

# **SHERWOOD**

## **SEWER SERVICE AREA PLAN**

*WDNR Certification Date: March 1<sup>st</sup>, 2002*

Prepared by the  
East Central Wisconsin Regional Planning Commission

in cooperation with the

State of Wisconsin  
Department of Natural Resources

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## **ABSTRACT**

**Title:** SHERWOOD SEWER SERVICE AREA PLAN UPDATE

**Staff:** Eric W. Fowle, AICP, Assoc. Environmental Planner  
Joe Huffman, Planning Analyst

**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 1993 Sherwood Sewer Service Area Plan which is an element of the Water Quality Management Plan, Upper Fox River Basin, Wisconsin. The plan was prepared by the East Central Wisconsin Regional Planning Commission and was certified by the Wisconsin Department of Natural Resources on March 1<sup>st</sup>, 2002 as part of the State of Wisconsin Water Quality Management Plan. It provides population and land use projections and delineates future growth areas for the Sherwood Sewer Service Area. Also identified are environmentally sensitive areas which should not be developed. This plan contains policy recommendations encourage cost-effective and environmentally sound development patterns.*



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## CHAPTER 1 - INTRODUCTION

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This report represents the first update of the Sherwood Sewer Service Area plan, a formal element of the State of Wisconsin's Water Quality Management Plan, which for this area includes the Upper Fox River Basin Water Quality Management Plan (WDNR, 1996 [draft]). In the eighteen years that 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 Sherwood Sewer Service Area Plan is the second update of the original 1985 plan and amends the 1993 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 NR 121.07(2)(a)1. However, this schedule is dependent upon available funds and priorities established within the WDNR, and those determined by the Commission.

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 Workforce Development (formerly Department of Industry, Labor and Human Relations, or 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 2020.
- 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.



### SEWER SERVICE AREA PLANNING AUTHORITY

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 NR-121, concerning areawide waste treatment management planning; and NR-110, 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 WDNR'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 WDNR and East Central Planning 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 policies and procedures, initially adopted in 1978, were revised in 1984, 1990, with additional amendments regarding the urban areas (Fox-Cities/Oshkosh/Fond Du Lac) in late 1996, early 1997, and during 2000. These policies and procedures established standards and criteria for amending Sewer Service Area boundaries and also describes the procedure for amending Sewer Service Area plans. The amendment policy (Chapter 5) 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 Sherwood Sewer Service Area plan was adopted by East Central's Community Facilities Committee on October 11<sup>th</sup>, 2002 and by its full Commission on October 26<sup>th</sup>, 2002. The plan update was certified by the Wisconsin Department of Natural Resources and became effective on March 1<sup>st</sup>, 2002 (Appendix A).

## **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 re-evaluated and refined in 1985 and in 1990, with additional refinements regarding the urban areas (Fox-Cities/Oshkosh/Fond Du Lac) in late 1996, early 1997, and 2000. Two overall goals have been identified. The first goal and its 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 B.

## **WATER QUALITY MANAGEMENT AREAS**

The Sherwood Sewer Service Area is within the “designated” area and located within the Lake Winnebago East subwatershed which is part of the Upper Fox River Basin. 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 serves as the “designated” portion and 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 “designated” 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 six Sewer Service Area plan elements within the “non-designated” area and twenty Sewer Service Area plan elements within the “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.

## **REPORT FORMAT**

This plan describes and delineates the Sherwood Sewer Service Area. The plan was developed in accordance with state and federal guidelines and involved public input and review. This SSA Plan update was developed with input taken from public meetings of a joint committee called together by the Village of Sherwood (Village Board and Sewer Utility Committee). Formal informational meetings and public hearings were also held as part of the process in conjunction with ECWRPC’s Regional Development Committee. Summaries of Proceedings of these meetings are kept on file at the East Central offices. Appendix A contains information on the public meetings during the plan development and approval process. The following sections of the plan discuss the:

1. Sherwood Sewer Service Area characteristics, projected growth and service area plan map (Exhibit 1)
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.



EXHIBIT 1 - SHERWOOD SEWER SERVICE AREA



## **CHAPTER 3 - SHERWOOD SEWER SERVICE AREA**

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### **PLANNING AREA DESCRIPTION**

The Planning Area is defined partially by what was felt to be a crude approximation of the “ultimate service” area of the treatment plant and gravity sewer system based on capacity/serviceability, as well as delineating and including nearby clusters of development currently on on-site systems which may have long-term needs for sanitary sewer (more than 20 years).

The Sherwood SSA Planning Area and Sewer Service Area are located in the northwestern part of Calumet County along the USH 55 corridor adjacent to Lake Winnebago. The Planning Area boundary was updated during the planning process and includes the Village of Sherwood as well as portions of the adjacent Town of Harrison. Encompassing approximately 7.75 square miles, the updated Planning Area encompasses portions of Sections 23, 24, 25, 26, and 36 in T20N, R18E and all or portions of Sections 19, 20, 28, 29, 30, 31, and 32 in T20N, R19E. The Planning Area was modified during this plan update to include an additional 1.4 square miles (897 acres) and remove 0.05 square miles (29 acres) to more accurately reflects the areas serviceable by gravity sewers based on the depth of existing lift stations and surrounding topography. Approximately 291 acres of the 897 added, is in the form of an “undefined” planning area which identifies lands that can, theoretically be service via gravity sewers, however; issues between the Village and the Town of Harrison need to be resolved prior to including the area as part of the formal “Planning Area”.

Additionally, this plan update spurred the study of the Fire Lane 12/Fire Lane 13 areas along Lake Winnebago as a joint venture by the Village of Sherwood and the Town of Harrison. This area has historically been of concern to both communities not only due to the high potential for on-site system failures, but also as an area of mutual concern regarding the future extension of sewers from either the Village or the Waverly Sanitary District. Appendix C includes a copy of the McMahon Associates study which determined that these properties (illustrated on Exhibit 1 as “unsewered growth area”) cannot be cost-effectively serviced with municipal sewer at this time. This area encompasses approximately 517 acres.

### **LAND USE AND DEVELOPMENT**

A mixture of urban, agricultural, recreational and rural development is present in the planning area. The Village of Sherwood is the core of denser urban development. With a 2000 population of 1,550 persons, the Village covers an area of approximately 1,839 acres, of which approximately one-half is developed. The predominant land use is single family residential homes with a small downtown commercial area and a highway commercial area along USH 55. The Village does not have an improved industrial park although several quasi-industrial uses are present within the Village. The total estimated dwelling units for the Village of Sherwood was 534 in 2000.

The Planning Area also encompasses portions of the surrounding Town of Harrison. These areas are predominantly agricultural, woodlands, or pasture with some scattered residential development occurring. Some denser residential development also exists along Lake Winnebago to the west of the Village. All of these areas are currently unsewered and serviced by private on-site systems.

## **ENVIRONMENTAL CONDITIONS**

Environmentally sensitive lands within the planning area are generally associated with wetlands and with a number of streams passing through the area.

### Watersheds

As stated previously, the Sherwood Sewer Service Area planning boundary falls entirely within the Lake Winnebago East subwatershed (UF-02) of the Upper Fox River Basin with all drainage flowing directly into Lake Winnebago via existing ditches, wetland areas, and stream corridors. According to the draft Upper Fox River Basin Water Quality Management Plan (October, 1996), Lake Winnebago is an important year round recreational waterbody which experiences excessive weed growth during July and August which is likely associated with non-point source pollution (i.e., phosphorus from lawn fertilizers, etc.). The Lake Winnebago East Watershed was designated as a "Priority Watershed Project" by the Wisconsin Department of Natural Resources in 1986 in hopes of improving water quality within the watershed and Lake Winnebago.

Other than Lake Winnebago, no named surface water features are present within the Sherwood Planning Area. However, several un-named streams, including "Creek 21" (Calumet County Surface Water Resources, WDNR, 1971) are present within the Planning Area. These streams, for the most part, originate in the northern portions of the Planning Area, at or above the Niagara Escarpment, and drain into Lake Winnebago.

### Wetlands

A number of areas along the previously mentioned water bodies which are not developed have been designated as Environmentally Sensitive Areas (ESA's). These wetlands, found throughout the planning area, are essential environmental features for providing wildlife habitat, scenic open spaces, flood water retention, and groundwater discharge areas. Wetlands act as a natural filtering system for nutrients such as phosphorus and nitrates. They also provide a buffer zone protecting shorelines and streambanks. The Planning Area has several remaining tracts of wetlands which are associated with river or stream features, with the largest complex being located to the east of CTH M north of the wastewater treatment plant. Smaller wetland areas exist within the Village near Spring Hill Road, Clifton Road, and High Cliff Road.

### Floodplains

No mapped FEMA floodplain data exists for the Sherwood Planning area, although it is likely that small floodplain areas exist along the shores of Lake Winnebago and the un-named streams. Areas susceptible to flooding are considered unsuitable for any type of development due to the potential health risks and property damage.

### Soils and Geology

Soils support the physical base for development within the Planning Area. Knowledge of the limitations and potential difficulties of soil types is important in evaluating land use proposals such as residential development, utility installation and other various projects. Some soils exhibit characteristics such as slumping, compaction, erosion, and high water tables which place limits on development. Severe soil limitations do not necessarily indicate areas cannot be developed, but rather indicate more extensive construction measures must be taken to prevent environmental and property damage. These construction techniques generally increase the costs of development and the utilities needed to service that development.

Most of the soils within the Sherwood Planning Area are heavily clay laden and are more poorly drained. Although this may reduce the potential for groundwater contamination, failing on-site waste disposal systems, abandoned and active landfills, agricultural practices, quarries, and other land uses have the potential to be a direct source of contamination of groundwater if not managed properly. Since all of the Village's residents rely on a municipal water system for potable uses (drinking water, cooking, etc.) the threat of contamination of the groundwater is of less concern versus areas within the Town with private wells.

According to the Soil Survey of Calumet and Manitowoc Counties, prepared by the USDA in 1980, three major soil associations are present within the Sherwood SSA Planning Area:

- Kewaunee-Manawa-Poygan Association: This soil association encompasses about 90 percent of the Planning Area. This association consists of soils on undulating ground moraines made up of knolls, ridges, and plains that are dissected by drainageways and broad depressions. The soils are mostly nearly level to sloping, but along the sides of drainageways and on escarpments, they are steeper. These soils are well drained to poorly drained that have a dominantly clayey subsoils and substratum. They have good potential for cultivated crops but have severe limitations for use as septic tank absorption fields.
- Hochheim-Lamartine-Mayville Association: This soil association encompasses approximately 5 percent of the Planning Area is located along its southern border. This association consists of soils on ground moraines made up of broad knolls and ridges that are dissected by drainageways. The soils are mostly nearly level to sloping but on the sides of drainageways and on escarpments, they are moderately steep. These soils are suitable for cultivated crops while the steeper soils are used for pasture or as wildlife habitat. These soils have moderate to severe limitations for septic tank absorption fields.

- Channonahon-Whalan-Kolberg Association: This soil association encompasses approximately 5 percent of the Planning Area is located in the central and western portions following the Niagara Escarpment. Dolomite substratum is present within 10 to 40 inches of the surface in these areas. These soils have fair to poor potential for use as cropland and good potential for woodland use. These soils have severe limitations for septic tank absorption fields.

Additionally, based on this soils information, steep slopes are identified in several portions of the Planning Area; these areas are associated either with streambank areas, or lands along the Niagara Escarpment in the southern and central portions of the Planning Area.

### Groundwater

The groundwater resources of area are generally plentiful and of good quality. Groundwater resources within the Sherwood area are linked directly to the surficial glacial deposits and underlying bedrock structure. The western edge of the Niagara Escarpment lies within the Village. Therefore the Planning Area has four distinct aquifers present which can be generally described as follows:

- The Water Table Aquifer: Present in all areas of the Planning Area this aquifer consists of glacial sediments deposited by several glacial advances that covered portions of Calumet County. The thickness of this aquifer is variable, being greatest in pre-glacial bedrock valleys and least over topographic highs in the bedrock surface. Sand and gravel seams may transmit adequate amounts of water for private well systems.
- The Niagara Aquifer: Specific to the area underlying the Niagara Cuesta in the central and eastern portions of the Planning Area this aquifer forms an important regional aquifer along the western side of Lake Michigan. The Niagara Aquifer is underlain by Mequoketa Shale which does not transmit water easily and, therefore, acts as a confining layer between the Niagara Aquifer and the much more expansive Sandstone Aquifer of Wisconsin. The Niagara Aquifer consists of water stored in cracks and fractures located randomly throughout the rock. Fractured rock aquifers are particularly susceptible to pollution. In such areas, human activities and land uses take place in close proximity to features that provide relatively direct point source input routes for aquifer recharge. Dissolved and suspended contaminants can be moved rapidly across the land and into the subsurface with little or nothing to inhibit them. Examples of affected water supply wells, springs, and surface water bodies are common in such geologic settings. The potential for groundwater contamination is classified as high throughout most of the Niagara Escarpment.

- The Platteville-Galena Aquifer: This aquifer is located below the Water Table Aquifer and Niagara Aquifer, and below the layer of Mequoketa Shale, within all portions of the Planning Area. This aquifer is comprised primarily of dolomite and acts as a leaky confining layer over the sandstone aquifer. It does not transmit water as readily as the underlying sandstone, but it is capable of supplying adequate amounts of water to private water systems due to secondary fractures. The Cambrian (St. Peter's) Sandstone Aquifer is the areas thickest and is the most important in the western portion of Calumet County. Of the four aquifers, the Cambrian Sandstone aquifer is the most widely uses for sustained high capacity wells for municipal and industrial uses.

The vertical flow of groundwater is present in all areas of the Sherwood Planning Area with the exception of those areas where Mequoketa Shale is present. The horizontal movement of groundwater is generally westward towards Lake Winnebago. The Village of Sherwood has prepared and adopted a Wellhead Protection Plan and Ordinance for its municipal well which inventories existing features that may potentially cause contamination and recommends specific actions to address these concerns. The wellhead protection plan encompasses an area within 1,200 feet of existing municipal wells.

