utility District No. 1	400	6	0.08	11	0.11	11	0.27	11	140	11	150	11
Town of Waterford Sanitary District No. 1	2,700[f]	42	0.24	34	0.33	33	0.70	29	440	34	480	34
Total	6,400	100	0.71	100	0.99	100	2.40	100	1,290[g]	100	1,400[g]	100

Designated Management Agency[a]	Existing 1995											
	Resident Population Served		Average Hydraulic Loading		Maximum Monthly Loading		Peak Hydraulic Loading		Average Organic Loading		Maximum Monthly Organic Loading	
	Number	Percent of Total	(mgd)[h]	Percent of Total	(mgd)[i]	Percent of Total	(mgd)[c]	Percent of Total	(ppd)[h]	Percent of Total	(ppd)[j]	Percent of Total
Village of Rochester	1,000	13	0.08	10	0.10	10	0.25	10	140	10	160	10
Village of Waterford	3,000[e]	39	0.35	44	0.45	45	1.30	50	640	44	700	44
Town of Rochester Utility District No. 1	500	6	0.10	13	0.13	13	0.30	12	190	13	210	13
Town of Waterford Sanitary District No. 1	3,300[f]	42	0.26	33	0.33	32	0.75	28	480	33	530	33
Total	7,800	100	0.79	100	1.01	100	2.60	100	1,450[g]	100	1,600[g]	100

Designated Management Agency[a]	Planned Year 2010											
	Resident Population Served		Average Hydraulic Loading		Maximum Monthly Loading		Peak Hydraulic Loading		Average Organic Loading		Maximum Monthly Organic Loading	
	Number	Percent of Total	(mgd)	Percent of Total	(mgd)	Percent of Total	(mgd)	Percent of Total	(ppd)	Percent of Total	(ppd)	Percent of Total
Village of Rochester	1,700	15	0.14	12	0.18	12	0.43	12	250	12	270	12
Village of Waterford	4,100[e]	35	0.45	39	0.59	40	1.55	44	825	39	900	39
Town of Rochester Utility District No. 1	600	5	0.11	10	0.14	9	0.32	9	200	9	230	10
Town of Waterford Sanitary District No. 1	5,200[k]	45	0.45	39	0.59	39	1.20	35	825	40	900	39
Total	11,600	100	1.15	100	1.50	100	3.50	100	2,100[g]	100	2,300[g]	100

[a]See Map 7 for service area assumed for each designated management agency. The municipal jurisdiction of thee areas may change over time.

[b]Total flow based upon 1990 compliance maintenance report. Community values distributed based upon February 1996 draft WRSD user charge system.

[c]Flow based upon 1.25 times estimated maximum daily flow.

[d]Loadings based upon 1995 estimates adjusted by population.

[e]Does not include seasonal population of about 100 persons.

[f]Does not include seasonal population of about 300 persons.

[g]Does not include septage and holding tank waste loadings estimated in 1995 to be 500 to 700 pounds per day.

[h]Flows based upon February 1996 draft WRSD user charge system.

[i]Flow and load based upon review of 1994 plant monitoring data and 1996 draft WRDS user charge system data.

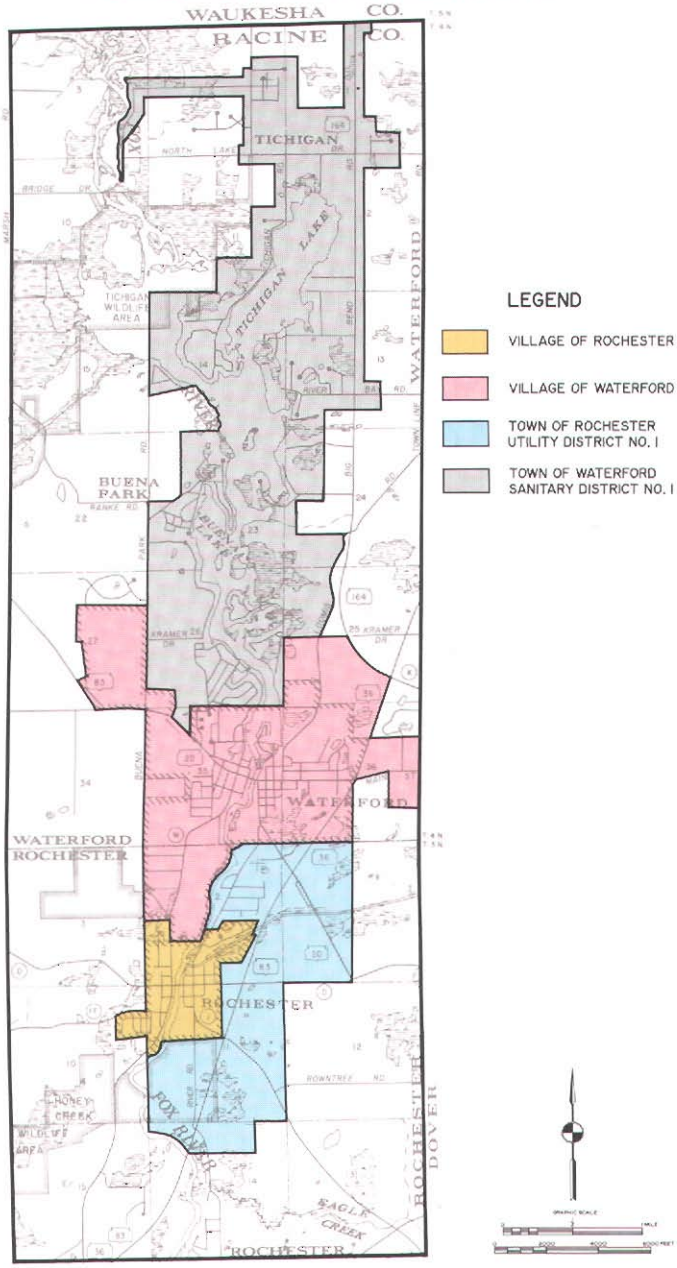
[j]Based upon an assumption of 10 percent increase in maximum monthly over average annual, including septage and holding tank waste loading.

[k]Does not include seasonal population of about 500 persons, of a planned population of about 1,500 persons envisioned in the Town of Waterford Land Use Plan to be located outside the current sewer service area, but within the current sanitary district and ultimately to be provided sanitary sewer service.

Source: SEWRPC.

Map 7

ASSUMED PLANNED SANITARY SEWER SERVICE AREAS TRIBUTARY TO THE WESTERN RACINE COUNTY SEWERAGE DISTRICT SEWAGE-TREATMENT FACILITY



Source: SEWRPC.

Other general comments made by members of the public related to the lack of personal notification to individual landowners of the public hearing and to the rapid pace of urban development in the Waterford-Rochester area and the undesirable effects of that development on the character of the area. Offsetting the latter concerns were statements by members of the public, particularly realtors and developers, who expressed positions of support for additional urban development in the Waterford-Rochester area as an ingredient essential to the revitalization of the communities concerned.

