

SANITARY SEWER SERVICE AREA FOR THE CITY OF MUSKEGO

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**COMMUNITY ASSISTANCE PLANNING REPORT
NUMBER 64 (3rd Edition)**

**SANITARY SEWER SERVICE AREA FOR THE CITY OF MUSKEGO
WAUKESHA COUNTY, WISCONSIN**

Prepared by the

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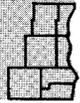
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February 13, 1998

TO: The Common Council of the City of Muskego, the Milwaukee Metropolitan Sewerage District,
and the County Board of Waukesha 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 plants 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 Commerce 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, on July 24, 1996, the City of Muskego requested that the Regional Planning Commission assist the City in refining and detailing the recommended Muskego sanitary sewer service area tributary to the Milwaukee Metropolitan Sewerage District. This report documents the results of that refinement 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.

A public hearing was held on November 11, 1997, to discuss the preliminary findings and recommendations of the sewer service area refinement process, and to receive the comments and suggestions of the local elected officials concerned, and of interested citizens. The recommendations contained in this report reflect the pertinent comments and suggestions made at the hearing.

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 Muskego 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,

Philip C. Evenson

Philip C. Evenson
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 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 (WDNR) must be found to be in accordance with the adopted and endorsed plan. These actions include, among others,

¹The 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; Volume Two, Alternative Plans; and Volume Three, Recommended Plan.

WDNR approval of waste discharge permits, WDNR approval of State and Federal grants for the construction of wastewater treatment and conveyance facilities, and WDNR approval of locally proposed sanitary sewer extensions.

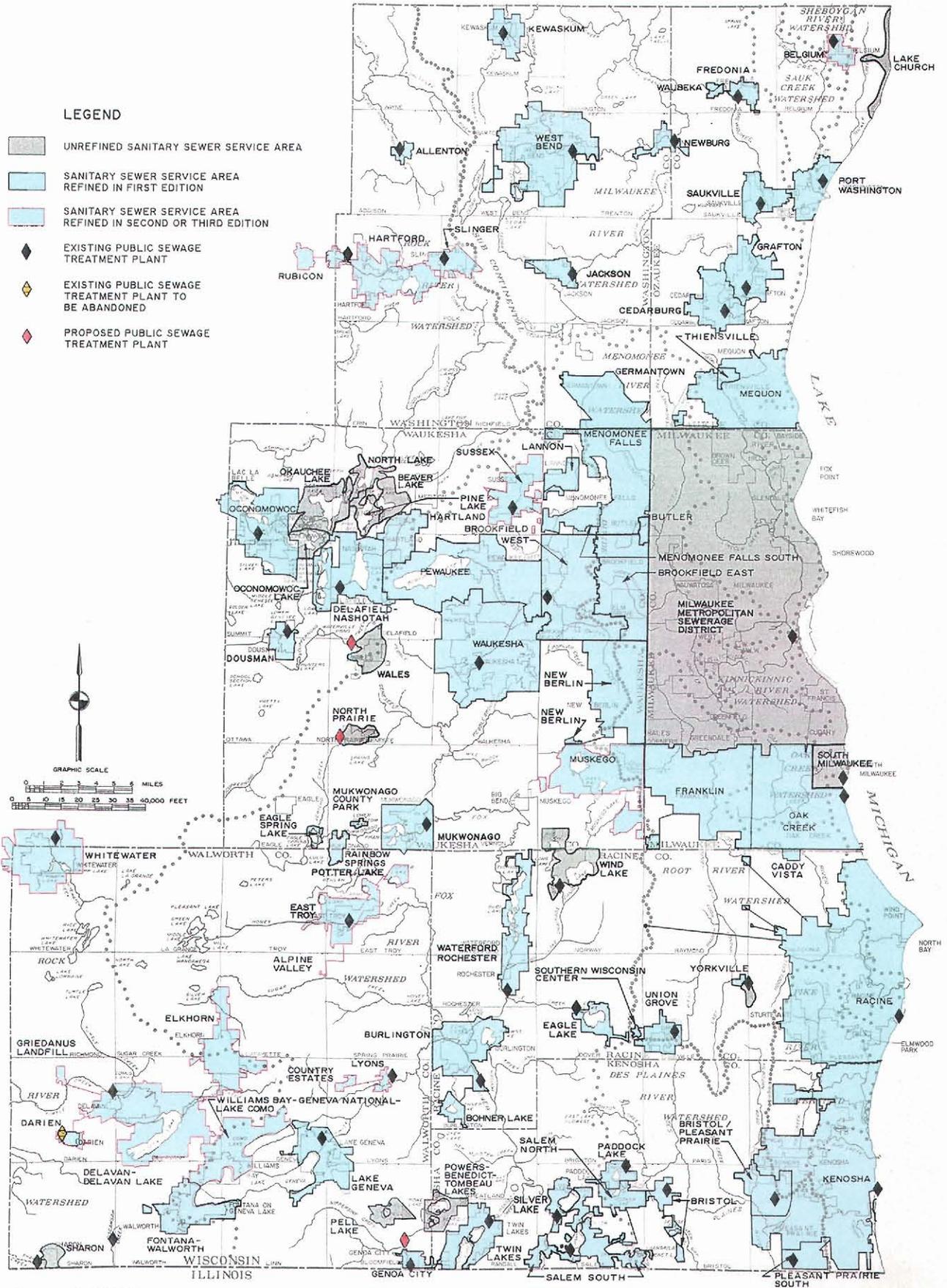
NEED FOR REFINEMENT AND DETAILING OF LOCAL SANITARY SEWER SERVICE AREAS

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 2000.² 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 Comm 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 Commerce, 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 to properly reflect local, as well as areawide planning concerns in the execution of this review responsibility, the Regional Planning Commission, in

²See SEWRPC Planning Report No. 25, A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin: 2000, Volume One, Inventory Findings; and Volume Two, Alternative and Recommended Plans.

RECOMMENDED SANITARY SEWER SERVICE AREAS IN THE REGION: 2010



Source: SEWRPC.

adopting the areawide water quality management plan, recommended that steps be taken to refine and detail each of the 85 sanitary sewer service 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. The preparation of a base map at an appropriate scale for each sanitary sewer service area identified in the areawide water quality management plan.
2. The delineation on that base map of a sanitary sewer service area consistent with the objectives set forth in the adopted regional water quality management plan.³
3. The conduct of intergovernmental meetings involving the local or areawide unit or units of government 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. The preparation of modifications to the initially proposed sanitary sewer service area to reflect the agreements reached at the intergovernmental meetings. These modifications would meet, 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. The holding of a public hearing jointly by the Commission and the local or areawide unit or units of government concerned to obtain public reaction to site-specific sewer service area issues that might be raised by the proposed sewer service area delineation.
6. The preparation of a final sanitary sewer service area map and accompanying report.

³The sewer service areas in the water quality management plan were based upon the urban land use configurations as set forth in the Commission's design year 2000 land use plan. The Commission has since completed and adopted a design year 2010 land use plan, which plan served as the point of departure in the delineation of the sewer service area set forth in this report.

7. Adoption of 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 concerned. 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 MUSKEGO 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 letter dated February 13, 1980, the City of Muskego requested that the Regional Planning Commission undertake the refinement and detailing of the proposed year 2000 sanitary sewer service area within the City proposed to be tributary to the Milwaukee Metropolitan Sewerage District. The initial sewer service area plan was documented in the first edition of SEWRPC Community Assistance Planning Report No. 64, Sanitary Sewer Service Area for the City of Muskego, Waukesha County, Wisconsin, dated February 1982. Following a public hearing held on November 3, 1981, the plan was adopted by the Common Council and the Regional Planning Commission, and endorsed by the Wisconsin Department of Natural Resources, on May 11, June 17, and October 15, 1982, respectively.

On November 12, 1985, the City of Muskego requested the Regional Planning Commission to amend the Muskego sanitary sewer service area for the year 2000 as identified in the first edition of SEWRPC Community Assistance Planning Report No. 64. The amendment was requested to address onsite sewage disposal problems from existing residential development located east and southeast of Muskego Lake; to include provisions in the plan for conveyance and treatment of leachate from landfills located within and adjacent to the City of Muskego; to include additional areas for urban development east and southeast of Muskego Lake; and to remove certain areas from the initially planned sewer service area. Following a

public hearing held on February 18, 1986, the second edition of SEWRPC Community Assistance Planning Report No. 64, dated March 1986, was adopted by the Common Council and the Regional Planning Commission, and endorsed by the Wisconsin Department of Natural Resources, on March 11, March 3, and March 20, 1986, respectively. The Regional Planning Commission subsequently adopted one further amendment to the sanitary sewer service area as set forth in the second edition of SEWRPC Community Assistance Planning Report No. 64 in March, 1993. That amendment, which was requested by the City of Muskego on September 20, 1988, recommended the addition of certain lands located immediately adjacent to the Muskego sewer service area.

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 properly reflect regional and local urban development objectives, especially as such objectives relate to the amount and spatial distribution of new

development requiring sewer service. By letter dated July 24, 1996, the City of Muskego requested the Regional Planning Commission to refine further the currently adopted Muskego sanitary sewer service area tributary to the Milwaukee Metropolitan Sewerage District.

Copies of the draft report setting forth a preliminary revised sanitary sewer service area plan were provided to the City of Muskego, the Milwaukee Metropolitan Sewerage District, Waukesha County, and the Wisconsin Department of Natural Resources for review and comment prior to the public hearing held on November 11, 1997. 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 for the City of Muskego tributary to the Milwaukee Metropolitan Sewerage District 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 the refined Muskego sanitary sewer service area is shown on Map 2. The area consists of all the lands encompassed within the corporate limits of the City of Muskego, based upon 1995 civil division boundaries, and is 36 square miles in extent.

POPULATION

The resident population of the study area in 1995 was estimated at 19,350 persons. Of this total, it is estimated that about 16,540 persons were served by sanitary sewers. The remaining 2,810 persons in the study area were served by onsite sewage disposal systems.

The forecast of probable future resident population levels for small geographic areas such as the Muskego study area is a difficult task, accompanied by uncertainties and subject to periodic revision as new information becomes available. To accommodate unforeseen changes in social and economic conditions, an "alternative futures" approach is utilized by the Regional Planning Commission to project a range of population growth which may be expected to occur over the period 1990 to 2010. The preparation of the Commission's year 2010 regional land use plan incorporated a consideration of two alternative scenarios for regional growth and change, involving different assumptions regarding population lifestyles and economic conditions. The high-growth scenario is intended to represent the upper extreme of possible future regional growth and change, while the intermediate future is considered to be the most likely scenario.

The Commission's year 2010 land use plan also considered alternative development patterns for accommodating the incremental population and employment levels envisioned under the aforementioned growth scenarios. Two development patterns were considered in the preparation of the alternative land use plans. The first, a centralized development pattern, accommodates 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, similar to the first- and second-generation adopted regional land use plans. The second, a decentralized development pattern, accommodates the continued diffusion of population and employment levels historically evident in the Region, but in a manner consistent with the protection of the natural resource base of the Region.

The intermediate-growth centralized land use plan, also the adopted regional land use plan, would accommodate a year 2010 resident population level of about 20,000 persons in the Muskego study area. Under a high-growth decentralized alternative, the population level within the study area could be as high as 29,500 persons by the year 2010.

