

**WAUTOMA/SILVER-IROGAMIE LAKES**  
**SEWER SERVICE AREA PLAN**

Prepared by the

East Central Wisconsin Regional Planning Commission

in cooperation with the

State of Wisconsin  
Department of Natural Resources

November 6, 1995

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## ABSTRACT

Title: WAUTOMA/SILVER-IROGAMIE LAKES SEWER SERVICE  
AREA PLAN

Staff: Harlan P. Kiesow, Assistant Director  
Joe Huffman, Planning Technician

Subject: Sanitary sewer service area delineation for future  
community growth.

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Planning Agency: East Central Wisconsin Regional Planning Commission  
132 Main Street  
Menasha, WI 54952

This plan updates and supersedes the 1987 Wautoma/ Silver-Irogamie Lakes Sewer Service Area Plan which is an element of the Water Quality Management Plan, Upper Fox River Watershed, Wisconsin. The plan was prepared by the East Central Wisconsin Regional Planning Commission and was certified by the Wisconsin Department of Natural Resources in 1996 as part of the Statewide Water Quality Plan. It provides population and land use projections and delineates future growth areas for the Wautoma/Silver-Irogamie Lakes Sewer Service Area. Also identified are environmentally sensitive areas which should not be developed. Policy recommendations encourage cost-effective and environmentally sound development patterns.

## **CONTENTS**

INTRODUCTION.....	1
WAUTOMA/SILVER-IROGAMIE LAKES SSA PLAN .....	5
SEWER SERVICE AREA DELINEATION AND PLANNING PROCESS .....	17
SEWER SERVICE AREA AMENDMENT PROCESS.....	29

## **APPENDICES**

Appendix A - SSA Plan Review/Approval Letters.....	33
Appendix B – Goals & Objectives.....	39
Appendix C – Public Participation.....	45

## **FIGURES**

Figure 1 -Wautoma/Silver-Irogamie Lakes Sewer Service Area Map .....	15
Figure 2 -Environmentally Sensitive Area Standards .....	18

# INTRODUCTION

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This report represents the second update of the Sewer Service Area element of the Water Quality Management Plan, Upper Fox River Watershed, Wisconsin. In the fifteen years sewer service areas have been in effect, they have had significant impacts on urban development. Both communities and land developers are now more aware of sewer service areas and are using the plans and policies in planning of future growth.

## PURPOSE

This Wautoma/Silver-Irogamie Lakes Sewer Service Area Plan updates and amends the 1987 sewer service area plan. The update is part of a regularly scheduled re-evaluation of sewer service area plans. Water quality plan elements, including sewer service areas, are to be updated every five years as provided by Wisconsin Administrative Code NR121.07(2)(a)1. However, this schedule is dependent upon available funds and priorities established within the WDNR.

Sewer service area plans serve as a basis for Department of Natural Resources (WDNR) approval of state and federal grants for the planning and construction of wastewater collection and treatment facilities. They also serve as a basis for WDNR approval of locally proposed sanitary sewer extensions and Department of Industry, Labor and Human Relations (DILHR) approval of private sewer laterals. In addition, environmentally sensitive areas identified in the service area plans serve as a guide for environmental permit decisions by federal and state agencies.

Sewer service area plans are intended to be an important planning and development guide for local communities. The updated plans:

- . Identify wastewater treatment and collection needs for sewer service areas through the year 2015.
- . Forecast the amount and location of future urban development areas.
- . Identify environmentally sensitive areas where development should be limited to protect water quality.
- . Contain land use development forecasts and recommendations for implementing wastewater treatment and collection plans for individual sewer service areas.
- . Establish "holding tank" service areas for isolated and rural special uses.

## **BACKGROUND**

The passage of the Federal Water Pollution Control Act Amendment (P.L.92-500) in 1972 marked the beginning of a new approach to the planning, design and construction of municipal wastewater collection and treatment facilities. This law established Areawide Water Quality Management Planning under Section 208 and also the Facility Planning Grant Program under Section 201. The preparation of sewer service area plans for major urban areas was a significant part of this planning process.

In recent years, the State of Wisconsin has embodied many of the federal areawide and facility planning requirements in the Wisconsin Administrative Code. These administrative rules set forth clear procedures and standards regarding the preparation of these plans and their implementation. Specific sections of the code directly pertaining to these activities are NR121, concerning areawide waste treatment management planning; and NR110, concerning facility planning and sanitary sewer extensions.

In June 1977, East Central completed initial sewer service area plans for 23 communities within the Fox Valley area under contract with the Fox Valley Water Quality Planning Agency. These plans delineated sewer service areas through the year 2000. The service area plans were adopted as part of the Point Source element of the Fox Valley Water Quality Management Plan in January, 1979. In 1985, the East Central Wisconsin Regional Planning Commission entered into a memorandum of understanding with the Wisconsin Department of Natural Resources to initiate sewer service area planning for the non-designated portions of the East Central ten county region. This memorandum sets out the responsibilities and relationships among the parties relative to the planning, management and implementation of sewer service area plans. The contractual agreement provides that East Central will periodically review, revise and update the service area plans, and review proposed sewer extensions for conformance with the approved areawide water quality plan. As provided by Chapter NR121, the Department's role is to review and approve every sewer service area plan and plan amendment taking into account water quality impacts and cost effectiveness. The DNR also reviews and approves plans for wastewater treatment facilities and sewer extensions based upon conformance with the areawide plan. The contract agreement outlines rather broadly the responsibilities of each of the agencies involved in managing sewer service areas.

In order to address specific development proposals which impact sewer service area plans on a day-to-day basis, East Central has adopted an "Amendment Policy and Procedure for Sewer Service Areas." The amendment policy and procedure, initially adopted in 1978, revised in 1984, and revised again in 1990, establishes standards and criteria for amending sewer service area boundaries and also describes the procedure for amending sewer service area plans. The amendment policy (Chapter 4) provides a mechanism whereby communities can alter service area boundaries in response to changes in both the rate and direction of development. The amendment process provides the flexibility for communities to adjust to short-term changes in development trends and thus provides a means of accommodating changing development trends between the five-year updates.

The Wautoma/Silver-Irogamie Lakes Sewer Service Area Plan was adopted by the East Central Wisconsin Regional Planning Commission in 1995. The plan was certified by the Wisconsin Department of Natural Resources and became effective in 1996 (Appendix C).

## **GOALS, OBJECTIVES AND POLICIES**

In the ten-county region of the East Central Wisconsin Regional Planning Commission, sewer service area plans are prepared within the context of the regional land use plan, *New Directions for Growth and Development* (ECWRPC, 1977). The process used for the 1977 land use plan established goals, objectives and policies formulated in response to citizens' desires and needs brought forth in East Central's public participation program. Appropriate goals, objectives and policies were referenced as the groundwork for the establishment of 104 urban service area plans and boundaries.

The initial goals, objectives and policies were reevaluated and refined in 1985 and in 1990. Two overall goals have been identified. The first goal and related objectives and policies pertain to land use and urban development issues. The second goal addresses public facilities, specifically sanitary sewerage systems. Objectives and policies related to both goals point out the significant interrelationship between urban land use and sanitary sewerage planning and also provide a sound basis for determining a community's future development and sewerage system needs. The adopted goals, objectives and policies are listed in Appendix C. As part of the planning process, minor policy changes were also made and are reflected in the Growth Allocation section, pages 25-27.

## **NON- DESIGNATED WATER QUALITY MANAGEMENT AREA**

The Statewide Water Quality Management Plan identifies three designated (complex) water quality management planning areas within the State of Wisconsin with the remainder of the state identified as a "non-designated" area. Within the East Central region, the Fox Valley Designated Water Quality Management Area comprises major portions of the four urban counties surrounding Lake Winnebago. The 1,580 square mile area has been specially designated for water quality planning because of the concentration of industries and urbanization along the Fox River and Lake Winnebago. Within this overall area 23 different sewer service areas have been delineated and individual plans prepared. The remainder of the region is identified as a non-designated water quality management area. To date, East Central has prepared seven sewer service area plan elements within the non-designated area.