Review of the public hearing record further indicates that in terms of the planned areal extent of the Waterford-Rochester sanitary sewer service area, the following two specific concerns were raised:

1. A real estate agent for two large landowners in the Town of Waterford requested that certain lands in U. S. Public Land Survey Sections 4 and 13, Township 4 North, Range 19 East, which were not included in the planned sanitary sewer service area, be so included. These lands are located approximately one mile west of, and immediately adjacent to and east of, respectively, the currently approved sewer service area. The agent noted that the two landowners concerned desire to terminate farming operations in the near future on the lands concerned and would seek urban development proposals for the lands, development that by its nature should be served by centralized sanitary sewers.

2. The Town Chairman of the Town of Waterford, together with a number of other Town officials and residents, objected to certain proposed additions to the sanitary sewer service area lying in the STH 164 and STH 36 corridors north and east of the Village of Waterford (see Map 6). These officials and citizens noted that, not only would the addition of such lands contribute to potential future urban development in excess of the present capacity of the sewage treatment plant, but also that such lands lie along important state trunk highways where access needs to be carefully controlled and where, despite the fact that the lands concerned lie largely within the Town of Waterford, intergovernmental agreement between the Town of Waterford and the Village of Waterford had not been achieved as to whether or not the lands should be committed to urban development, much less the specific types of land uses concerned. To strip-zone these highways would destroy the capacity and safety, as well as the aesthetic appearance, of the facilities. Accordingly, these Town officials and citizens recommended that the planned sanitary sewer service area expansion in the STH 164 and

STH 36 corridors be reduced to those lands only which currently lie within the Village of Waterford.

Following the public hearing, the five-member Commission of the Western Racine County Sewerage District met to consider the sewer service area plan expansion proposal. Given the substantive nature of the two major concerns noted above, the Regional Planning Commission staff and the legal counsel for the District recommended that the Sewerage District Commission lay the matter over pending additional intergovernmental meetings to see if full agreement could be reached among the local governments concerned as to the areal extent of the planned sewer service area. After consideration of these staff recommendations, the Sewerage District Commission, on a vote of three to two, determined to recommend to the Regional Planning Commission adoption of the planned sanitary sewer service area precisely as that area had been described at the public hearing.

In making its recommendation, the Sewerage District Commission rejected the request that the sewer service area be expanded in the Town of Waterford, noting that such expansion would be contrary to the land use plan adopted by the Town of Waterford and inconsistent with the position of the Town of Waterford as articulated by the Town Chairman at the public hearing. In addition, the Sewerage District Commission rejected the position of the Town of Waterford with respect to the deletion from the amended plan of the additional sewer service area proposed in the STH 164 and STH 36 corridors, noting that the District had been planning to consider sewage treatment plant expansion during the first decade of the 21st century in a manner consistent with the analysis set forth in the sewer service area plan report by the Regional Planning Commission staff; that the lands concerned were contiguous to the present limits of the Village of Waterford and could be readily annexed to the Village at such time as land development is imminent; that the Village Plan Commission of the Village of Waterford had given appropriate consideration to potential expansion of the limits of the Village of Waterford in the two highway corridors concerned; and that, while the Village had not yet produced a specific land use plan for such lands, the Village would be preparing such a land use plan in the relatively near future.

Detailed delineations of the revised Waterford/ Rochester sanitary sewer service area, and of the environmentally significant lands within this area, are shown on a series of aerial photographs reproduced as Map 8, beginning on page __ and continuing through page __ of this report.

IMPLEMENTING RECOMMENDATIONS

It is recommended that the following steps be taken to implement the sanitary sewer service area proposals contained in this report:

1. Formal adoption or endorsement of SEWRPC Planning Report No. 30, A Regional Water Quality Management Plan for Southeastern Wisconsin: 2000, and this SEWRPC Community Assistance Planning Report by the Western Racine County Sewerage District Commission as the operator of the sewage treatment facility; by the Village Boards of the Villages of Rochester and Waterford and by the Town Boards of the Towns of Rochester and Waterford, as having lands affected by the planned sanitary sewer service area; by the Racine County Department of Planning and Development as the County planning agency having joint responsibility with the Towns in planning and zoning and otherwise regulating the development of lands in the study area outside of the incorporated area; and by the governing bodies of the Town of Rochester Utility District No. 1 and the Town of Waterford Sanitary District No. 1.

2. Formal adoption of this SEWRPC Community Assistance Planning Report by the Regional Planning Commission as an amendment to the regional water quality management plan set forth in SEWRPC Planning Report No. 30, with certification of this report as a plan amendment to all parties concerned, including the Wisconsin Natural Resources Board and the U. S. Environmental Protection Agency.

3. Review by all of the local units of government concerned of their zoning, land subdivision control, and related ordinances to ensure that the policies expressed in such ordinances reflect the urban development recommendations inherent in the final delineated Waterford/Rochester sanitary sewer service area as shown on Maps 5 and 6. In particular, steps should be taken to ensure that those lands identified as being environmentally significant in this report are properly zoned to

reflect a policy of retaining such lands, insofar as possible, in essentially natural, open uses.

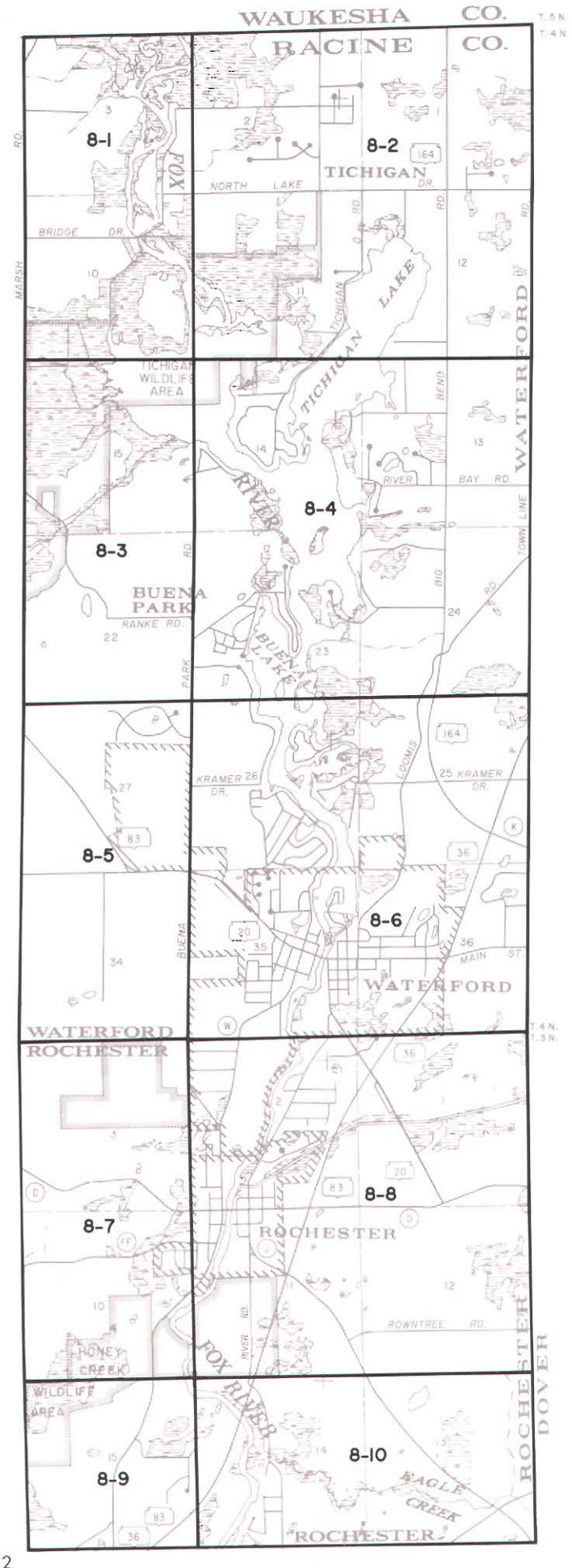
4. Review by the Villages of Rochester and Waterford and Racine County of utility extension policies to ensure that such policies are consistent with the urban land development recommendations inherent in the delineation of the planned sanitary sewer service area.

