

**SANITARY SEWER
SERVICE AREA FOR
THE VILLAGE OF
KEWASKUM**

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WISCONSIN**

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

**COMMUNITY ASSISTANCE PLANNING REPORT
NUMBER 161**

**SANITARY SEWER SERVICE AREA FOR
THE VILLAGE OF KEWASKUM,
WASHINGTON COUNTY, WISCONSIN**

Prepared by the

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March 11, 1988

TO: The Village Board of the Village of Kewaskum, the Town Board of the Town of Kewaskum, and the Washington County Land Use and Park Department

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 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 Village of Kewaskum, on December 22, 1987, requested that the Regional Planning Commission assist the Village in refining and detailing the recommended sanitary sewer service area tributary to the Village's wastewater treatment facility. This report documents the results of that refinement process.

The report contains a map showing not only the recommended refined sanitary sewer service area, but also the location and extent of the environmental corridors within that service 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 future extension of sanitary sewer service.

A public hearing was held on February 29, 1988, 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, the report will be certified to the Wisconsin Department of Natural Resources, the Governor, 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 public officials in the making of sewer service-related development decisions in the Village of Kewaskum. Accordingly, careful consideration and adoption of this report by all parties concerned is respectfully urged. The Regional Planning Commission stands ready to assist the Village 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 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 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 endorse-

ment 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, as shown on Map 1. 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 reflect 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

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.

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.

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 area-wide, 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 sanitary sewer service areas delineated in the plan in cooperation with the local units of government concerned. The refinement and detailing process was envisioned to consist 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 adopted areawide water quality management plan.
2. The delineation on that map of the design year 2000 sanitary sewer service area as proposed in the regional water quality management plan and consistent with the objectives set forth in the adopted regional land use plan.
3. The conduct of 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. The preparation of 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. The holding of 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. The preparation of a final sanitary sewer service area map and accompanying 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 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 VILLAGE OF KEWASKUM SANITARY SEWER SERVICE AREA REFINEMENT PROCESS

By letter dated December 22, 1987, the Village of Kewaskum requested that the Regional Planning Commission undertake the refinement and detailing of the proposed year 2000 sanitary sewer service area tributary to the Village of Kewaskum sewage treatment facility. Accompanying the aforementioned letter was a preliminary refined sanitary sewer service area map suggested by the Village. The Regional Planning Commission concurred with the preliminary map provided by the Village and utilized it in the preparation of the draft sewer service area report.

A copy of the draft report setting forth the preliminary sanitary sewer service area was provided to the Village of Kewaskum, the Town of Kewaskum, and the Washington County Park and Planning Commission for review and comment prior to a public hearing on the plan proposal. The public hearing was held on February 29, 1988. The public reaction to the proposed

sanitary sewer service area, as documented in the minutes contained in Appendix A, is summarized later in this report. The final, agreed-upon, refined sanitary sewer service area for the Village of Kewaskum is described in Chapter III of this report. The delineation of that area reflects the intergovernmental decisions made at the meeting and hearing held to consider this matter.

Chapter II

STUDY AREA DESCRIPTION

The study area considered in the refinement of the Village of Kewaskum sanitary sewer service area is shown on Map 2. The area consists of all of the lands encompassed within the corporate limits of the Village of Kewaskum, as well as certain adjacent and contiguous portions of the Town of Kewaskum. The study area encompasses about 12.2 square miles, of which about 1.3 square miles, or about 11 percent, lie within the Village of Kewaskum, and about 10.9 square miles, or about 89 percent, lie within the Town of Kewaskum. These areas and percentages are based on 1987 civil division boundaries.

The estimated resident population of the entire study area in 1985 was 3,020 persons. Of this total, 2,325 persons, or about 77 percent, resided in the Village of Kewaskum, with virtually the entire resident population being provided with centralized sanitary sewer service extended from the Village of Kewaskum sewage treatment facility. The remaining 695 persons, or about 23 percent, resided in the Town of Kewaskum and were served by onsite soil absorption sewage disposal systems or by sewage holding tanks.

About 5,400 persons may be expected to reside in the identified study area by the year 2000. The areawide water quality management plan envisions that of this total, about 4,900 persons, or about 91 percent, will reside in the Village of Kewaskum sewer service area and be provided with centralized sanitary sewer service extended from the Village of Kewaskum sewage treatment facility. The remaining 500 persons, or 9 percent, would continue to rely on onsite sewage disposal systems for sewage disposal.

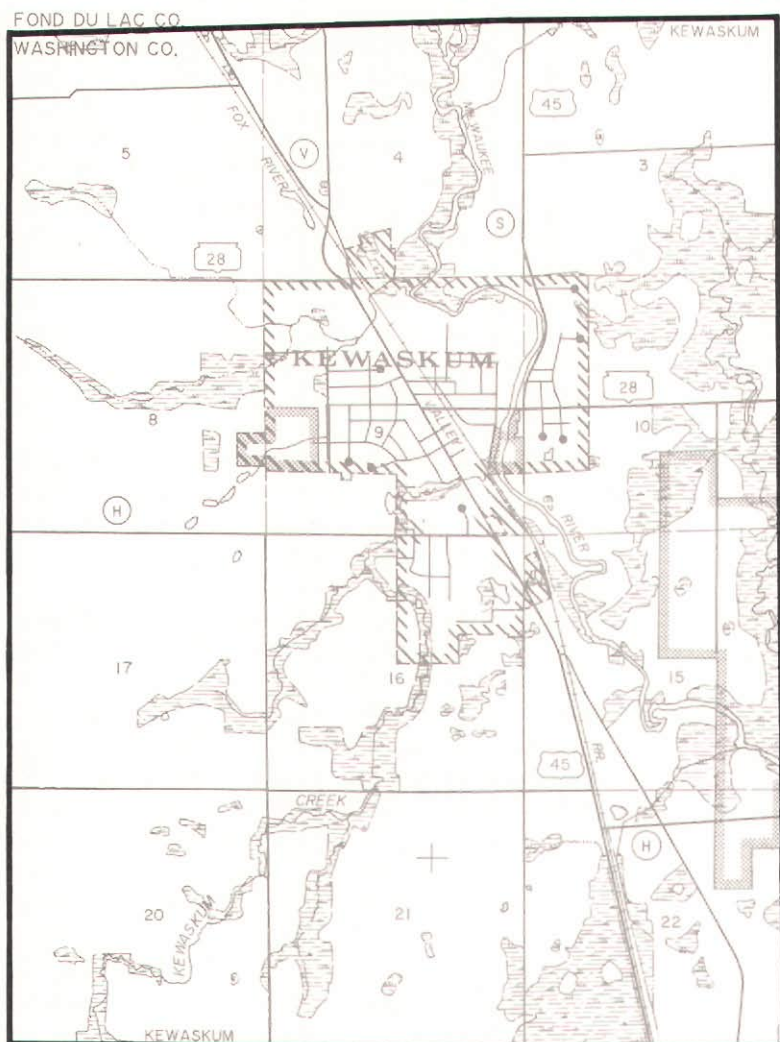
It should be noted that the forecast of probable future population levels for small geographic areas such as the Village of Kewaskum study area is a difficult task, accompanied by uncertainties and subject to periodic revision as new information becomes available. The practice that has been typically followed in forecasting population levels for physical development planning is the preparation of a single population forecast believed to be most the 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 socioeconomic 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 socioeconomic conditions in the United States, the Regional Planning Commission began to incorporate the alternative futures approach into its planning program in the late 1970's, 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. Two 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—were thus defined. These scenarios represent opposite extremes of the prospects identified for the external factors, and, consequently, indicate relatively large potential differences in population growth and in economic activity. One scenario developed postulates moderate population and economic growth; the other scenario postulates stable or declining population and employment levels in the Region. Two alternative regional land use plans, a centralized plan and a decentralized plan, were then developed for each of the two alternative future scenarios, thus providing, in effect, four alternative futures as a framework for physical