Bedrock located near the surface is present within the Village limits, and areas to the south associated with High Cliff State Park. These areas are associated with the face and crest of the Niagara Escarpment. The Niagara Escarpment is composed of highly fractured dolomitic limestone referred to as Silurian Dolomite or Niagara Limestone. High bedrock may not only hinder development due to the cost of rock excavation, but it also coincides with a lack of soil which can filter pollutants before they reach groundwater; thus, the potential for groundwater contamination in high or exposed bedrock areas can be extremely high.

## **EXISTING SEWERAGE TREATMENT AND COLLECTION SYSTEM**

The entire Village is serviced with sanitary sewer with the except for several isolated homes that currently use on-site systems due to the high cost of, or inability to extend sewers at this time. These systems will be eliminated as growth and services are expanded. Should an on-site system fail in the future, the Village will address the extension of sewers based on its cost-effectiveness.

No public sewerage system is present within this portion of the Town of Harrison at this time, therefore; residents rely on individual on-site wastewater treatment systems (conventional, mound, and holding tank). Calumet County currently has a ban on holding tank installations for new construction, however, they are allowed for use as replacement systems.

### Wastewater Treatment Plant

The Village of Sherwood's wastewater treatment facility (WWTF) is located in the eastern portion of the Planning Area. This facility was originally constructed in 1974 and received a major re-construction in 1998 based on the Village's approved 1995 Facilities Plan. The treatment plant uses an oxidation ditch and the activated sludge process to treat raw sewerage. A reed bed system is used to provide bio-solids management while the existing lagoons are used for flow equalization. Treated effluent is eventually discharged into a tributary of the North Branch, Manitowoc River.

The plant was designed for a maximum monthly design flow average of 728,000 gallons per day (.728 mgd). The designed loadings for biological oxygen demand (BOD) are 334 lbs./day and suspended solids (SS) loadings are designed for a 365 lb./day average. No operational concerns have arisen since the plant's re-construction. According to the 2000 CMAR, the Village of Sherwood WWTF has a total rating of 2 points (voluntary action range). These points were attributed to the plant's age.

In summary, the permit and design information for the plant is as follows:

- **WPDES Permit Number:** WI-0031127
- **Receiving water:** Tributary of the North Branch, Manitowoc River
- **Design Monthly Flow:** 0.259 mgd
- **Average Monthly Flow:** 0.1495 mgd (based on 2000 CMAR report)
- **Design BOD (lb./day):** 334
- **Treatment Type:** Activated sludge
- **Sludge Treatment:** Reed bed / agricultural land spreading

### Wastewater Collection System

The existing wastewater collection system for the Village is comprised mainly of eight-inch gravity sewers with some segments of 10, 12, and 15-inch gravity lines. Eight separate lift stations and segments of 6-inch and 8-inch forcemains eventually transport waste to the eastern portion of the Village and is then pumped through an 8-inch forcemain to the wastewater treatment plant.

## **FORECAST GROWTH**

Based on East Central's population projection methodology, the Sherwood Sewer Service Area is projected to have a continued increase in population growth in the future (Exhibit 2). According to East Central's projections, the total Sewer Service Area (Village) is projected to increase by 598 persons between 2000 and 2020 thus bringing the year 2000 population of 1,550 to 2,148 persons in the year 2020. This projection may, in fact, be under-estimated based on the use of older data in the projection methodology. Additionally, the recent growth rates in the Village may confirm this. In fact, the Village's recently adopted land use plan projected 2,434 persons by the year 2020, thirteen percent more than East Central's projection.

The projected persons per household for the Sherwood Planning Area is also expected to decline throughout the planning period. The Village's persons per household is projected to drop from 2.62 in 2000 to 2.32 in 2020. Exhibit 3 contains information on the historic and projected persons per household and the total households for the Town of Harrison and Village of Sherwood, as well as for Calumet County. The projected increase in population, coupled with the decreasing persons per household size, results in a projected increase of at least 391 households (dwelling units) by 2020.

Based on the projected population increase of the Village, coupled with the availability of developable lands in the pre-updated SSA, there is no justifiable need for additional vacant lands within the existing SSA based solely on East Central's population projection method. Using East Central's projections, and assuming all new residential development occurred at 2.5 units per acre for single family and 8 units per acre for multi-family development, only 132 acres of land would be needed within the SSA. However, due to concerns on the relative marketability of existing vacant infill parcels and land ownership patterns, the Village has relatively limited opportunities for development with the existing SSA boundary configurations. Additionally, the Village's proximity to the Fox Cities urbanized area, as well as recent building permit trends (Exhibit 4), indicate that an increase in population will likely occur beyond that which was projected by East Central.

The proposed Sherwood Sewer Service Area (Exhibit 1) now has a total of 1,649.9 acres of land, an increase of 196.5 acres from the current plan. Within the updated SSA boundary 51.6 acres have been identified as environmentally sensitive areas and 35.6 acres are open water. Developed lands within the updated service area total 734.5 acres while 629.4 acres of vacant, developable lands are now available for sewer development. This represents an "excess" of approximately 420 acres according to East Central's projection methodology. Exhibits 5 and 6 contain details of the acreages associated with the Sewer Service Area before and after this plan update.

**Exhibit 2  
Sherwood Planning Area Growth Projections**

<b>Source</b>	<b>Year</b>	<b>Village of Sherwood</b>	<b>Town of Harrison</b>	<b>Calumet County</b>
<b>Historic (US Census)</b>	<b>1970</b>	350	3,260	27,604
	<b>1980</b>	372	3,521	30,867
	<b>1990</b>	837	3,195	34,291
<b>Historic (DOA Estimates)</b>	<b>1991</b>	848	3,204	34,512
	<b>1992</b>	862	3,309	34,779
	<b>1993</b>	900	3,480	35,655
	<b>1994</b>	968	3,583	36,097
	<b>1995</b>	1,008	3,718	36,824
	<b>1996</b>	1,049	3,874	37,309
	<b>1997</b>	1,118	4,025	37,788
	<b>1998</b>	1,209	4,493	38,760
	<b>1999</b>	1,286	4,660	39,313
	<b>2000</b>	1,398	5,034	40,082
<b>Current (US Census)</b>	<b>2000</b>	1,550	5,756	n/a
<b>Projected (ECWRPC)*</b>	<b>2005</b>	1,596	5,411	41,410
	<b>2010</b>	1,779	5,725	42,169
	<b>2015</b>	1,968	6,044	42,910
	<b>2020</b>	2,148	6,330	43,373
<b>Total increase (2000-2020)</b>		<b>598</b>	<b>574</b>	<b>3,291</b>

Source: U. S. Census, 1970, 1980, 1990 and 2000; WI DOA, 1991-2000, and 1993; ECWRPC, 2000.

\* Projections were based on 1993 DOA Estimated population

Notes: For comparison purposes, the Village's Land Use Plan (adopted Nov. 16, 2000) uses a "straight-line" projection of 2,434 persons for the year 2020. None of the Town of Harrison's population growth was allocated to the Village's Sewer Service Area based on the previous allocations of growth to the Neenah / Menasha and the Heart of the Valley SSAs.

**Exhibit 3**  
**Sherwood Planning Area Household Information**

**Historic & Projected Households, 1970 to 2020**

Source	Year	Village of Sherwood	Town of Harrison	Calumet County
<b>Historic (US Census)</b>	<b>1970</b>	95	809	7,342
	<b>1980</b>	123	1,063	9,694
	<b>1990</b>	303	1,059	11,772
<b>Projected (ECWRPC)</b>	<b>2000</b>	534	1,759	14,526
	<b>2005</b>	630	1,955	15,521
	<b>2010</b>	724	2,133	16,299
	<b>2015</b>	820	2,306	16,984
	<b>2020</b>	924	2,494	17,734
<b>Total increase (2000-2020)</b>		<b>391</b>	<b>735</b>	<b>3,207</b>

Source: U. S. Census, 1970, 1980 and 1990; ECWRPC, 2000.

**Historic & Projected Persons Households, 1970 to 2020**

Source	Year	Village of Sherwood	Town of Harrison	Calumet County
<b>Historic (US Census)</b>	<b>1970</b>	3.68	4.03	3.70
	<b>1980</b>	3.02	3.31	3.15
	<b>1990</b>	2.76	3.15	2.89
<b>Projected (ECWRPC)</b>	<b>2000</b>	2.62	2.86	2.74
	<b>2005</b>	2.53	2.77	2.65
	<b>2010</b>	2.46	2.68	2.57
	<b>2015</b>	2.40	2.62	2.51
	<b>2020</b>	2.32	2.54	2.43

Source: U. S. Census, 1970, 1980 and 1990; ECWRPC, 2000.

**Exhibit 4**  
**Village of Sherwood Building Permit Data, 1990 to 2001**

<b>Year</b>	<b>1 Unit</b>	<b>2 Unit</b>	<b>MF</b>	<b>Mobile Home</b>	<b>Total Units</b>
<b>1990</b>	12	0	0	0	<b>12</b>
<b>1991</b>	20	0	0	0	<b>20</b>
<b>1992</b>	19	0	0	0	<b>19</b>
<b>1993</b>	11	0	0	0	<b>11</b>
<b>1994</b>	18	0	0	0	<b>18</b>
<b>1995</b>	18	2	0	0	<b>20</b>
<b>1996</b>	30	4	0	0	<b>34</b>
<b>1997</b>	41	10	0	0	<b>51</b>
<b>1998</b>	36	2	0	0	<b>38</b>
<b>1999</b>	40	1	0	0	<b>41</b>
<b>2000</b>	51	0	0	0	<b>51</b>
<b>2001 (as of 3/27)</b>	12	0	0	0	<b>12</b>
<b>Total</b>	<b>308</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>327</b>

Source: WI DOA and V. Sherwood, 2001.

**Exhibit 5**  
**Existing Sherwood SSA**  
**Acreage Summary**

**Existing (pre-updated) SSA Acreages**

SSA Characteristic	Existing SSA Acres
<b>Total SSA Acreage</b>	<b>1453.4</b>
<b>Total Developed Acres</b>	<b>881.0</b>
Developed Land Uses	714.5
Road and R.R. Rights-of-way	166.5
<b>Total Undeveloped Acres</b>	<b>572.4</b>
<b>Total Vacant Lands</b>	<b>483.4</b>
Vacant Lands	456.5
Vacant, Undevelopable Areas	26.9
<b>Environmentally Sensitive Area (ESA)</b>	<b>89.0</b>
WDNR Wetlands	24.8
Stream Buffers	29.0
Water Areas	35.2
<b>Total Developable Acreage</b>	<b>456.5</b>

**Proposed Land Uses for Vacant Lands within Existing (pre-updated) SSA**

Proposed Land Use*	Acres
Single-Family Residential	335.6
Multi-Family Residential	10.7
Commercial	33.5
Industrial	8.8
Public / Institutional	64.8
Conservancy	3.2
<b>Total Acres</b>	<b>456.5</b>

\* Proposed land uses based on V. Sherwood Land Use Plan, adopted November 16, 2000.

**Exhibit 6**  
**Updated Sherwood SSA**  
**Acreage Summary**

**Updated SSA Acreages**

SSA Characteristic	Existing SSA Acres
<b>Total SSA Acreage</b>	<b>1649.9</b>
<b>Total Developed Acres</b>	<b>902.4</b>
Developed Land Uses	734.5
Road and R.R. Rights-of-way	167.9
<b>Total Undeveloped Acres</b>	<b>747.4</b>
<b>Total Vacant Lands</b>	<b>660.2</b>
Vacant Lands	629.4
Vacant, Undevelopable Areas	30.8
<b>Environmentally Sensitive Area (ESA)</b>	<b>87.3</b>
WDNR Wetlands	22.7
Stream Buffers	28.9
Water Areas	35.6
<b>Total Developable Acreage</b>	<b>629.4</b>

**Proposed Land Uses for Vacant Lands within Updated SSA**

Proposed Land Use*	Acres
Single-Family Residential	434.7
Multi-Family Residential	10.7
Commercial	82.4
Industrial	28.7
Public / Institutional	69.8
Conservancy	3.2
<b>Total Acres</b>	<b>629.4</b>

\* Proposed land uses based on V. Sherwood Land Use Plan, adopted November 16, 2000.

## Growth Allocation Areas

The policy basis for allocating acreage for future development is outlined on page 35. 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. Vacant lands available for development within the updated SSA boundary total 629.4 acres.

### Environmentally Sensitive Areas

Approximately 1.9 acres of ESAs were removed from the SSA, based on the boundary reconfigurations in the “administrative allocation areas” (discussed below).

### Administrative Allocations

These areas were added to the SSA mainly based East Central's boundary configuration policies, which state that both sides of a right-of-way which contains (may contain) public sewer should be included in the SSA. This category of allocations comprises 66.05 total acres of which, 47.08 acres is considered to be vacant and developable. Most of this vacant acreage is slated for residential development according to the Village's land use plan.

### Future Growth Areas

Three major acreage allocations have been made to the SSA to accommodate future planned growth for a variety of land uses. These areas total approximately 151 acres and can be described as follows:

- **Residential Development:** Land for these uses have been primarily allocated in the northwestern portion of the Village and its periphery. A majority of the single-family residential development activity has occurred in this portion of the village in the past, and the Village's land use plan dictates the continuation of this development pattern. Recent subdivisions have accommodated significant stormwater management, public recreation, and open space systems. New sewer residential development is proposed as follows:
  - ◆ Approximately 34 acres have been added east of State Park Road for single-family residential development. These areas will be serviced via gravity sewer which will connect to lift station No. 4.
  - ◆ Approximately 55 acres of land have been added between Pigeon Road and Stommel Road to accommodate single-family residential uses. These areas will be serviced via gravity sewer to lift stations No. 4 and 5.
  - ◆ Approximately 3.08 acres of land were added in the southern portion of the SSA, along Cliff Road to accommodate the potential future extension of a gravity sewer which would allow for the connection of an existing single family home which has an on-site system which is in poor condition.