The "non-designated" portion of the East Central region, as well as the remainder of the state, are further divided into major river basins. For each river basin the WDNR has prepared a water quality plan. The Wautoma/Silver-Irogamie Lakes Sewer Service Area is within both the Upper Fox River Basin and the Wolf River Basin.

## **REPORT FORMAT**

This plan describes and delineates the Wautoma/Silver-Irogamie Lakes Sewer Service Area. The plan was developed in accordance with state and federal guidelines and involved public input and review including two general information meetings and six local information meetings held during 1994 thru 1995 and listed in Appendix D. Summaries of Proceedings of the general information meetings are included in Appendix . The following sections of the plan discuss the:

1. Wautoma/Silver-Irogamie Lakes Sewer Service Area characteristics, projected growth and service area plan map (Figure 2);
2. Service area delineation and planning process; and
3. Service area amendment process.

Additional information describing the sewer service area planning process and copies of supporting documentation (such as population and growth projection methodologies) is available at the Commission offices.

## **WAUTOMA/SILVER-IROGAMIE LAKES SEWER SERVICE AREA**

### Planning Area Description

The Wautoma /Silver-Irogamie Lakes Planning area is located in central Waushara County at the junction of STH's 21, 22 and 73. The planning area includes the City of Wautoma, the Silver-Irogamie Lakes Sanitary District as well as adjacent developed surrounding areas encompassing a total of over 12 square miles. The City portion encompasses 6 square miles and includes Section 2, 3, N 1/2 of Sections 4 and 10 in T18N R10E; Sections 33, 34, and 35, T19N R10E.

The planning area for Silver-Irogamie Lakes is located east of the City of Wautoma and encompasses land surrounding Bugh's Lake, Irogamie Lake, Silver Lake, Hills Lake and Deer Lake. Covering an area of 6.25 square miles it includes Section 1 of T18N-R10E; the NW 1/4 and S 1/2 of Section 36 of T19N-R10E; E 1/2 of Section 5, Sections 6, 7, 8, and W 1/2 of Section 9, T18N-R11E; and S 1/2 of Section 31 and the SW 1/4 of Section 32, T19N-R11E.

### Land Use and Development

A mixture of urban, recreational and rural development is present in the planning area. The City of Wautoma is the core of denser urban development. The City covers an area of approximately 1,240 acres. The predominant land use is single family residential with only a small amount of multi-family. Only a small amount of residential construction has taken place in the last few years. Commercial development consists of a central business district and a few scattered small commercial establishments totaling approximately 65 acres.

The City has no improved industrial park although the City owns approximately 35 acres for future industrial development on the community's southeast side. Existing industrial development totals 36 acres.

A small amount of residential development exists north of STH 21 and east of the City which is outside the municipal boundaries. Dwellings in this area are on individual septic systems and wells and may require extension of sanitary sewers in the future.

The Silver-Irogamie Lakes Sanitary District covers an area of 1,015 acres around Silver and Irogamie Lakes although additional areas around the other lakes and portions of STH 21 have petitioned to be included. Lakeshore residential development is a primary land use within the planning area. Minimal new development has occurred in recent years because of poor soils conditions for private septic systems and also high ground water conditions. The lakes area has followed other lake area trends in the increasing conversion of seasonal to permanent residences.

Strip commercial development also exists along STH 21 from the east edge of the City of Wautoma to the west side of Silver Lake. Other commercial land uses such as resorts, golf courses and supper clubs are scattered throughout the area. The total estimated dwelling units for the planning area is 2000 during 1990. This includes approximately 400 seasonal units.

### Environmental Conditions

Environmentally sensitive lands within the planning area are generally associated with lakes and their adjacent wetlands and with a number of streams passing through the area. Bird Creek and Soules Creek pass through the City of Wautoma and are tributary to the White River; a significant trout stream in Waushara County. There are no floodways in the planning area however there are numerous areas with steep slopes identified in both the planning area and sewer service area.

While there are sandy soils in the planning area, there is also high groundwater present in many areas. These conditions prohibit the use of individual septic systems and limit development in many of the desirable development areas. There are no floodplain areas currently identified; however, a study is underway within the City of Wautoma to determine the extent of flooding.

Lands to the east and southeast of the City of Wautoma appear to be the best environmentally suited for long-term development.

### Sewerage System

The Silver-Irogamie Lakes wastewater treatment plant was constructed in 1987 and utilizes an orbital oxidation ditch process. The plant was expanded in 1995 to accommodate the abandonment of the Wautoma wastewater treatment plant and City of Wautoma wastewater flows. The plant expansion was designed to serve the needs of the sanitary district and the city with a limited amount of capacity for future expansion. The existing plant discharges effluent to the White River.

The existing facility has good treatment performance. There are, however, some problems with inflow and infiltration at various times of the year within the city collection system. The permit and design information for the plant is:

WPDES Permit Number: WI-

Expiration Date: 12-31-

Receiving water: White River (Upper Fox River Basin)

Design Flow: 2.14 mgd

Average Flow: 1.07 mgd (estimate)

Treatment Type: Orbital oxidation ditch

Sludge Treatment: Aerobic digestion

Method of Sludge Disposal: Agricultural land disposal

The existing sewerage collection system serves 688 acres within the City of Wautoma and the Silver-Irogamie Sanitary District. A lift station at the previous Wautoma treatment plant site transmits flows via forcemain to the Silver Lake treatment plant. A large 15-inch interceptor follows Soules Creek through the City to the pump station. Most other sewer lines consist of minimum eight-inch sewers. One pump station and force main serves a newly developing subdivision on the City's east side. As indicated by previous treatment facility average flows, there appears to be a significant infiltration and inflow problem within the city collection system. The City has been making efforts to remove the I & I.

#### Forecast Growth

The Wautoma/Irogamie Lakes Sewer Service Area is projected to have moderate growth in the future. A land use plan has been prepared for the City and surrounding three towns of Dakota, Marion and Wautoma. This plan proposes minimal growth in the broad area surrounding the planning area and promotes the majority of the growth within the sewer service area.

The total sewer service area is projected to increase 809 people thus bringing the permanent population of 3771 in 1990 to 4580 in the year 2015. Due to a continuing reduction in household size, there will be an increase in dwelling units of 420 during this same time period. Assuming all single family development at a density of 2.5 units per acre, 170 acres of residential acreage is required to meet this demand. In addition to the permanent residential increase, it is projected that 115 additional seasonal units will be added by the year 2015 with a population equivalent of 290 additional people. An additional 50 acres of land will be needed to accommodate this development.

	Growth Projections (Permanent Population)					
Year:	<u>1990</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>
Population:	3771	4299	4427	4505	4566	4580
Dwelling Units:	1585	1698	1805	1889	1968	2005

In response to the moderate population increase, there is a need for approximately 20 acres of additional commercial and industrial acreage through the year 2015. The industrial acreage which is available in the city coupled with scattered vacant parcels of commercial acreage in the city and sanitary district should accommodate any potential commercial or industrial development which may occur.

The year 2015 Wautoma/Silver-Irogamie Lakes Sewer Service Area has a total of 2526 acres. Within the service area boundary 349 acres have been identified as environmentally sensitive.

Developed lands within the service area total 1352 acres in 1995. There are 824 acres of lands available for development compared to a need for 240 acres. It should be noted however, that the majority of the vacant acreage available for development is infilling along existing sewer lines and is not newly allocated.

<u>Service Area characteristics</u>	<u>Acres</u>
Sewer Service Area:	2526.0
Developed Land:	1352.0
Environmentally Sensitive Area:	349.0
Lands Available for Development:	824.0
Residential Land Needs:	220.0
Commercial/Industrial Land Needs:	20.0
Lands in Excess of Needs:	584.0

### **Growth Allocation Areas**

The policy basis for allocating acreage for future development is outlined on page 23. These policies take into account a broad range of land use and environmental concerns directed toward encouraging orderly, cost-effective and environmentally sound development. Working within the broad policy base, the sewer service area plan also considers sewer system capacities, land development market trends, and development plans and preferences of the individual communities. New vacant lands allocated for development in this update total 200 acres, half of which is in a preliminary development stage.