Map 2

STUDY AREA IDENTIFIED FOR PURPOSES OF REFINING AND DETAILING THE VILLAGE OF KEWASKUM SANITARY SEWER SERVICE AREA



Source: SEWRPC.

development planning and related demographic and economic studies.

The anticipated year 2000 population level of about 5,400 persons in the Village of Kewaskum study area is based upon the moderate growth, centralized land use scenario—the scenario utilized by the Regional Planning Commission

in the development of the areawide water quality management plan. Under the alternative futures approach, however, the population level within the study area could range from a low of about 4,000 under the stable or declining growth, decentralized land use scenario, to a high of about 5,500 under the moderate growth, decentralized land use scenario.

Chapter III

PROPOSED SANITARY SEWER SERVICE AREA

SIGNIFICANCE OF SANITARY SEWER SERVICE AREA DELINEATION

As noted earlier in this report, recent 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 process of delineating local sanitary sewer service areas an important one for local units of government and private land developers. Prior to the recent 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 recent 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, area-wide 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 area-wide 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.

PROPOSED SANITARY SEWER SERVICE AREA AS SET FORTH IN SEWRPC PLANNING REPORT NO. 30

A number of important factors were taken into account in the delineation of the recommended sanitary sewer service area as set forth in SEWRPC Planning Report No. 30. These factors also comprised important considerations in the development of the adopted regional land use plan. These factors included, among others, the location, type, and extent of existing urban land use 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 existing major sewerage system pumping stations, or to sewage treatment plants; the location and capacity of existing and planned trunk sewers; 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.

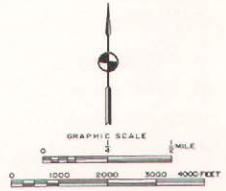
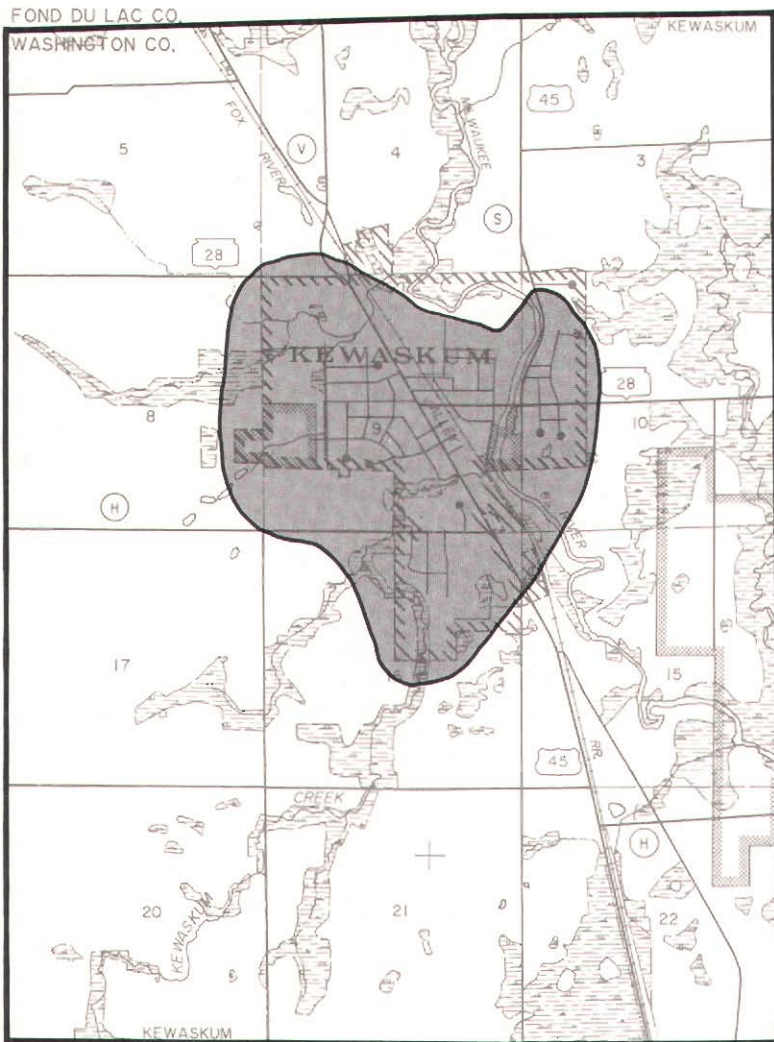
The plan year 2000 sanitary sewer service area tributary to the Village of Kewaskum sewage treatment facility, as proposed in the adopted area-wide water quality management plan, is shown on Map 3. The service area totals about 1.5 square miles, or about 12 percent of the total study area of 12.2 square miles. In 1985, the resident population of this area totaled about 2,440 persons. Based on SEWRPC Planning Report No. 30, the resident population of this sanitary sewer service area may be expected to total 4,900 persons by the plan design year 2000. This population level is based upon the moderate growth, centralized land use scenario, and represents the highest population level envisioned under any of the four alternatives. The population level could, however, be as low as 3,100 under the stable or declining growth, decentralized land use scenario.