- **Commercial Development:** Commercial development has been primarily allocated along the STH 114 corridor, on lands located below the Niagara Escarpment. Approximately 40 total acres were added to the SSA for this purpose based on the Village's land use plan.
- **Industrial Development:** Based on local land use plans, approximately 20 acres were allocated specifically for industrial uses during the planning period. The Village has not historically seen this type of development, however; existing plans identify an area, west of CTH M and north of the existing railroad, for such uses. This allocation should allow for the initial phase of such a development, with possible rail access being provided. This area would likely be serviced to the east through an existing 15-inch gravity sewer location along CTH M. Counting vacant lands within the existing SSA, a total of 29.8 are available for sewerered industrial uses within the updated SSA.
- **Public / Institutional Development:** No new lands have been added to accommodate future public/institutional development. However, within the existing (previous) SSA configuration, approximately 65 acres have been planned to accommodate future parklands, church properties, and a new post office.

#### Holding Tank Service Areas

A complete inventory of existing private holding tanks and alternative septic systems is not readily available for the entire Planning Area through the Calumet County sanitary program. Numerous holding tanks exist within the area with wastes hauled by private contractors to various wastewater treatment facilities in the area. More detailed information on the on-site systems along the Lake Winnebago shoreline, west of the Village, is available in Appendix C.

## **FUTURE WASTEWATER FLOWS**

Based on ECWRPC's original growth projection for the Village, significant change in flows should result over the planning period. If all vacant lands allocated within the SSA (629.4 acres) were to develop in the future, the anticipated flow increase is calculated to be 668,501 gallons per day (0.669 mgd) using the following assumptions:

- 378.59 acres of single and multi-family residential development (85% of 445.4 acres – 15% used for roads, etc.) at an average density of 2.5 units per acre, 2.32 persons per household [year 2020 projection], and 80 gallons per day per capita;
- 91.04 acres of commercial and industrial development (85% of 107.1 acres – 15% used for roads, etc.) accommodating 20 separate businesses with an average flow of 25,000 gallons per day.
- 69.8 acres of public / institutional development with an average flow of 25,000 gallons per day.

Current flows average 0.1495 mgd with a design flow of .259 mgd for the current treatment system. If new development occurs at this level, the associated flows would exceed the design capacity of the wastewater treatment plant. Realistically, such a level of development would not occur throughout the Planning Period. However, the Village will need to monitor new growth and loadings to the plant in order to determine if, and when, the Village needs update its facility planning efforts to address any future capacity deficiencies.

## **WATER QUALITY ASSESSMENT**

Continued urbanization of the Sherwood Planning Area will impact surface and groundwater resources. Short term impacts include the increase in surface water runoff and pollutant loadings as well as a reduction in groundwater recharge areas. Long term, cumulative development impacts include the loss of baseflow in streams and enhanced stream flashiness (flooding). 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 residential development will increase loadings to the wastewater treatment plant, and ultimately to the groundwater aquifer which is used for discharge. At current treatment levels, projected residential growth as illustrated above could result in the daily discharge of an additional 573.1 pounds of BOD, and 507.3 pounds of suspended solids (TSS) and 14.1 pounds of phosphorus. 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 areas 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 2000 Sewer Service Area update includes 629.4 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 (assuming full development which is not likely given the population growth projected) is estimated to increase annual pollutant yields by 135.7 tons for sediment, 0.21 tons for phosphorus and 0.39 tons for zinc and lead.

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. The Village currently has an adopted stormwater management ordinance.

#### Groundwater Protection

Conversion of rural/agricultural lands to urban uses may impact the quality and quantity of groundwater. Groundwater recharge will decrease as areas which are paved over or built upon. At the same time, withdrawal of groundwater is likely to increase for domestic, commercial and industrial use. All residents within the Village have public water. 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. As stated previously, the Village has an existing Wellhead Protection Plan and Ordinance in place which addresses most of these issues.

#### 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**

1. The Village should attempt to direct new development to areas where sewers are already in place ("infill") before extending new sewers into undeveloped areas. Efforts should also be made to maximize use of gravity sewers to accommodate new development to avoid the capital, operating and maintenance costs associated with constructing new lift stations.
2. The Village should monitor new development and wastewater loadings, including infiltration and inflow, to the WWTF in order to determine the appropriate time for additional Facility Planning efforts which would address potential capacity deficiencies in the future.
3. The Village, Town of Harrison, and Calumet County should coordinate the review of all development proposals within the Planning Area in order to address potential sewer growth impacts.

4. The Village and Town should review the potential for long-term sewer service provision and alternatives, particularly for downstream capacities, in the “undefined” Planning Area, located north of STH 114.
5. The Town of Harrison and / or Calumet County should investigate potential methods for ensuring that existing, and new, on-site treatment systems are maintained or replaced as necessary in the “unsewered growth area” to improve surface and groundwater quality within the Lake Winnebago East watershed.
6. The Town of Harrison should review its current land use plan and modify it as necessary to address the findings contained within this plan.
7. Environmental conditions within the SSA and Planning Area warrants concern with regard to construction site erosion, destruction of wetlands and impacts on ground and surface water quality. The Village should:
  - a. Direct development away from designated ESAs (stream buffers and wetlands) as well as areas of steep slopes to minimize the erosion hazard and maintain/improve water quality.
  - b. The Village should continue to implement / enforce its adopted Subdivision Ordinance provisions relating to stormwater management and erosion control in order to maintain/improve surface water quality conditions which may be negatively impacted by new development.
  - c. The Village should implement / enforce its well-head protection ordinance to maintain and improve groundwater quality within the Planning Area.

## **PLAN IMPLEMENTATION**

Although Sewer Service Area planning was initiated at the state and federal levels, successful implementation of each plan rests primarily at the local level with some guidance provided by East Central Planning. 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 (DMA) for portions of the planning area within their jurisdictions. The Village of Sherwood has been designated as a Class III Designated Management Agency to provide wastewater collection and treatment within its planning area.

As designated management agencies for wastewater treatment and collection the Village should do the following:

1. Adopt the Sherwood 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.

Implementation of the SSA Plan relies mainly on local government actions which use the plan recommendations as a guide for the extensions of new sewers to service development. However, ECWRPC plays an advisory role in these decisions in two distinct ways:

1. ECWRPC requests that communities within the region require developers to submit "preliminary" subdivision plats for staff review and comment (advisory only). Staff not only checks the proposed plat (whether sewerred or using on-site treatment) for conformance with the municipality's SSA Plan, but also reviews the subdivision's overall design and, more specifically, check the following items: potential water quality impacts to environmental corridors; groundwater aquifer / private well concerns; impacts to other natural and cultural features; construction site erosion control methods; storm-water management methods and concerns; internal vehicle/bicycle/pedestrian transportation system design; and other social / service provision impacts (i.e., parks, adjacent land use conflicts, police and fire protection, etc.).

2. Sewer extension requests are required to be submitted to ECWRPC for review and comment. Hopefully, staff has reviewed the preliminary plat prior to the extension request which can reduce conflicts at this point. However, staff normally requests that a copy of the final plat be submitted with the extension request. ECWRPC then issues a "208 Water Quality" letter if the extension request is in conformance with the municipality's current SSA Plan. In general, if the extension request is within the designated SSA and does not have negative impacts to defined environmental corridors, a letter will be issued. Sometimes, requests fall outside of the SSA Boundary and thereby, usually initiates an SSA Amendment Request for continued consideration. If negative water quality impacts will occur to designated environmental corridors, a denial of the extension will occur, or recommended mitigation measures (i.e., stormwater management / erosion control devices, etc.) will be attached to the approval.

Utilizing these two methods, a majority of the water quality concerns relating to construction and development can be effectively monitored by ECWRPC for individual projects; thereby, assisting to attain the water quality objectives outlined within the plan's goals.

In addition to ECWRPC's role in 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.



## **CHAPTER 4 - SEWER SERVICE AREA PLANNING PROCESS**

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### **GENERAL DESCRIPTION**

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 re-delineation 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 2020). Planning area boundaries generally include all areas within existing city, Village or 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. 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 Exhibit 7. 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 sewer 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."

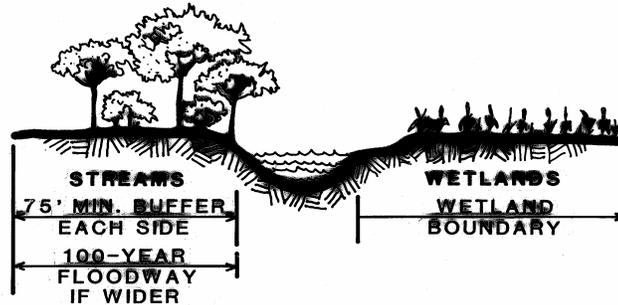
East Central, after deliberations with technical and policy advisory committees, defined environmentally sensitive areas in a manner that complements existing local, state and federal regulations which protect various environmental amenities. While NR 121 authorizes Sewer Service Area plans to identify 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.

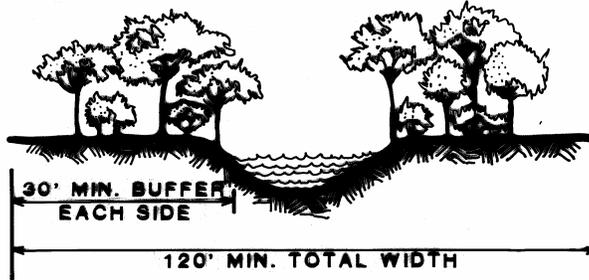
Exhibit 7

ENVIRONMENTALLY SENSITIVE AREA STANDARDS

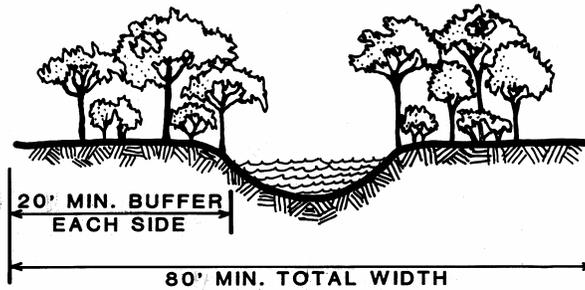
NAVIGABLE STREAMS & WETLANDS



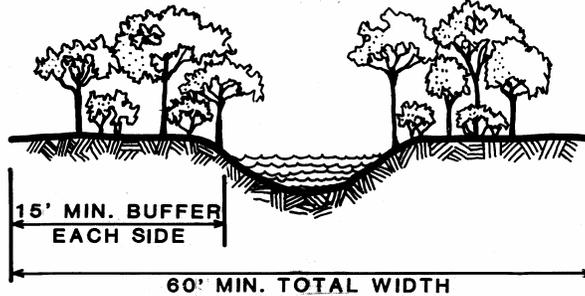
NON-NAVIGABLE STREAMS & DRAINAGEWAYS  
DRAINAGE AREA GREATER THAN APPROXIMATELY 2000 ACRES



NON-NAVIGABLE STREAMS & DRAINAGEWAYS  
DRAINAGE AREA APPROXIMATELY 300-2000 ACRES



NON-NAVIGABLE STREAMS & DRAINAGEWAYS  
DRAINAGE AREA LESS THAN APPROXIMATELY 300 ACRES



First, the classification can be removed provided that the conditions outlined in Section (E) of the Sewer Service Area Amendment Process are met. This re-designation 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;
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 WDNR certified floodway delineations resulting from revised flood studies;
- b) Revised wetland boundaries on the Wisconsin Wetland Inventory Maps resulting from field inspections by WDNR 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 sewer 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 unit of government 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.

Important for analyzing the planning areas, existing urban development areas were delineated on aerial photography based on field work and photo interpretation. Urban development areas consist of all concentrations of development within the planning area, together with undeveloped lands which are either sewerred 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 sewerred, (2) developed and unsewerred, (3) undeveloped and sewerred and (4) undeveloped and unsewerred. In order to be classified as sewerred, areas must be adjacent to public sewer lines, with the ability to connect either through private laterals or, in certain instances, private sewerred. 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, 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 1990-2020 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 350 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 may 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 NR-113 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 NR-113.

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 policy development for the Designated Sewer Service Areas (urban areas). 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.

General public participation from the Sherwood Planning Area was sought during and the planning process as proposed Sewer Service Area boundary maps were completed. Public information meetings were held with local officials within the planning areas and associated Sewer Service Areas. The purpose of Sewer Service Area planning, the planning process, existing conditions of the service area and growth forecasts were explained. 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.

After the preliminary changes were incorporated on the GIS maps, letters and draft maps 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 Water Quality Management Plan. After WDNR certification the plan becomes effective and copies of the final plans are distributed to the affected communities.

## **CHAPTER 5 - SEWER SERVICE AREA AMENDMENT STANDARDS AND UPDATE PROCEDURES**

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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. This chapter was reviewed and approved by the Land Use Advisory Committee and the Commission in 2000, with WDNR approval coming on February 12<sup>th</sup>, 2001, as part of addressing policy issues related to the Long-Range Fox Cities, Oshkosh, and Fond du Lac Transportation/Land Use Plan Addendum. These revised policies will apply to the communities illustrated in Exhibit 8. When an amendment is requested, East Central recommends that a representative from the government entity with Designated Management Agency (DMA) status meet with East Central staff to discuss the proposal prior to submission. Most documentation and questions needed for the evaluation of the amendment can be addressed at that time.