### **Residential Development**

Five major areas are proposed for future residential development. Three of these areas are extensions of the existing clusters of residential development, with a fourth area added north of the treatment plant along 19th Avenue and Chicago Road, and a fifth area north of Hills Lake and south of STH 21. The remainder of mapped residential growth areas are infilling of development adjacent to existing sewers.

- The area of development on the northwest portion of the City along STH 73 consists of scattered single lot homes . Major infilling of additional residences is proposed. Future residential growth of this area should use concepts of cluster development and preservation of greenways. Most of this area can be serviced by the existing gravity sewer system and a newly installed lift station
- The area to the south of City is likely to develop in a traditional fashion. However, open space concepts and the preservation of the environmental corridor along the White River should be included in development plans for this area as well. Development of a street pattern which promotes good traffic circulation within the area and access to STH 22 is vital. This entire area should be serviceable by gravity sewer as it is in the vicinity of the abandoned city treatment facility.
- The area west of Shangri-La Lane, north of Chicago Road and south of STH 21 would serve as a logical continuation of residential development.
- The vacant area north of the wastewater treatment plant is likewise suitable for the expansion of residential development. The sloping character of this land and the existing interceptor to the plant provides for cost effective sewage collection.
- The area south of STH 21 and north of Hills Lake also affords opportunities to work with the topography and existing vegetation to create attractive building sites. The character of this land would be well suited to cluster development concepts associated with planned unit development. Whether this approach, or more traditional development is undertaken, the preservation of natural features should be addressed in the development plan. Much of this area can be developed with gravity sewer, provided that development progresses from south to north.

One area of existing residential development is located along STH 52 just east of the City limits. This area is served by on-site septic systems with densities which would make sanitary sewer extension feasible. Additional in-filling would also be possible with sewer construction.

### **Commercial Development**

Commercial development has been primarily allocated along STH 21 between the City and Silver Lake. Future development potential consists of in-filling of vacant parcels along the commercial "strip" and some backlot potential which would require the extension of collector sewers.

### **Industrial Development**

The only area with significant industrial potential is located on the southeast corner of the City west of 17th Avenue and north of Townline Road. This are is a logical extension of existing industrial uses and has easy access to adequate collector sewer capacity.

## **Holding Tank Service Areas**

A complete inventory of existing private holding tanks and alternative septic systems is not available for the planning area through Waushara County sanitary program. An estimate by county staff revealed that there have been approximately 25 holding tanks installed in the planning area since 1980. There are no large holding tanks which receive more than 3,000 gallons of wastewater per day within the planning area.

## **Future Wastewater Flows**

The approximate increased wastewater flows have been calculated for the future growth areas to determine the potential impacts on the wastewater plant. These flows have been applied to the rates of growth for different land uses and then compared to the existing flows and design capacity of the treatment plant. The anticipated future development flows are .11 mgd for residential development, .05 mgd for commercial and industrial development. Holding tank flows are estimated at 6250 gallons per day. Based upon these forecast growth rates the design capacity of the treatment plant is adequate through the year 2015.

## **Water Quality Assessment**

Continued urbanization of the Wautoma/Irogamie Lakes area will impact surface and groundwater resources. Surface water runoff and pollutant loadings are likely to increase, and groundwater recharge is likely to decrease. The scope of these impacts cannot be precisely determined because specific development characteristics-(location, type, density)-are unknown. However, it is possible to generally estimate water quality impacts by applying assumptions concerning the nature of future development.

### Point Source Water Quality Impacts

Population growth and commercial/industrial development will increase loadings to the wastewater treatment plant, and ultimately to the White River. At current treatment levels, projected growth will result in the daily discharge of an additional 12 pounds of BOD, and 12 pounds of suspended solids to the White River. Impacts of increased discharge levels will be periodically evaluated by the Department of Natural Resources in conjunction with WPDES permit renewals. Assimilative capacity of the receiving water will be used to establish discharge limits if existing categorical limits are inadequate to maintain water quality standards.

### Non-point Source Water Quality Impacts

The 1995 sewer service area update includes an additional 200 acres of undeveloped land within the sewer service area boundary. As this land comes under development, surface water runoff and pollutant loadings are likely to increase. The placement of buildings, roads and parking areas increase the amount of impervious area, and hence, more water runs off the land surface, carrying organic and inorganic pollutants associated with more intensive urban uses.

The conversion of the allocated acreage from rural/agricultural to urban uses is estimated to increase pollutant yields by 44 tons for suspended solids, 16.5 tons for COD and 1 ton for phosphorus. On a watershed basis, conversion of these lands will result in less than a one percent increase in pollutant loadings. However, localized impacts on receiving waters may be significant. Utilization of stormwater detention facilities, site development controls, preservation of green space and other measures can help mitigate urban non-point source impacts on water quality.

### Groundwater

Conversion of rural/agricultural lands to urban uses may impact the quality and quantity of groundwater. Groundwater recharge will decrease as areas are paved over or built upon. At the same time, withdrawal of groundwater is likely to increase for domestic, commercial and industrial use. The City of Wautoma is currently installing a potable municipal water system using high capacity wells. This conversion will eliminate over 750 individual shallow wells and have significant beneficial impacts on municipal water supply and quality. Continued development of individual wells is projected for the sanitary district area growth. While the installation of the sanitary sewer system eliminates a major contamination potential, the permeability of the soils in the area poses risks of contamination from urban related land uses such as parking lot runoff, lawn pesticides and commercial activities.

### Water Quality Protection

Where sanitary sewer extensions are proposed in mapped environmentally sensitive areas or on other lands whose physical characteristics indicate susceptibility to erosion or flooding, or where development of such lands is likely to impair surface or groundwater quality, East Central may identify mitigating conditions to be incorporated into the development proposal. As part of the sewer service area plan review East Central may request the WDNR attach conditions for mitigation to any sewer extension prior to the approval for the proposed development.

## Recommendations

Close coordination for the planning of any sewer development in the transition area should be undertaken between the City and the Sanitary District. Prior to development commitments any plans should be submitted to East Central for cost-effectiveness analysis.

The extension of sanitary sewers should be strongly considered for the existing residences along Chicago Avenue to the east of the City to eliminate on-site systems. Permits for new on-site systems in this area should be limited.

Efforts should be made to direct development to areas where sewers are already in place before extending new sewers into undeveloped areas. Efforts should also be made to maximize use of gravity sewers as well as capacity of existing wastewater pumping stations to avoid the capital, operating and maintenance costs associated with constructing new pumping facilities.

Environmental conditions in the planning area warrants concern with regard to construction site erosion, destruction of wetlands and impacts on groundwater. Development should either be directed away from wetlands and areas of steep slopes or appropriate erosion control measures should be applied to minimize the erosion hazard. Seasonal high groundwater and groundwater seepage are potential hazards to buildings constructed in the eastern portion of the service area. Mitigation measures should be addressed.

## Plan Implementation

Although sewer service area planning was initiated at the state and federal levels, successful implementation of each plan rests at the local level. In the state-approved Areawide Water Quality Management Plan, certain local units of government were assigned water quality-related management functions. Entities with adequate authority to plan, construct, operate and maintain wastewater collection and treatment facilities were designated as management agencies for portions of the planning area within their jurisdictions. The City of Wautoma has been designated to provide wastewater collection within its planning area and the Silver-Irogamie Lakes Sanitary District has been designated for wastewater collection and treatment.

Governmental Unit	Category of Designation	Management Function
City of Wautoma	III	Wastewater Collection
Silver-Irogamie Lakes Sanitary District	I	Wastewater Collection & Treatment

As designated management agencies for wastewater treatment and collection the city and sanitary district should do the following:

1. Adopt the Wautoma/Silver-Irogamie Lakes Sewer Service Area Plan;
2. Review and update development policies and regulations in light of the sewer service plan and recommendations;
3. Submit preliminary land subdivision plats which are proposed to be sewerred to the East Central Wisconsin Regional Planning Commission for review for consistency with sewer service area plans for the area;
4. Submit sanitary sewer extension requests to the East Central Wisconsin Regional Planning Commission for review for consistency with sewer service area plans prior to being submitted to the WDNR for approval;
5. Submit wastewater facilities plan elements and amended plan elements to the East Central Wisconsin Regional Planning Commission for review for consistency with sewer service area plans prior to submittal to the WDNR for approval; and
6. Carry out their management responsibilities for treatment facilities and collection systems as specified by state and federal requirements.