DETERMINATION OF ENVIRONMENTALLY SIGNIFICANT LANDS IN THE VILLAGE OF KEWASKUM STUDY AREA

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 of 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

Map 3

THE VILLAGE OF KEWASKUM SANITARY SEWER SERVICE AREA
AS DEFINED IN SEWRPC PLANNING REPORT NO. 30



Source: SEWRPC.

scenic areas, and the best remaining potential park sites are located within the environmental corridors. Such environmental 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. It was, however, recognized

in the plan 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 on five-acre lots, 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 steps involved in refining the Village of Kewaskum sanitary sewer service area was mapping in detail the environmentally significant lands in the Village of Kewaskum 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 possessing 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, Volume 4, No. 2, in an article entitled, "Refining the Delineation of Environmental Corridors in Southeastern Wisconsin." The primary environmental corridors as delineated in the Village of Kewaskum study area are shown on Map 4.

In addition, Map 4 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, with such a corridor having a minimum area of 100 acres and a minimum length of one mile.

Table 1

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

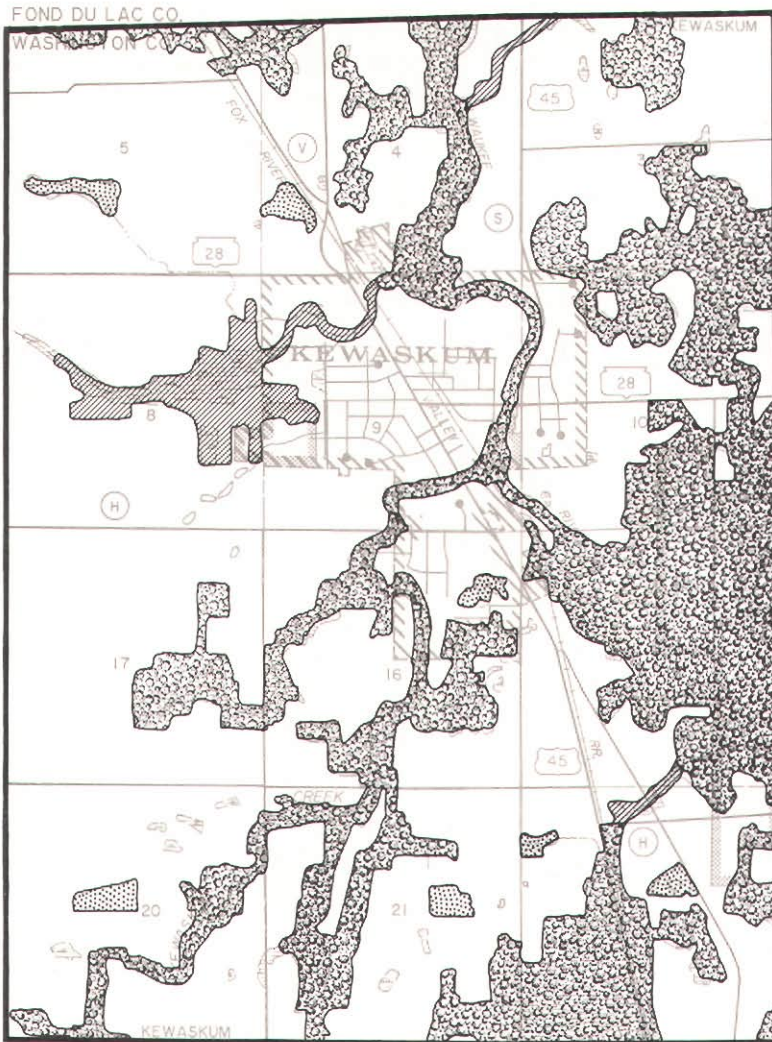
Resource Base or Related Element	Point Value
Natural Resource Base	
Lake	
Major (50 acres or more)	20
Minor (5-49 acres)	20
Rivers or Streams (perennial)	10
Shoreland	
Lake or Perennial River or Stream	10
Intermittent Stream	5
Floodland (100-year recurrence interval) .	3
Wetland	10
Wet, Poorly Drained, 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 Sites	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.

Also identified on Map 4 are isolated natural areas. Isolated natural 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 that are separated physically from the primary and secondary environmental corridors by intensive urban and agricultural land uses. Since isolated natural 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

Map 4

ENVIRONMENTALLY SIGNIFICANT LANDS IN THE VILLAGE OF KEWASKUM STUDY AREA



Source: SEWRPC.

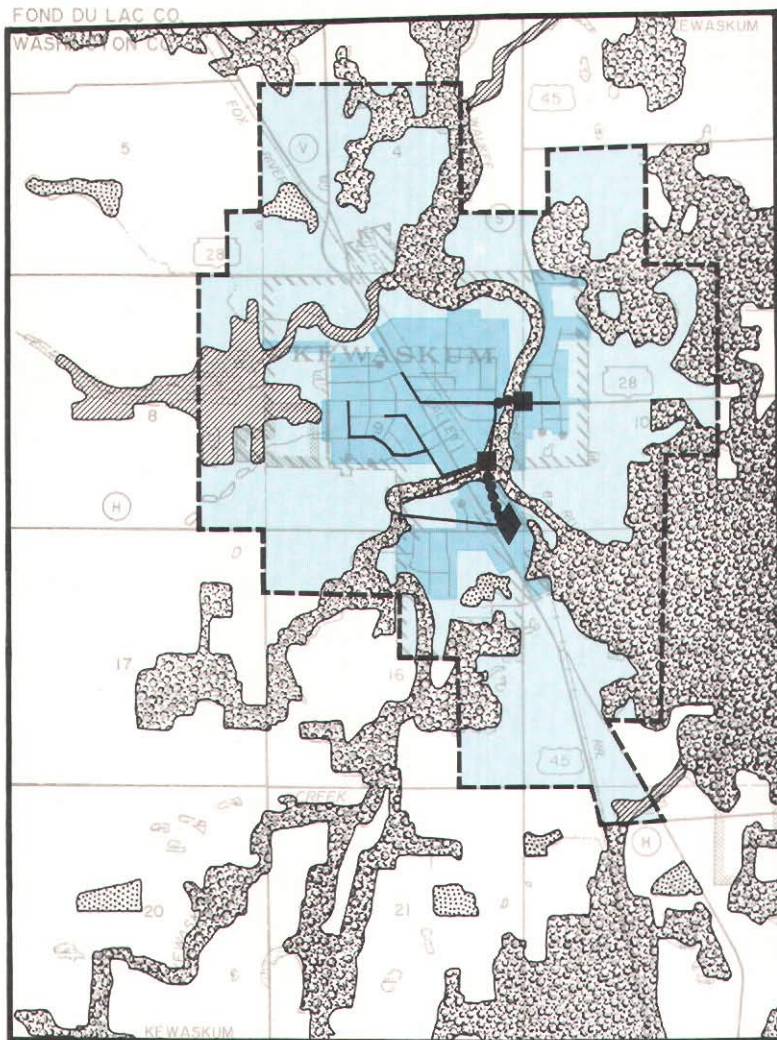
and natural diversity to an area, they should also be protected and preserved in a natural state to the extent practicable. An isolated natural area must be at least five acres in size.