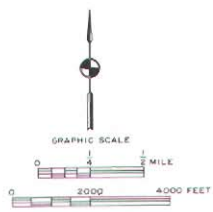
SUBSEQUENT REFINEMENTS TO THE WATERFORD/ROCHESTER SEWER SERVICE AREA

This report presents the revised sewer service area tributary to the Western Racine County Sewerage District sewage treatment facility. The revised sewer service area was delineated cooperatively by the units and agencies of government concerned and was subjected to review at a public hearing. It is envisioned that the delineated sewer service area will accommodate all new urban development anticipated in the Waterford/Rochester area to the year 2010. Like other long-range plans, however, this sewer service area plan should be periodically reviewed, at about five-year intervals, to assure that it continues to reflect properly the urban development objectives of the communities involved, especially as such objectives may relate to the amount and spatial distribution of new urban development requiring sewer service. Should it be determined by the Western Racine County Sewerage District Commission, as the operator of the sewage treatment facility involved, or by the communities involved, that amendments to the sewer service area plan as presented herein are necessary, the particular unit of government should ask the Southeastern Wisconsin Regional Planning Commission for assistance in undertaking the technical work required to properly amend the plan. Any such plan revision should be carried out in a manner similar to that utilized in the refinement effort described in this report. While plan amendment may be expedited because study area base maps have been prepared and certain inventories completed as part of the sewer service area planning documented herein, such amendment should be subject to the same analyses and interagency review and should include a public hearing to obtain the comments and suggestions of those citizens and landowners most affected by the proposed changes to the sewer service area boundary. Upon agreement on a revised sewer service area, the new plan map should be endorsed by the governing bodies of the appropriate local units of government and by the Southeastern Wisconsin Regional Planning Commission before certification to the Wisconsin Department of Natural Resources and the U. S. Environmental Protection Agency.

Map 8

INDEX OF MAPS SHOWING ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE WATERFORD/ROCHESTER AREA





Source: SEWRPC.

Map 8-1

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE WATERFORD/ROCHESTER AREA

U. S. Public Land Survey Sections 3 and 10
Township 4 North, Range 19 East

LEGEND

- PRIMARY ENVIRONMENTAL CORRIDOR
- SECONDARY ENVIRONMENTAL CORRIDOR
- PLANNED SANITARY SEWER SERVICE AREA
- GROSS SANITARY SEWER SERVICE AREA BOUNDARY