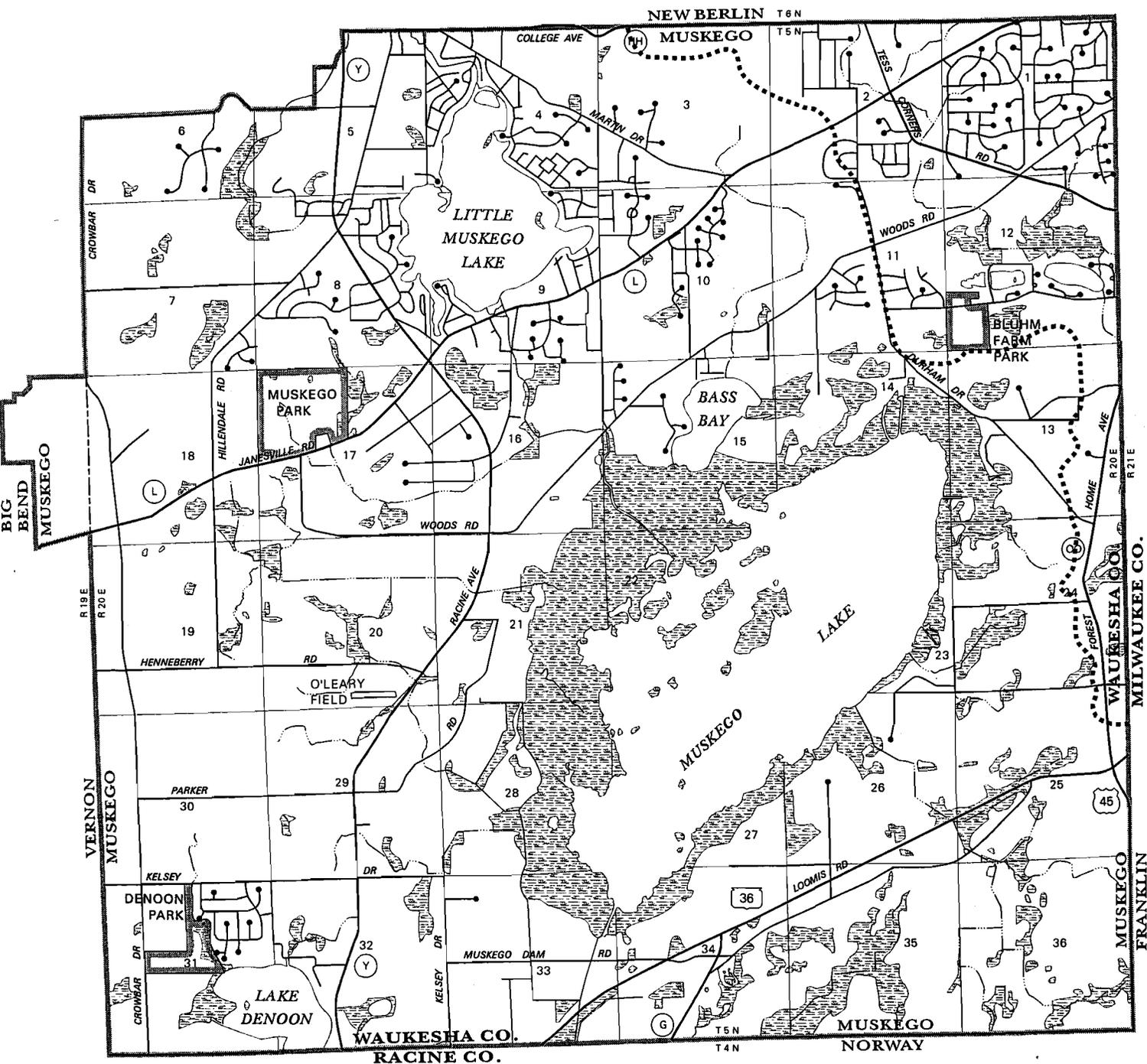
ENVIRONMENTALLY SIGNIFICANT LANDS

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.

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. 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

Map 2

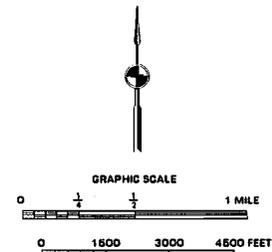
STUDY AREA IDENTIFIED FOR PURPOSES OF REFINING AND
DETAILING THE CITY OF MUSKEGO SANITARY SEWER SERVICE AREA



LEGEND

— 1995 CITY OF MUSKEGO CIVIL DIVISION BOUNDARY

Source: SEWRPC.



uses requiring sanitary sewer service could be properly located within the corridors, including park and outdoor recreation facilities and certain institutional uses. In some cases, 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, and 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 Muskego 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 1). 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, along with secondary environmental corridors and isolated natural resource areas, as delineated in the Muskego study area, are shown on Map 3.

The secondary environmental corridors should be considered for preservation as the process of urban development proceeds, because such corridors often

Table 1

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 (5-49 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
13-19 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

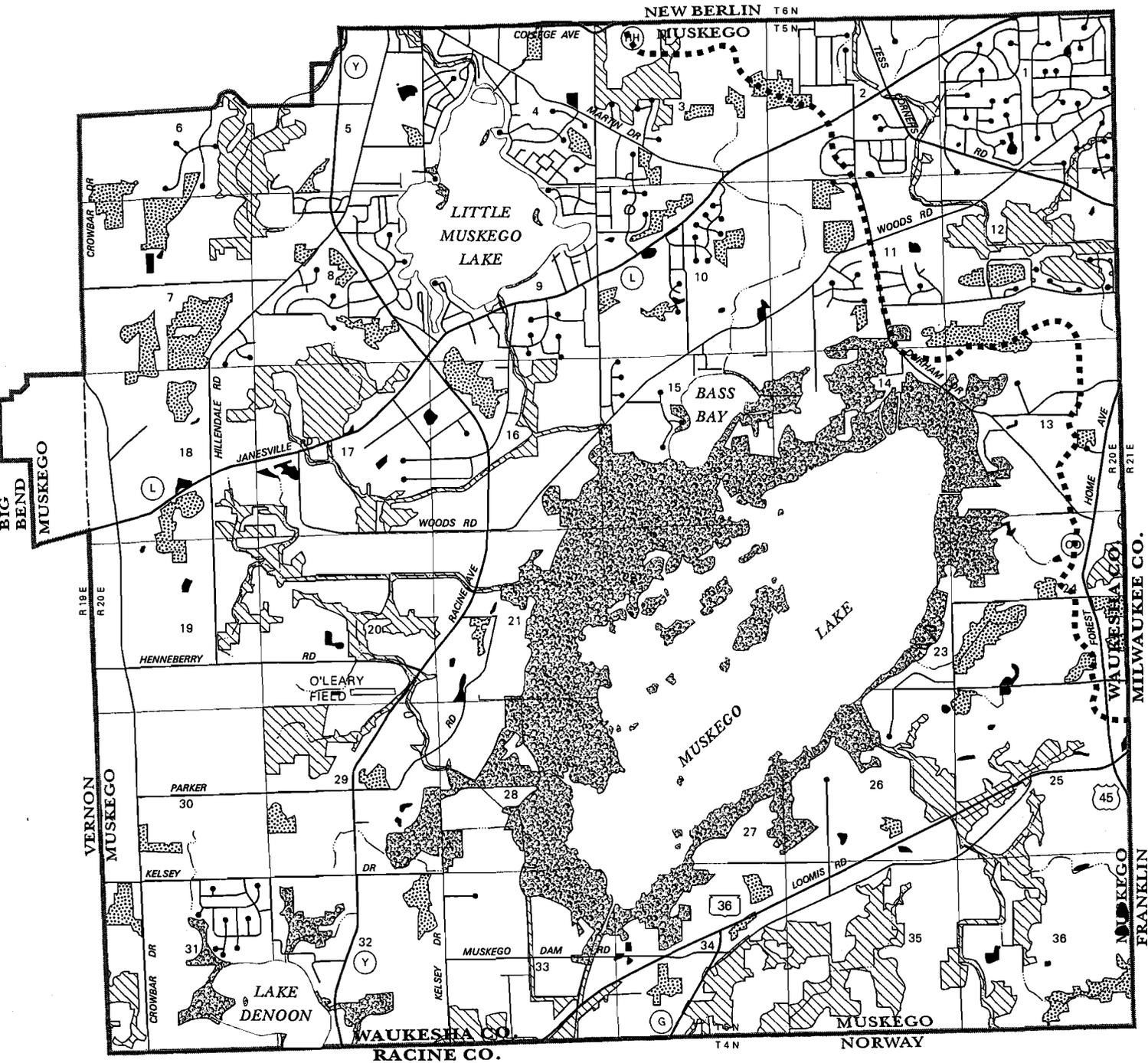
Source: SEWRPC.

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.

Isolated natural resource areas generally consist of those natural resource base elements that have "inherent natural" value, such as wetlands, woodlands, wildlife

Map 3

ENVIRONMENTALLY SIGNIFICANT LANDS
IN THE CITY OF MUSKEGO STUDY AREA

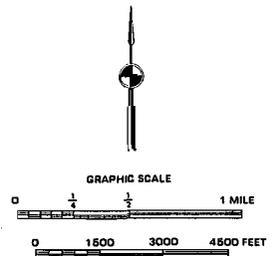


LEGEND

-  PRIMARY ENVIRONMENTAL CORRIDOR
-  SECONDARY ENVIRONMENTAL CORRIDOR
-  ISOLATED NATURAL RESOURCE AREA

-  WETLANDS AND SURFACE WATER AREAS LESS THAN FIVE ACRES IN SIZE
-  1995 CITY OF MUSKEGO CIVIL DIVISION BOUNDARY

Source: SEWRPC.



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.

In addition, wetlands less than five acres in size, located outside of primary environmental corridors, secondary environmental corridors and isolated natural resource areas, are shown on Map 3. Under Section 23.32 of the Wisconsin Statutes, a wetland is defined as, "an area where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which has soils indicative of wet conditions." It should be noted the information presented on Map 3 does not represent an exhaustive inventory of wetlands in the study area. The identified wetlands are based upon the 1982 Wisconsin Wetlands Inventory and interpretation of 1995 aerial photographs.¹

Lands and surface water encompassed within the primary environmental corridors of the Muskego study area in 1995 totaled 7.6 square miles, or about 21 percent of the total study area. Lands and surface water encompassed within the secondary environmental corridors totaled about 2.6 square miles, or about 7 percent of the study area. Lands and surface water encompassed within isolated natural resource areas totaled about 1.2 square miles, or about 3 percent of the study area. About 71 acres of the study area, or about one-tenth of a square mile, was encompassed within wetlands and surface water areas less than five acres in size. Thus, all environmentally significant lands in the Muskego study area encompassed about 11.5 square miles, or about 32 percent of the study area.

¹*Precise delineation of such small wetlands as well as other environmentally significant lands, including primary and secondary environmental corridors and isolated natural resource areas, can only be determined through field investigation.*

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 a portion of the delineated floodlands in the Muskego study area are contained within the environmental corridors, there are areas of the floodlands utilized for agricultural 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 should be preserved in essentially natural, open space uses, and over time become part of the adjacent environmental corridors.

In addition, the adopted regional water quality management plan recognizes that certain secondary environmental corridors, isolated natural resource areas, and wetlands less than five acres in size may 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 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.