Lands encompassed within the primary environmental corridors total about 3.2 square miles, or about 26 percent of the total study area. Lands encompassed within the secondary environmental corridors total about 0.3 square mile, or about 2 percent of the study area. Lands encompassed within isolated natural areas total about 0.1 square mile, or about 1 percent of the study area. Thus, environmentally significant lands in the Village of Kewaskum study area comprise a total of about 3.6 square miles, or about 29 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 space uses, it also 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 benefit to the community than the preservation of a small segment of the primary environmental corridor.

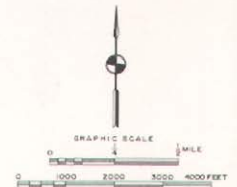
Map 5

PRE-PUBLIC HEARING VILLAGE OF KEWASKUM SANITARY SEWER SERVICE AREA



LEGEND

-  PRIMARY ENVIRONMENTAL CORRIDOR
-  SECONDARY ENVIRONMENTAL CORRIDOR
-  ISOLATED NATURAL AREA
-  NET SANITARY SEWER SERVICE AREA (EXISTING)
-  NET SANITARY SEWER SERVICE AREA (2000)
-  GROSS SANITARY SEWER SERVICE AREA BOUNDARY
-  EXISTING PUBLIC SEWAGE TREATMENT FACILITY
-  EXISTING PUMPING STATION
-  EXISTING TRUNK SEWER
-  EXISTING FORCE MAIN



Source: SEWRPC.

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.

It should also be noted that while almost all the delineated floodlands in the Kewaskum study area are contained within the environmental corridors, there are small 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 because of periodic flood inundation. The Commission thus recommends

that as development of lands adjacent to these floodland areas occurs, such areas be preserved in essentially natural, open space uses.

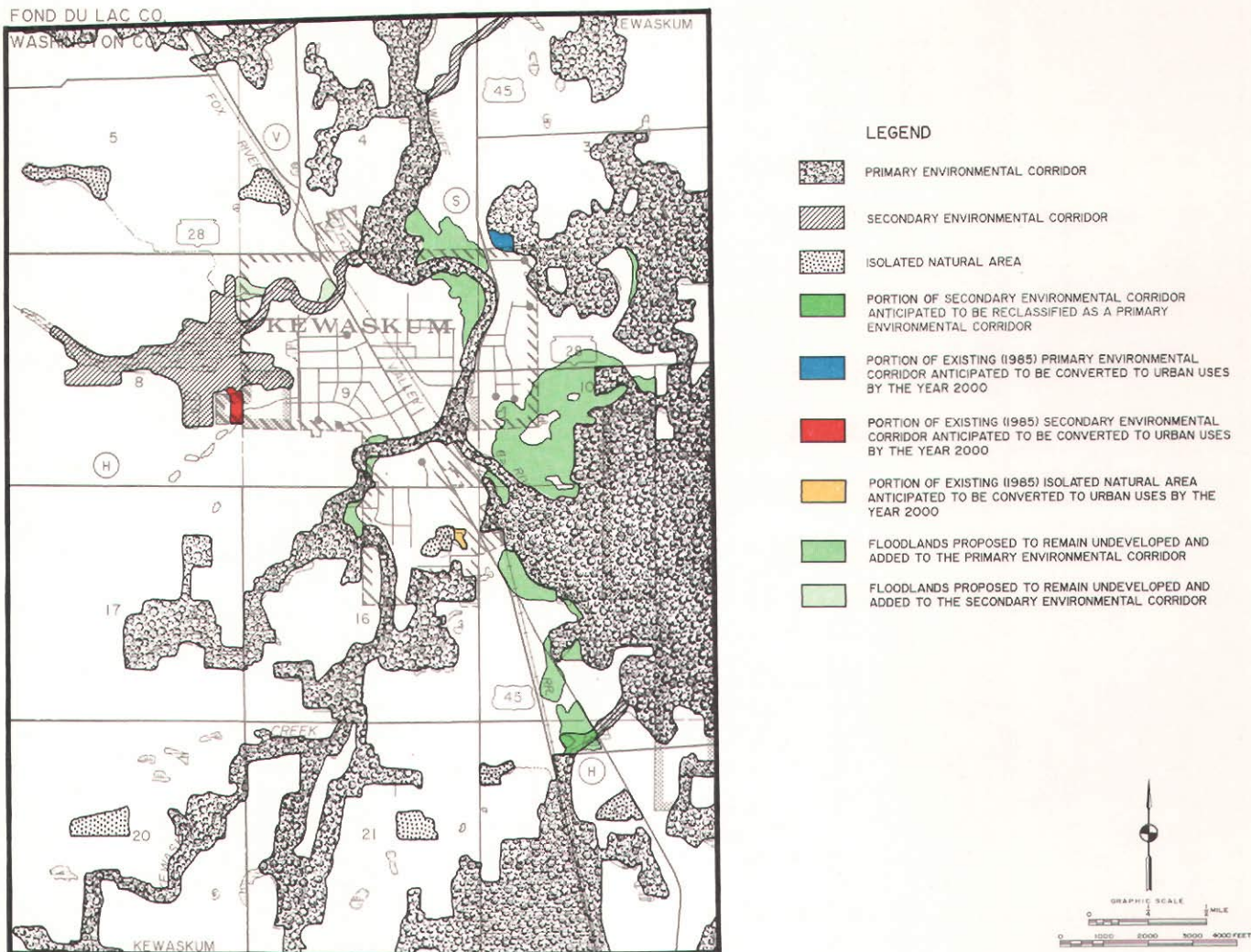
REFINED SANITARY SEWER SERVICE AREA

The refined year 2000 sanitary sewer service area tributary to the Village of Kewaskum sewage treatment facility, as submitted to public hearing, is shown on Map 5, together with the existing trunk sewers.

The gross sanitary sewer service area for the Village of Kewaskum totals about 3.8 square miles, or about 31 percent of the total study area

Map 6

**ANTICIPATED CHANGE IN THE ENVIRONMENTALLY SIGNIFICANT LANDS
IN THE VILLAGE OF KEWASKUM SANITARY SEWER SERVICE AREA: 1985-2000**



Source: SEWRPC.

of 12.2 square miles. This gross, refined, sanitary sewer service area includes 1.3 square miles of primary environmental corridor, 0.2 square mile of secondary environmental corridor, and less than 0.1 square mile of isolated natural area. Thus, a total of about 1.5 square miles, or about 39 percent of the Village of Kewaskum refined sewer service area, would be encompassed in environmentally sensitive areas. It should be noted that the environmentally significant lands indicated on Map 5 total approximately 214 acres more than the environmentally significant lands indicated on Map 4. As indicated on Map 6, 19 areas encompassing about 220 acres located within the 100-year recurrence interval

floodplain, primarily adjacent to the Milwaukee River, are proposed to remain undeveloped and converted to primary or secondary environmental corridors. As further indicated on Map 6, one area of secondary environmental corridor encompassing about three acres and one area of isolated natural area, also encompassing about three acres, are anticipated to be converted to urban uses.