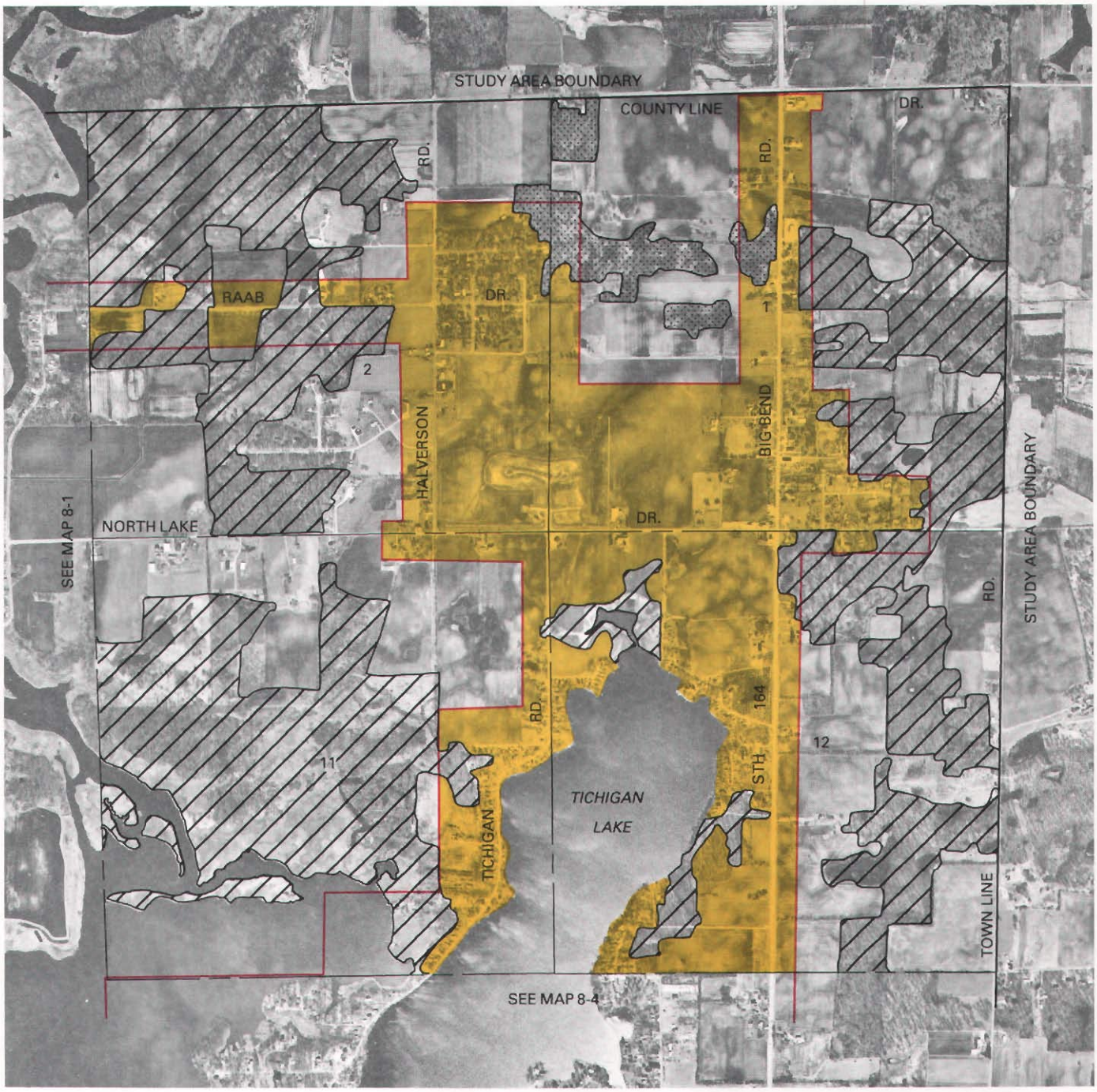
GRAPHIC SCALE
0 400 800 1200 FEET

Source: SEWRPC.

Map 8-2

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE WATERFORD/ROCHESTER AREA

U. S. Public Land Survey Sections 1, 2, 11, and 12
Township 4 North, Range 19 East



LEGEND

- PRIMARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREA
- PLANNED SANITARY SEWER SERVICE AREA
- GROSS SANITARY SEWER SERVICE AREA BOUNDARY

GRAPHIC SCALE

0 400 800 1200 FEET

Source: SEWRPC.

Map 8-3

ENVIRONMENTALLY SIGNIFICANT LANDS FOR THE WATERFORD/ROCHESTER AREA

U. S. Public Land Survey Sections 15 and 22
Township 4 North, Range 19 East

LEGEND

PRIMARY ENVIRONMENTAL CORRIDOR

ISOLATED NATURAL RESOURCE AREA

GROSS SANITARY SEWER SERVICE AREA BOUNDARY

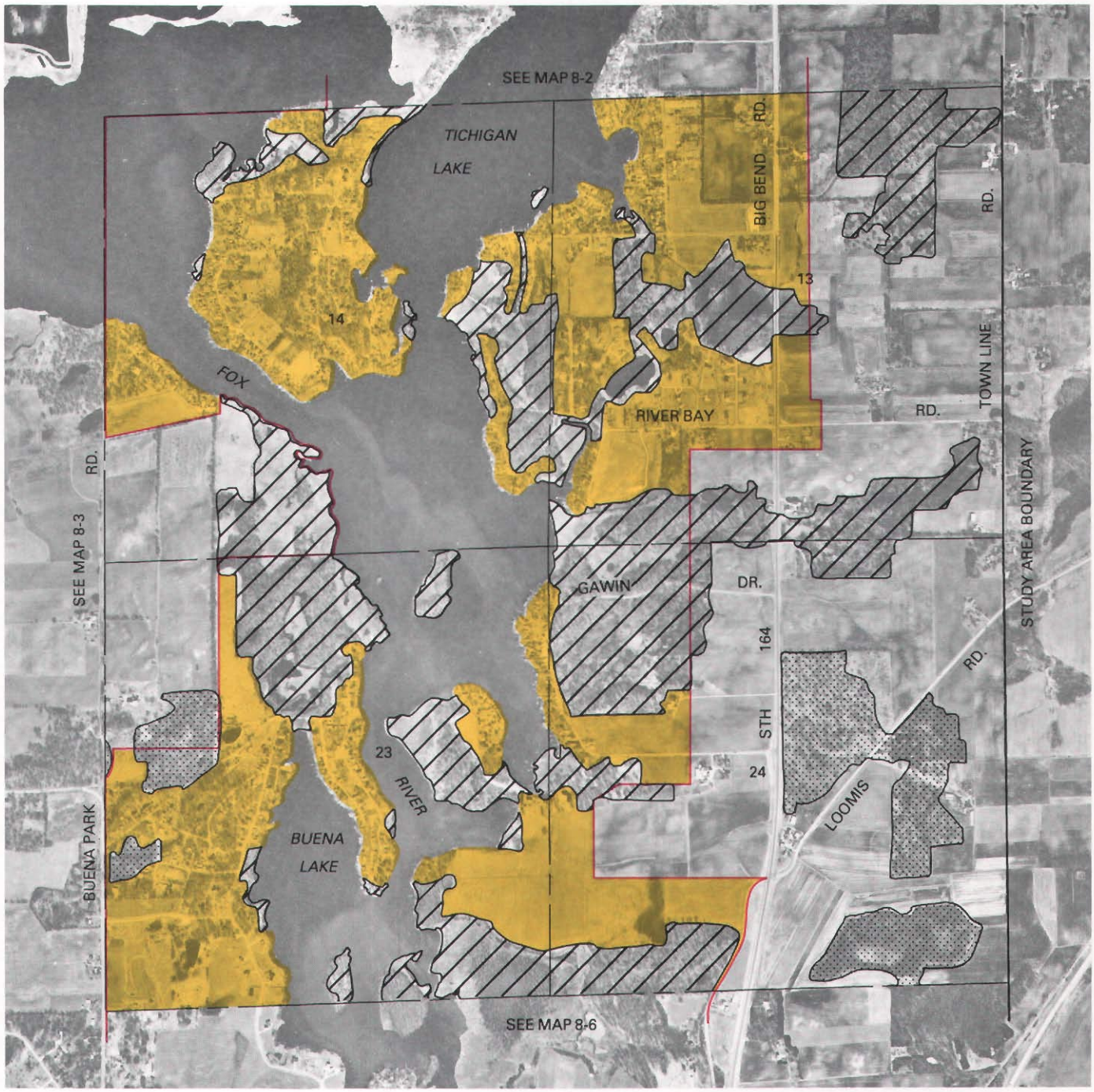
GRAPHIC SCALE
0 400 800 1200 FEET

Source: SEWRPC.

Map 8-4

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE WATERFORD/ROCHESTER AREA

U. S. Public Land Survey Sections 13, 14, 23, and 24 Township 4 North, Range 19 East



LEGEND

- PRIMARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREA
- PLANNED SANITARY SEWER SERVICE AREA
- GROSS SANITARY SEWER SERVICE AREA BOUNDARY

GRAPHIC SCALE
0 400 800 1200 FEET

Source: SEWRPC.