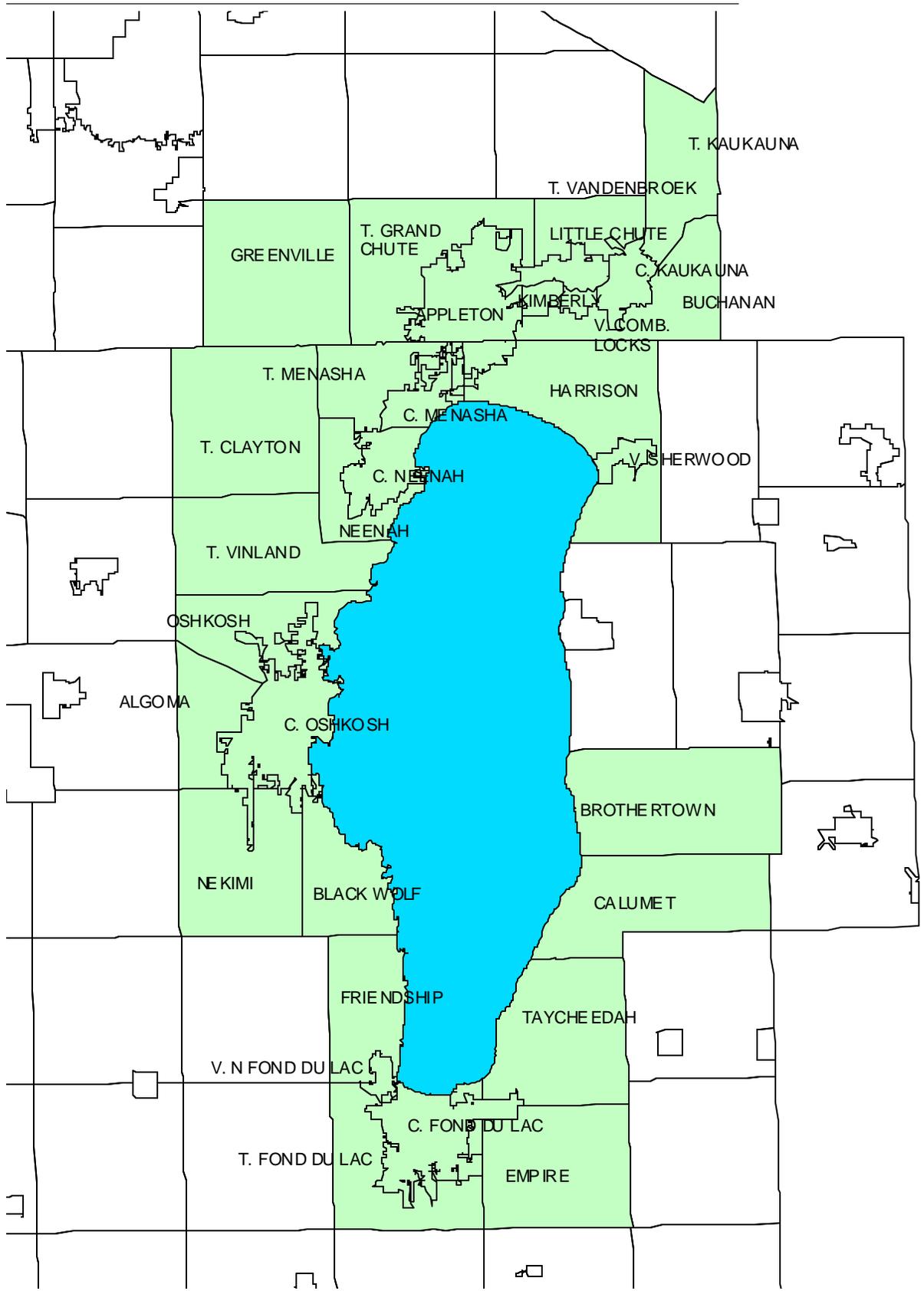
### **EAST CENTRAL REVIEW AND RECOMMENDATION**

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 and Commission recommendation(s) shall be submitted to the Wisconsin Department of Natural Resources to request revision of the applicable 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 1,000 acres or greater than 5 percent of the total service area the Department should approve the amendment and certify the applicable Water Quality Management Plan within approximately 45 days after submittal. If the proposal is over 1,000 acres or 5 percent of the total service area, and/or if the project involves the development of an Environmentally Sensitive Area the Department may require the preparation of an environmental assessment statement under NR-150 with public comment period on Type 2 Actions. This may lengthen the approval period to three months or greater. Once WDNR decision is made, and if approved, East Central can review sewer extensions and submit comments to the WDNR for sewer extension plan approval.

# Exhibit 8 – Sewer Service Area Amendment Standards & Update Procedures Application Area



The formal Sewer Service Area amendment process includes the following elements:

### **Section I: Amendment Policies**

- A. Sewer service area boundaries may be modified (acreage swap) provided no increase in the total acreage of the specific sewer service area occurs. Newly added area will have Environmentally Sensitive Areas (ESAs) delineated prior to the amendment approval. The land comprised of an ESA will not require a swap for and equal amount of acreage. Acreage swaps may occur on a regional basis within the same sewer service area. (i.e., added and deleted acreage does not have to be within the same community).
- B. Sewer service area boundaries may be swapped on an acre for acre basis (vacant, developable lands only) provided a documented need for a sanitary sewer collection system exists for areas of existing urban development. Newly added area will have Environmentally Sensitive Areas (ESAs) delineated prior to the amendment approval. The land comprised of an ESA will not require a swap for and equal amount of acreage. Acreage swaps may occur on a regional basis within the same sewer service area (i.e., added and deleted acreage does not have to be within the same community).
- C. Sewer service area boundaries may be expanded (overall increase in net developable acreage) provided a documented need for sanitary sewers to serve a proposed unique facility or development exists.
- D. Sewer service areas may be expanded (overall increase in net developable acreage) to provide the flexibility to accommodate unanticipated short-term development based upon accelerated growth which exceeds the forecasted total service area growth rate in the plan. The requesting DMA shall have the community(ies) certify that the proposed amendment area is required for reasonable community growth and is consistent with locally adopted land use plans.
- E. Sewer service area boundaries may be modified by the re-designation 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 prior to the final approval of the amendment request.
  - 3. Major re-designations shall pose no significant adverse water quality impacts. Major re-designations 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 re-designated acreage will be added to the Sewer Service Area's 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 will be compared to other alternatives. East Central may require this determination from the applicant. Amendments submitted under Policy B shall require such a determination from the applicant, and;
- 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. The Commission will evaluate the ability of the existing sewerage facilities to transport and treat the projected flows and will provide a water quality evaluation statement. East Central may also prescribe safeguards or impose additional conditions deemed necessary to protect the water quality in the area.
- C. Amendments within the Urbanized Area SSA's should be consistent with East Central's Long-Range Transportation/Land Use Plan Addendum's goals, objectives and policies, particularly for density standards, as follows:

### Policy 1.3 conformance:

- a) The average net residential density of the buildable plat area is more than or equal to 1 unit per acre, or;

- b) The community has illustrated that development proposal meets the density requirements by being part of an overall "mixed density" concept documented in its local land use plan which meets the policy intent. (Note: Should amendments occur over time primarily for low density development which does not meet the one acre requirement, and no higher density development occurs, Section V, Urbanized Area Standard (1)(d) will apply at the next scheduled plan update), and;
- c) If an amendment takes place which includes lands planned for residential development, without being platted prior to the amendment, ECWRPC will require an assurance from the community in the form of a resolution stating that the development will meet these requirements. At the time of platting, ECWRPC will require that a copy of the preliminary plat be submitted for review.
- D. 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.
- E. Policy B (existing development) amendments must be contained within an approved SSA Planning Area. This boundary can be reviewed and considered for modification as a separate process if necessary.
- F. Amendment areas under Section I Policy A and B involving the "swap" of land acreage shall, to the extent possible, utilize consistent land use areas on an acre for acre basis, based on the community's locally adopted and Commission certified Comprehensive Plan. Should the community not have enough of a particular type of land designated in its locally adopted Comprehensive Plan to allow for a swap, the community should consider utilizing the "regional swap" policy prior to submitting the amendment under Policy D. Any community affected by a "regional swap" shall be notified and given an opportunity to comment prior to Commission approval of the amendment.
- G. Amendments submitted under Policy C – Unique Facilities, not only fit the definition contained in this plan, but the applicant must also submit additional information which illustrates that all impacts, including secondary land use impacts, and their effects on water quality, transportation, and public service provision be addressed prior to the Commission recommending approval of the amendment. Such amendment requests must also be consistent with locally adopted Comprehensive Plans. Amendments under this policy may be approved conditionally by the Commission so that other necessary approvals can occur concurrently.

### 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 has received Designated Management Agency (DMA) status and 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, 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 existing development and/or the type of future development expected to occur;
  4. Ability of the treatment facility to treat the anticipated wastewater;
  5. Methods of stormwater management and regulation for the 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.
  8. Amendments submitted under Section 1 – Policy B will require that additional information be submitted and criteria be met as follows:
    - a) Documentation that the community's locally adopted Comprehensive Plan illustrates the area as a future urban growth area which will be provided a full range of services as spelled out in the Urbanized Area Long-Range Transportation/Land Use Plan Addendum's density standards, and;
    - b) A determination of the cost-effectiveness of providing public sanitary sewer versus on-site system replacement. This determination should be consistent with NR-110 requirements, and;

- c) Documentation that at approximately 30% of the existing on-site systems within the proposed amendment area be considered failing (direct need), and;
- d) Documentation that approximately 30% or more of the balance of existing on-site systems within the proposed amendment area are subject to failure based on the physical condition of the on-site system itself and / or the physical characteristics of the subject site (indirect need);

*Documentation for c) and d) above can be in the form of: copies of County or State orders for on-site system replacement; copies of existing on-site system inspection reports; letters from the County Sanitarian indicating that the systems are failing or have the potential to fail; or documentation of recent private well tests which show bacterial contamination likely resulting from on-site system failure.*

- 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 to the community 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.
- C. 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: SSA Plan Update Procedures and Standards

Even though local, regional, and state levels of government engage in planning activities to direct their future, individual or multiple conditions can change over time. Some can be predicted and handled proactively (Comm. 83, demographics, etc.), while some occur rapidly and generally without much warning (economic conditions, regional growth patterns and rates, market demands, etc.). Sewer Service Area Plans are meant to be a proactive type of plan which identifies future sewer growth areas based on cost-effectiveness service provision, water quality, and regional cooperation/coordination. When conditions change, these plans need to be updated to reflect those changes. This section describes the conditions under which Sewer Service Area Plans are updated and how previously developed and approved regional goals, objectives, and policies (i.e. Urbanized Area Long Range Transportation/Land Use Plan Addendum) will apply prior to, during, or after the Update process.

### Minimum Update Procedures and Standards (for all Sewer Service Areas)

SSA Plans will be updated on an approximate 5-year interval. Funding, staff availability, urban growth demands, and regional/state policy changes/proposals may alter this time interval. When updated, the following items will be addressed:

- 1) A review and update of population, housing, and employment trends and projections;
- 2) A review and update of land use demands based on socio-economic conditions and projections;
- 3) A review and update of existing physical conditions, including:
  - (a) Existing land uses
  - (b) Proposed land uses (based on local, county, regional, and state plans)
  - (c) Water quality and natural resource (ESA) characteristics, changes, and issues;
- 4) A description of relevant events since the last plan update pertaining to sanitary sewer or having an impact on future sewer service, including:
  - (a) Major WWTF improvements or changes;
  - (b) Major collection system improvements or changes;
  - (c) Local governmental changes (i.e., sanitary district formations, intergovernmental boundary / service agreements, Comprehensive Plan updates, regulations and requirements, etc.)
  - (d) SSA Plan amendments and acreage consumption since the last plan update
- 5) A review and modification of mapping elements, if necessary, to accommodate future sewer growth and development, including:
  - (a) Proposed major sewer system improvements and/or regional connections
  - (b) A revised twenty-year Sewer Service Area Boundary;
  - (c) A revised forty-fifty year Planning Area Boundary;
  - (d) Environmentally Sensitive Areas

- 6) A review of local governmental actions and regulations which have implemented the Sewer Service Area Plan;
- 7) An update of citizen information/education and participation efforts;
- 8) A review of the institutional structure for plan update and amendment review and approval and for plan implementation;
- 9) A review / revision of goals, objectives, and policies, if necessary;
- 10) The development of recommendations and strategies for plan implementation.

#### Urbanized Area Procedures & Standards

*The Urbanized Area Procedures and Standards will apply to the following communities: City of Appleton, City of Kaukauna, Village of Combined Locks, Village of Kimberly, Village of Little Chute, Town of Buchanan, Town of Grand Chute, Town of Greenville, Town of Kaukauna, Town of Vandenbroek, City of Menasha, Village of Sherwood, Town of Harrison, City of Fond du Lac, Village of North Fond du Lac, Town of Calumet, Town of Empire, Town of Fond du Lac, Town of Friendship, Town of Taycheedah, City of Neenah, City of Oshkosh, Town of Algoma, Town of Black Wolf, Town of Menasha, Town of Neenah, Town of Nekimi, Town of Oshkosh, Town of Vinland.*

The Urbanized Area Standards and Procedures include the above listed "Minimum" items, plus the following reviews of local conformance with policies and requirements as spelled out in the Urbanized Area Long-Range Transportation/Land Use Plan Addendum, including:

- 1) Addendum Policy 1.3 Conformance - A review of local development densities within the SSA occurring between plan updates and their conformance with the minimum residential density requirement will need to be met as follows:
  - (a) Areas within the SSA prior to WDNR certification date of the 1997 (or subsequent) Sewer Service Area Plan Update are not required to meet this policy, however; ECWRPC staff will consider new residential developments which have occurred after this date as part of the overall density calculation (therefore this will not penalize communities for recent development meeting the criteria and being "banked" for lower densities elsewhere within the SSA).
  - (b) Areas allocated and approved as part of the 1997 (or subsequent) Plan Update are required to meet policy
  - (c) Areas amended to SSA after 1997 update are required to meet policy (see SSA Plan Amendment Policies and Procedures section for additional information)

- (d) If an individual community does not meet the density requirements spelled out in the *Transportation/Land Use Plan Addendum* it will not be eligible for additional Sewer Service Area acreage allocations in subsequent plan updates.
- 2) Addendum Policy 1.4 – A review of local unsewered development patterns and locations and advisory recommendations pertaining to such information;
- 3) Comprehensive Plan Guidelines – A review of local land use plan for conformance with the Guidelines and the communities’ plan certification status.

