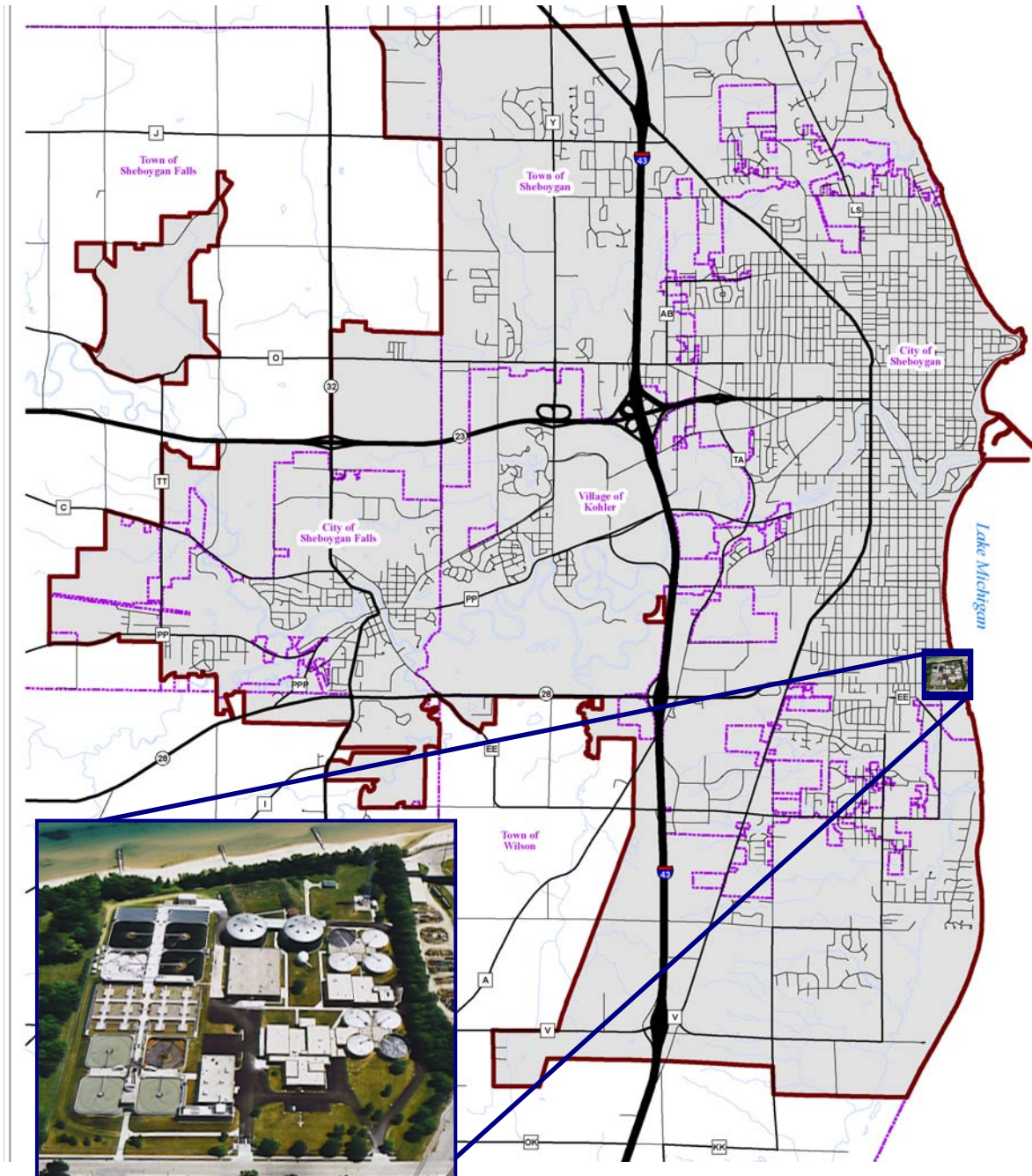


# 2030 Sheboygan Urbanized Area Sewer Service Plan: A Water Quality Management Plan



Developed by:  
*Sheboygan Urbanized Area  
Sewer Service Area  
Technical Advisory Committee*

**October 2011**

With Assistance from:

**BAY-LAKE**  
REGIONAL PLANNING COMMISSION  
Brown • Door • Florence • Kewaunee • Manitowish • Marinette • Oconto • Sheboygan

# Sheboygan Urbanized Area Sewer Service Area Technical Advisory Committee

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City of Sheboygan:	William Bittner
City of Sheboygan:	Dale Doerr
City of Sheboygan Falls:	Ken Sonntag
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<sup>1</sup> This position was held by David Gartman for the majority of plan development until 9/16/2011.