Map 8-5

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE WATERFORD/ROCHESTER AREA

U. S. Public Land Survey Sections 27 and 34
Township 4 North, Range 19 East

LEGEND

- PRIMARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREA
- PLANNED SANITARY SEWER SERVICE AREA
- GROSS SANITARY SEWER SERVICE AREA BOUNDARY

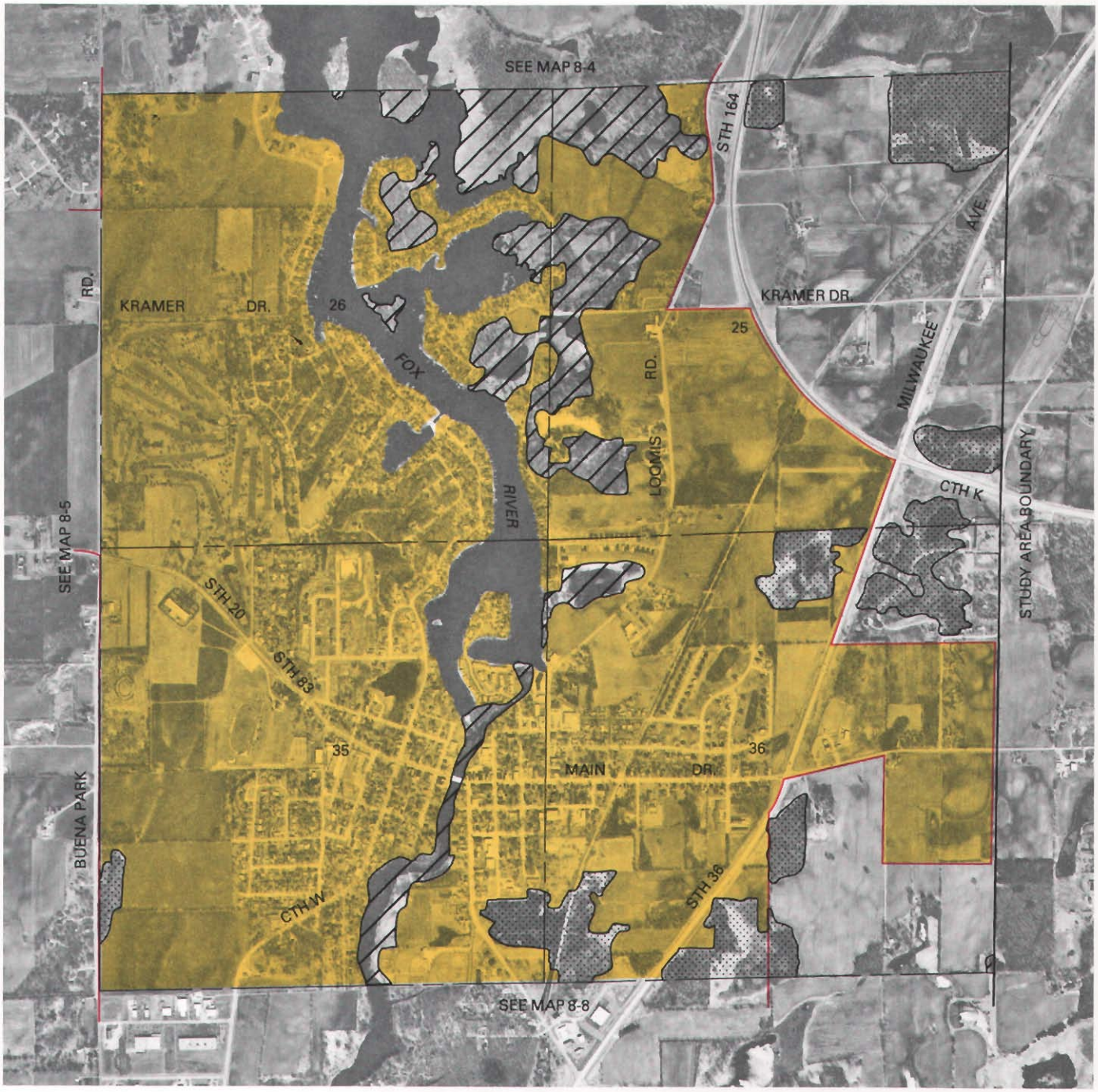
GRAPHIC SCALE
0 400 800 1200 FEET

Source: SEWRPC.

Map 8-6

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE WATERFORD/ROCHESTER AREA

U. S. Public Land Survey Sections 25, 26, 35, and 36
Township 4 North, Range 19 East



LEGEND

- PRIMARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREA
- PLANNED SANITARY SEWER SERVICE AREA
- GROSS SANITARY SEWER SERVICE AREA BOUNDARY