In addition to implementing sewer service area plans, local units of government may exercise other authority conferred upon them by state statute to preserve and protect water quality. Local units may use this authority to plan and manage land use and development through subdivision, zoning and other development ordinances. Criteria can be written into existing ordinances or new ordinances can be adopted which promote orderly development and address water quality concerns.

Additional actions by local units of government which are recommended for water quality protection include the adoption of construction site erosion and stormwater management ordinances and the preservation of greenways along existing drainage corridors.



## **SEWER SERVICE AREA DELINEATION AND PLANNING PROCESS**

A sewer service area is a geographic area which is currently served or anticipated to be served with sanitary sewers within a 20-year planning period. Sewer service areas, called "urban service areas," were first delineated for the East Central region in 1978 in the plan New Directions for Growth and Development. In the initial plan, a generalized methodology was used for the estimation and allocation of growth which led to the identification of service area boundaries. Various state and federal guidelines, as well as regional policies, were utilized in the planning process. Since the initial delineation of service areas, the planning and management process has become much more complex and multi-faceted, thus greater detail in the explanation of the updating process is required.

The process of updating and refining sewer service area plans consists of the following major steps:

1. Identification of planning area limits;
2. Delineation of environmentally sensitive areas;
3. Identification and quantification of existing conditions;
4. Refinement of goals, objectives and policies;
5. Forecast of urban growth and redelineation of service area limits;
6. Public and community input; and
7. Adoption and publication of final plans.

### **IDENTIFICATION OF PLANNING AREA LIMITS**

The first step in delineating sewer service areas is the outlining of broad planning areas which include all feasible options for where urban growth might occur within the 20-year planning period (through the year 2015). Planning area boundaries generally include all areas within existing city, village and sanitary district limits. These areas may also include clusters of development and adjacent areas where there is potential for the installation of a sanitary sewerage system in the foreseeable future. Planning areas generally extend beyond the existing or potential development areas to the nearest quarter section line. The planning areas are delineated on aerial photos at a scale of 1 inch to 400 feet. These aerial photos serve as detailed file photos for all sewer service area delineation purposes. The planning areas are also shown on the one inch to 2000 foot maps contained in this plan. Planning areas serve as the study areas for wastewater facilities planning efforts.

## **DELINEATION OF ENVIRONMENTALLY SENSITIVE AREAS**

Environmentally sensitive areas are geographic areas consisting of all lakes and streams shown on the USGS quadrangle maps and adjacent shoreland buffer areas as defined in Figure 2. All wetlands shown on the state Wisconsin Wetland Inventory Maps and floodways as delineated on the official Federal Emergency Management Administration Flood Boundary and Floodway Maps are also designated environmentally sensitive. The environmentally sensitive areas are mapped on the sewer service area file photos and are also shown on the maps contained in this plan.

The purpose of designating environmentally sensitive areas is to preserve significant environmental features from encroachment by sewered development. Environmentally sensitive areas perform a variety of important environmental functions including stormwater drainage, flood water storage, pollutant entrapment, and the provision of wildlife habitat. They can also provide desirable green space to enhance urban aesthetics.

In the 1978 sewer service area plans only major wetlands as shown on the USGS quadrangle maps were considered environmentally sensitive. Since that time, the Department of Natural Resources through Wisconsin Administrative Code NR 121.05(g)(2)(c), has developed guidelines which serve as minimum criteria for the identification and delineation of environmentally sensitive areas. Department of Natural Resource guidance states, "Environmentally sensitive areas will be used for all environmental features that should be excluded from sanitary sewer service areas."

East Central, after deliberations with technical and policy advisory committees, defined environmentally sensitive areas in a manner that complements existing local, state and federal regulations which protect various environmental amenities. While NR 121 authorizes sewer service area plans to identify a broad array of natural features as environmentally sensitive areas, only those features which were believed vital in the East Central Wisconsin Region to preserve environmental quality were so designated.

Although the delineation of environmentally sensitive areas is intended to provide adequate long term and uniform environmental protection for all sewer service areas within the East Central Wisconsin Region, the environmentally sensitive area classification may be changed in two ways in response to specific local development proposals.

First, the classification can be removed provided that the conditions outlined in Section (E) of the Sewer Service Area Amendment Process are met. This redesignation is considered a major change. Major changes have the potential for significant impacts on water quality and would require the concurrence of the East Central Wisconsin Regional Planning Commission and the Department of Natural Resources before these changes would become effective for the purpose of reviewing sanitary sewer extensions. Examples include:

- (1) removal of any mapped wetland area for sewered development, unless resulting from an activity exempted by state administrative rules governing wetland protection [NR 117.05(2)] or state approved rezoning of wetlands;

1 "Guidance for Approving Sewer Service Area Plans and Plan Amendments." WDNR Correspondence, February, 1982.

- (2) reduction of a delineated floodway of any navigable stream or river, or removal of any area below the ordinary high water mark of a navigable stream, pond, or lake;
- (3) total removal or change in the continuity of any corridor segment including floodways, wetlands, shoreland buffer strips or steep slopes adjacent to water bodies. The water quality benefit that was associated with the portion of the corridor removed must be provided in the development proposal.

In the second instance, the environmentally sensitive areas may be modified by a minor change. Refinements and minor changes would not require prior approval of the East Central Wisconsin Regional Planning Commission or the Department of Natural Resources. However, East Central would have to be informed of the change before it would be effective for the purposes of reviewing sanitary sewer extensions. East Central would then be responsible for informing the Department of Natural Resources of the change.

Refinements and minor changes are generally of two types. The first type involves changes resulting from revised, improved or more detailed background resource information to include:

- (a) improved or revised DNR certified floodway delineations resulting from revised flood studies;
- (b) revised wetland boundaries on the Wisconsin Wetland Inventory Maps resulting from field inspections by DNR personnel or resulting from an approved rezoning.

The second type involves changes which would not seriously affect water quality and are the result of specific development proposals to include:

- (a) relocation of a non-navigable stream or drainageway as long as the environmental integrity of the stream or drainageway is preserved;
- (b) shortening of a non-navigable stream or drainageway based upon field determination of its point of origin;
- (c) adjustments to the widths of shoreland buffer strips along non-navigable streams and drainageways within the guidelines established in Figure 1;

- (d) changes which would reduce the width of shoreland buffer strips below the minimum guidelines provided there are locally adopted stormwater drainage criteria that establish corridor widths for drainageway preservation. Locally adopted criteria must be based upon sound engineering and environmental protection criteria; and
- (e) changes which result from utility or roadway maintenance or construction which meet the criteria set forth in NR 115 or 117. It is not the intent of the environmental corridors to prevent or obstruct maintenance, expansion or construction of transportation or utility facilities intended to serve areas outside of the corridors, needed to maintain or improve continuity of those systems, or designed to serve compatible uses in the corridors, such as park shelters or facilities. Facilities intended to serve new sewered residential, commercial or industrial development in the corridors would not be permitted.

## **IDENTIFICATION AND QUANTIFICATION OF EXISTING CONDITIONS**

The ability to inventory existing conditions both quantitatively and qualitatively are paramount to evaluating land use and development trends and impacts. Aerial photos are the basis for identifying and quantifying land uses within the East Central region. Comparing aerial photos at different time intervals can establish trends in types and magnitude of land uses. East Central's 1980 land use inventory has been updated utilizing more recent photos (where available) or spot field surveys for this purpose. Acreages for major land use categories have been computer digitized and aggregated by section and township-range. Totals were also calculated for each town, town sanitary district, village, city and county within the planning area. In conjunction with the land use mapping program, all village and city municipal boundaries, as well as sanitary district limits, were identified on the aerial photos and transferred to the sewer service area maps.

Sanitary sewerage systems for all communities have been identified on the sewer service area file aerial photos. The location and size of all sewer collectors, mains, interceptors and forcemains are mapped in detail. In addition, the locations of all lift stations, pump stations and wastewater treatment facilities are shown. These maps are continually updated as new sewer extensions are reviewed by East Central.