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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 (WDNR) and Wisconsin Department of Commerce 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, review and approval of locally proposed sanitary sewer extensions by the WDNR and the Department of Commerce 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 MUSKEGO SANITARY SEWER SERVICE AREA

The currently identified design year 2000 Muskego sanitary sewer service area tributary to the Milwaukee Metropolitan Sewerage District is set forth in SEWRPC Community Assistance Planning Report No. 64 (2nd Edition), Sanitary Sewer Service Area for the City of Muskego, Waukesha County, Wisconsin, dated March 1986, and in one subsequent amendment to that report. As shown on Map 4, this service area as amended totals 16.3 square miles, or about 45 percent of the total study area of 36 square miles. The area encompasses about 2.4 square miles of primary environmental corridor, 1.0

square mile of secondary environmental corridor, and 0.5 square mile of isolated natural resource areas.

REFINED MUSKEGO SANITARY SEWER SERVICE AREA

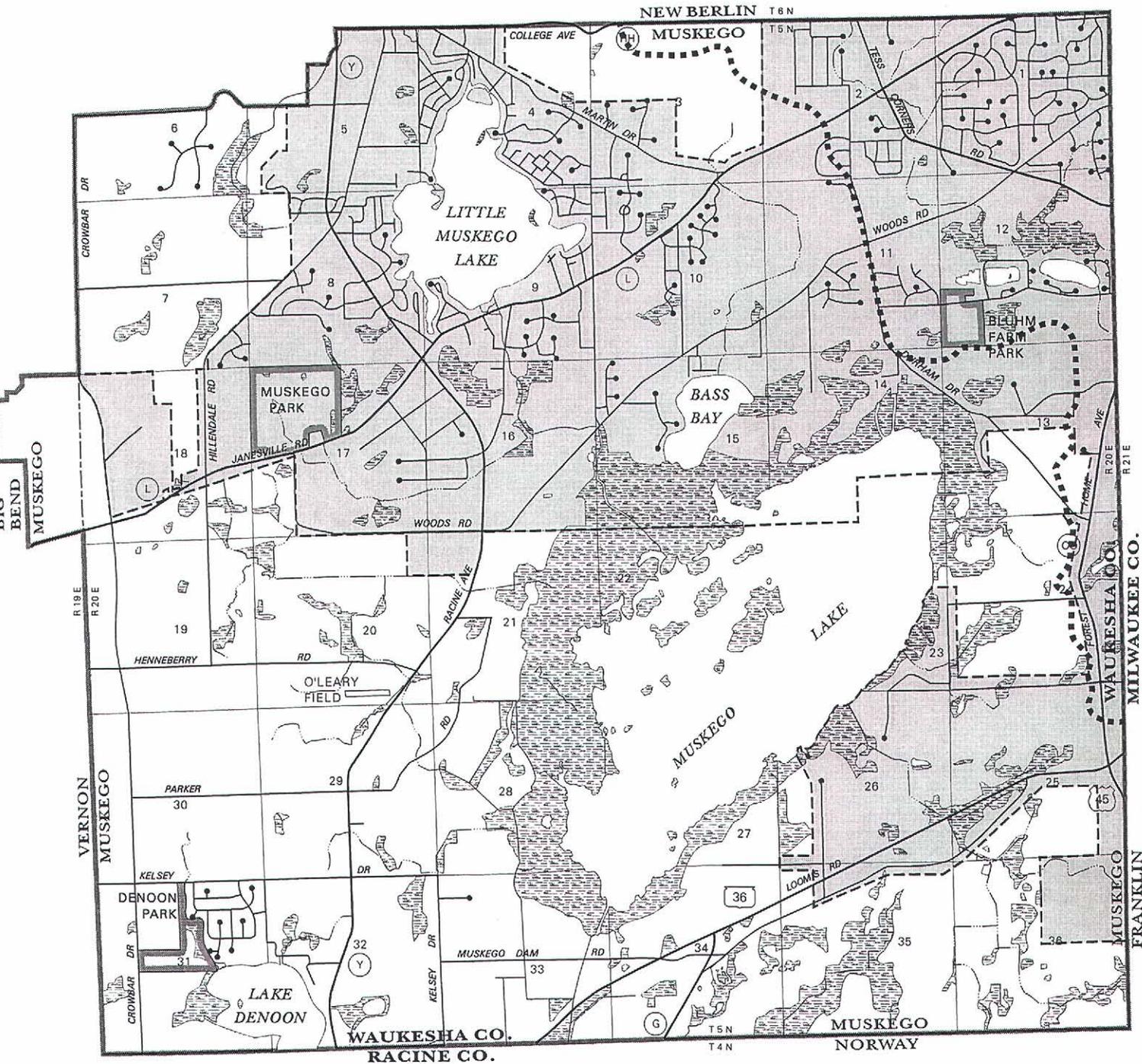
A comprehensive review of the Muskego sanitary sewer service area was last undertaken during the preparation of SEWRPC Community Assistance Planning Report No. 64 (2nd Edition) in 1986. The purpose of this refinement effort is to review once again the sewer service needs of lands envisioned to be tributary to the Milwaukee Metropolitan Sewerage District 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.

Factors taken into account in the delineation of the refined Muskego sanitary sewer service area included the currently identified sanitary sewer service area plan set forth in SEWRPC Community Assistance Planning Report No. 64, (2nd Edition), Sanitary Sewer Service Area for the City of Muskego, Waukesha County, Wisconsin, dated March 1986, and in one subsequent amendment dated March 1993, and shown on Map 4; the design year 2010 regional land use plan documented in SEWRPC Planning Report No. 40, A Regional Land Use Plan for Southeastern Wisconsin: 2010, dated January 1992 and adopted by the Regional Planning Commission in 1992; and the City land use plan as reflected in the land use plan for Waukesha County presented in SEWRPC Community Assistance Planning Report No. 209, A Development Plan for Waukesha County, Wisconsin, dated August 1996. Preliminary facilities planning work being undertaken in 1997 by the Milwaukee Metropolitan Sewerage District was also considered in the delineation of the Muskego sanitary sewer service area.

The refinement effort considered the location, type, and extent of existing urban development; the location of areas where onsite soil-absorption sewage disposal systems were known to be failing; the location and extent of gravity drainage areas tributary to planned sewage treatment facilities; the location and capacity of planned trunk sewers; the location of existing property ownership boundaries; and certain pertinent aspects of the natural

Map 4

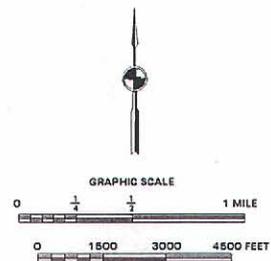
CITY OF MUSKEGO SANITARY SEWER SERVICE AREA, TRIBUTARY TO THE MILWAUKEE METROPOLITAN SEWERAGE DISTRICT, AS DEFINED IN SEWRPC COMMUNITY ASSISTANCE PLANNING REPORT NO. 64 (2ND EDITION) AS AMENDED



LEGEND

-  CITY OF MUSKEGO SEWER SERVICE AREA TRIBUTARY TO THE MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
-  1995 CITY OF MUSKEGO CIVIL DIVISION BOUNDARY

Source: SEWRPC.



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 important 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 Muskego area thus incorporates a range of resident 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 future scenario.

Local sanitary sewer service area and sewerage facility planning work should also consider a range of possible future 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 certain 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 relatively certain to be needed over a 15 to 20-year design period. The use of the intermediate population forecast may thus 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 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.

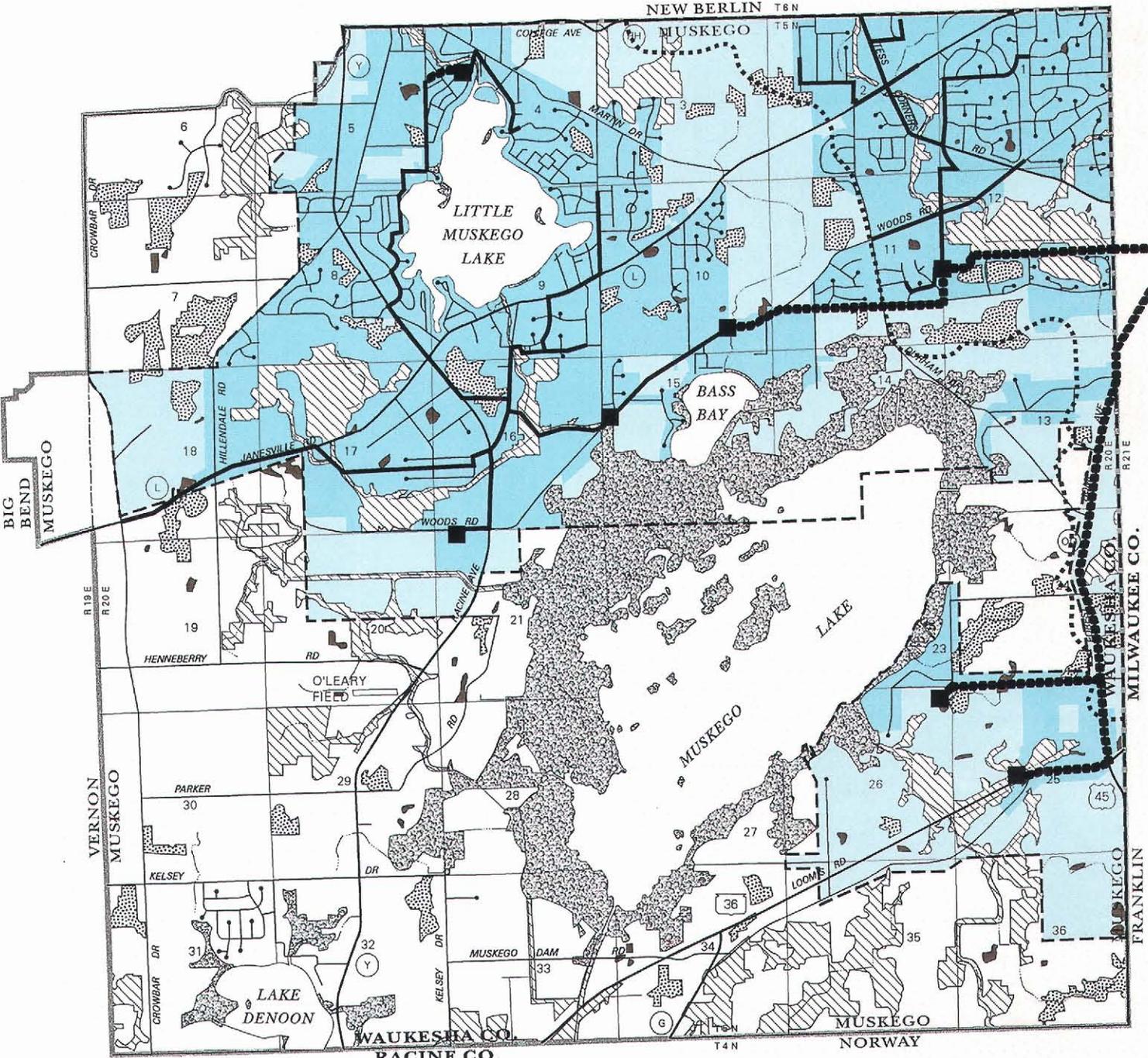
Under the foregoing conditions, the resident population levels of the area of Muskego anticipated to be tributary to the Milwaukee Metropolitan Sewerage District would, by the design year 2010, range from about 17,400 persons under the Commission's adopted land use plan to about 26,900 persons under the Commission's high-growth decentralized future scenario. It should also be noted that the Milwaukee Metropolitan Sewerage District, with cooperation from the City and the Regional Planning Commission in facilities planning work for that District, identifies a resident population level not exceeding 25,100 for the area by the year 2010. This population level is consistent with growth envisioned within the sewer service area under the City's land use plan and lies within the Commission-identified range for the year 2010.