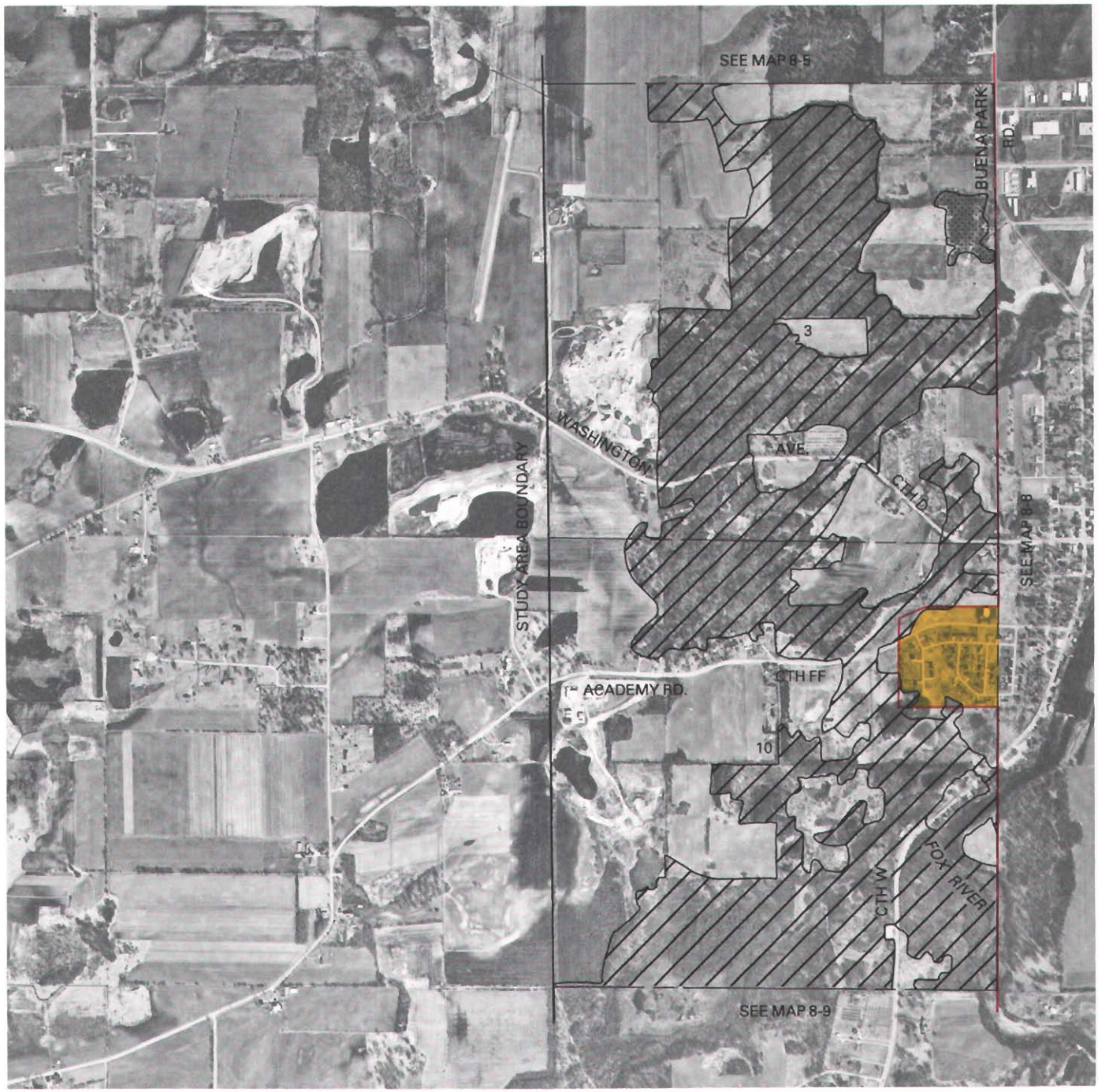
GRAPHIC SCALE
0 400 800 1200 FEET

Source: SEWRPC.

Map 8-7

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE WATERFORD/ROCHESTER AREA

U. S. Public Land Survey Sections 3 and 10
Township 3 North, Range 19 East



LEGEND

- PRIMARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREA
- PLANNED SANITARY SEWER SERVICE AREA
- GROSS SANITARY SEWER SERVICE AREA BOUNDARY

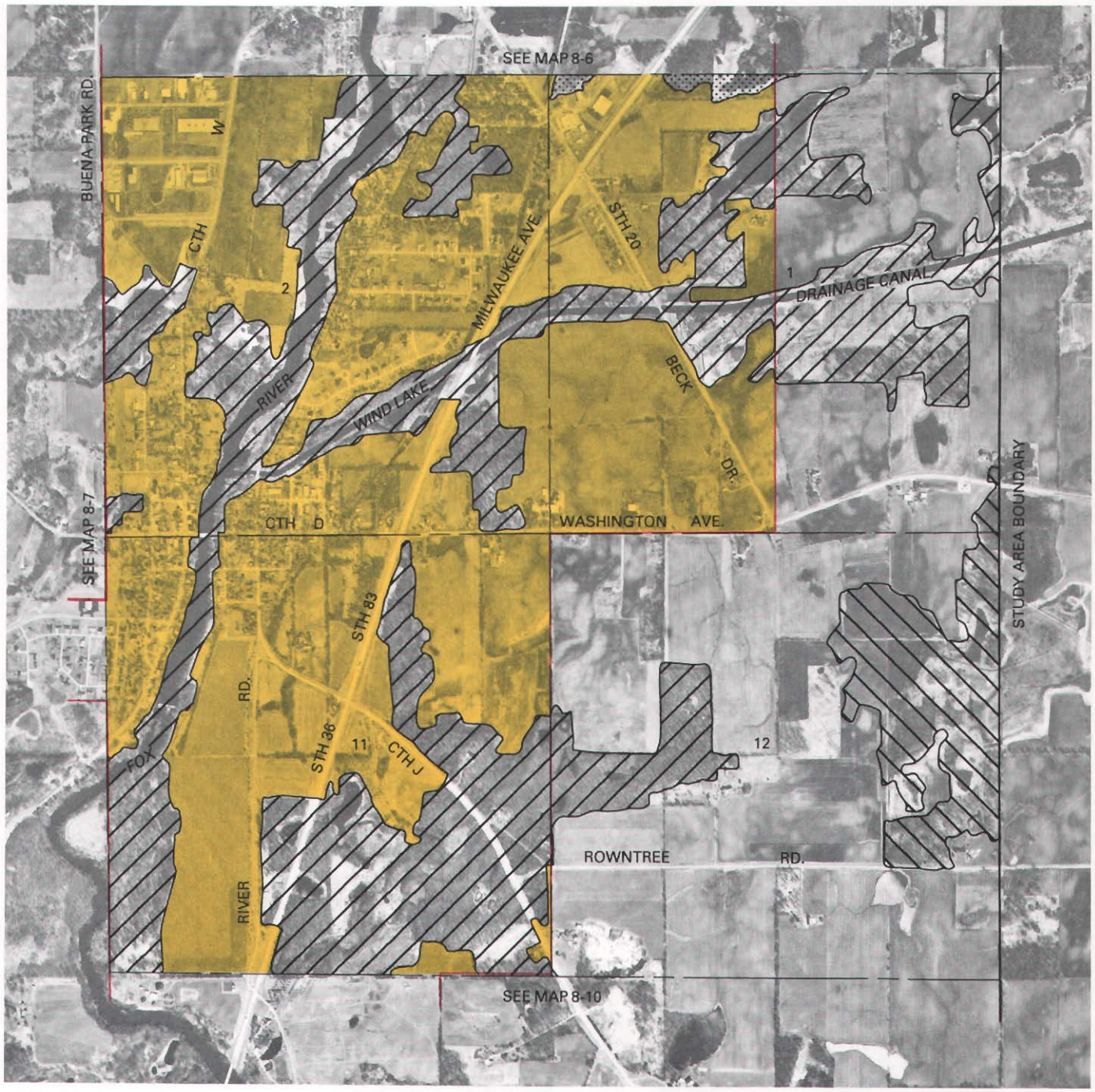
GRAPHIC SCALE
0 400 800 1200 FEET

Source: SEWRPC.

Map 8-8

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE WATERFORD/ROCHESTER AREA

U. S. Public Land Survey Sections 1, 2, 11, and 12
Township 3 North, Range 19 East



LEGEND

- PRIMARY ENVIRONMENTAL CORRIDOR
- SECONDARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREA
- PLANNED SANITARY SEWER SERVICE AREA
- GROSS SANITARY SEWER SERVICE AREA BOUNDARY