New to this updated plan is the development of "holding tank" service areas and the mapping of on-site septic systems within the planning areas. On-site systems have been located, quantified and qualified for the purpose of determining individual septic system disposal requirements. Estimates of septage treatment are utilized in the treatment plant design recommendations.

Important for analyzing the planning areas, existing urban development areas were delineated on mylar overlays to the file photos. Urban development areas consist of all concentrations of development within the planning area, together with undeveloped lands which are either sewered or otherwise committed for development. These urban development areas are, in most instances, the minimal land areas which should be designated as sewer service areas.

The urban development areas have been further broken down into areas which are (1) both developed and sewered, (2) developed and unsewered, (3) undeveloped and sewered and (4) undeveloped and unsewered. In order to be classified as sewered, areas must be adjacent to public sewer lines, with the ability to connect either through private laterals or, in certain instances, private sewers. In general, lands within 200 feet of a public sewer are assumed to connect via a private sewer lateral.

In addition to the development information included on the mylar overlay, the existing sewer service area boundaries were identified to determine the location and amount of land currently available for development outside of the urban development areas. This land, in most instances, is the area which had been the primary growth area forecast in the 1985 sewer service area plan. These lands were automatically included within the updated sewer service area.

In addition to the designations of environmental sensitive areas (shorelands, wetlands and floodways), other areas with natural characteristics that could impact environmental quality or development potential have been identified. These areas have been termed areas with "limiting environmental conditions" and include areas with seasonal high groundwater (within one foot of the surface), floodplain areas, lands with shallow bedrock (within five feet of the surface) and areas with steep slopes (12 percent or greater).

Unlike the environmentally sensitive areas, development is not excluded from land with limiting environmental conditions. The primary purpose of identifying these areas is to alert communities and potential developers of environmental conditions which should be considered prior to the development of such an area.

Complementing the information placed upon the aerial photos, additional data was collected on existing population, numbers of dwelling units, mixes and densities of residential development, existing employment by type and amount, and densities of industrial and commercial development.

Much of this information was available from the 1990 and later census materials; other information was gathered from state and local sources. This data is contained in East Central's information files for each sewer service area.

## **REFINEMENT OF GOALS, OBJECTIVES AND POLICIES**

The conceptual and philosophical bases for sewer service area planning are the goals, objectives and policies. As stated earlier, the service area planning process has become much more complex since it was first initiated. In response to changing conditions, minor refinements have been made to the 1985 goals, objectives and policies. This effort was accomplished early in the planning process in order to give direction to decisions involving the amount of growth in a given service area, especially the allocation and location of future growth.

## **FORECAST OF URBAN GROWTH**

The forecasting of urban growth and development within the East Central region involves two primary analytical processes. These are 1) population projections and related dwelling unit and employment estimates, and 2) allocation of land use acreage. This process answers the question of the quantity and location of new growth. The process utilizes the sewer service area policies and various planning and development standards as a technical basis.

### **Population Projections**

Population projections are the key factor in forecasting urban growth. The projections used are the 1990-2015 Department of Administration (DOA) population projections by five year increments for individual counties. DOA utilizes the cohort component method of population projection. These are the official state projections, consistent with U.S. Bureau of Census State of Wisconsin projections. The DOA county projections are required to be used as control totals in accordance with Wis. Admin. Code. NR121 for the development of sewer service area plans. A detailed description of the population projection process is included in the East Central report Population Characteristics of the East Central Region, April 1994. The official DOA projections, first received in 1992, have been updated using the DOA annual population estimates for the counties and individual MCD's.

East Central has developed a process for breaking down the county population projections to the minor civil division (MCD) level. This estimating process uses the "share-of-the-county trending methodology." This methodology was used for all communities within the East Central region, with the exception of the Fox Cities, Sherwood and Fond du Lac. In these areas, a special procedure was used which established "urban area" control totals. These control totals were then broken down into Transportation Analysis Zones (TAZ's) in the Fox Cities and Sherwood areas and Special Analysis Zones (SAZ's) in the Fond du Lac area. This special projection process was needed because of the complex jurisdictional interrelationships of cities, villages and sanitary districts within these areas.

## **Residential Development**

In addition to population projections, household size and housing densities are required to determine residential land needs. Household formation rates were estimated and translated into household size. The household size thus represents a typical dwelling unit which can be compared to population projections for estimating future dwelling units. The household size for the East Central region has been steadily declining and is anticipated to continue to decline. Thus, an anomaly occurs in which a community may not be increasing in population, but still is forming new households which require new housing construction.

Once household size was established, residential development densities and the mixture of single-family/multifamily uses was determined. The number of dwelling units per acre were determined from existing residential development densities for the three major urban areas. These densities were also used for larger outlying urban communities. Several smaller communities in the outlying areas were found to have less dense development and therefore a somewhat lower density was used.

The mix of residential development was determined from development and construction records from various communities as well as census materials for the urbanized area. The residential mix was found to vary greatly from community to community. Community specific mixes were used for freestanding communities; however, standardized splits for the Fox Cities, Sherwood and Fond du Lac areas were developed and applied within the growth forecast method.

Population projections divided by household size established the number of dwelling units. The number of dwelling units by type (single or multifamily) divided by the density per acre resulted in the number of acres of residential land required. The resultant acreage was allocated as residential growth for land areas within each planning area.

## **Non-Residential Development**

Forecasts of nonresidential development were also based upon population projections for sewer service area planning. There is, however, a significant difference between the methodology used for the three urban areas and the outlying planning areas. Within the urban areas the population projections served as a basis for estimating future employment. These employment estimates were used in conjunction with documented employment densities (number of employees per acre) for various land use types and employment categories to determine acreage needs for future nonresidential employment. Similar to the household participation rates for calculating dwelling units, labor force participation rates were used to calculate employment for various employment categories. These employment categories were broken down into two types of nonresidential development consisting of commercial and industrial land uses. After future employment was estimated for commercial and industrial uses, densities were applied (employees per acre) and total acres of the land needs were calculated. This acreage was then allocated within particular planning areas.

In the outlying areas, a much simpler process for forecasting nonresidential growth was required because of deficiencies in labor force and employment data available for small communities. Furthermore, because of the small commercial and industrial base of these communities, a refined process for estimating future employment could be subject to extreme error.

Local initiative for promoting development is a greater factor in future growth than statistical trends. A simple forecast method was used which calculated the existing amount of nonresidential development per capita within the area then multiplying this amount by the population growth for the planning period resulting in the amount of non-residential acreage required.

### **Growth Allocation**

After the amount of growth is calculated for residential and nonresidential uses within each planning area, the process of allocating this growth acreage is undertaken. The allocation process (where growth should occur) is complex, and must integrate service area growth policies, planning standards and criteria as well as historical and market growth trends for a particular planning area. The allocation process establishes the future growth areas within each sewer service area.

A major product of the allocation process is the mapping of growth areas. Again, the file aerial photos were used to designate these growth areas. The following criteria and standards were utilized in the designation of growth areas:

1. All areas within a planning area which are currently served with public sanitary sewers shall be designated sewer service areas. Areas along existing and proposed (WDNR approved) sewer collector or interceptor lines (forcemains excluded) shall be designated sewer service areas. The depth of the sewer service area boundary line shall be to the average lot depth (maximum 400 feet) bordering the sewer or where average lot depths cannot be distinguished to line 200 feet from the sewer line. Development within this area is generally considered to be serviceable by a private sewer lateral.
2. Unsewered areas of development within close proximity to existing sanitary sewer lines where the cost-effectiveness of the extension of sewers is not questionable shall be included in the service area. These areas have generally been designated as an urban development area.
3. Areas of existing development with approved wastewater facility plans shall be designated sewer service areas. (Note: Various areas of existing development previously designated have been dropped because of lack of approved wastewater facilities plans.)
4. The acreage allocations of future development areas should approximate residential, commercial and industrial growth projections.

5. Environmentally sensitive areas shall be excluded from the sewer service area.
6. Holding tank service areas shall be designated for existing large holding tanks defined in NR113 and for areas of existing development where no cost-effective alternative to the installation of a large holding tank is available. The cost-effective analysis is to be prepared by the owner. All large and individual holding tank wastes are to be disposed of in accordance with NR113.