The refined year 2010 Muskego sanitary sewer service area anticipated to be tributary to the Milwaukee Metropolitan Sewerage District, together with planned trunk sewers, and as submitted to public hearing, is shown on Map 5. The gross refined Muskego sanitary sewer service area encompasses 18 square miles, or one half of the total study area of 36 square miles. This gross sewer service area includes about 2.4 square miles of primary environmental corridor, 1.4 square miles of secondary environmental corridor, 0.6 square mile of isolated natural resource areas, and 48 acres, or about 0.08 square mile, of wetlands and surface water areas less than five acres in size. Therefore, a total of about 4.5 square miles, or 25 percent of the sewer service area, would encompass environmentally significant areas consisting of primary environmental corridors, secondary environmental corridors, isolated natural resource areas, and wetlands and surface water areas less than five acres in size.

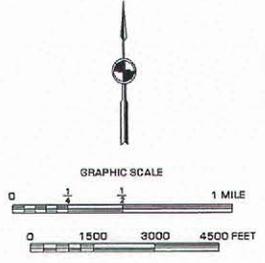
It should be noted that the environmentally significant lands indicated on Map 5 total 105 acres more than the environmentally significant lands indicated on Map 3. As shown on Map 6, 10 acres of land located within the 100-year recurrence interval flood hazard area associated with Muskego Lake and Bass Bay, and lying within the Muskego sewer service area, are currently undeveloped and lie adjacent to primary environmental corridor lands. An additional 95 acres located within other 100-year

Map 5

CITY OF MUSKEGO SANITARY SEWER SERVICE AREA TRIBUTARY TO THE MILWAUKEE METROPOLITAN SEWERAGE DISTRICT



- LEGEND**
- PRIMARY ENVIRONMENTAL CORRIDOR
 - SECONDARY ENVIRONMENTAL CORRIDOR
 - ISOLATED NATURAL RESOURCE AREA
 - WETLANDS AND SURFACE WATER AREAS LESS THAN FIVE ACRES IN SIZE
 - EXISTING SANITARY SEWER SERVICE AREA: 1997
 - PLANNED SANITARY SEWER SERVICE AREA: 2010
 - PLANNED SANITARY SEWER SERVICE AREA BOUNDARY
 - EXISTING TRUNK SEWER
 - EXISTING FORCE MAIN
 - EXISTING PUMPING STATION
 - 1995 CITY OF MUSKEGO CIVIL DIVISION BOUNDARY



Source: SEWRPC.

recurrence interval flood hazard areas are currently undeveloped and lie adjacent to secondary environmental corridor lands. It is anticipated that over time, these lands will be re-vegetated to possess the characteristics of, and added to, the adjacent environmental corridor.

As also indicated on Map 6, there are 636 additional acres of land located within 100-year recurrence interval flood hazard areas lying outside of the proposed Muskego sewer service area. These floodplain areas would be added to adjacent environmental corridors should the sewer service area be expanded into those areas.

The refined Muskego sanitary sewer service area tributary to the Milwaukee Metropolitan Sewerage District would accommodate a resident population of about 25,100 persons, assuming full development of vacant lands within the sewer service area as envisioned under the City's land use plan. This population level lies within the range of population levels envisioned for the sewer service area under the Commission's regional land use plan for the year 2010.

The population and housing unit levels envisioned in the Muskego sewer service area would be accommodated at an overall density of about 1.8 dwelling units per net residential acre. This density lies within the recommended density range for the Muskego area as identified in the Commission-adopted regional land use plan for the year 2010.¹

WATER QUALITY IMPACTS

Under the adopted regional water quality management plan and the refined 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

¹Net residential density in the refined Muskego sanitary sewer service area is determined by dividing the total number of dwelling units anticipated in the sewer service area under full development, as envisioned under the City's land use plan, by the net residential land area anticipated within that area. The total number of dwelling units anticipated in the Muskego sewer service area under full development (9,240 units) divided by the net residential land within the sewer service area (5,040 acres) results in an overall net residential density of 1.8 dwelling units per acre.

identified as primary environmental corridor 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, extremely 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 important that the developer or 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.²

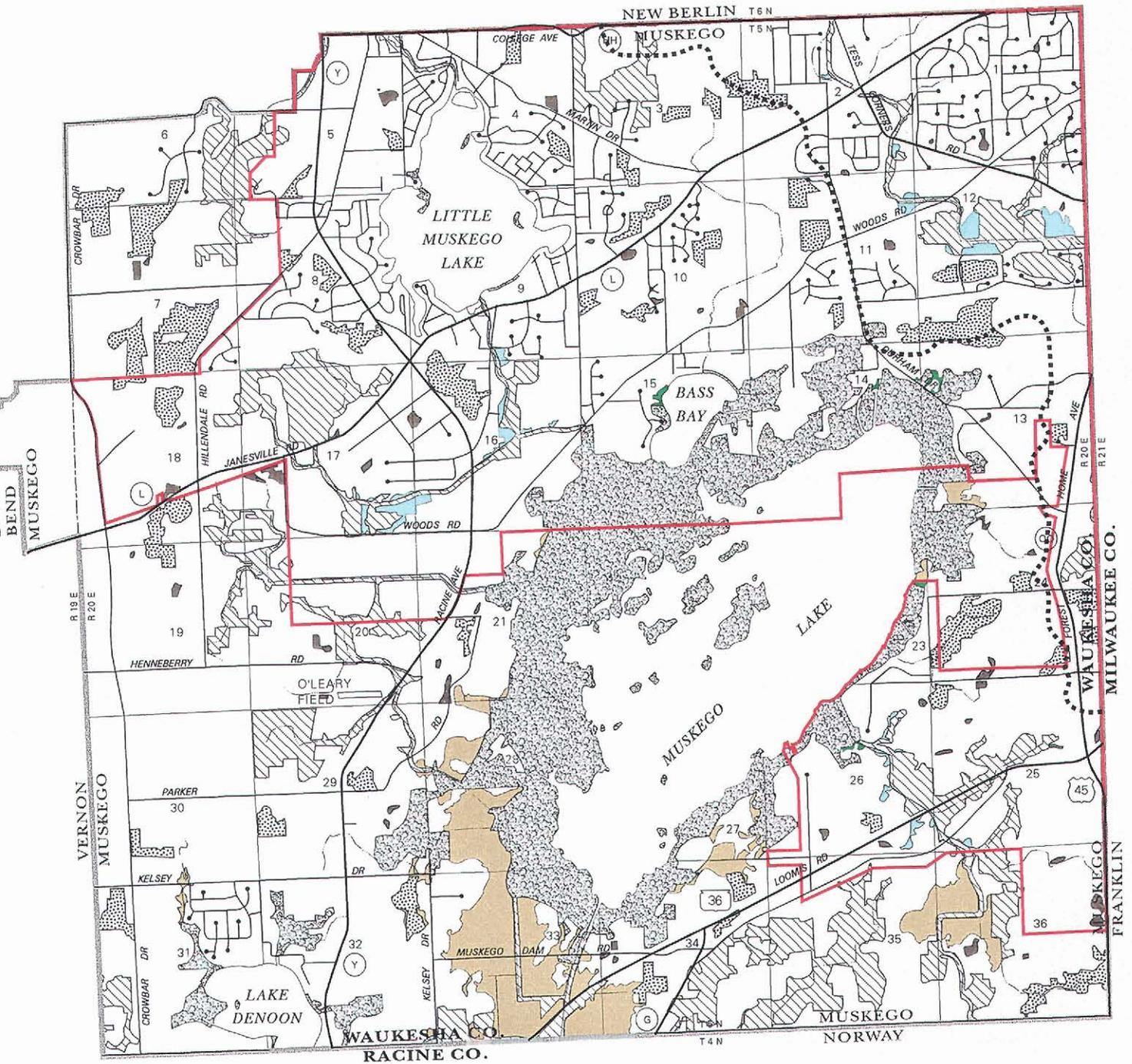
In addition, the provision of public sanitary sewer service to those lands within the planned sanitary sewer service area which are currently developed and served by onsite sewage disposal systems may be expected to reduce the pollutant loadings from the existing onsite sewage disposal systems to both surface and ground waters.

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.

²It 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.

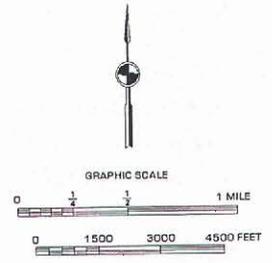
Map 6

ANTICIPATED CHANGES IN THE ENVIRONMENTALLY SIGNIFICANT LANDS IN THE CITY OF MUSKEGO SANITARY SEWER SERVICE AREA



LEGEND

-  PRIMARY ENVIRONMENTAL CORRIDOR
-  SECONDARY ENVIRONMENTAL CORRIDOR
-  ISOLATED NATURAL RESOURCE AREA
-  WETLANDS AND SURFACE WATER AREAS LESS THAN FIVE ACRES IN SIZE
-  GROSS SANITARY SEWER SERVICE AREA BOUNDARY
-  1995 CITY OF MUSKEGO CIVIL DIVISION BOUNDARY
-  FLOODLANDS PROPOSED TO REMAIN UNDEVELOPED AND ADDED TO THE PRIMARY ENVIRONMENTAL CORRIDOR
-  FLOODLANDS PROPOSED TO REMAIN UNDEVELOPED AND ADDED TO THE SECONDARY ENVIRONMENTAL CORRIDOR
-  FLOODLANDS LOCATED OUTSIDE THE MUSKEGO SEWER SERVICE AREA WHICH WOULD BE ADDED TO THE ADJACENT ENVIRONMENTAL CORRIDOR SHOULD THE SEWER SERVICE AREA BE EXPANDED



Source: SEWRPC.

COST-EFFECTIVENESS ANALYSIS OF SEWAGE CONVEYANCE AND TREATMENT ALTERNATIVES

The planned Muskego sanitary sewer service area set forth in this report is about 1.7 square miles, or about 10 percent larger than the currently adopted sewer service area as set forth in SEWRPC Community Assistance Planning Report No. 64 (2nd Edition) as amended. All of the proposed additions to the Muskego sewer service area lie adjacent to the current sewer service area which is tributary to the Milwaukee Metropolitan Sewerage District. The nearest other public sanitary sewer system, the Town of Norway Sanitary District No. 1, is located about three miles to the southwest and is a relatively small system having a treatment plant capacity of only about 0.75 million gallons per day (mgd). No other public sewerage system is in the vicinity, and thus no further analysis is deemed to be required to conclude that the subject area would be served most cost effectively through connection to the Milwaukee Metropolitan Sewerage District sewerage system.