The refined year 2000 sanitary sewer service area tributary to the Village of Kewaskum sewage treatment facility would accommodate a plan year 2000 resident population of about 4,900 persons.

PUBLIC REACTION TO THE PROPOSED SANITARY SEWER SERVICE AREA

A public hearing was held on February 29, 1988, for the purpose of receiving comments on the proposed refined sanitary sewer service area, as shown on Map 5. The hearing was sponsored jointly by the Village of Kewaskum and the Regional Planning Commission. Minutes of the public hearing are presented in Appendix A.

A brief summary of the sewer service area refinement report for the Village of Kewaskum was presented prior to receiving public comment. The rationale for refining and detailing the sanitary sewer service area tributary to the sewage treatment plant operated by the Village of Kewaskum and the importance of the final delineation of the service area was discussed. In addition, the significance of environmentally significant lands within the Kewaskum study area—namely primary environmental corridors, secondary environmental corridors, and isolated natural areas—was discussed. Comments on the report and accompanying maps were then solicited.

A review of the hearing record indicates that one substantive concern was raised. The Village Administrator, with the concurrence of the Village Board, recommended that the preliminary Kewaskum sewer service area shown on Map 5 be modified to include a 20-acre parcel located adjacent to the preliminarily identified sewer service area south of E. Moraine Drive and east of CTH S in the southwest one-quarter of U. S. Public Land Survey Section 3, Town 12 North, Range 19 East.

Two additional concerns attendant to the delineation of environmentally significant lands as shown on Map 5 were brought to the attention of the Regional Planning Commission by the Village Administrator on March 7, 1988. These concerns related to the delineations of the boundaries of primary environmental corridors in two locations where landowners had previously, but tentatively, proposed development projects. In acting to approve the Kewaskum sewer service area plan, the Regional Planning Commission directed that these two concerns be addressed before final publication of the report and its transmittal to the Wisconsin Department of Natural Resources. The Commission's approval of the plan was contingent upon the conduct of the field work required to determine the extent

to which the primary environmental corridors concerned could be modified without causing potential adverse water quality impacts.

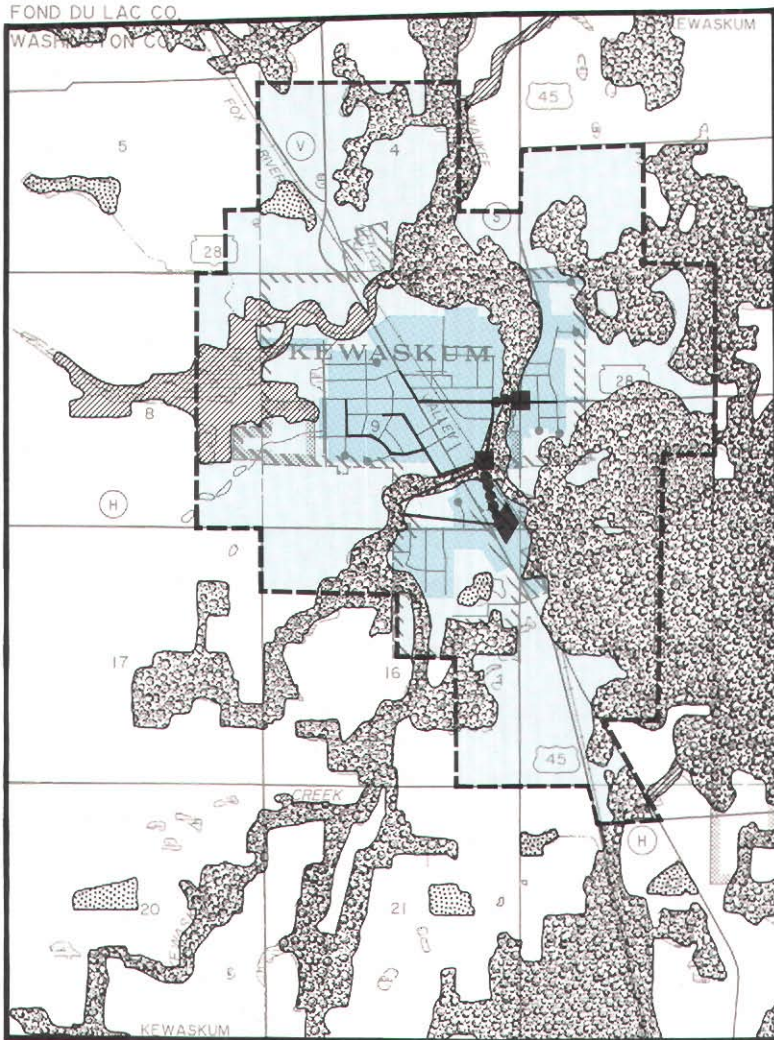
Based on this direction, the Commission staff, over a period of months, met with the Village officials and the landowners concerned to discuss the two particular development proposals. With respect to the first such proposal, involving a primary environmental corridor located north of Warner Drive and east of CTH S in U. S. Public Land Survey Section 3, Township 12 North, Range 19 East, it was determined that it would be possible to delete about 5.6 acres of such corridor from the final plan map without compromising water quality objectives. The field investigation indicated that the area in question lies at the base of a kame, does not constitute wetlands, and is covered by relatively low quality, second growth upland vegetation. Accordingly, the delineation of the primary environmental corridor in this portion of the Village, as shown on Map 7, reflects the elimination of the area in question.

The second area of concern related to a portion of a primary environmental corridor located north of Badger Road and west of Prospect Drive in U. S. Public Land Survey Section 16, Township 12 North, Range 19 East. A preliminary development proposal for the lands concerned indicates that the owner seeks to substantially modify an existing wetland and adjacent steeply sloped lands in the area. Upon review of this proposal, it was determined that the development project as initially proposed likely could be expected to have significant adverse water quality impacts. Accordingly, it was determined that the primary environmental corridor delineation in this area of the Village should not be changed, and that the landowner be advised by the Village to modify the development proposal in such a way as to preserve the wetlands and steep slopes concerned.