The standards and criteria for allocating future growth areas are policy based. These considerations are:

1. Urban development patterns should incorporate planned areas of mixed use and density that are clustered and compatible with adjacent uses.
2. The allocation of future urban development should maximize the use of existing urban facilities and services.
3. Future urban development should be encouraged to infill vacant developable lands within communities and then staged outward adjacent to existing development limits.
4. Future commercial and industrial development should expand upon existing areas and be readily accessible to major transportation systems.
5. The boundaries of urban development should consider natural and man-made features such as ridge lines, streams and major highways.
6. Residential land use patterns should maximize their accessibility to public and private supporting facilities.
7. Urban development should be directed to land suitable for development and discouraged on unsuitable land, such as floodplains, areas of high bedrock, and areas of high groundwater.
8. Environmentally sensitive areas shall be excluded from the sewer service area to protect water quality.
9. Future urban development should pose no significant adverse impacts to surface or groundwater.
10. Urban development should be located in areas which can be conveniently and economically served by public facilities.
11. The waiver of acreage allocations based on density standards for large lot developments will be considered if the installation of sewers is cost-effective, the community adopts a development plan and subdivision plat for the area specifying no smaller subdivision of parcels will be allowed.

Combined with the policy-based criteria for allocating future development areas were various considerations involving the direction of growth trends and short term "market" factors. These considerations primarily involved experienced judgments by planning staff and consultations with local planning officials.

Early in the planning process, a policy decision was made that the total allocated growth acreage for individual sewer service areas delineated in the 1985 adopted plans and subsequent amendments, would not be reduced in quantity. This policy was applied to all sewer service areas which have a sewerage system or which have WDNR approved wastewater facilities plans for a sewerage system. The impact of this policy is that the areas available for future growth in various sewer service areas sometimes were greater than the updated forecast growth which was to be allocated. The result of this policy is that there were fewer service areas where the existing service area boundaries needed to be expanded.

## **PUBLIC AND COMMUNITY PARTICIPATION**

Citizen participation during the update of the service area plans was encouraged throughout the process. An ad hoc Technical Advisory Committee (TAC) was formed during the initial stages of service area updates in 1990. This committee met three times at critical stages in the process and provided a significant contribution to the refinement of the goals, objectives and policies. The meeting dates of the TAC and specific members are listed in Appendix D.

General public participation was sought after the proposed sewer service area boundary maps were completed. Public information meetings were held for each sewer service area. The purpose of sewer service area planning, the planning process, existing conditions of the service area and growth forecasts were explained. As a follow-up to these meetings (in smaller communities these meetings were combined) additional meetings were held for communities within each sewer service area. The designated service area boundaries on the file aerial photos were reviewed as part of these meetings.

In response to comment from these meetings, the boundaries of various sewer service areas were modified in accordance with the technical and policy criteria and standards described earlier. In most instances, future development land was "swapped," meaning adjustments were made on the photos without changes in growth acreage. The special amendment policy which was adopted in 1985 and modified in 1990 has been dropped and replaced with an accelerated growth policy adopted in

After the preliminary changes were incorporated on the file photos, certified letters and second draft photos showing the updated service areas were sent to all communities within the sewer service areas. Communities were notified to respond to East Central before the service areas were addressed by the Regional Development Committee for approval. A final round of these public information meetings was also held prior to adoption by East Central.

## **ADOPTION AND PUBLICATION OF FINAL PLANS**

Each individual sewer service area is adopted by the East Central Wisconsin Regional Planning Commission as an element of the Commission's regional land use plan. After adoption, the plans are submitted to the Wisconsin Department of Natural Resources for certification as an element of the Fox Valley Water Quality Management Plan. After WDNR certification the plan becomes effective and copies of the final plans are distributed to the affected communities.



## **SEWER SERVICE AREA AMENDMENT PROCESS**

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The East Central Wisconsin Regional Planning Commission has adopted "An Amendment Policy and Procedure For Sewer Service Areas" to enable sewer service area plans to be amended in response to changing conditions and community plans. This procedure provides a flexible, yet equitable and uniform basis for revising sewer service area boundaries.

East Central recommends that a representative from the government entity requesting the amendment meet with East Central staff to discuss the proposal. Most documentation and questions needed for the evaluation of the amendment can be addressed at that time.

### **EAST CENTRAL REVIEW AND RECOMMENDATION**

East Central's Regional Development Committee will review the proposed amendment within approximately 30 days of receipt of the request. The review will include a staff evaluation of the consistency of the proposal with East Central's amendment policies and criteria. The review will also include an evaluation of comments and recommendations received from local units of government and agencies notified of the proposal by East Central. The applicant may be requested to appear at the Regional Development Committee meeting if there are significant issues involved. The Regional Development Committee shall recommend approval or disapproval of the amendment. Upon approval, the amendment request shall be submitted to the Wisconsin Department of Natural Resources to request revision of the Water Quality Management Plan.

### **WDNR REVIEW AND APPROVAL**

The Wisconsin Department of Natural Resources will review the East Central recommendations for the service area amendment. If the service area amendment does not involve an area greater than 60 acres or greater than 5 percent of the total service area the Department should approve the amendment and certify the water quality plan within approximately 30 days after submittal. If the proposal is over 60 acres or 5 percent and/or if the project involves the development of an environmentally sensitive area the Department may require the preparation of an environmental assessment statement which may lengthen the approval period to three months or greater. Once WDNR approval is made, East Central can review sewer extensions and submit comments to the WDNR for sewer extension plan approval.

The formal amendment process includes the following elements:

Section I:       Amendment Policies

- A. Sewer service area boundaries may be modified (acreage swap) provided there is no increase in the total acreage of the specific sewer service area.

- B. Sewer service area boundaries may be expanded provided there is a documented need for a sanitary sewer collection system for areas of existing urban development.
- C. Sewer service area boundaries may be expanded provided there is a documented need for sanitary sewers to serve a proposed unique facility or development.
- D. Sewer service areas may be expanded to provide communities with the flexibility to accommodate unanticipated short-term development. The community shall certify through plan commission action that the proposed amendment area is required for reasonable community growth and is consistent with adopted development plans.
- E. Sewer service area boundaries may be modified by the redesignation of previously identified environmentally sensitive areas consistent with all the following standards:
  - 1. The environmentally sensitive area is immediately adjacent to an existing sewer service area.
  - 2. Appropriate local, state and federal environmental permits are granted for the proposed development.
  - 3. Major redesignation shall pose no significant adverse water quality impacts. Major redesignations include:
    - a. removal of any mapped wetland area for sewer development unless resulting from an activity exempted by state administrative rules governing wetland protection [NR 117.05(2)] or state approved rezoning of wetlands.
    - b. any change which would reduce a delineated floodway of any navigable stream or river, or which would remove any area below the ordinary high water mark of a navigable stream, pond or lake.
    - c. any change resulting in the total removal or in the continuity of any corridor segment including floodways, wetlands, shoreland buffer strips or steep slopes adjacent to water bodies. The water quality benefit that was associated with the portion of the corridor removed must be provided for in the development.
  - 4. The redesignated acreage will be added to the service area total acreage.
- F. Sewer service area boundaries may be modified or expanded to correct an error in the maps, data, projections or allocations of the adopted sewer service area plan.

## Section II: Amendment Criteria

Any proposed amendment shall be reviewed according to the following criteria:

- A. The cost-effectiveness of the proposed amendment compared to other alternatives. East Central may require this determination from the applicant.
- B. The environmental impacts of the proposed amendment shall be assessed in accordance with the criteria established in the Wisconsin Department of Natural Resources environmental assessment checklist.
- C. The East Central Wisconsin Regional Planning Commission will provide a water quality impact assessment and also evaluate the ability of the existing sewerage facilities to transport and treat the projected flows. East Central may also prescribe safeguards or impose additional conditions deemed necessary to protect the water quality in the area.
- D. Consistency with East Central's Regional Land Use and Transportation Policies.
- E. Amendment areas under Section I Policy A & D shall have a common boundary with the current sewer service area and shall not create a void within the service area.
- F. Service area amendments under Section I Policy D shall use as guidance the following:
  - 1. The expansion area generally shall not exceed 20 acres for residential development or 50 acres for nonresidential development.
  - 2. Not less than 15 percent of the expansion area boundary must be common to the boundary of a reference area within the current sewer service area. This reference area must be three times larger than the acreage in the proposed expansion and must be at least 50 percent developed.
  - 3. If any part of the reference area is part of a previously defined reference area, then the entire expansion area of the previous amendment should be included as part of the current reference area.
- G. The Commission may also prescribe safeguards or impose additional conditions deemed necessary to carry out the intent of the sewer service area amendment criteria.