## **Section VI: Definitions**

*Sewer Service Area:* An area defined and approved by the WDNR under Wisconsin Administrative Code, NR-121 with the assistance, and recommendation from, the East Central Wisconsin Regional Planning Commission and input from the communities involved and the general public. This boundary delineates areas which can be provided public sanitary sewer more cost-effectively than on-site treatment methods over a 20-year period. ECWRPC determines this boundary based on the following information (all of which are not necessarily listed in NR-121):

1. Definition and mapping of Environmentally Sensitive Areas (ESAs);
2. Justified acreage allocations based on projected 20-year growth and development using ECWRPC accepted methodologies;
3. Projected available 20-year capacity of wastewater treatment plant from publicly sewer development and established holding tank receiving areas;
4. Facilities Plan listed projects and improvements;
5. Projected available 20-year capacity of interceptor sewers, force-mains, and lift stations;
6. Location of existing sanitary sewer lines;
7. Existing and projected 20-year development patterns (based on local land use plan and zoning maps);
8. Proximity to development with known failing privately owned treatment works (POTWs) (also referred to as on-site wastewater treatment systems
9. Ability to provide recommended levels of urban service per the Addendum matrices. (This would be addressed further as criteria for future allocations and amendments to the SSA).
10. Intergovernmental growth / service agreements (advisory only)

11. The boundary itself is located, for administrative use, on the location of:

- a) Environmentally Sensitive Areas (ESAs);
- b) Watershed, sub-watershed, and drainage basin boundaries;
- c) One lot depth (200-foot) buffer from existing sewer line locations;
- d) Quarter-section lines based on the Public Land Survey System (PLSS);
- e) MCD and Sanitary District Boundaries
- f) Road centerlines;
- g) Lift station service areas (topography and depth)
- h) Gravity and interceptor sewer service areas (topography and depth)

*Sewer Service Area Planning Area:* An area defined and approved by the WDNR under Wisconsin Administrative Code, NR-121 with the assistance, and recommendation from, the East Central Wisconsin Regional Planning Commission and input from the communities involved and the general public. This is an area where urban growth is anticipated to occur over a longer period of time (40 to 50 years) where short-term conflicting land use development should be discouraged. This boundary serves the purpose of delineating long-term (40-50 year), cost-effective, urban growth areas. ECWRPC determines this boundary based on the following information (all of which are not necessarily listed in NR-121):

- 1. Definition and mapping of Environmentally Sensitive Areas (ESAs);
- 2. Justified acreage allocations based on projected 50-year growth and development using ECWRPC accepted methodologies;
- 3. Projected available 50-year capacity of wastewater treatment plant from publicly sewer development and establish holding tank receiving areas;
- 4. Projected available 50-year capacity of interceptor sewers, force-mains, and lift stations;
- 5. Existing and projected 20-year development patterns (based on local land use plan and zoning maps);
- 6. Location of existing development with known problems, or potential risk for on-site system failures;
- 7. Intergovernmental growth / service agreements
- 8. The boundary itself is located, for administrative use, on the location of:
  - a) Environmentally Sensitive Areas (ESAs)
  - b) Watershed, sub-watershed, and drainage area boundaries,
  - c) Nearest quarter-section line of the Public Land Survey System (PLSS);
  - d) MCD and Sanitary District boundaries;

- e) Wastewater treatment plant service areas (when multiple plants available);
- f) Road centerlines;
- g) Lift station service areas (topography and depth)
- h) Interceptor sewer service areas (topography and depth)
- i) Extraterritorial review jurisdiction of involved incorporated communities (this would be utilized only at the discretion of all affected communities.)

*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)

*Unique Facility:* A proposed facility that, regardless of location, is considered to be “unanticipated”; and is of “regional importance”. “Unanticipated” is defined as not being illustrated in a local community’s or county’s Comprehensive Plan, and was not anticipated or projected in the Sewer Service Area Plan during the previous update. “Regional importance” is defined as facility which, if constructed, will provide a widespread benefit to multiple local governmental jurisdictions within the Sewer Service Area. Examples of facilities fitting this criteria include state prisons, county landfills, regional public specialty facilities such as EAA, public museums or performing arts centers, churches, private (commercial) specialty facilities such as the Kaukauna dog track, opportunistic park/recreation/open space acquisitions, public golf courses, other state or federal facilities as deemed appropriate. Not eligible are any type of school facility, local government administrative office or facility, residential golf course developments, local parks, private campgrounds, local airports or related facilities. These types and locations of future facilities should be addressed, and their needs quantified, in the communities local land use plans and the sewer service area plan update process.. These listings may be added to from time to time based on individual SSA Plan Amendment proposals. Those specific facilities not listed above would be reviewed based on their merits and conformance with the intent of this definition.

*Expansion Area:* The geographic area proposed to be added to the existing sewer service area through the amendment process.

*Cost-effectiveness:* Analysis of the long term costs for providing sanitary sewerage system alternatives. The analysis shall include monetary costs, environmental costs, as well as other non-monetary costs consistent with NR-110.

*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 – PUBLIC PARTICIPATION AND APPROVAL DOCUMENTS**

### **Appendix Documents**

1. List of Public Meetings Held
2. Regional Development Committee Summary of Proceedings – October 11, 2001
3. ECWRPC Commission Summary of Proceedings – October 26, 2001
4. ECWRPC - Commission Resolution No. 20-01
5. WDNR Certification Letter



## Sherwood Sewer Service Area Update Meetings

A majority of the meetings held during the SSA Plan Update process were "joint" meetings of the Village Board, Plan Commission and Utility Commission. All meetings were posted and/or published and open to the public.

### Date Description

March 19 <sup>th</sup> , 2001	Village Utility Commission	Introductory meeting
March 26 <sup>th</sup> , 2001	Village Board	Introductory meeting
May 21 <sup>st</sup> , 2001	V. Board, Plan Commission, Utility Commission	Discuss Pop Projections, Existing Conditions, P.A. issues.
June 21 <sup>st</sup> , 2001	V. Board, Plan Commission, Utility Commission	Discuss P.A. Issues / Draft of SSA Edits
September 6, 2001	V. Board, Plan Commission, Utility Commission	Reviewed draft SSA Plan Update maps
September 17 <sup>th</sup> , 2001	V. Board, Plan Commission, Utility Commission	Reviewed and approved revised SSA Plan Update maps
October 11 <sup>th</sup> , 2001	ECWRPC Community Facilities Committee	Public Hearing / Review and Approval of Sherwood SSA Plan Update
October 26 <sup>th</sup> , 2001	ECWRPC Full Commission	Review and Approval of Sherwood SSA Plan Update

SUMMARY OF PROCEEDINGS

Community Facilities Committee  
East Central Wisconsin Regional Planning Commission  
East Central Offices  
October 11, 2001 – 10:00 A.M.

The meeting was called to order by Don Wilson at 10:05 A.M. Committee members present were:

Wilma Springer..... Calumet County  
Sally Mielke..... Outagamie County  
Lester Van Loon..... Waushara County  
Don Wilson..... Marquette County  
Richard Wollangk . . . . . Winnebago County

Committee members absent:

Jane Van De Hey . . . . . Outagamie County

Others in attendance:

Allison Blackmer ..... Town of Harrison  
Leon Church ..... Casaloma Properties, Inc.  
Josh Van Lieshout ..... Administrator, Village of Sherwood  
Allen Davis. ....Community Development Director, Town of Grand Chute  
Dave Eisele . . . . .Martenson & Eisele, Inc.  
Eric Fowle ..... ECWRPC Staff  
Joe Huffman . . . . . ECWRPC Staff  
Kathy Thunes ..... ECWRPC Staff

**1. Welcome & Introductions**

Mr. Wilson welcomed everyone to the meeting, introductions were made and the meeting was called to order at 10:05 A.M.

**2. Public Hearing and Comment on the 2001 Sherwood Sewer Service Area Plan Update**

Mr. Fowle presented the Sherwood Sewer Service Area Plan Update and briefed the committee members relative to Calumet County's and the village's involvement. As the draft mapping was reviewed, Mr. Fowle presented the projected growth and population calculations that supported the acreage allocation. In addition, the village had conducted a lift station service area study that justified the expansion of the planning area boundary. This boundary would set the stage for future sewer pipe sizing north of the village. Ms. Blackmer suggested that the planning area additions north of STH 114 be removed from consideration based on the Town of Harrison's future development strategy. This area includes the town hall which is currently on a private septic system, mini-warehouses that

require no sewer and a fair amount of wetland area that is undevelopable. Ms. Blackmer felt it would be cost prohibitive to serve this area. Mr. Van Lieshout countered that the village would stage development to the north and the planning area was critical to designing sewer capacity requirements. This issue was debated further resulting in an agreement that the town and village would work together to resolve the problem. A mutual decision was made to designate the planning area north of STH 114 as an undefined planning area. There being no further discussion the public hearing was closed.

**3. Adoption of Resolution 20-01: Approving the 2001 Sherwood Sewer Service Plan Update**

Mr. Don Wilson called for a motion to adopt the Sherwood Sewer Service Area Plan Update as presented. Sally Mielke moved to adopt Resolution 20-01 with the proviso that the planning area addition north of STH 114 be designated as an undefined planning area until further study renders its status otherwise. Lester Van Loon made the second. Motion passed unanimously.

**4. Public Hearing and Comment on the 2001 Butte des Morts Sewer Service Area Plan Update**

Mr. Fowle presented the Butte des Morts Sewer Service Area Plan Update describing the planning process and summarized the allocation and projection methodology. Mr. Fowle informed the committee that the plan update would not include any additional acreage for development. This conclusion was based on the sanitary district's request. It had been determined that the Butte des Morts treatment facility was nearing capacity and that treatment plant upgrades were not a consideration at this time. The district also felt that there was sufficient developable acreage within the current boundaries to accommodate future development. East Central staff concurred with these findings and developed the plan using the most current base mapping data. Mr. Fowle indicated that approval of this plan by the committee be contingent upon the Butte des Morts Consolidated Sanitary District's final approval. The BDMCSD is scheduled to meet on October 16, 2001. There being no further comments the public hearing was closed

**5. Adoption of Resolution 21-01: Approving the 2001 Butte des Morts SSA Plan Update**

Based on the public hearing earlier Don Wilson called for a motion to adopt Resolution 21-01 that would approve the Butte des Morts Sewer Service Area Plan Update. Lester Van Loon moved to approve the plan update contingent upon the Butte des Morts Consolidated Sanitary District approval slated for October 16, 2001. Richard Wollangk made the second. Motion passed unanimously.

**6. Grand Chute-Menasha West Sewer Service Area Amendment Request**

Mr. Fowle presented the Grand Chute-Menasha West Sewer Service Area amendment request in which the Town of Grand Chute proposes to add approximately 85 acres. The proposal, if approved, would allow the sanitary district to serve this area slated for residential and public/institutional development. Mr. Fowle explained that the amendment

request utilizes two policies: 1) Policy C, which allows for a unique facility and, 2) Policy F, which allows for previous mapping errors. The mapping error was due to re-designations in vacant developable lands based on the Town of Grand Chute's recently certified comprehensive land use plan. East Central was made aware of numerous parcels that are slated for public/institutional uses. The most recent Fox Cities SSA Plan Update had these same parcels designated as future residential development. This area totals approximately 77 acres and should be credited back to the Grand Chute-Menasha West SSA. Mr. Fowle went on to add that Policy C, unique facility, would be used to add the balance of the amendment request. The facility being proposed includes a new church and athletic fields. Mr. Fowle pointed out that the Village of Eden and the City of Shawano have previously invoked the mapping error. It is expected that the remaining 37 acres, (due to the mapping error), would be placed within the SSA prior to Department of Natural Resources submittal. There being no further discussion or questions Wilma Springer moved to approve the request. Sally Mielke made the second. Motion passed unanimously.

## **7. Adoption of Resolution 18-01: Residential Development Policies Report**

Ms. Thunes began by citing two previous completed in 1979 and the second in 1992. Today's action would approve and adopt an update of those reports. The updated "Residential Development Policies" includes three additional communities. This report is a collection of data from various communities that have in place residential policies. Ms. Thunes emphasized that the purpose of this report was to give communities an opportunity to evaluate their own residential policies and allow them to compare policies with other communities. Issues such as levels of service, development costs, development implications and cost sharing were discussed in this presentation. Subdivision planning plays a big role in a community's ability to effectively provide service. (A PowerPoint presentation was given to review changes to the plan document).

There being no further discussion Lester Van Loon moved to approve Resolution 18-01. Richard Wollangk made the second. Motion passed unanimously.

## **8. Review & Discussion of the Draft Comprehensive Planning Grant**

Mr. Fowle explained to the committee member's east Central's on-going preparation of the Comprehensive Planning Grant application. The state assistance being offered will assist in the development of the Regional Comprehensive Plan. Elements, which pertain to the Community Facilities Committee, were distributed for members to review and discuss. Mr. Fowle described this committee's responsibilities as the comprehensive plan moves forward. Also mentioned was the full commission's consideration of the grant application later this month.

There being no further business the meeting was adjourned at 11:38 A.M.

SUMMARY OF PROCEEDINGS

East Central Wisconsin Regional Planning Commission  
Outagamie County Courthouse, Appleton  
October 26, 2001

- I. PLEDGE OF ALLEGIANCE
- II. MOMENT OF SILENT MEDITATION
- III. ROLL CALL

The meeting of the East Central Wisconsin Regional Planning Commission was called to order by Chair Donald De Groot at 1:33 P.M. Chair De Groot stated that the meeting will follow the revised agenda that was handed out. Roll call was taken showing the following attendance:

Commission Members Present

Merlin Gentz .....	Calumet County
Wilma Springer .....	Calumet County
Walter Cacic .....	Marquette County
Don Wilson .....	Marquette County
Brian Kowalkowski .....	Menominee County
Robert "Toby" Paltzer .....	Outagamie County
Sally Meilke .....	Outagamie County
Alfred Krause .....	Outagamie County
Donald De Groot .....	Outagamie County
Arlyn Tober .....	Shawano County
M. Eugene Zeuske .....	Shawano County
Clarence Natzke .....	Shawano County
La Verne Grunwald .....	Waupaca County
Duane Brown .....	Waupaca County
Norman Weiss .....	Waushara County
Lester Van Loon .....	Waushara County
Ernie Bellin .....	Winnebago County
Arden Schroeder .....	Winnebago County
Richard Wollangk (Alt. for Jon Dell'Antonia) .....	Winnebago County
Joseph Maehl .....	Winnebago County

Commission Members Absent

Clarence Wolf .....	Calumet County
Howard Zellmer .....	Marquette County
Randy Reiter .....	Menominee County
Ruth Winter .....	Menominee County
Tim Hanna .....	Outagamie County
James Schuette .....	Outagamie County
James Lewinski .....	Waupaca County
Ken Hurlbut .....	Waushara County
Yvonne Feavel (Alt. for George Sorenson) .....	Waushara County
Jane Van De Hey .....	Winnebago County
Mark Madison .....	Winnebago County

Staff Members Present

Harlan Kiesow .....	Executive Director
Ann Z. Schell .....	Assistant Director
Fred Scharnke .....	Principal Planner

Walt Raith .....	Principal Planner
Eric Fowle .....	Associate Planner
Ed Kleckner .....	Associate Planner
Denise McShane .....	Associate Planner
Elizabeth Runge .....	Associate Planner
Betty Nordeng .....	Planner
Kathy Thunes .....	Planner
Scott Konkle .....	Reclamation Specialist
Tom Faella .....	Information Technology Manager
Vicky Johnson .....	Administrative Specialist

IV. **MINUTES OF THE JULY 27, 2001 MEETING**

Mr. Natzke moved to approve the minutes of the July 27, 2001 meeting, seconded by Mr. Paltzer. The motion was passed unanimously.