The final year 2000 sanitary sewer service area tributary to the Village of Kewaskum sewage treatment facility, including the revisions suggested at the February 29, 1988, public hearing and March 7, 1988, Commission meeting, is shown on Map 7. The final sewer service area totals about 3.9 square miles, or about 32 percent of the total study area. This area includes 1.3 square miles of primary environmental corridor, 0.2 square mile of secondary environmental corridor, and less than 0.1 square mile of isolated

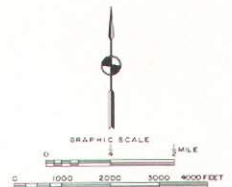
Map 7

POST-PUBLIC HEARING VILLAGE OF KEWASKUM SANITARY SEWER SERVICE AREA



LEGEND

-  PRIMARY ENVIRONMENTAL CORRIDOR
-  SECONDARY ENVIRONMENTAL CORRIDOR
-  ISOLATED NATURAL AREA
-  NET SANITARY SEWER SERVICE AREA (EXISTING)
-  NET SANITARY SEWER SERVICE AREA (2000)
-  GROSS SANITARY SEWER SERVICE AREA BOUNDARY
-  EXISTING PUBLIC SEWAGE TREATMENT FACILITY
-  EXISTING PUMPING STATION
-  EXISTING TRUNK SEWER
-  EXISTING FORCE MAIN



Source: SEWRPC.

natural area. Thus, about 1.5 square miles, or about 38 percent of the Village of Kewaskum revised sewer service area, would be encompassed within environmentally significant areas. The area would accommodate a plan year 2000 resident population of about 4,900 persons, resulting in a density of about 3.9 dwelling units per net residential acre.¹ This density lies within the recommended density range for the Village of Kewaskum as identified in the Commission-adopted regional land use plan for the year 2000.

Detailed delineations of the final Village of Kewaskum sanitary sewer service area and environmentally significant lands within that area are shown on a series of aerial photographs reproduced as Map 8, beginning on page 16 and continuing through page 20 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:

¹Net residential density is determined by dividing the total number of dwelling units in the sewer service area in the design year by the net residential land area anticipated in the sewer service area. The total number of dwelling units anticipated in this sewer service area—2,194—was determined by dividing the anticipated household population—4,900—by the anticipated

(Footnote continued on page 15)

1. Formal adoption or endorsement of SEWRPC Planning Report No. 30, A Regional Water Quality Management Plan for Southeastern Wisconsin: 2000, and of this SEWRPC Community Assistance Planning Report by the Village Board of the Village of Kewaskum as the operator of the sewage treatment facility; by the Town Board of the Town of Kewaskum as having lands affected by the planned sewer service area; and by the Washington County Park and Planning Commission as the county planning agency having joint responsibility with the town in planning and zoning and otherwise regulating the development of lands in the study area.
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 Village of Kewaskum sanitary sewer service area as shown on Maps 5 and 7. 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 Village of Kewaskum 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.

(Footnote continued from page 14)

average household size of about 2.3 persons per dwelling. In addition, a dwelling unit vacancy rate of 3 percent was assumed. The net residential land anticipated in this sewer service area was determined by first identifying all developable land within the service area. Developable land was assumed to include all undeveloped land within the proposed sewer service area except environmental corridors, isolated natural areas, floodplains, and areas covered by soils poorly suited for urban development with sewer service. Developable land in the sewer service area totaled 902 acres. In order to provide flexibility to the community in determining the spatial distribution of new urban development, and in order to facilitate operation of the urban land market, it was assumed that only 80 percent of the developable land—722 acres—would actually be developed for urban purposes by the design year of the plan. It was further assumed that 60 percent of the land to be developed, or 433 acres, would be allocated to “gross” residential uses, the remaining 40 percent being allocated to other urban uses. Of the 433 acres allocated to “gross” residential uses, it was assumed that streets would occupy 23 percent of the area, leaving the remaining 77 percent, or 333 acres, for new “net” residential development.

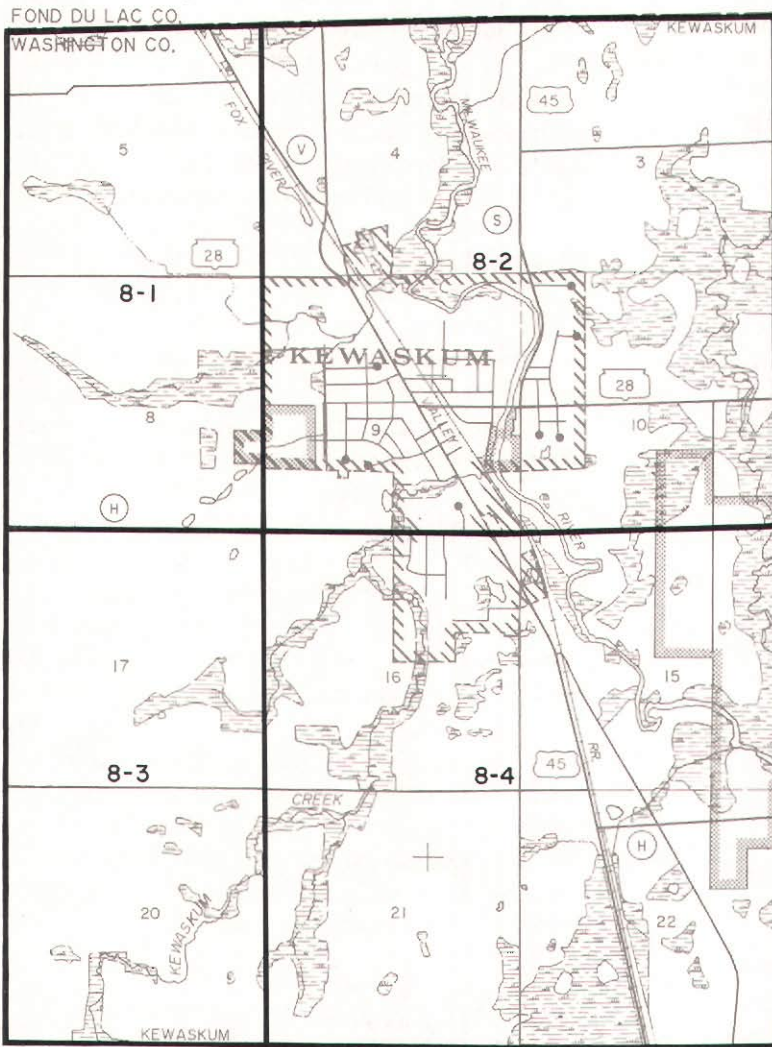
This area added to the 233 acres of existing net residential land in the service area provides a total net residential area of 566 acres. The number of dwelling units anticipated in the sewer service area in the design year—2,194—divided by the anticipated net residential land area—566 acres—results in an overall net residential density of 3.9 dwelling units per acre.