### Section III: Amendment Procedures

Proposed sewer service area amendments shall be reviewed according to the following procedure:

- A. Requests for sewer service area amendments should be made by the governmental entity that will be expected to serve the area. Units of government seeking an amendment to the sewer service area boundary should transmit a letter requesting the amendment to East Central along with the following documentation:

1. A map of the proposed expansion area and, if required, reference area or any area to be deleted (swapped) which affects the boundary modification;
  2. Estimates of existing and anticipated population, wastewater generation and means of collection from the area;
  3. A description of the type of development expected to occur;
  4. Ability of the treatment facility to treat the anticipated wastewater;
  5. methods of stormwater management for added service area and surrounding areas which may be impacted; and
  6. Documentation that all property owners in areas proposed to be deleted (swapped) were notified of this request by the unit of government seeking the amendment.
  7. Plan Commission or Board action as required under Section I Policy D.
- B. Based on this information the Regional Development Committee, designated as the review committee by the East Central's bylaws, will review the proposed amendment to determine whether it meets the standards set forth in the Sewer Service Area Amendment Process. If no significant adverse water quality impacts are involved, the East Central shall recommend approval of the Plan amendment and submit it to the Wisconsin Department of Natural Resources for State plan certification.

#### Section IV: Appeal

If an applicant feels that a hardship exists in the strict interpretation and application of the amendment standards and criteria, consideration may be given to providing relief through a variance subject to the following requirements:

- A. The hardship is significant and widespread owing to substantial pre-existing financial or legal commitments for sanitary sewer service.
- B. The major objectives of the sewer service area plans can be met. The appeal shall be submitted to the Chairman of East Central for action at a regularly scheduled meeting of the Commission. Further appeals may be submitted to Wisconsin Department of Natural Resources.

## Section V: Definitions

Sewer Service Area:	A geographic area currently or anticipated to be served with sanitary sewers within the planning period as specified in the Sewer Service Area Plan element of the Water Quality Management Plan.
Existing Urban Development:	A geographic area with densities of development suitable for the efficient and economic provision of urban services such as sanitary sewer, water, transportation and storm drainage. (e.g. single family residential development greater than two units per gross acre)
Reference Area:	A geographic area currently within the existing sewer service area which is at least 50 percent developed.
Unique Facility or Development:	Interpreted to represent a development which was not anticipated or projected in the Sewer Service Area Plan but, which if constructed, will provide a widespread benefit to the entire service area. It may also include a development which requires a specific geographic location for which no other location can be utilized. (i.e. Airport Industrial Park in Outagamie County, EAA complex and state prison site in Sherwood)
Expansion Area:	The geographic area proposed to be added to the existing sewer service area through the amendment process.
Cost-effectiveness:	Analysis of sanitary sewerage system alternatives. The analysis shall include monetary costs and environmental as well as other non-monetary costs.
Environmentally Sensitive Area:	Geographic areas consisting of all lakes and streams shown on USGS quadrangle maps and their adjacent shoreland buffer areas. Also all wetlands shown on the state Wisconsin Wetland Inventory Maps and floodways as delineated on the official Federal Emergency Management Administration Flood Boundary and Floodway Maps.



## **APPENDIX A – SSA PLAN REVIEW/APPROVAL LETTERS**





George E. Mayer  
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

101 South Webster Street  
Box 7921  
Madison, Wisconsin 53707  
TELEPHONE 608-266-2621  
TELEFAX 608-267-3579  
TDD 608-267-6897

April 28, 1994

Russell M. Nero, Clerk  
City of Wautoma  
City Hall, P.O. Box 428  
Wautoma, WI 54982

SUBJECT: Wastewater Management Facilities Plan

Dear Mr. Russell:

I have reviewed the facilities plan for the City of Wautoma which was submitted by your consulting engineer, Stanley Charron, of Perry-Carrington Engineering. I concur with the selected alternative of joint treatment with the Silver Lake Sanitary District. Before the facilities plan can be approved the route of the connection must be identified and the environmental effects of that construction (especially with respect to wetlands, endangered resources and archaeological resources) must be addressed. In addition, a unit process-design summary, covering the proposed expansion of the Silver Lake wastewater treatment facilities, should be provided.

Mr. Charron raised the issue with me as to whether a separate facilities plan would have to be prepared for the expansion of the Silver Lake plant. A separate facilities plan will not be required and approval of the Wautoma facilities plan will cover the improvements at Silver Lake as well as the connection of Wautoma to Silver Lake.

I have previously spoken to Mr. Charron about the contents of this letter and I believe that these issues can be resolved in the near future. Should you have any questions about the status of your plan please do not hesitate to call me at (608) 267-7625.

Sincerely,

Gerald Novotny, P.E.  
Municipal Wastewater Section  
Bureau of Wastewater Management

cc: Silver Lake Sanitary District  
Lake Michigan District (WW Supervisor)  
Jim Savinski - Oshkosh Area  
→ East Central Regional Planning Commission

Stanley Charron - Perry-Carrington  
Mike Lefebvre - GAS  
Bureau of Environmental Loans - EL/S





RUSSELL M. NERO, CMC, CMFA  
City Clerk, Treasurer  
Telephone (414) 787-4044  
Fax (414) 787-4505

CHRISTMAS TREE CAPITAL  
OF THE WORLD

CITY OF WAUTOMA  
Post Office Box 428  
210 East Main Street  
Wautoma, Wisconsin 54982-0428

October 17, 1995

East Central WI Regional Planning  
Joe Huffman  
132 Main St.  
Menasha, WI 54952-3100

Dear Joe:

The city corporate boundary has been changed on the attached map as noted in red. Also noted on the map in red is the road that should be deleted. This road is a private driveway. Please make these changes.

I also talked with Vic Bartel and we have scheduled a Public Hearing for November 9, 1995, at 7 p.m., at City Hall. Please plan on attending this meeting. The city should be able to approve the *Map* at their November 13 Council meeting.

If you have any further questions, please give us a call at 414-787-4044.

Sincerely,

RUSSELL M. NERO  
City Clerk

enc.



RUSSELL M. NERO, CMC, CMFA  
City Clerk, Treasurer  
Telephone (414) 787-4044  
Fax (414) 787-4505