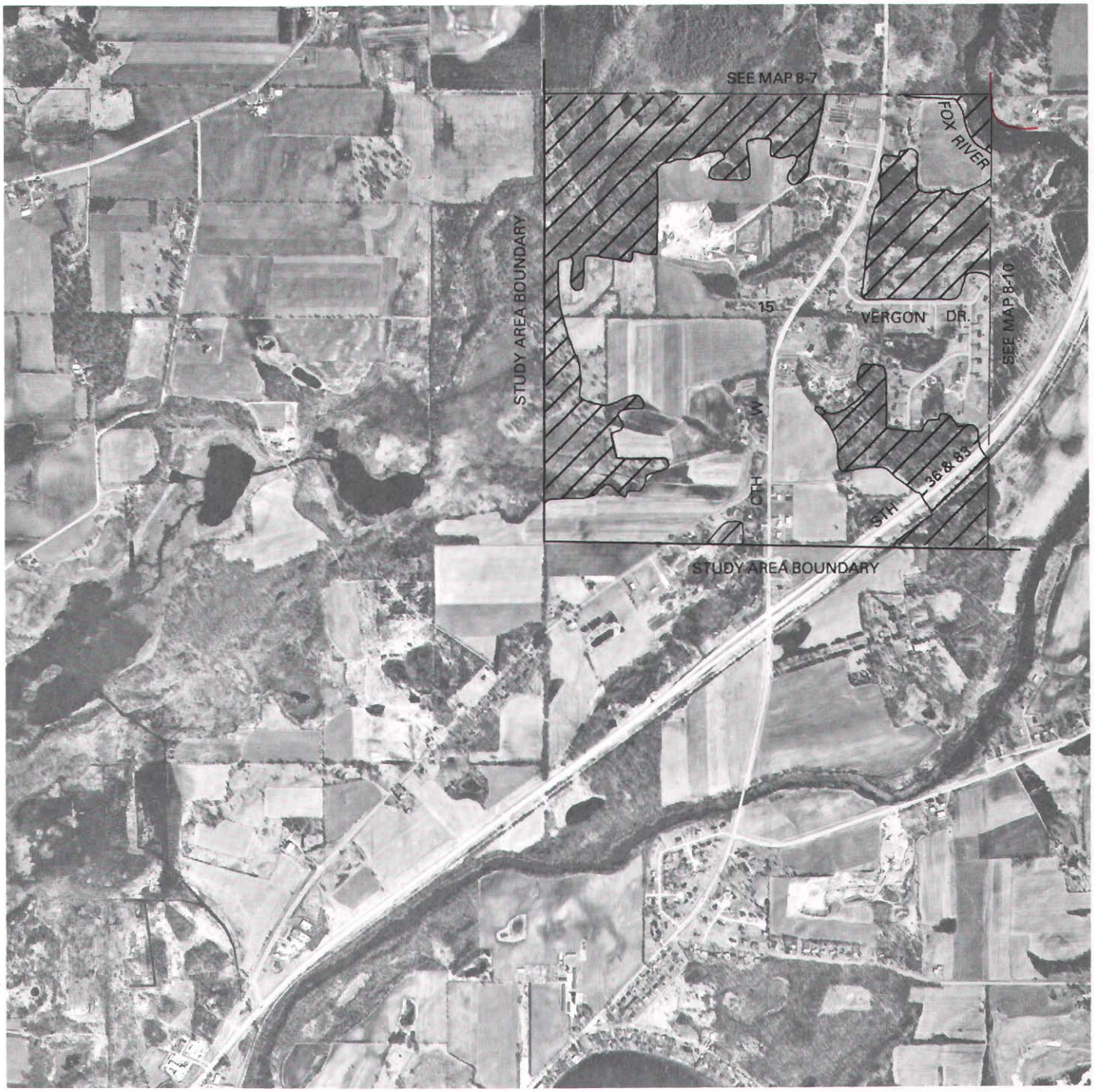
GRAPHIC SCALE
0 400 800 1600 FEET

Source: SEWRPC.

Map 8-9

ENVIRONMENTALLY SIGNIFICANT LANDS FOR THE WATERFORD/ROCHESTER AREA

U. S. Public Land Survey Section 15 Township 3 North, Range 19 East



LEGEND

PRIMARY ENVIRONMENTAL CORRIDOR

GROSS SANITARY SEWER SERVICE AREA BOUNDARY

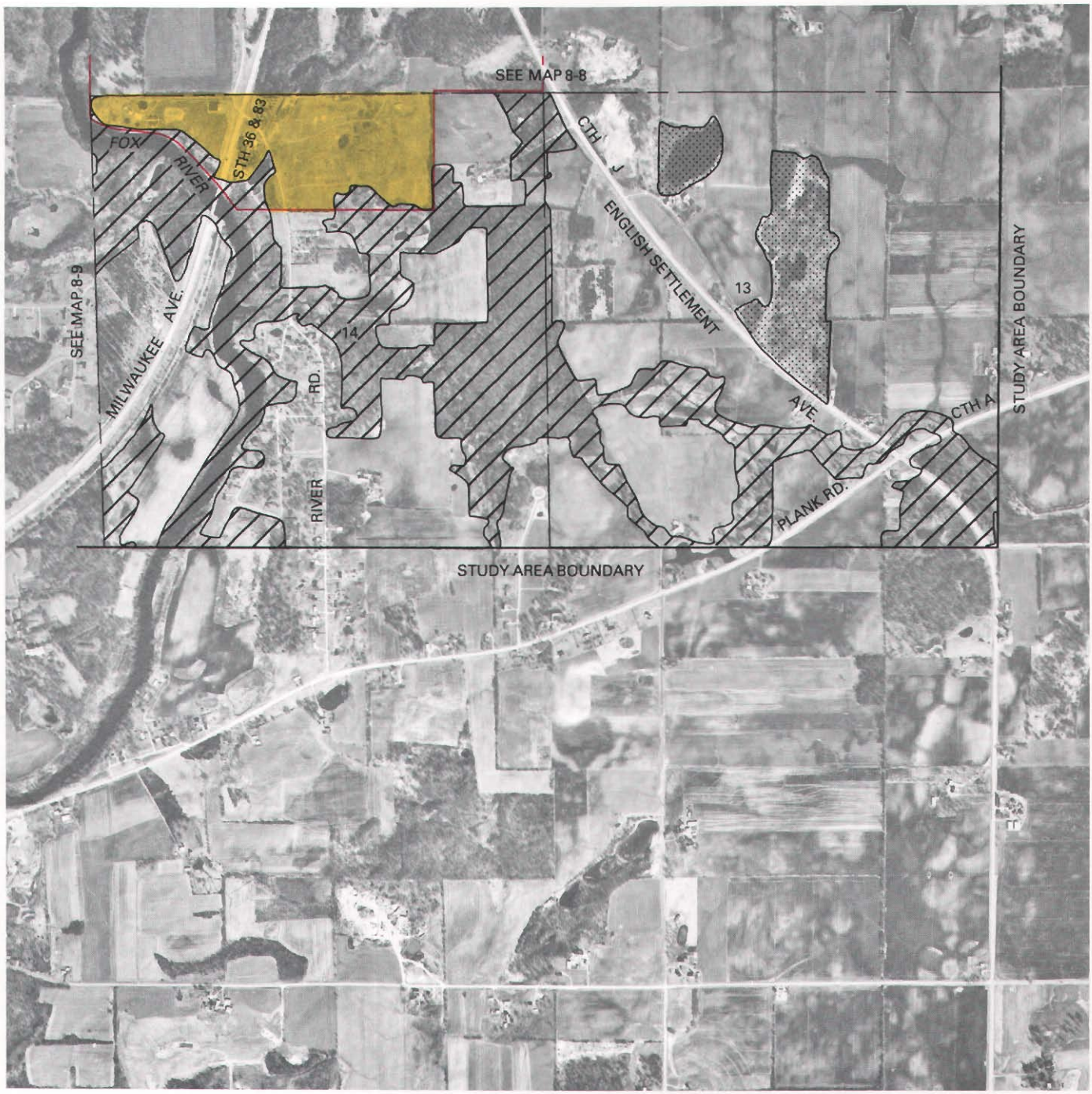
GRAPHIC SCALE
0 400 800 1200 FEET

Source: SEWRPC.