SUBSEQUENT REFINEMENTS TO THE VILLAGE OF KEWASKUM SANITARY SEWER SERVICE AREA

This report presents a refined sewer service area for the Village of Kewaskum. The refined sewer service area was delineated cooperatively by the units and agencies of government concerned, and was subjected to review at an intergovernmental meeting and at a public hearing. It is envisioned that the delineated sewer service area will accommodate all new urban development anticipated in the Village of Kewaskum to the year 2000. Like other long-range plans, however, this sewer service area plan should be periodically reviewed—every five years—to assure that it continues to properly reflect the urban development objectives of the community involved, especially as such objectives may relate to the amount and spatial distribution of new urban

Map 8

INDEX OF MAPS SHOWING THE ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE VILLAGE OF KEWASKUM AND ENVIRONS



Source: SEWRPC.

development requiring sewer service. Should it be determined by the Village of Kewaskum, as the operator of the sewage treatment facility involved, that amendments to the sewer service area plan as presented herein are necessary, the Village 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 intergovernmental 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 Village Board of the Village of Kewaskum and by the Southeastern Wisconsin Regional Planning Commission prior to certification to the Wisconsin Department of Natural Resources and the U. S. Environmental Protection Agency.

Map 8-1

ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE VILLAGE OF KEWASKUM AND ENVIRONS

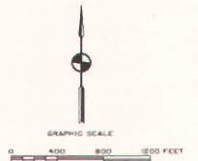
U. S. Public Land Survey Sections 5 and 8
Township 12 North, Range 19 East



LEGEND

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

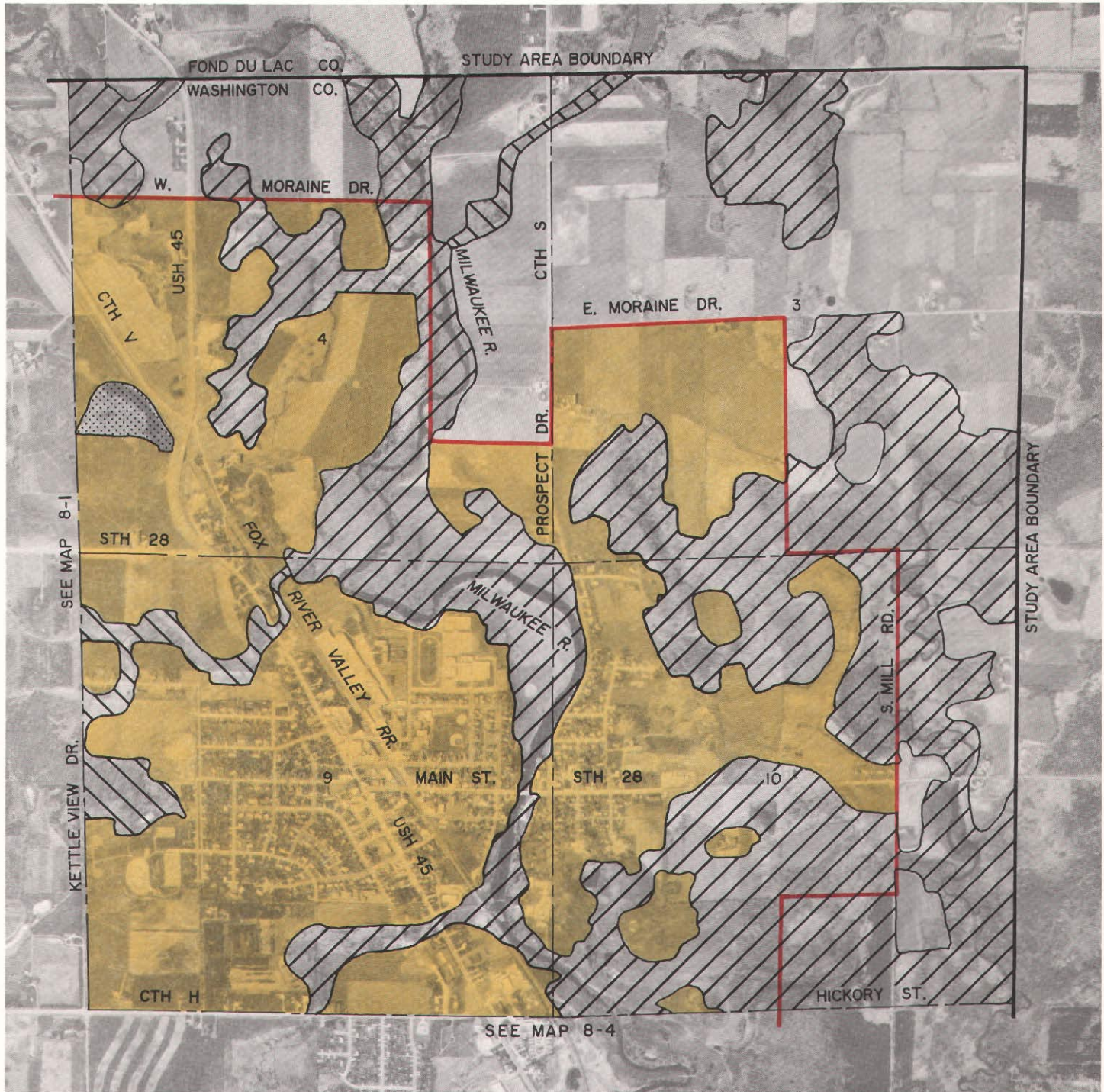
Source: SEWRPC.



Map 8-2

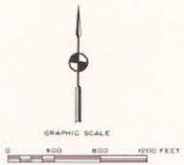
ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE VILLAGE OF KEWASKUM AND ENVIRONS

U. S. Public Land Survey Sections 3, 4, 9, and 10
Township 12 North, Range 19 East



LEGEND

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



Source: SEWRPC.