SEWERAGE SYSTEM CAPACITY IMPACT ANALYSIS

The size and capacity of the Milwaukee Metropolitan Sewerage District (MMSD) sewerage facilities were developed as a part of the District's facility planning program³. That plan was based upon an estimated year 2005 sewer service area population of 22,000 persons in the City of Muskego. As previously noted, the MMSD, with cooperation from the City and the Regional Planning Commission in their ongoing year 2010 facilities planning work, is planning for a resident population level of 25,100 persons for the Muskego sewer service area by the year 2010. Similarly, the amount of planned commercial and industrial land uses within the sewer service under the current MMSD facilities planning work was arrived at with input from both the City and the Regional Planning Commission, considering local planning and recent urban development, and represents a refinement of the regional land use plan. In addition, the planned population level and amount of commercial and industrial land uses incorporated into the MMSD facility planning are consistent with growth envisioned within the sewer service area under the City's land use plan, and are consistent with the range of potential future population

³*Milwaukee Metropolitan Sewerage District, Wastewater System Plan, June 1980.*

levels set forth in the Commission's adopted year 2010 regional land use plan.

Since the planned population level and amount of commercial and industrial land now envisioned in the City of Muskego sewer service area are the same as those being used in the MMSD facility planning, the sewerage facilities in the MMSD system, including the treatment plant, should have adequate capacity to provide service to the proposed service area.

PUBLIC REACTION TO THE REFINED SANITARY SEWER SERVICE AREA

A public hearing was held on November 11, 1997, for the purpose of receiving comments on the revised Muskego sanitary sewer service area plan as shown on Map 5. This hearing was sponsored jointly by the City of Muskego and the Regional Planning Commission. Summary minutes of the public hearing are presented in Appendix A.

A summary of the findings and recommendations of the Muskego sanitary sewer service area update and refinement effort was presented prior to receiving public comment. Topics specifically addressed in the summary presentation included the rationale for revising the Muskego sewer service area tributary to the Milwaukee Metropolitan Sewerage District, the importance of the delineation of the outer boundaries of the sewer service area, the importance of the delineation of the environmentally sensitive lands within the service area, and the significance of these lands insofar as the future extension of sewer service is concerned. The probable impact of planned development within the revised sanitary sewer service area on the treatment plant capacity of the Milwaukee Metropolitan Sewerage District was also summarized. In addition, it was noted that an environmental analysis of the proposed changes by the Wisconsin Department of Natural Resources would be required. Comments on the refined plan were then solicited.

A review of the hearing record indicates that no substantive concerns were raised regarding the delineation of the external boundaries of the revised Muskego sanitary sewer service area tributary to the Milwaukee Metropolitan Sewerage District, or the delineation of the environmentally sensitive lands within that area. Accordingly, no changes were made to the Muskego sanitary sewer service area plan as presented at the public hearing and as reflected on Map 5. Subsequently, on November 25, 1997, the Common

Council of the City of Muskego acted to approve the new sanitary sewer service area plan for the portion of the City tributary to the Milwaukee Metropolitan Sewerage District as shown on Map 5.

Detailed delineations of the revised Muskego sanitary sewer service area, and of the environmentally significant lands within that area, are shown on a series of aerial photographs reproduced as Map 7, beginning on page 19 and continuing through page 29 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 Common Council of the City of Muskego.
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 Muskego sanitary sewer

service area as shown on Map 5. 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.

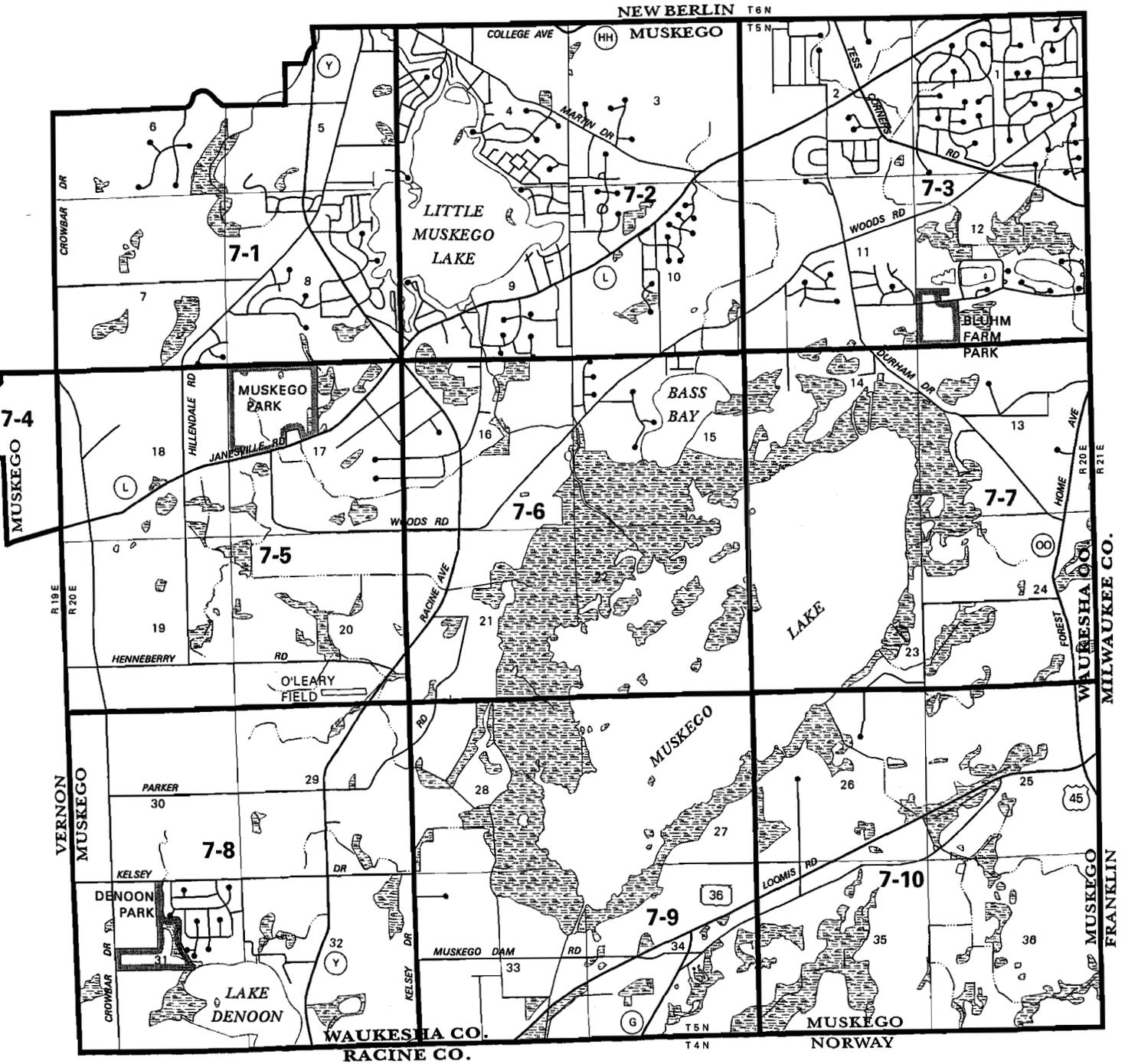
4. Review by the City of Muskego of utility extension policies to ensure that such policies are consistent with the urban land development recommendations inherent in the delineation of the planned sanitary sewer service area.

SUBSEQUENT REFINEMENTS TO THE MUSKEGO SEWER SERVICE AREA

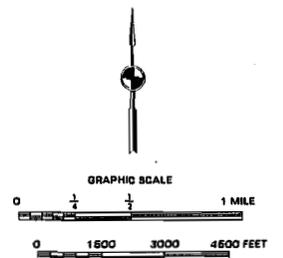
This report presents the revised Muskego sewer service area tributary to the Milwaukee Metropolitan Sewerage District. The refined sewer service area was delineated cooperatively by the units and agencies of government concerned, and was subjected to review at a public hearing. It is envisioned that the delineated sewer service area will accommodate all new urban development anticipated in this 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 properly reflect 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 Milwaukee Metropolitan Sewerage District, 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.

Map 7

INDEX OF MAPS SHOWING ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE CITY OF MUSKEGO

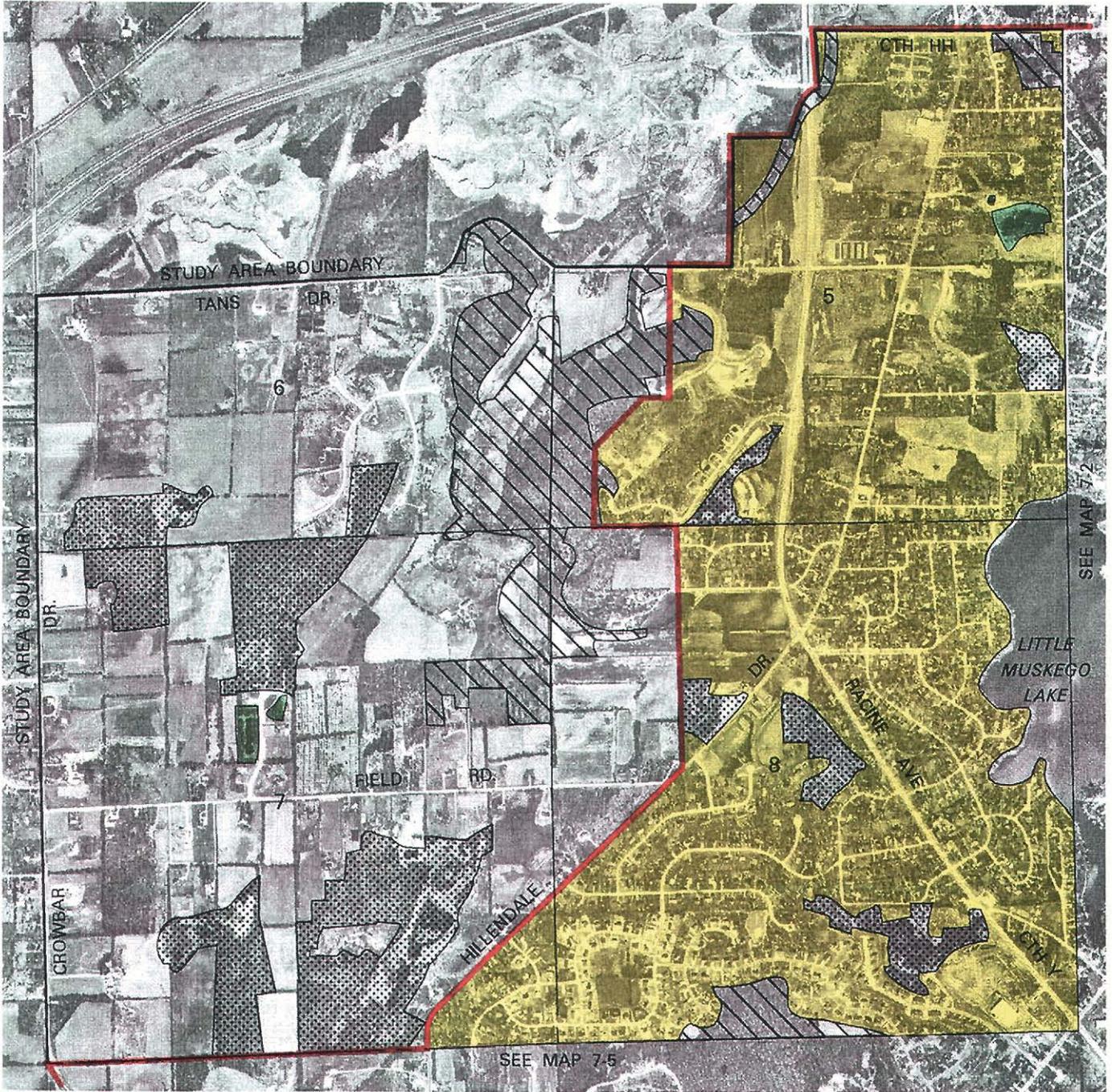


Source: SEWRPC.



**ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED
SANITARY SEWER SERVICE AREA FOR THE CITY OF MUSKEGO**

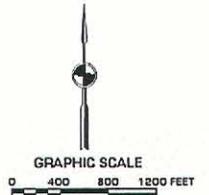
U. S. Public Land Survey Sections 5, 6, 7, and 8
Township 5 North, Range 20 East



LEGEND

- | | | | |
|--|--|---|--|
|  | SECONDARY ENVIRONMENTAL CORRIDOR |  | PLANNED SANITARY SEWER SERVICE AREA |
|  | ISOLATED NATURAL RESOURCE AREA |  | GROSS SANITARY SEWER SERVICE AREA BOUNDARY |
|  | WETLANDS AND SURFACE WATER AREAS
LESS THAN FIVE ACRES IN SIZE | | |

Source: SEWRPC.



**ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED
SANITARY SEWER SERVICE AREA FOR THE CITY OF MUSKEGO**

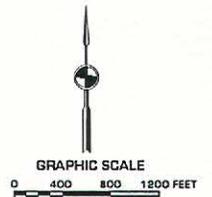
**U. S. Public Land Survey Sections 3, 4, 9, and 10
Township 5 North, Range 20 East**



LEGEND

- | | | | |
|--|--|---|--|
|  | PRIMARY ENVIRONMENTAL CORRIDOR |  | PLANNED SANITARY SEWER SERVICE AREA |
|  | SECONDARY ENVIRONMENTAL CORRIDOR |  | GROSS SANITARY SEWER SERVICE AREA BOUNDARY |
|  | ISOLATED NATURAL RESOURCE AREA | | |
|  | WETLANDS AND SURFACE WATER AREAS
LESS THAN FIVE ACRES IN SIZE | | |

Source: SEWRPC.



Map 7-3

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED
SANITARY SEWER SERVICE AREA FOR THE CITY OF MUSKEGO

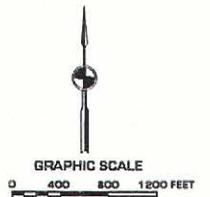
U. S. Public Land Survey Sections 1, 2, 11, and 12
Township 5 North, Range 20 East



LEGEND

- | | | | |
|--|--|---|--|
|  | PRIMARY ENVIRONMENTAL CORRIDOR |  | PLANNED SANITARY SEWER SERVICE AREA |
|  | SECONDARY ENVIRONMENTAL CORRIDOR |  | GROSS SANITARY SEWER SERVICE AREA BOUNDARY |
|  | ISOLATED NATURAL RESOURCE AREA | | |
|  | WETLANDS AND SURFACE WATER AREAS
LESS THAN FIVE ACRES IN SIZE | | |

Source: SEWRPC.



**ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED
SANITARY SEWER SERVICE AREA FOR THE CITY OF MUSKEGO**

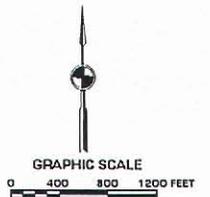
**U. S. Public Land Survey Sections 13 and 24
Township 5 North, Range 19 East**



LEGEND

 GROSS SANITARY SEWER SERVICE AREA BOUNDARY

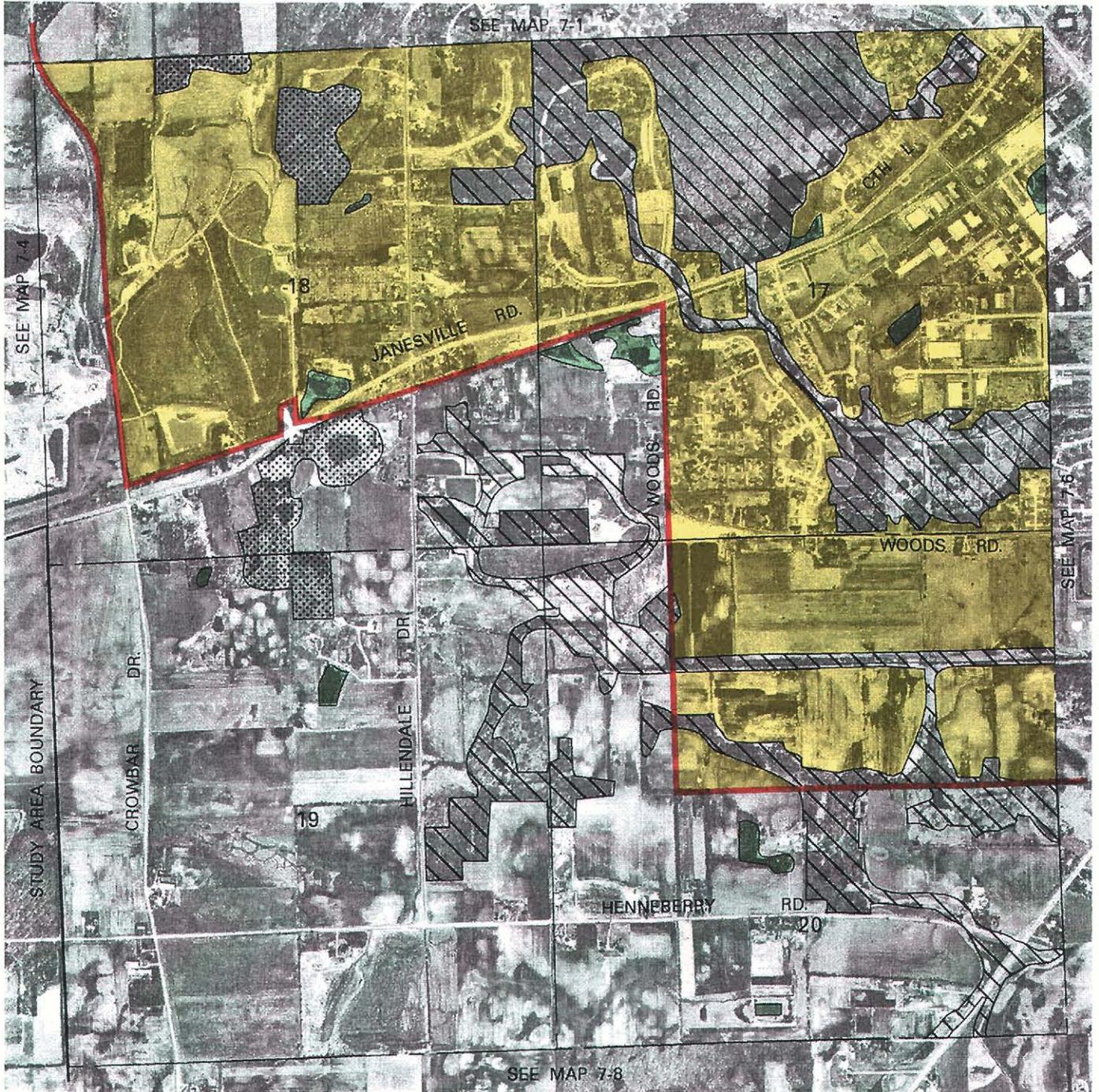
Source: SEWRPC.



Map 7-5

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED
SANITARY SEWER SERVICE AREA FOR THE CITY OF MUSKEGO

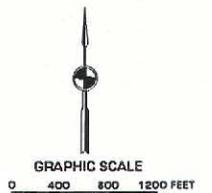
U. S. Public Land Survey Sections 17, 18, 19, and 20
Township 5 North, Range 20 East



LEGEND

- | | | | |
|--|--|---|--|
|  | SECONDARY ENVIRONMENTAL CORRIDOR |  | PLANNED SANITARY SEWER SERVICE AREA |
|  | ISOLATED NATURAL RESOURCE AREA |  | GROSS SANITARY SEWER SERVICE AREA BOUNDARY |
|  | WETLANDS AND SURFACE WATER AREAS
LESS THAN FIVE ACRES IN SIZE | | |

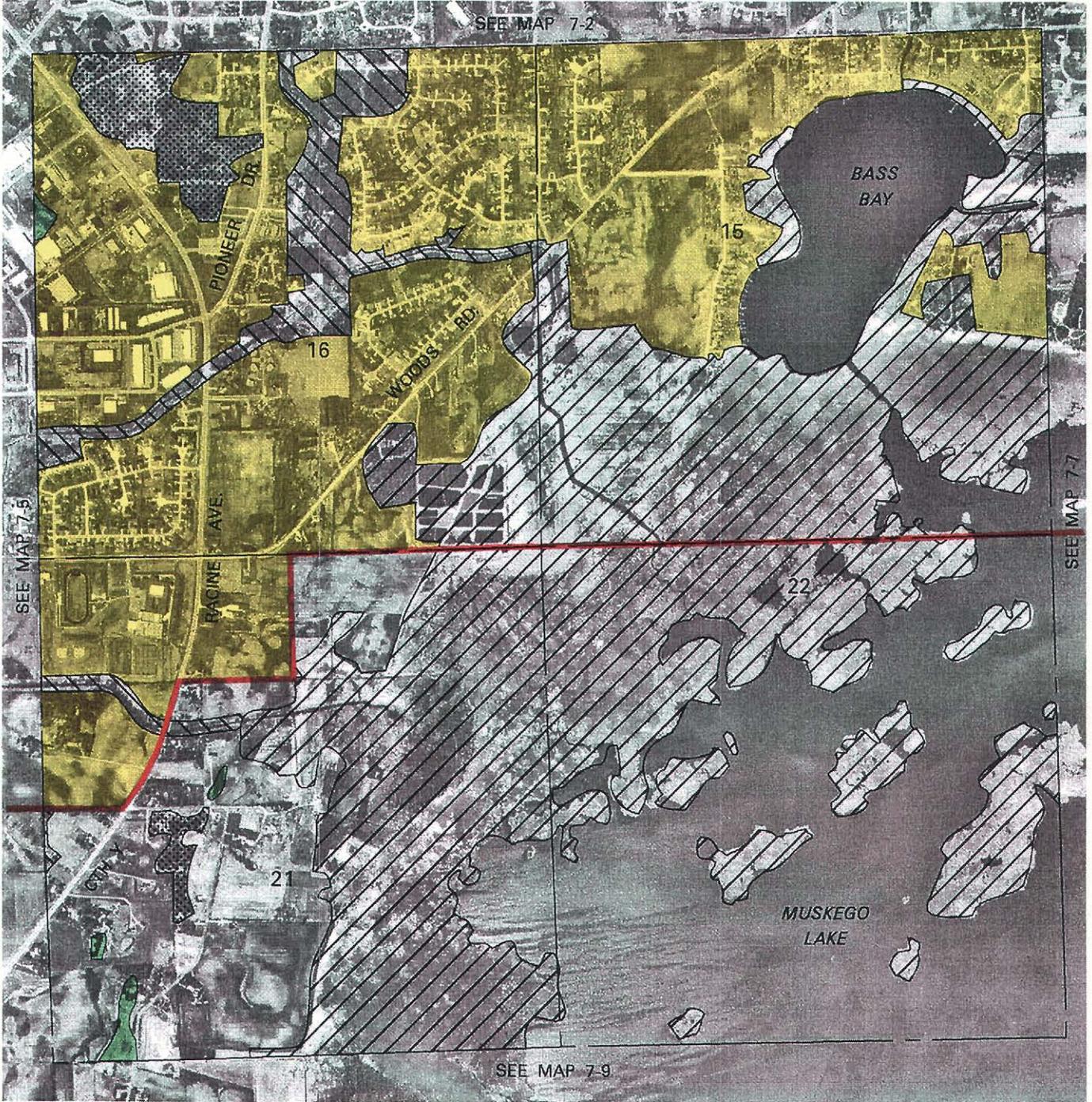
Source: SEWRPC.