V. **BUSINESS**

A. Steering Committee

1. **Acceptance of the Summary of Proceedings for the July 27, September 25 and October 19, 2001 Meetings.**

Mr. Gentz moved to accept the Summary of Proceedings for the July 27, September 25 and October 19, 2001 meetings. The motion was seconded by Ms. Mielke and passed unanimously.

2. **Proposed Resolution No. 15-01: Authorizing the Commission as an Economic Development District to make Application to the Economic Development Administration for a Planning Assistance Grant and to Execute the Necessary Agreements**

Mr. Kiesow stated that this resolution pertained to the Commission's routine request for planning funds from the Economic Development Administration, and that as the regional Economic Development District, East Central receive approximately \$52,000 per year for this function.

Mr. Cacic moved to adopt Proposed Resolution No. 15-01, seconded by Mr. Bellin. Passed unanimously.

3. **Proposed Resolution No. 22-01: Adoption of the Annual Affirmative Action Program for Equal Employment Opportunities**

Ms. Schell explained that the Affirmative Action Program is required by federal law and that it is intended to measure how well our pool of employees represents the gender and racial makeup of the labor force in the Metropolitan Statistical Area (MSA). She noted that due to East Central's small employment figures, as well as the low minority populations in East Central Wisconsin, very small variations in the employment of minorities and/or females can have a dramatic effect on that employment comparability. As of June 30, 2001, East Central's technical positions were, and still are, under-employing females, relative to the labor market availability.

Mr. Wilson moved to accept Proposed Resolution No. 22-01, seconded by Mr. Weiss, passing unanimously.

4. **Proposed Resolution No. 23-01: Approval of the East Central Wisconsin Regional Planning Commission Grant Application for the Development of a Comprehensive Plan**

Ms. McShane indicated that this resolution addresses the grant application for a "Smart Growth" grant to financially assist in the development of the regional plan. Ms. McShane stated that the application consists of four parts: General Information, Funding Information, Project Criteria and Project Budget. She briefly reviewed these with the Commissioners.

Mr. Bellin moved to adopt Proposed Resolution No. 23-01, seconded by Mr. Van Loon, Passed unanimously.

5. **Status Report on Local Contracts**

Mr. Scharnke updated the commissioners on the status of existing contracts. He referred them to the Contract Status report distributed prior to meeting and walked them through the expanded format now being used to track projects under contract. The new format provides a better mechanism for tracking individual projects over time and also provides a basis for programming future projects. He pointed out that each year's billing target is the sum of contracts identified in the work program (typically about \$140,000 annually) plus any carryover work activities or unpaid billings from the previous year. As an example, he pointed out that the 2001 Billing Target of \$231,925 includes \$149,317 from the 2001 Work Program plus an additional \$82,608 from earlier projects. These earlier projects include completed contracts that have an outstanding billing balance as well as active contracts that either have been billed out and paid or have billable services remaining. Because project completion and billings often trail the end of a calendar year, the billing target itself is not likely to be met. Rather, he stated, the true measure of progress on meeting contract work objectives is whether inroads can be made on the amount of carryover dollars from year to year. Based on the amount of paid (\$55,646) and outstanding (\$105,289) bills in 2001, carryover for the year 2002 will be no more than \$70,990, a reduction of \$11,618 from 2001 totals. The carryover total could be substantially less if additional billings for ongoing or completed work are received by the end of the year. Whatever carryover total remains will be added to the 2002 Billing Target, currently \$139,371 based on the 2002 Work Program. Mr. Scharnke pointed out that if all the potential contracts come to fruition and if continued progress can be made on reducing carryover totals, East Central is already committing staff into the year 2004 for this work program element.

6. **Proposed Resolution No. 24-01: Authorizing the Commission to Enter into an Agreement with the Wisconsin Department of Transportation for the Preparation of a STH 23 (Sheboygan to Fond du Lac) Corridor Study**

Mr. Raith explained that STH 23 is already a four-lane divided facility from I-43 to Plymouth, at this time, and that there is already an enumerated project to expand the section from Plymouth to Fond du Lac to a four-lane divided facility. This project was enumerated through a somewhat politically-influenced decision, prior to the development of a corridor plan. Therefore, WisDOT has requested that East Central (Fond du Lac County) enter into a contract, along with Bay-Lake Regional Planning Commission (Sheboygan County), and working closely with District 3 staff, to consider the corridor as a whole, and do some long range planning. Unlike some of our other corridor studies, WisDOT will take the lead role in analysis of the corridor and in the production of a study report. East Central and Bay-Lake's role will be to deal with public involvement and to inventory land use in the corridor. The study schedule calls for meeting with public officials very soon, to inform them the study and illicit their input. A public information meeting would follow in mid-2002, after data is collected, also to illicit input and involvement in the process. A study committee will also be developed to give input on the analysis and recommendations, as well as to review product.

Mr. Krause moved to adopt Proposed Resolution No. 24-01, seconded by Mr. Gentz,

Passed unanimously.

**7. Budget and County Levy Status**

Chair De Groot stated that in August a letter was received from Mr. Paltzer, Outagamie County Executive, requesting that the county levy amount stay the same as last year. Chair De Groot referred to Item 5 of the Summary of Proceedings from the October 19<sup>th</sup> Steering Committee that states the decision of the Steering Committee, which was to retain the adopted tax levy rate and that the Commission would allow Outagamie County to be in arrears. This situation had been experienced once before with Menominee County. Chair De Groot noted that, in the Steering Committee's discussions, it was felt that by lowering the levy the Commission would be under the same type of predicament that everyone else would be when the levy is lowered; it is very difficult to restore the rate in the future. He indicated that the Steering Committee also stated that to lower the levy rate at the request of one county would be setting a precedent.

Chair De Groot stated that Proposed Resolution No. 25-01 was on the October 19 Steering Committee agenda and a motion was made, at that meeting that no action would be taken on the resolution and the levy would be maintained. Therefore, Resolution No. 25-01 was deleted from the Commission agenda.

Mr. Kiesow explained the tax levy rate has remained constant for ten years. The equalized value for the region came in higher than expected and that is where the larger increase in dollars was based. This results in a \$19,000 increase for Outagamie County, over last year's levy amount.

Ms. Mielke motioned to reduce the mil rate to .0026579 percent of equalized real property value versus the adopted rate at the July 27, 2001 Commission meeting, motion seconded by Mr. Paltzer.

Discussion ensued concerning the ramifications on the county boards that have already adopted their budgets with the new mil rate. Mr. Wilson stated that the revised agenda had not been voted on at the start of the Commission Meeting. Mr. Kiesow stated he felt the action to change the levy rate needed to be by resolution. Mr. Schroeder stated the revised agenda, therefore, should be rejected and the original agenda used. Chair De Groot stated he felt the agenda amendment was valid, however, an option the Commission does have is to act on the original resolution revising the tax rate.

**7. Proposed Resolution No. 25-01: Amending the Tax Levy of the East Central Wisconsin Regional Planning Commission (initial agenda item)**

Ms. Meilke withdrew her previous motion to reduce the mil rate, and moved to reinstate Proposed Resolution No. 25-01, motion seconded by Mr. Paltzer. Chair De Groot called for a roll call vote which resulted in a tie vote, 10 ayes, 10 nays. The motion failed on the tie vote.

**8. Status on Marquette County withdrawal from East Central**

Mr. Kiesow explained that Marquette County's status is a little different than the other seven counties, in that, approximately 20 years ago, the majority of towns in the County dropped out of the Commission by resolution. Enabling statute notes that, more than 50% of a county's land area must be willing to participate, for a county to automatically be a member.

For a couple of years following those towns' resignation, the remaining towns did retain membership on an individual basis, and paid their dues accordingly. At that point, the County decided that they would pay the full county dues, collectively, for the sake of the

County and those jurisdictions wishing to participate. This has been done through annual contracts ever since. In this way, Marquette County has maintained representation on the Commission, and functioned within the Commission as a member. Each year, the participating jurisdictions within Marquette County are sent a levy letter expressing that this is ultimately their responsibility, should the County decide not to pay. As we do not have a signed contract for 2002 with Marquette County, an action by the County Board to approve the Finance Committee's recommendation for withdrawal would result in a shift of a portion of those costs to the individual jurisdictions for 2002, as spelled out in the Commission bylaws. Each of the jurisdictions would then need to make a membership decision prior to July 1, 2002, if their intention is to drop out of the Commission in 2003.

#### **B. Economic Development Committee**

1. Chairman's Report.
2. Acceptance of the Summary of Proceedings for the October 4, 2001 meeting.

Mr. Brown moved to accept the Chairman's Report and Summary of Proceedings for the October 4, 2001 meeting, seconded by Ms. Mielke. Passed unanimously.

#### **C. Open Space and Environmental Management Committee**

1. Chairman's Report.
2. Acceptance of the Summary of Proceedings for the October 9, 2001 meeting.

Mr. Natzke indicated the Chairman's Report and the Summary of Proceedings for the Open Space and Environmental Management Committee were in the packet and moved for acceptance of them. The motion was seconded by Mr. Krause, passing unanimously.

3. Update on NR-135 – Regional Non-metallic Reclamation Program

Mr. Fowle briefly updated the Commissioners on the NR-135 Program. He introduced Scott Konkle, the new reclamation specialist hired to work on the program. Mr. Fowle stated the summer was spent getting applications in and sorted, issuing temporary permit letters which will be finalized when we actually meet with the individual owners. A database has been created which ties into the GIS system to make maps of the sites. Mr. Fowle referred to a table distributed prior to the meeting, stating that 211 sites have been permitted, with 78 claiming some sort of exemption. He explained that 155 sites have an "unknown" status, they have either not responded to previous mailings, or these sites are duplicate records in the database (i.e. a mine which lies on more than one parcel would show up as two sites, when in reality, it is only a single site.)

4. Waushara County Ice Age Trailway Plan update

Mr. Scharnke explained East Central is doing a Corridor Plan for the Ice Age Trail in Waushara County. The Corridor runs north and south in the western portion of the County. This work is being done under contract with the National Park Service. Other partners in the project include the Wisconsin Department of Natural Resources, the Ice Age Park and Trail Foundation and the local chapter of the Ice Age Park and Trail Foundation. The next step in the process is to host a public information meeting. Mr. Scharnke indicated prior to the public meetings, members from the local chapter of Ice Age Park and Trail Foundation, many who are familiar with the local landowners, will be contacting the landowners involved to better assess their interest in having the future trail cross their lands. The project will culminate with a published report. This document, which will need to be presented to the Natural Resources Board, is expected to be completed next summer.

5. Fox River activities and projects update

Mr. Kiesow stated funding for the creation of the Fox River Navigation System Authority was put into the 2002-2003 State budget. The Authority will be governed by a nine member board with one member from each of three state agencies, and six local representatives, 2 each from Winnebago, Outagamie and Brown counties. The six local representatives will be appointed by the Governor. The Wisconsin budget adopted allocates 2.8 million dollars to provide the State's share of the project as agreed to in the Memorandum of Agreement signed by the Governor and the Corps in September of 2000.

**D. Community Facilities Committee**

1. Chairman's Report.
2. Acceptance of the Summary of Proceedings for the September 11 and October 11, 2001 meetings.

Mr. Wilson moved for acceptance of the Chairman's Report and the Summary of Proceedings for the Community Facilities Committee, seconded by Ms. Mielke. Passing unanimously. It was noted a correction to the summary of proceedings for the October 11, 2001 meeting be made to indicate that Jane Van de Hey represents Winnebago County not Outagamie County.

3. Proposed Resolution No. 20-01: **Updating the Sherwood Sewer Service Area Plan**

Mr. Fowle presented a brief background on the Sherwood Sewer Service Area. He stated that significant growth is expected in the Sherwood planning area in the next 20 years. Estimates show approximately 600 person, although based on the last ten years of building permits, the increase could be greater than that. To accommodate the Village's existing land use plan, as well as some concerns by the Town, East Central worked with the Village to update the map as presented in the packet. Approximately 170 vacant acres have been added to the service area. Mr. Fowle stated that after a general engineering study of the unsewered area between the Village and Waverly it was determined that it would not be cost-effective at this time. Both the Town and the Village have agreed to this, and will take this into consideration in their future planning efforts. He indicated a large area (the area north of 114) was also added to the planning area as an undefined planning area.

Mr. Wilson moved for adopted of Proposed Resolution No. 20-01, seconded by Mr. Bellin. Passed unanimously.

6. Proposed Resolution No. 21-01: **Updating the Butte des Morts Sewer Service Area Plan**

Mr. Fowle explained that the Butte des Morts wastewater treatment facility is nearing capacity to treat areas within their current sewer service area. The district felt that there was sufficient developable acreage within the current boundaries to accommodate future development. The District has a policy in place that basically states the district will not increase the rate for the existing users based on new development proposals. With that strict policy in place, East Central did not change anything to the service area.

Mr. Bellin moved for adopted of Proposed Resolution No. 21-01, seconded by Mr. Van Loon. Passed unanimously.

7. Proposed Resolution No. 18-01: **Acceptance of the Residential Development Policies of Selected Communities in East Central Wisconsin as updated**

Kathy Thunes stated this document was an update to the 1979 and 1992 reports. The purpose of the report is so that communities can evaluate and compare their residential policies with other community's policies in our region. Ms. Thunes briefly explained the contents of the report.

Mr. Cacic moved to adopt Proposed Resolution No. 18-01, seconded by Mr. Grunwald. Passed unanimously.