Map 8-10

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE WATERFORD/ROCHESTER AREA

U. S. Public Land Survey Sections 13 and 14
Township 3 North, Range 19 East



LEGEND

- PRIMARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREA
- PLANNED SANITARY SEWER SERVICE AREA
- GROSS SANITARY SEWER SERVICE AREA BOUNDARY

GRAPHIC SCALE
0 400 800 1200 FEET

Source: SEWRPC.

APPENDICES

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Appendix A

MINUTES OF PUBLIC HEARING
Waterford/Rochester Sanitary Sewer Service Area

April 10, 1996

A public hearing, for the purpose of getting input for the sewer service area, was held on April 10, 1996 at the Waterford Village Hall, 123 N. River Street, Waterford, WI.

The meeting was called to order by Grey Abendroth. Kenneth Hostak reviewed the notices for the meeting, the reason for the meeting and the process for persons wishing to be heard. The meeting was then turned over to Robert Biebel of SEWRPC.

Biebel explained the he wished to go over the more pertinent areas of the report presented to the meeting. He stated that the revised sewer service area is shown on maps. The changes are relatively limited, with the Village of Waterford being the only municipality with major changes. One square mile of property has been added, bringing the total to nine square mile of sewer service area.

Biebel explained the inclusion of the environmental corridor in the plan and discussed population and land uses. He stated that if population increases at the projected rate, in the year 2005 some modification will be needed for the WRCSD plant.

Biebel stated that following this public hearing, WRCSD would hold a meeting to either approve or disapprove the report presented by SEWRPC covering the sewer service area. The municipalities involved would also be asked to approve the plan.

Arnold Clement, Racine County, questioned if by the 2010 population count, the plant would reach capacity by 2005.

Biebel replied that this is what is anticipated.

George Robak, Village of Waterford resident, questioned the process of deciding what constitutes Environmental Corridor property. He stated that he owns 108 acres in the Village of which 45 acres are in the environmental corridor.

Phil Evanson, SEWRPC, stated that the SEWRPC plan delineates important natural resources. He explained that the process involves aerial photographs and when a foot inspection of the property is done, the area encompassed in the corridor will not change significantly from the original plan.

Robak restated his views.

Hostak stated that Western Racine County Sewerage District does not draw the lines of the environmental corridor and this meeting is for the purpose of discussing the SEWRPC report.

Langmesser, Town of Waterford, stated that at the March meeting of the Town Board, the Town made a motion not to extend their service area. He expressed concern about the Village of Waterford expanding into the township property. Langmesser stated that he would like to indicate that the impact from the expansion will effect the people of the Town of Waterford. The Village will be using the capacity at the sewerage plant and he does not feel that the townspeople should be responsible for any costs of the plant expansion.

Dale Gaurke, Town of Waterford, stated that he understood that two properties would be added to the Village's service area and was surprised to see additional the additional area of the Village's proposed service area.

Randy Niewolny, Village of Waterford, asked when the plant was last updated and what was the time that an addition was expected at that time.

Tom Foltz, engineer for the District, stated that when the new plant was put into operation, it was anticipated that an addition would be required by 2007.

Mike Iverson, Tichigan Lake Realty, stated that being in the environmental corridor does not mean that property cannot be built upon. He also stated that he is representing two property owners in the Town of Waterford that would like to be included in the service area.

Terry Alby questioned the anticipated growth of the area and the sewer capacity. He stated that the plant was built to be used and fits to the year 2010.

Arnold Clement, Racine County, stated that the plant life will not quite extend to the year 2010. He stated that the population is the area has an anticipated 50% grown and the plant capacity will probably run out about 2005 or 2007 which is about the 20 year design life of the plant. Clement said that the people already in the area have paid for the plant. If the service area is not extended and development curtailed, then the plant capacity will extend to the year 2010.

George Robak, Village of Waterford, expressed more concern over development and the environmental corridor.

Jay Henrichs, PSI, stated that the service area is a tool for development. He feels the proposed plan will allow for some development, but agrees that the growth must be controlled.

Langmesser, Town of Waterford, stated for the past five years he has been Chairman of the Town, 85 homes per year were allowed. This is controlled growth.

Matt Schulte, Fairview Village, stated that his property is already in the Village of Waterford. The Village has approved his development and he is ready to proceed. Schulte asked why the District cannot approve his plans and those of Jay Henrichs so they may proceed with their development.

Hostak, WRCSD, replies that the District will take up the matter as a whole and will not address any one property before addressing the entire area.

Robak, Village of Waterford, stated that this is the last public hearing before adoption of the report. He questioned if people from the communities were going to be able to have input into the plan.

Evanson, stated that he did not know if another hearing will be held. He said that from what he has heard tonight, he would recommend that a meeting be held between the municipalities involved to discuss the issues. Evanson said that he would not recommend the District accept the report at this time and he will tell them that a the meeting to be held later. It was explained that SEWRPC prepares the report, then WRCSD must approve the report. It then goes to a SEWRPC hearing and must be approved at that time. It then goes to the DNR which must sign the report.

Langmesser, stated that people are moving into the area and most people wish to keep the country atmosphere.

Several citizens of the Towns of Rochester and Waterford expressed support for the development known as Fairview Village.

Tamlyn Plohocky, Town of Waterford, expressed concern about the Village of Waterford expanding into the Town of Waterford.

Frankie Brezinski, Village of Waterford, stated that even though the service area was extended this does not mean that the property has been annexed into the Village.

Several more citizens expressed support for the Fairview Village Development.

Hostak stated that the matter the Commissioners for the District will have before it is to approve the report presented this evening. The entire report will be considered, not pieces of it.

Several citizens expressed opinions regarding the growth and current development of the area.

Matt West, Nienow Engineering, stated that he feels one issue has been missed. The Fairview Village project will bring a number of jobs, approximately 150 to 175, into the area.

Dick Kempken, Town of Waterford, said that the real issue here tonight is growth. Accepting the report will create a plan for approximately ten years. This will control growth in the service area and the farm districts can remain rural.

Having heard comments from citizens, the hearing was closed. The WRCSD meeting to be held five minutes later.

Submitted by
Frankie Brezinski