Map 7-6

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED
SANITARY SEWER SERVICE AREA FOR THE CITY OF MUSKEGO

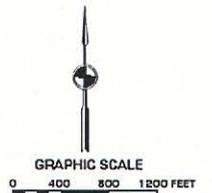
U. S. Public Land Survey Sections 15, 16, 21, and 22
Township 5 North, Range 20 East



LEGEND

- | | | | |
|--|--|---|--|
|  | PRIMARY ENVIRONMENTAL CORRIDOR |  | PLANNED SANITARY SEWER SERVICE AREA |
|  | SECONDARY ENVIRONMENTAL CORRIDOR |  | GROSS SANITARY SEWER SERVICE AREA BOUNDARY |
|  | ISOLATED NATURAL RESOURCE AREA | | |
|  | WETLANDS AND SURFACE WATER AREAS
LESS THAN FIVE ACRES IN SIZE | | |

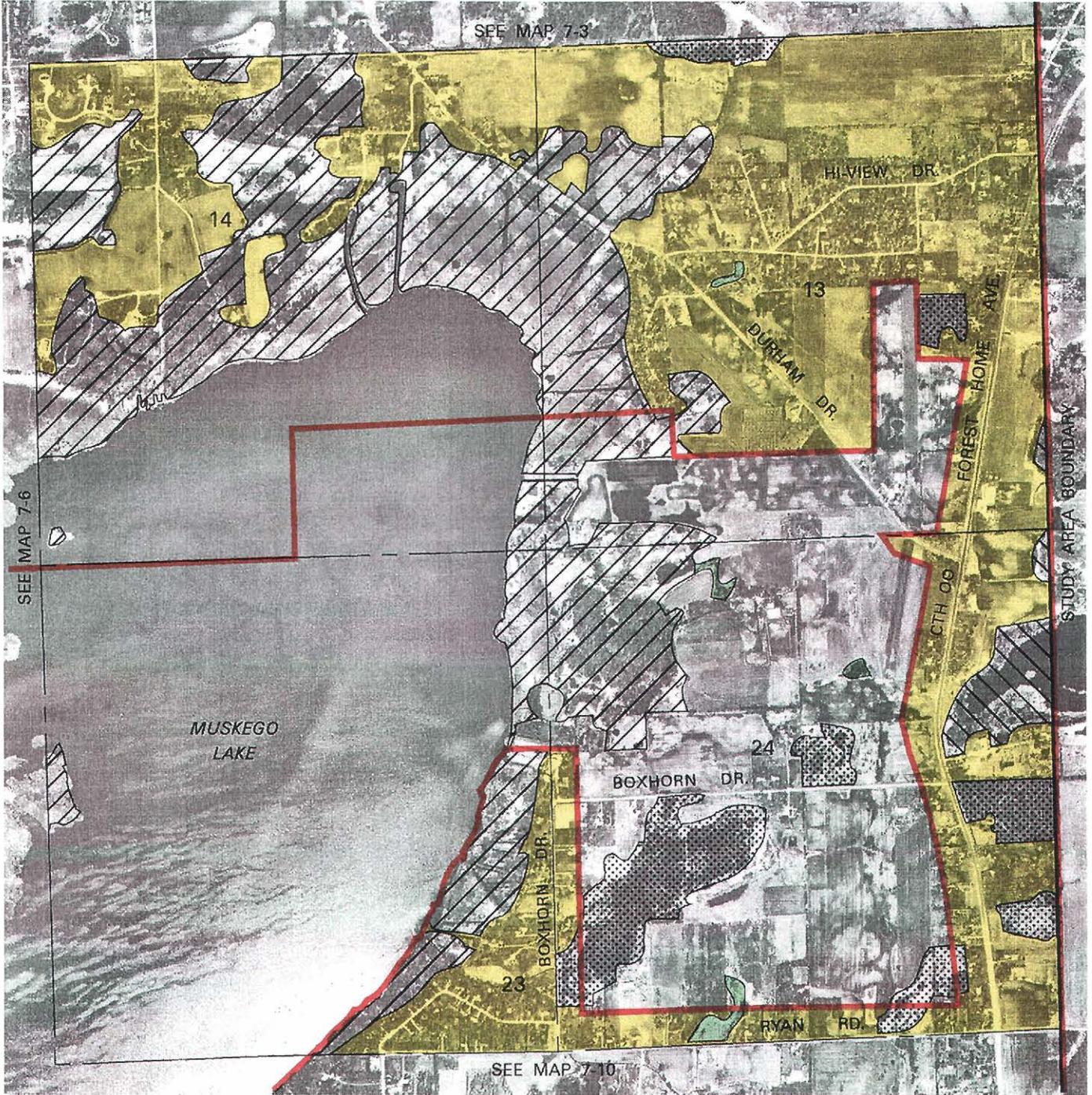
Source: SEWRPC.



Map 7-7

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED
SANITARY SEWER SERVICE AREA FOR THE CITY OF MUSKEGO

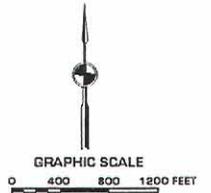
U. S. Public Land Survey Sections 13, 14, 23, and 24
Township 5 North, Range 20 East



LEGEND

- | | | | |
|--|--|---|--|
|  | PRIMARY ENVIRONMENTAL CORRIDOR |  | PLANNED SANITARY SEWER SERVICE AREA |
|  | SECONDARY ENVIRONMENTAL CORRIDOR |  | GROSS SANITARY SEWER SERVICE AREA BOUNDARY |
|  | ISOLATED NATURAL RESOURCE AREA | | |
|  | WETLANDS AND SURFACE WATER AREAS
LESS THAN FIVE ACRES IN SIZE | | |

Source: SEWRPC.



**ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED
SANITARY SEWER SERVICE AREA FOR THE CITY OF MUSKEGO**

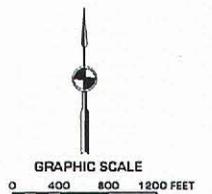
**U. S. Public Land Survey Sections 29, 30, 31, and 32
Township 5 North, Range 20 East**



LEGEND

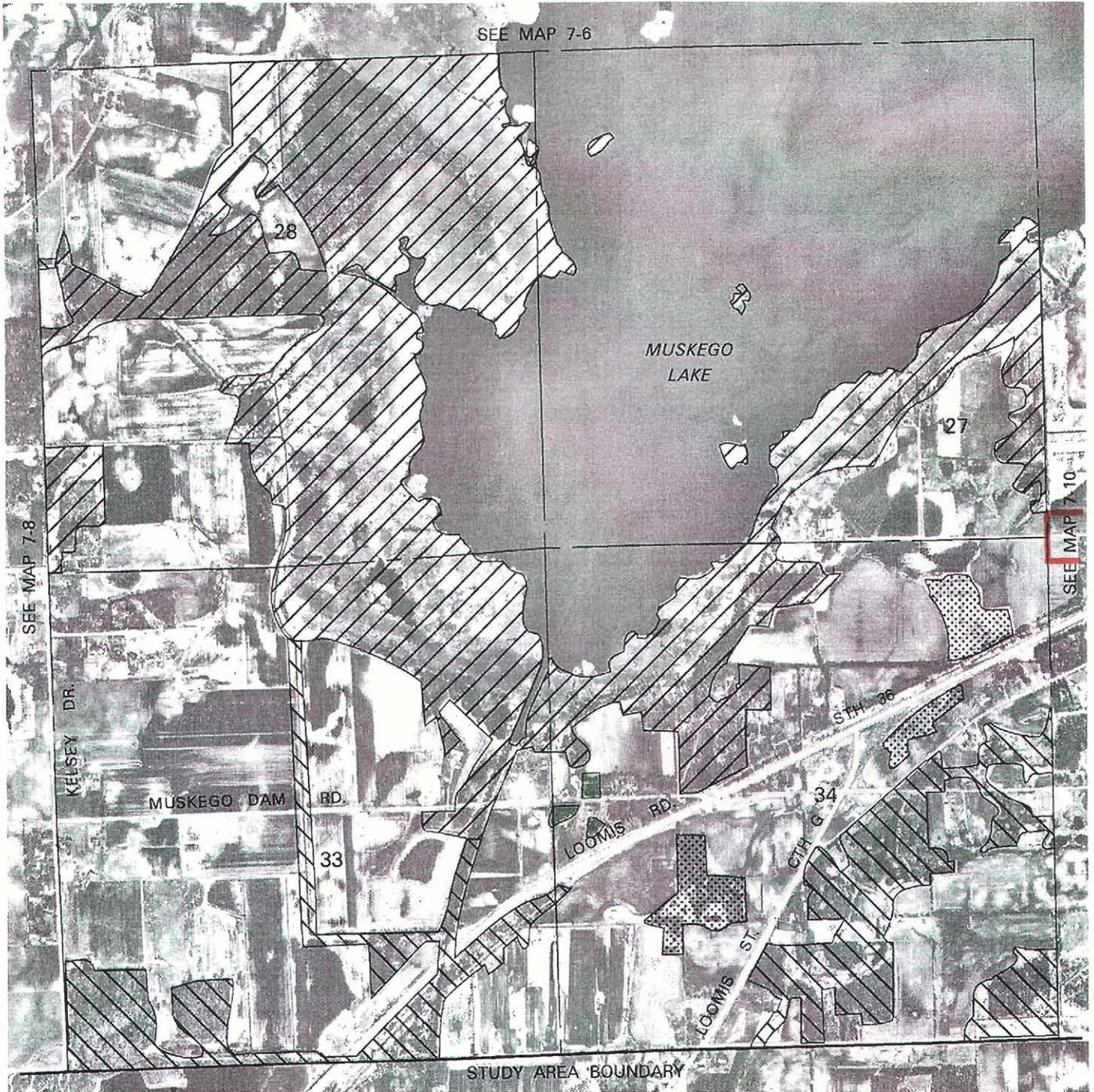
- | | | | |
|--|--|--|--|
| | PRIMARY ENVIRONMENTAL CORRIDOR | | PLANNED SANITARY SEWER SERVICE AREA |
| | SECONDARY ENVIRONMENTAL CORRIDOR | | GROSS SANITARY SEWER SERVICE AREA BOUNDARY |
| | ISOLATED NATURAL RESOURCE AREA | | |
| | WETLANDS AND SURFACE WATER AREAS
LESS THAN FIVE ACRES IN SIZE | | |

Source: SEWRPC.



**ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED
SANITARY SEWER SERVICE AREA FOR THE CITY OF MUSKEGO**

U. S. Public Land Survey Sections 27, 28, 33, and 34
Township 5 North, Range 20 East

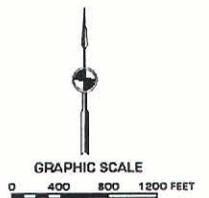


LEGEND

-  PRIMARY ENVIRONMENTAL CORRIDOR
-  SECONDARY ENVIRONMENTAL CORRIDOR
-  ISOLATED NATURAL RESOURCE AREA
-  WETLANDS AND SURFACE WATER AREAS
LESS THAN FIVE ACRES IN SIZE

 GROSS SANITARY SEWER SERVICE AREA BOUNDARY

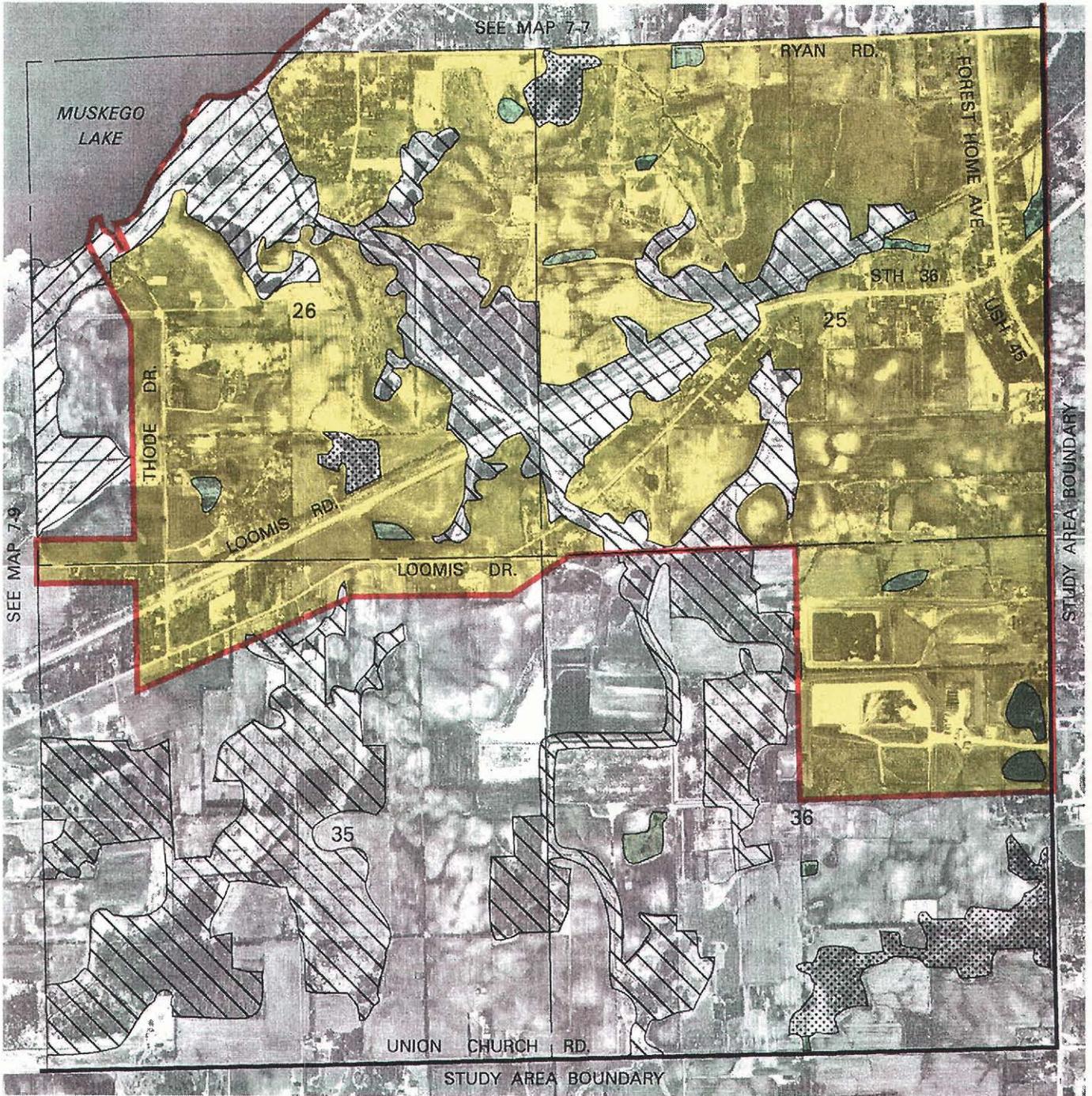
Source: SEWRPC.



Map 7-10

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED
SANITARY SEWER SERVICE AREA FOR THE CITY OF MUSKEGO

U. S. Public Land Survey Sections 25, 26, 35, and 36
Township 5 North, Range 20 East

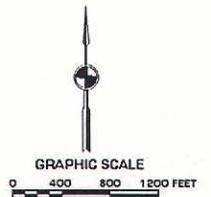


LEGEND

-  PRIMARY ENVIRONMENTAL CORRIDOR
-  SECONDARY ENVIRONMENTAL CORRIDOR
-  ISOLATED NATURAL RESOURCE AREA
-  WETLANDS AND SURFACE WATER AREAS
LESS THAN FIVE ACRES IN SIZE

-  PLANNED SANITARY SEWER SERVICE AREA
-  GROSS SANITARY SEWER SERVICE AREA BOUNDARY

Source: SEWRPC.



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APPENDIX

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**MINUTES OF PUBLIC HEARING
CITY OF MUSKEGO COMMON COUNCIL**

MINUTES OF PUBLIC HEARING HELD NOVEMBER 11, 1997

UPON THE PETITION OF THE SEWER UTILITY COMMITTEE OF THE CITY OF MUSKEGO SHALL CERTAIN AREAS AS DELINEATED ON A MAP ENTITLED "MAP 1; RECOMMENDED REVISION TO THE CITY OF MUSKEGO SANITARY SEWER SERVICE AREA TRIBUTARY TO THE MILWAUKEE METROPOLITAN SEWERAGE DISTRICT" BE ADDED TO THE MUSKEGO SEWER SERVICE AREAS AS ILLUSTRATED WITH THE FOLLOWING GENERAL MAP (see attached):

Mayor De Angelis declared the hearing open at 7:32 p.m. Also present were Aldermen D'Acquisto, Patterson, Salentine, Sanders, Slocomb, and Woodard, Clerk-Treasurer Marenda, Planning Director Sadowski, Utilities Superintendent Kloskowski, City Attorney Molter, and Deputy Clerk Blenski.

The Clerk-Treasurer read the Notice of Public Hearing.

Mr. Sadowski presented a brief history. He stated the request originates back to early 1996 when the City looked at adding two small areas to the service area to accommodate the sewer project in the Holz Drive area and to add lands west of Hillendale Drive that were eliminated as a result of a prior amendment. The Southeastern Wisconsin Regional Planning Commission (SEWRPC) was contacted in July to assist with the addition of those two areas. It was determined that the City should be looked at in its entirety and the sewer service area be amended to go out to the year 2010. Mr. Sadowski identified the proposed additions to the sewer service area. After initial calculations, the area around the high school was dropped out, but a reanalysis has determined the areas adjacent to the high school and the southeast corner of Woods Road could be added back in. In November of 1996, the Public Utilities Committee approved the map without those areas. The Plan Commission also recommended the amendment to the sewer service area in line with that of the Public Utilities Committee.

As SEWRPC determined the area south of the high school could be included, the map does show that area as being added.

Mr. Bob Biebel of SEWRPC reiterated that this project has been worked on with City staff for about a year. He stated that this work will be factored into the Milwaukee Metropolitan Sewerage District's facility planning to ensure that the capacity needed to serve this area will be included. Mr. Tim McCauley, also of SEWRPC, distributed a copy of the draft report. Mr. McCauley presented background information. Sewer service areas are refined from time to time to reflect local concerns and account for changing conditions. Muskego's service area was initially refined in 1982 and again in 1986. This amendment would represent the third edition. He further identified the steps in the refinement process. After adoption of the map and report by the municipality, it is forwarded to the Department of Natural Resources for its endorsement. The refined sewer service area is a little less than two square miles

larger than the current area and would accommodate a population of 25,100. That assumes full development of vacant lands within the sewer service area as envisioned under the City's land use plan. This compares to 16,500 (in the sewer service area) in 1995. The addition of these areas is not expected to have negative impacts on water quality provided proper site development is practiced. After the public hearing, comments will be considered and any necessary revisions made. Milwaukee Metropolitan Sewerage District must also concur.

Al Stefaniak, north side of College Avenue, stated no one on the hillside has had any problems with septic systems. He asked if any person applied to develop land directly across the road from his property. Mayor responded not that he is aware of. Mayor further clarified that because Mr. Stefaniak's property may be included in the sewer service area does not mean that sewer is going to be extended to his property in the near future. It allows for the availability of the extension if the need arises.

Mr. Stefaniak asked about the cost per foot of sewer and Mr. Kloskowski responded that \$70 per linear foot is the average. Mr. Stefaniak stated that he was originally in the sewer service area and then was taken out; there was no notification given to him when his property was removed. He has been dissatisfied with the way it has been handled. It seems he was taken out of the area so that development could take place somewhere else. He would like the City to consider how the cost of sewer affects senior citizens. Mayor De Angelis also stated that because a property is included in the service area does not mean there is any lien or bill against the property. He also stated that the City does have a hardship policy in place.

Paul Oman, College Avenue, stated he does not object to the area for a business park being in but he has a problem with an area being put included where no development is taking place. There are many open areas in the existing sewer service area which remain undeveloped. He is concerned with being spread all over the place. Mr. Oman asked if anyone petitioned the City or asked to be included? Mayor responded no; however, the properties on College Avenue were originally in the service area and removed in 1986. The City determined the long-range plan needed to be looked at. The Mayor responded to Mr. Oman's inquiry about how you petition for sewer.

Jim Woulfe, Racine Avenue just south of the high school, asked what benefit this has for his property if sewer is not going to be run to his house? Mayor responded that in the event the current on-site system on the property fails, municipal sewer can be accessed. He stated the driving force behind the amendment was that municipal sewer is a more attractive and viable means for sewage treatment than on-site septic because it does not go into the aquifer where drinking water is obtained.

Jack Collier owns a 35-acre parcel of land south of Janesville Road and east of Crowbar. He presently has sewer and water service along the frontage on Janesville Road. He urged the Council to consider adding the remainder of his site (approximately 14-15 acres) to the service area to allow a more comprehensive plan for the development of his entire parcel.

Mr. Stefaniak stated the County had plans for the extension of Calhoun and the correction of the dangerous S curve on College Avenue. Any plans to extend sewer in that area should take this into consideration.

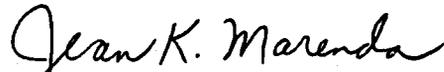
Alderman Sanders noted that the date on Map 5 is incorrect.

Alderman Patterson asked if the request of Mr. Collier could be addressed. Mayor responded that the area was reviewed again and it is still believed to be too remote and in the far region of the City where development is not being encouraged at this time.

As there were no additional comments or questions, the hearing was declared closed at 8:25 PM.

(Minutes taken and transcribed by Jill Blenski.)

Respectfully submitted,



Jean K. Marendia, CMC
Clerk-Treasurer