## E. Transportation Committee

1. Chairman's Report.
2. Acceptance of the Summary of Proceedings for the October 12, 2001 meeting.

Mr. Bellin stated that the Chairman's Report and the Summary of Proceedings for the October 12, 2001 meeting was in the packet and moved for approval, seconded by Ms. Paltzer. Unanimously passed.

3. Proposed Resolution No. 19-01: **In Support of a WisDOT Proposal to Declare State Trunk Highway 55/114, from USH 10 to Castle Street in the Village of Sherwood, a Controlled Access Highway**

Mr. Raith noted that East Central has long supported and assisted in access management activities regionwide. The need for access management is based, in large part, on traffic volumes and development patterns. He explained that increased development adjacent to STH 114, especially in the Sherwood area, has resulted in a significant increase in traffic. It has increased to the point that, combined with other criteria, WisDOT can declare access control under state law. The Department would not require the resolution, but it simply shows that East Central is in support of enacting access control on STH 114. Mr. Raith noted that the Calumet County Highway Committee supported the resolution, but the Calumet County Board did not pass it. Some discussion followed regarding reasons for not supporting the resolution. Mr. Raith speculated that some local officials might consider access control anti-development, but in reality, access control is about preserving the traffic carrying capacity of the highway. Access must be provided, but not necessarily directly to the highway. Strategies include combining accesses or providing alternative access to existing local road. The Transportation Committee agreed that access management on all highways should be encouraged.

Mr. Weiss moved for adoption of Proposed Resolution No. 19-01, seconded by Mr. Bellin. Passed unanimously.

4. Corridor Plan Updates

Mr. Raith briefly updated the Commissioners on the USH 45 Corridor. He indicated that construction as currently planned would create a bottleneck just north of CTH G. A primary recommendation is that WisDOT complete the 4-lane section from CTH G to Winchester as soon as possible. Mr. Raith explained that WisDOT is making a concerted effort to consider larger segments of the highway as evidenced by the number of corridor plans East Central is currently working on. The Department should look at complete corridors rather than segmenting projects. Major recommendations developed as part of the planning process were drafted in the form of a resolution and adopted by all jurisdictions adjacent to the highway including Outagamie, Waupaca and Winnebago Counties.

Mr. Raith stated that STH 21 would be considered for further study this year by the Transportation Projects Commission (TPC). The primary recommendation was that STH 21 be constructed as an "Expressway" facility from Oshkosh to, and including, a bypass of Omro. He noted that local jurisdictions along the corridor have adopted the recommendations by resolution

and that the Transportation Projects Commission would be receiving information about the project. Local support is one factor that the TPC looks at when selecting projects and STH 21 has a high degree of support. He stated that the Department of Transportation prioritizes projects and presents them to the TPC. He noted that STH 21 was not selected for further study by WisDOT staff. He added that the TPC has the final word and information regarding STH 21 has been forwarded to all members.

Mr. Raith continued by updating the Commissioners on the USH 10 Corridor Study. The environmental and engineering studies are currently underway. It is recommended that USH 10 be constructed and/or converted to a "Freeway" from USH 41 in the Fox Cities to I-39 in Stevens Point. Mr. Raith explained that both East Central and North Central Regional Planning Commission have passed a resolution supporting the freeway design. Winnebago County and the Waupaca County Highway Committee have passed the resolution. The resolution goes before the Waupaca County Board on October 30<sup>th</sup>. The next step would be Portage County and the local jurisdictions adjacent to the corridor.

#### **F. Regional Comprehensive Planning Committee**

1. Chairman's Report
2. Acceptance of the Summary of Proceedings for the October 10, 2001 meeting.

Mr. Bellin moved to accept the Chairman's Report and the Summary of Proceedings for the October 10, 2001 meeting, seconded by Mr. Natzke. Motion passed unanimously.

#### **VI. OTHER BUSINESS**

#### **VII. ESTABLISH TIME AND PLACE FOR NEXT COMMISSION MEETING**

Quarterly Commission Meeting, January 25, 2002, 1:30 P.M., Winnebago County Courthouse

#### **VIII. ADJOURNMENT**

Ms. Springer moved for adjournment, seconded by Mr. Bellin. Motion passed unanimously. Meeting adjourned at 3:23

**RESOLUTION NO. 20-01**

**UPDATING THE SHERWOOD SEWER SERVICE AREA PLAN**

**WHEREAS**, the East Central Wisconsin Regional Planning Commission has been designated by the Wisconsin Department of Natural Resources as the sewer service area management agency for the ten county East Central region, and;

**WHEREAS**, the East Central Wisconsin Regional Planning Commission has entered into a memorandum of agreement with the Wisconsin Department of Natural Resources to develop, update, and manage sewer service area plans for the designated area and select non-designated areas, and;

**WHEREAS**, the East Central Wisconsin Regional Planning Agency is preparing updated sewer service area plans for communities through the year 2020, and;

**WHEREAS**, the East Central Wisconsin Regional Planning Commission has held numerous public participation and community meetings for those areas affected during the planning process, and;

**WHEREAS**, the Sewer Service Area Plans will be submitted to the Wisconsin Department of Natural Resources and certified as part of the Wisconsin Water Quality Plans;

**NOW THEREFORE BE IT RESOLVED BY THE EAST CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION:**

**Section 1:** That the Commission adopt the updated plan for the Sherwood Sewer Service Area and recommend Wisconsin Department of Natural Resources certification of the plan update, and;

**Section 2:** That the Commission provide continuing sewer service area planning and management functions including sewer service area amendments, the review of wastewater and sewer plans and the review of sewer extension requests for the Sherwood Sewer Service Area.

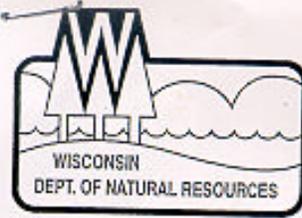
Effective Date: October 11<sup>th</sup>, 2001

Submitted By: Community Facilities Committee

Prepared By: Eric W. Fowle, AICP – Assoc. Environmental Planner



Donald De Groot, Chair



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Scott McCallum, Governor  
Darrell Bazzell, Secretary

101 S. Webster St.  
Box 7921  
Madison, Wisconsin 53707-7921  
Telephone 608-266-2621  
FAX 608-267-3579  
TTY 608-267-6897

March 1, 2002

Mr. Harlan Kiesow  
ECRPC  
132 Main Street  
Menasha, WI 54952

SUBJECT: Sherwood SSA Amendment

Dear Mr. Kiesow:

We have completed our review and approve of the update to the Sherwood SSA Plan. This update involves a net addition 196.5 acres, involving 175 new developable acres. The Village of Sherwood and the Town of Harrison should ensure that environmentally sensitive areas are protected and that stormwater and construction erosion are controlled to protect surface and groundwater during and after development.

The approval of this revision does not constitute approval of any of the following:

- private sewage systems pursuant to Chapter ILHR 83, (WI Admin. Code),
- sewer extension pursuant to Chapter NR 110, (WI Admin. Code),
- authority to alter the bed or banks of any navigable waterway (Chapter 30, WI Stats.),
- certification for any wetland alteration (Section 401, Federal Water Pollution Control Act, and NR 103, 299, WI Admin. Code).
- takings of threatened and endangered resources pursuant to Wisconsin Statutes 29.415

Those approvals must be obtained separately from the respective agencies. In addition, storm water management plan development is required for any construction site activity disturbing five or more acres of land pursuant to Chapter NR 216 (WI Admin. Code).

Any person aggrieved by this approval has the right to appeal the decision. Wisconsin Statutes and Administrative Code establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to s. 227.52 and 227.53, Wisconsin Statutes, a petition for review must be filed within 30 days after service of the decision. The respondent in an action for judicial review is the Department of Natural Resources. This notice is provided pursuant to s. 227.48(20), Wisconsin Statutes.

Sincerely,

Charles R. Ledin, Section Chief  
Great Lakes & Watershed Planning Section  
Bureau of Watershed Management

c. Rob McClennan, NER - Oshkosh  
J. Lieshout, V. Sherman; L. Buboltz, T. Harrison



## **APPENDIX B - GOALS, OBJECTIVES AND POLICIES**

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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. 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 C – FIRE LANE 12/13 ON-SITE SYSTEM ANALYSIS**

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# ON-SITE SYSTEM CONDITION ASSESSMENT

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For  
FIRE LANE 12 & FIRE LANE 13 STUDY AREA

Prepared For The  
**VILLAGE OF SHERWOOD / TOWN OF HARRISON**  
Calumet County, Wisconsin

October 2, 2001  
McM. No. S011-90322.06  
AJV:car

## II. EXISTING CONDITIONS

There are a total of 65 homes on Fire Lane 12, Fire Lane 13 and Mielke Road. On-site system information was obtained on 51 of the existing systems. The information obtained is provided in Appendix A. On-site permit information was obtained by ECWRPC from the Calumet County Planning/Zoning Department in June 2001. Town staff obtained additional information by calling property owners directly. Information obtained included; type of system, age of system, was the system installed when the home was originally constructed or if it was a replacement system.

The information obtained is summarized on Table #1. Based on the information obtained slightly more than half of the existing systems are holding tanks. Most of the remaining systems are conventional systems consisting of a septic tank and a drainfield. There are two mound systems identified in the study area.

It is interesting to note that, with the exception of the systems where the age was unknown, all of the conventional systems are older than 20 years old. Based on the information obtained the average age of these systems is 34 years. Nearly all of these systems were constructed when the homes were originally constructed. It is likely that these systems are not constructed to current standards and may not be providing adequate treatment.

The average age of the existing holding tanks is 13 years. Approximately one-half of the existing holding tanks were installed when the homes were originally constructed, and the remaining systems are replacement systems.

## III. SOIL CONDITIONS

The soil conditions found within the study area are summarized on Table #2. All of the existing soils severely limit the use of conventional on-site systems. The high groundwater level in some of the areas is at the ground surface or only within 3 feet of the surface. Frequent flooding and/or ponding occurs in these areas. Water moves slowly through the soils and the soils may be saturated for long periods of time. In general these soils are also poorly suited to most building site development.

## IV. COST EFFECTIVE ANALYSIS

Based on the information obtained on the age of the existing systems, soil conditions and the types of systems, a replacement program for potentially failing systems has been developed. The replacement program assumptions are summarized on Table #3. Based on these assumptions the total present worth of the proposed replacement program is \$800,000. This includes the capital cost to replace failing systems and the

present worth value of the 20 year operational and maintenance costs for all on-site systems serving homes on Fire Lane 12, Fire Lane 13 and Mielke Road.

Although a detailed cost estimate has not been developed for the construction of a sanitary sewer system to serve the existing homes in the study area, it is likely that the capital cost alone would well exceed \$800,000. A sanitary sewer system would require several lift stations.

## V. CONCLUSION & RECOMMENDATION

It would not be cost effective to extend sanitary sewers to the entire study area as compared to upgrading the existing on-site systems. It is recommended that a majority of the study area remain outside the Sewer Service Area Planning Areas for both the Village of Sherwood and the Neenah-Menasha area. Homes in this area should be serviced by code compliant on-site systems that provide adequate treatment. Gravity sewer service could be extended from the Village of Sherwood to an area directly west of State Park Road. Therefore, the Village of Sherwood Planning Area Boundary should correspond to the limits of the gravity service area.

AJV:car  
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ON-SITE SYSTEM CONDITION ASSESSMENT  
Fire Lane 12 & Fire Lane 13 Study Area  
VILLAGE OF SHERWOOD/TOWN OF HARRISON - CALUMET COUNTY, WISCONSIN

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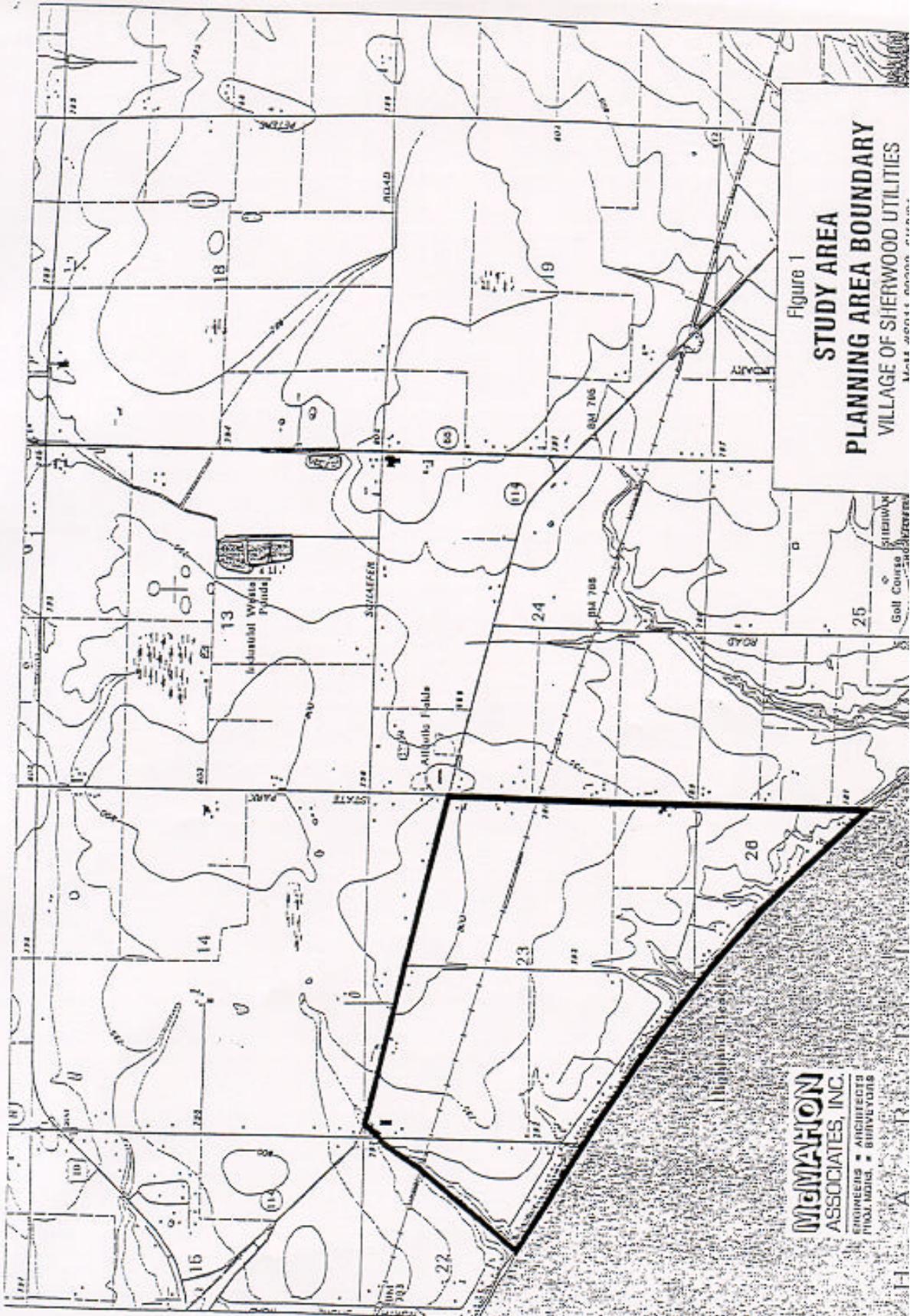