Map 8-3

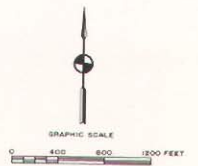
ENVIRONMENTALLY SIGNIFICANT LANDS
FOR THE VILLAGE OF KEWASKUM AND ENVIRONS

U. S. Public Land Survey Sections 17 and 20
Township 12 North, Range 19 East



LEGEND

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

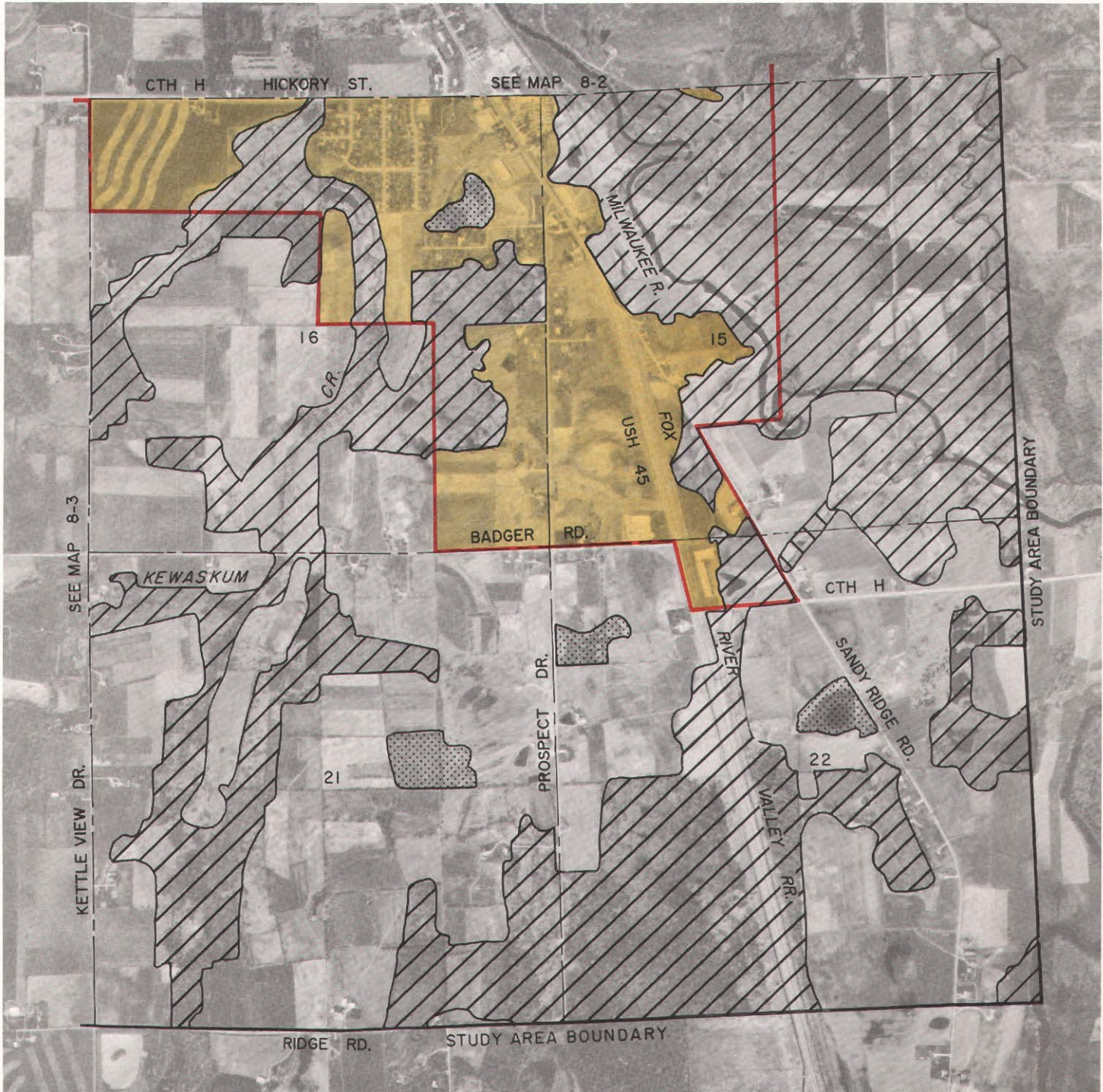


Source: SEWRPC.

Map 8-4

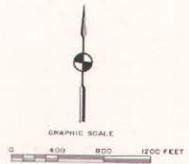
ENVIRONMENTALLY SIGNIFICANT LANDS AND PLANNED SANITARY SEWER SERVICE AREA FOR THE VILLAGE OF KEWASKUM AND ENVIRONS

U. S. Public Land Survey Sections 15, 16, 21, and 22
Township 12 North, Range 19 East



LEGEND

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



Source: SEWRPC.

APPENDICES

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Appendix A

MINUTES OF PUBLIC HEARING

Sanitary Sewer Service Area for the Village of Kewaskum
February 29, 1988

Special Public Hearing
February 29, 1988
7:00 p.m.

The Village Board of Kewaskum, Washington County, Wisconsin met for a Special Public Hearing in conjunction with Southeastern Wisconsin Regional Planning Commission in the Council Room of the Municipal Building, 204 First Street.

In the absence of President Paul Blumer, Administrator Daniel S. Schmidt called the meeting to order. President Paul Blumer asked to be excused and was absent. All other Trustee Members were present. A quorum was present.

On a motion by Trustee Charles Boegel, seconded by Trustee Mary Krueger and unanimously carried by voice vote the Board appointed Senior Trustee Howard Laubenstein as President Pro-Tem.

The meeting was opened with a Moment of Silence and Pledge of Allegiance.

President Pro-Tem Howard Laubenstein reviewed with all present the purpose of the hearing and that is to receive public comment on, and reaction to a proposed year 2000 sanitary sewer service area for the Village of Kewaskum and the environmentally significant lands encompassed within this area.

An introduction of public officials present included Mr. Bruce Rubin and Mr. Joel Dietl were present from SEWRPC, Mr. Richard Zarling, the Village's Zoning Administrator, Mr. Ted Meilahn, a local land surveyor, Mr. George B. Allmann, Town of Kewaskum Chairman, Mr. Peter Albers, the Village's Water Pollution Control Department Superintendent, Mr. August Bilgo, the Village's Department of Public Works Superintendent and three area residents were also present.

Mr. Bruce Rubin, the Chief Planner for SEWRPC, then briefed those in attendance on the proposed sanitary sewer service area for the Village of Kewaskum. Mr. Rubin then answered questions from the floor.

Mr. Meilahn asked how long the sewer service area would be in effect? (answer) Indefinitely, but it may be amended as needed and also should be reviewed on the average of every five years.


Mr. Allmann indicated he had no objections as to the area on the Town's behalf, but said he felt SEWRPC's projections as to population expectations for the year 2000 were high.

Mr. Zarling asked how much use of topographical maps was used to establish the area? (answer) Those maps are used a lot especially for the significant environmental corridors.

The Village asked about an approximate 20 acre parcel bordered by CTH S and E. Moraine Drive as to why it wasn't included. (answer) It was overlooked more than likely and can be included as so noted by the Village Board in their Resolution.

In closing Mr. Rubin indicated this plan is a requirement of the DNR and is only a basic guide for future development.

On a motion by Trustee Richard Schmidt, seconded by Trustee Kenneth Bonlender to close the public hearing. Roll call vote was carried by the majority. Roll call vote was 6 "Aye" 0 "Nay" 1 "Absent".


Daniel S. Schmidt
Daniel S. Schmidt
Administrator/Clerk