**CHRISTMAS TREE CAPITAL  
OF THE WORLD**

CITY OF WAUTOMA  
Post Office Box 428  
210 East Main Street  
Wautoma, Wisconsin 54982-0428

~~~~~  
March 5, 1996

East Central WI Regional Planning Comm.  
132 Main St.  
Menasha, WI 54952

Attn: Joe Hoffman

Dear Joe:

This letter is in approval of the Silver Lake-Wautoma Sewer Service Plan as adopted by East Central Planning on November 30, 1995 and approved by the full commission in January, 1996.

Sincerely,

RUSSELL M. NERO  
City Clerk

**SILVER LAKE SANITARY DISTRICT**

P. O. Box 357  
Wautoma, Wisconsin 54982  
414-787-7622

March 22, 1996

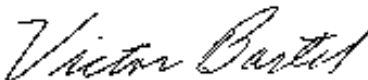
EAST CENTRAL WISCONSIN REGIONAL PLANNING COM.  
132 Main Street  
Menasha, WI 54952-3100

Att: Joe Huffman

Silver Lake Sanitary District agrees and approves of the  
latest sewer service area map as submitted.

Please send us three copies of the map.

Sincerely,



Victor Bartel,  
Chairman

## **APPENDIX B – GOALS & OBJECTIVES**

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## GOALS, OBJECTIVES AND POLICIES

Goals represent common community ideals. They give statements of direction in which planning is aimed. Objectives are more specific targets along the path of satisfying community goals. Objectives may be measurable, adding to the community good. Policies are strategies for accomplishing the stated objectives. Specific policies can be used in the decision-making process.

As part of the updating process, the earlier set of goals, objectives and policies have been refined to provide more specific guidance for service area planning. The refinements are a result of additional community and technical advisory committee participation in the service area update planning process (Appendix E). The refinements also reflect various state and federal laws and regulations which impact sewer service area growth and development activities. They address three basic questions. How much development is anticipated to occur? What type of development can be expected? Where should this development occur?

Two overall goals have been identified. The first goal and related objectives and policies pertain to land use and urban development issues. The second goal addresses public facilities, specifically sanitary sewerage systems. Objectives and policies related to both goals point out the significant interrelationship between urban land use and sanitary sewerage planning and provide a sound basis for determining a community's future development and sewerage system needs.

### **GOAL**

To encourage an orderly and planned pattern of community growth and development that will provide a high quality living environment.

**OBJECTIVE:** To promote a balanced and realistic allocation of land areas to accommodate current and future urban development needs.

#### Policies

- 1) The supply of land allocated for urban development should approximate current and future needs as determined from population, employment and land use projections.
- 2) Urban development patterns should incorporate planned areas of mixed use and density that are clustered and compatible with adjacent uses.
- 3) The allocation of future urban development should maximize the use of existing urban facilities and services.

**OBJECTIVE:** To promote compact communities which contain centralized, concentrated and compatible urban development patterns.

Policies

- 1) Future urban development should be encouraged to infill vacant developable lands within existing communities and then staged outward adjacent to existing development limits.
- 2) A greater proportion of subdivision development now occurring in rural areas should be encouraged within existing communities where urban services area are available.
- 3) Future commercial and industrial development should expand upon existing areas and be readily accessible to major transportation systems.
- 4) Urban development areas should consider existing political boundaries and jurisdictions.
- 5) The boundaries of urban development should consider natural and man-made features, such as ridge lines, streams and major highways.
- 6) Residential land use patterns should maximize their accessibility to public and private supporting facilities.
- 7) Urban development should occur only in designated urban service areas.

**OBJECTIVE:** To promote urban development which is environmentally sound and compatible with the natural resource base.

Policies

- 1) Urban development should be directed to land suitable for development and discouraged on unsuitable land, such as floodplains, wetlands, prime agricultural soils, areas of high bedrock and groundwater, prime wildlife habitat, unique scientific areas and areas of historical or archeological significance.
- 2) Environmentally sensitive areas should be preserved and protected from urban development.
- 3) Urban development should pose no significant adverse impacts to surface water and groundwater.

**OBJECTIVE:** To promote urban development in an efficient and economical manner.

Policies

- 1) Urban development should be encouraged at densities adequate to sustain reasonable urban service costs.

- 2) Future urban development should be located in areas which can be conveniently and economically served by public facilities.
- 3) Future residential development should provide an adequate variety of types, prices and locations of housing and convenience and choice in acquiring goods services.
- 4) Existing communities and their central businesses districts should be preserved and enhanced.

## **GOAL**

To provide and maintain a full range of community facilities and services which are efficient, economical and environmentally sound.

**OBJECTIVE:** To promote sanitary sewerage systems which will effectively and economically serve urban development.

### Policies

- 1) The number of waste treatment plants should be minimized to avoid duplication of facilities, institute economies of scale and lessen environmental degradation.
- 2) Urban development should be provided with sanitary sewer service which is reasonably sized.
- 3) Existing capacity in sanitary sewerage systems should be used before making substantial expansion or extensions.
- 4) Sanitary sewerage system construction and sizing should be staged to encourage lower capital investment and greater flexibility.
- 5) Sanitary sewerage systems should be provided for existing development whenever they are the most cost-effective alternative for addressing failing on-site disposal systems.
- 6) Gravity flow sanitary sewer and interceptor systems should be utilized whenever it is cost-effective.

**OBJECTIVE:** To promote sanitary sewerage systems which are environmentally sound.

### Policies

- 1) Disturbances to natural resources should be minimized when constructing sanitary sewerage systems.

- 2) Constructing sanitary sewers through environmentally sensitive areas should be avoided whenever possible.
- 3) The design and construction of sanitary sewerage facilities should not promote development in environmentally sensitive areas.
- 4) Sanitary sewerage systems should meet water quality standards.
- 5) When feasible, sanitary sewer systems and stormwater drainage systems should be designed and constructed concurrently to achieve pollutant abatement, gain drainage benefits, and minimize disruption of natural resources.
- 6) Erosion and sediment control practices should be utilized in constructing sanitary sewer systems where the potential for erosion is high.



**APPENDIX E – PUBLIC PARTICIPATION**

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SUMMARY OF PROCEEDINGS

Regional Development Committee  
East Central Wisconsin Regional Planning Commission  
ECWRPC Offices  
November 30, 1995

The meeting was called to order by Ron Van De Hey at 9:40 A.M.

Those Committee members present were:

Ron Van De Hey ..... Outagamie County  
Warren Utecht ..... Outagamie County  
Bill Frueh . . . . . Winnebago County  
Marigen Carpenter ..... Winnebago County

Those committee members absent:

Wilma Springer ..... Calumet County  
Robert Zellmer ..... Marquette County  
Duane Brown ..... Waupaca County

Other persons in attendance were:

Dennis Uitenbroek ..... T. Harrison  
Carita Williams ..... T. Neenah  
Lester Van Loon ..... Mayor, C. Wautoma  
Ken Theine ..... ECWRPC Staff  
Harlan Kiesow ..... ECWRPC Staff  
Ann Schell ..... ECWRPC Staff  
Kassandra Mazurek ..... ECWRPC Staff  
Betty Nording ..... ECWRPC Staff  
Brad Drefcinski ..... ECWRPC Staff  
Joe Huffman ..... ECWRPC Staff

(Marigen Carpenter requested that agenda item 2 be addressed first).

1. Proposed Resolution No. 2-96: Updating the Wautoma SSA Plan

Mr. Harlan Kiesow began explaining the process and background by which the Wautoma/Silver Lakes Sewer Service Area had been updated. Mr. Kiesow stated that the process began well over a year ago and was interrupted by the "Wautoma Area Land Use Development Plan". The land use development plan was completed in August 1995, which in turn was used to provide direction and consistency with the Wautoma/Silver Lake Sewer Service Area Plan. Mr. Kiesow then reviewed the series of meetings that occurred regarding the service area plan update, including the public information meeting held in Wautoma, and indicated

that final adoption by the full Commission would be held in January 1996.

Mr. Kiesow then referred to the preliminary sewer service area map and overviewed the existing conditions and proposed revisions for the plan. It was indicated that an agreement between the Silver Lake Sanitary District and City of Wautoma had been reached for regionalized treatment.

Mr. Kiesow also explained the "transition area" delineated on the service area map. This area was agreed upon by the two designated management agencies as an area of negotiation for future sewer extensions. Sewer extensions proposed in this area would be granted to the management agency that provides the most cost-effective service.

A brief discussion regarding taxes vs. services at the city and county levels was led by Bill Frueh. Marigen Carpenter requested clarification on the holding tank service area issue in regards to the apparent incomplete data presented in the preliminary report. Mr. Kiesow explained that the county entity responsible for collecting that particular data was not yet computerized which hindered efforts to collect that specific data. It was expected that the holding tank data would become more readily available in the future. There being no further discussion Marigen Carpenter moved to approve the proposed resolution updating the Wautoma/Silver Lake Sewer Service Area Plan. Warren Utecht made the second. Motion passed unanimously.

2. Proposed Resolution No. 1-96: Adoption of Policy Refinements for the Long-Range Transportation/Land Use Plan and Sewer Service Area Plans for the Fox Cities, Oshkosh and Fond du Lac Urban Areas

It had been decided that this discussion be deferred until attendance achieved proper representation. The magnitude of importance placed on this issue and particularly the controversy associated with the land use planning for sewer service areas weighed heavily on the decision to postpone action. It was therefore agreed that this item be placed on the agenda for the December 14, 1996 Regional Development Committee meeting.

The meeting was adjourned at 10:15 A.M.