Figure 1  
**STUDY AREA**  
**PLANNING AREA BOUNDARY**  
 VILLAGE OF SHERWOOD UTILITIES

**MEMPHON**  
 ASSOCIATES, INC.  
 ENGINEERS • ARCHITECTS  
 PLANNING • SURVEYORS

Fire Lane 12 - Fire Lane 13 - Mielke Road

Type of System	0 - 5 Years		6 - 10 Years		11 - 15 Years		16 - 20 Years		>20 Years		Age Unknown	Total		Average (Years)
	Org	Rplmt	Org	Rplmt	Org	Rplmt	Org	Rplmt	Org	Rplmt		Org	Rplmt	
Holding Tank	1	3	4	2	3	5	1	1	4	--	3	13	11	13
	4		6		8		2		5			28		
Conventional						14			11	1	7	11	1	34
Mound					1						1	--	2	--
					--	1						--	1	

65 total households

Obtained information on 51 on-site systems

Org - Original System

Rplmt - Replacement System

Source - Based on information obtained by East Central Wisconsin Regional Planning Commission (ECWRPC) from Calumet County Planning / Zoning Department - June 2001 and direct telephone calls to property owners by the Town of Harrison, August 2001.

Table #2

SOIL CHARACTERISTICS

Soil Name & Symbol	Soil Characteristics	Depth to High Water Table	Suitability for Building Construction	Soil Absorption Field Limitations
Manawa Silt Loam MbA	Somewhat poorly drained; occasional flooding; shallow depth to water table during wet periods, nearly level and gently sloping	1 - 3 ft. Perched	Poor potential for building site development	Severe - wetness, percs slowly floods
Manawa-Kewaunee-Poygan -McB	Slow permeability; saturated soil conditions & flooding, nearly level and gently sloping	1 - 3 ft. Perched	Poorly suited to most building site development	Severe - wetness, percs slowly, floods
Kewaunee Loam KnB	Well drained, slow permeability, gently sloping	> 6 ft.	Only fairly suited to building site development because of moderate shrink - swell potential and low strength	Severe - percs slowly, potential for mound systems
Kewaunee Loam KnD2	Well drained, moderately steep - 12 to 20% slopes, slow permeability	> 6 ft.	Poorly suited for building sites, local roads or streets	Severe - percs slowly, steep slope
Fluvaquents Fu	Subject to frequent flooding, located in drainage ways, identified as environmentally sensitive areas	< 1 ft. during most of the year	Poor potential for building development	Poorly suited - wetness, frequent flooding
Granby Fine Sandy Loam	Poorly drained, lake shore, beach, nearly level	0 - 1 ft.	Poorly suited for building site development	Severe - wetness, floods
Poygan Silty Clay Loam Po	Poorly drained, slow permeability, nearly level	0 - 1 ft. Perched	Poor potential for building site development	Severe - wetness, percs slowly, floods

Source: Soil Survey of Calumet & Manitowoc Counties - U.S. Department of Agriculture - Soil Conservation Service

For all soils listed - bedrock is greater than 5-feet below grade.

Table #3

**TOTAL PRESENT WORTH ANALYSIS  
Upgrade On-Site Systems**

- Replacement Program Assumptions
  - All 21 conventional systems require replacement.
  - 2/3 or 14 would be replaced with holding tanks.
  - Remaining 1/3 or seven would be replaced with mounds or modified systems.
  - Existing holding tanks and mounds will not require replacement.
  
- Unknown Systems - Total 14
  - Assume ½ are holding tanks and do not require replacement.
  - Assume remaining seven are conventional systems.
  - Four require replacement with holding tanks.
  - Three would be replaced with mounds or modified systems.

*Work Done In Year 1*

Item	Qty / Units	Unit Cost	Total Cost	Life Years	Future Costs	Salvage Value
Replacement Holding Tanks	18 Each	\$6,000	\$108,000	20-years	0	0
Mound Systems	10 Each	\$11,000	\$11,000	20-years	0	0
<b>Total Construction Cost</b>			<b>\$218,000</b>			

Construction Costs Include: Review & Permit Fees, Contingency for Site Conditions & Abandonment of Existing System

Interest Rate: 6.375%

*Calculate O&M*

Type of System	No. of Systems	Annual Flow - gal.	Annual Cost
Holding Tank	53	2,611,575	\$52,300
Mound System Tanks	12		\$320
<b>Total Annual O&amp;M</b>			<b>\$52,620</b>
O&M Present Worth Factor			11.1288
<b>Total O&amp;M Present Worth</b>			<b>\$585,600</b>

Assumptions: 2.25 pphh  
60 gpcd

Holding Tank: \$80 to pump 4,500 gallons / \$0.02 per gallon  
Septic Tank: \$80 to pump once every three years

Table #3

TOTAL PRESENT WORTH ANALYSIS  
Upgrade On-Site Systems  
(continued)

*TOTAL PRESENT WORTH*

Total Capital Present Worth	\$218,000
<u>Total O&amp;M Present Worth</u>	<u>\$585,600</u>

<b>TOTAL PRESENT WORTH REPLACEMENT SYSTEM</b>	<b>\$800,000</b>
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APPENDIX A

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**Existing On-Site Systems**

Calumet County Sanitary Permit Information  
 Fire Lane 12 & Fire Lane 13 & Melike Rd. A72Study Area - Town of Harrison

Address	Owner(s)	Current System Type	Permit On File?	Permit Year	New or Replacement	Est. Age of System (Years)	Inspection Report?	Inspection Year	System Condition (if stated)	Notes
W5505 Fire Lane 12	Thomas McKenzie	Conventional								
W5511 Fire Lane 12	Todd Hanson & Karen Gae	Holding Tank	Yes	1985	Replacement	18	No			
W5517 Fire Lane 12	Stephanus & Lee Merzender	Conventional	Yes	1973	New System	28	No			
W5525 Fire Lane 12	William D. Dick	Holding Tank	Yes	1987	Replacement	14				
W5537 Fire Lane 12	Conrad Stevens	Conventional		Unknown	New System	Approx. 50			Pumped 2X / Year	
W5541 Fire Lane 12	Timothy & Jill Schmidt	Holding Tank	Yes	1994	New System	7	No			
W5547 Fire Lane 12	Stephen & Janet Ah	Conventional		Unknown	New System	> 27			Worst Great	Spa. By previous owner
W5551 Fire Lane 12	Gary & Mary Yohn	Holding Tank	Yes	1987	Replacement	14	No			
W5555 Fire Lane 12	Keranth Smith	Holding Tank	Yes	1997	Replacement	4	No			
W5561 Fire Lane 12	Todd & Lynn Schroeder	Holding Tank	Yes	1998	Replacement	13	No			
W5565 Fire Lane 12	Garald Nyles	Holding Tank	Yes	1983	New System	18				
W5569 Fire Lane 12	Daniel Prociak	Holding Tank	Yes	1990	Replacement	11	No			
W5571 Fire Lane 12	Howard Zandek	Conventional	Yes	1974	Replacement	27	No			
W5577 Fire Lane 12	Devin F. Massey	Holding Tank	Yes	1986	New System	15	No			
W5581 Fire Lane 12	Peter Schuh	Holding Tank								
W5583 Fire Lane 12	Gerald A. & Virginia Dohr	Holding Tank	Yes	1993	Replacement	0	No			
W5589 Fire Lane 12	Virginia L. Lenko	Holding Tank								
W5593 Fire Lane 12	Alisa C. Jansen	Holding Tank	Yes	1990	Replacement	11	No			Put in when house built
W5595 Fire Lane 12	Jamela T. Fischer	Conventional		1986	New System	35				
W5615 Fire Lane 12	Norma E. Goshka	Holding Tank	Yes	1991	New System	7	No			
W5621 Fire Lane 12	Dale D. Stralton	Holding Tank	Yes	1991	New System	8	No			
W5622 Fire Lane 12	Patricia & Peter Bossor	Conventional		Unknown	Unknown	22			Pumped 2X / Year	Permit Re-issued on 10/1/93
W5629 Fire Lane 12	Daniel P. Shtanski	Conventional		1985	New System	55				By prev. owner of house addition
W5639 Fire Lane 12	Thomas N. Strobel	Conventional		1953	New System	49				Put in when house built
W5645 Fire Lane 12	Norman Lutz	Conventional		1948	New System	55				Put in when house built
W5651 Fire Lane 12	Urban Hoffman	Conventional								No phone number
W5659 Fire Lane 12	Helen Lenz	Conventional	Yes	1979	New System	22	Yes	1998	Satisfactory	
W5665 Fire Lane 12	Jack Lertso	Conventional								No phone number
W5671 Fire Lane 12	Brian Atson									Installed by prev. owner
W5676 Fire Lane 12	Thomads & Marie Moser	Holding Tank	Yes	1997	Replacement	4	No			
W5677 Fire Lane 12	Boyes Raveckala Trust	Conventional								
W5684 Fire Lane 12	James Ziegelbauer	Conventional	Yes	1995	Replacement	5				Nothing on File
W5685 Fire Lane 12	Brian Moch	Holding Tank	Yes	1978	New System	23	No			
W5691 Fire Lane 12	Paul & Judith Du Young	Holding Tank	Yes	1991	Replacement	10	No			Nothing on File
W5707 Fire Lane 12	Gary A. Lichtenberg	Conventional								
W5710 Fire Lane 12	David & Carol Koopko	Holding Tank	Yes	1986	New System	15	No			
W5711 Fire Lane 12	Gary & Carol Kiyala	Holding Tank								
W5721 Fire Lane 12	Thomas Macco	Conventional								Nothing on File
W5725 Fire Lane 12	Donald Keddell	Conventional								Nothing on File
W5735 Fire Lane 12	Allan & Paula Poddecki	Conventional								Nothing on File
W5743 Fire Lane 12	Mark Hensch	Holding Tank								Nothing on File
W5749 Fire Lane 12	Oliver E. Rureke	Conventional								Nothing on File
W5753 Fire Lane 12	Gregory Wahnburg	Conventional		Unknown	Unknown	20 - 25				City in home 7 mos.

W5785	Fire Lane 12	Thomas Wolf	Conventional?	Yes	1977	New System	24	No				
W5779	Fire Lane 12	Donald & Mercedes Rosenbom	Conventional	Yes	1971	New System	30	No				
W5705	Fire Lane 12	Karen Schar	Holding Tank #1	Yes	1981	New System	20	Yes	1981	Satisfactory		
W5903	Fire Lane 12	James M. & Madeline Sargent	Holding Tank #2	Yes	1980	New System	12	No				Phone Disc./No new number Nothing on file Installed by previous owner
W5263	Fire Lane 12	Judy & Thomas Dunn	Holding Tank									
W5279	Fire Lane 12	Carl J. Lammers	Holding Tank									
W5290	Fire Lane 12	Daniel L. Biring	Holding Tank #1	Yes	1978	Unknown	25	No				
W5311	Fire Lane 12	Leon R. Doering	Holding Tank #2	Yes	1976		26	No				
W5325	Fire Lane 12	Eugene Stumpf	Conventional									
W5360	Fire Lane 12	Schmitz Revocable Trust	Holding Tank	Yes	1990	New System	3	No				
W5464	Fire Lane 12	Donald J. Biring										
W5168	Fire Lane 13	Oliver Heise	Holding Tank #1	Yes	1973	New System	20	No				
W5172	Fire Lane 13	Charles & Carolyn Fane	Holding Tank #2	Yes	1903	New System	19	No				
W5203	Fire Lane 13	Ann E. Younger	Holding Tank	Yes	1987	New System	14	No				
W5409	Wielko Road	William Heckrod	NOTHING ON FILE									
W5413	Wielko Road	Ronald & Karen Phillips	Mound	Yes	8/15/90	Replacement	11	Yes	0 / 90			Installation Inspection
W5443	Wielko Road	Wayne & Suzanne Lurink	NOTHING ON FILE									
W5447	Wielko Road	Carol Cuth	Conventional	Yes	08/30/78	New	25	Yes	1981	Adequate		
W5485	Wielko Road	Michael & Vickie Miles	Holding Tank	No		New	23	No				HI Agreement Dated 1978 Installation Inspection
W5473	Wielko Road	Charles & Christine Koelan	Holding Tank	Yes	12/28/83	New	8	Yes	1984	Adequate		
W5481	Wielko Road	Nicholas & Janet Gioia	NOTHING ON FILE									
W5499	Wielko Road	James & Karen Blica	NOTHING ON FILE									

**DATA SUMMARY**

65 Households

Obtained information on 51 on-site systems

- 28 with holding tanks
- 21 with conventional systems
- 2 with a mound system
- 14 homes - no information

Average estimated age of known permitted systems = 15.6 years  
Average estimated age of known systems = 20 years

Source: Prepared by ECMRPC based on information obtained from Calumet County Planning/Zoning Department - June, 2001  
and direct phone calls to property owners by the Town of Harrison, August 2001  
Note: Calumet Co. Sanitary Permits were not required to be filed with Planning Dept. prior to 1989. Additional data may be available from Clark's office on these systems but was not researched.

AJV  
9.4.01