# 2030 Sheboygan Urbanized Area Sewer Service Plan: A Water Quality Management Plan

**September 1997**

**Updated October 2011**

**Prepared for:**

Wisconsin Department of Natural Resources

**Prepared By:**



441 S. Jackson Street  
Green Bay, Wisconsin 54301

Contract No. 0801909 and an Agreement dated 10/13/2010.

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## CHAPTER 1: INTRODUCTION

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In 1972, the U.S. Congress passed amendments to the Federal Water Pollution Control Act (P.L. 92-500, known as the Clean Water Act). This act called for a national goal of fishable and swimmable waters to be achieved by July 1, 1983, through a comprehensive program of water quality planning, construction grants for municipal wastewater treatment facilities, and a national wastewater discharge permit program for municipal and industrial discharges.

Section 208 of the Clean Water Act requires local agencies, designated by the Governor, or the State Water Quality Agency (in Wisconsin, the Department of Natural Resources herein referred to as WDNR), to prepare Areawide Water Quality Management Plans.

State and Federal regulations require that these plans indicate the most cost-effective and environmentally sound wastewater treatment configuration for a municipal sewage treatment facility for a 20-year planning period. This is accomplished with the development of a Section 208 Municipal Point Source Plan, more commonly known as a “Sewer Service Area (SSA) Plan.”

In addition to the preparation of the SSA Plan, a second key element of the Clean Water Act is Section 201, which requires the preparation of a facility plan. A Section 201 Facility Plan is a detailed engineering analysis of the most cost-effective sewage collection and treatment system for a particular planning area. When approved, the Facility Plan and SSA Plan form the municipal point source element of the *Areawide Water Quality Management Plan*.

After the plan is approved by the WDNR, State and Federal regulations (NR 121, NR 110) require permits to be obtained for wastewater treatment facilities, facility plans, interceptors and sewer extensions; all of which must be in conformance with the Areawide Water Quality Management Plan.

### **NR121**

The state's Areawide Water Quality Management Planning code, Wisconsin Administrative Code NR 121, establishes Sewer Service Area planning. NR121 establishes regulations specifying policies, procedures, and requirements for Wisconsin's areawide water quality planning process. This process will result in the preparation of areawide plans for managing the quality of waters of the state, including consideration of the relationship of water quality to land and water resources and uses.

The WDNR is responsible for working with regional planning commissions, county governments, municipalities, towns, and the public to develop SSA plans that guide publicly sewered growth and protect water quality.

NR121 requires permits for interceptors and sewer extensions to ensure that the projects conform to the Areawide Water Quality Management Plan.

### **PURPOSE OF THE PLAN**

The 2030 Sheboygan Urbanized Area Sewer Service Plan serves the following purposes:

1. Project future needs for sewer service and establish the geographic extent of the sewer service area to the year 2030.
2. Identify environmentally sensitive areas for protection from development to improve the quality of surface and ground waters in the planning area.

3. Provide technical data on sewerage system capacities in the planning area.
4. Define the procedures for reviewing boundary and plan amendments.
5. Serve as a guideline for government interaction and development of community plans.
6. Provide a basis for local officials to direct sustainable community growth by encouraging infill within the sewer service area.

Delineation of the SSA not only identifies those areas suitable for sanitary sewer service, but also identifies and protects environmentally sensitive areas from future development and indiscriminate urban growth. Environmentally sensitive areas include, but are not limited to, floodplains, shorelands, wetlands, and adjoining steep slopes. Wastewater treatment facilities can then be designed to provide adequate treatment capacity for the anticipated population growth within the sewer service area, while protecting sensitive natural areas and water quality.

A sewer service area identifies the land area intended for sewer services that will be made available during the next 20-year planning period. Delineating a service boundary is critical in designing sewage collection and treatment facilities to serve existing and future residents of the Sheboygan metropolitan area in the most cost-effective and environmentally sound manner.

The service area in this plan is delineated using the 20-year population projection, an acceptable residential population density, and a forecast of non-residential (i.e. commercial and industrial) growth, all of which result in acreage demand and allocation. The service area excludes major areas found to be environmentally or physically unsuitable for sewer development, or where cost analyses show sewerage extensions would create financial burdens to the municipality. Land included in the service area is simply deemed eligible to receive sewer service; however, the governmental entities providing sewer service are not obligated to serve specific areas.

Sanitary sewerage represents perhaps the greatest catalyst to development within an area. Orderly land use and organized community growth are directly dependent upon the orderly and organized provision of such essential services. A sewer service plan should provide each of the participating municipalities with a valuable tool to manage its growth in the most cost-effective and environmentally acceptable means possible.

Sewer service planning in the Sheboygan area was originally initiated in 1982 when the Sheboygan County Planning and Resources Department contracted with the Wisconsin Department of Natural Resources (WDNR) to prepare the municipal point source element of the water quality management plan for the Sheboygan River Basin. Sheboygan County planning staff collected the background information and drafted goals, objectives, and policies for the plan; in 1985 the plan was abandoned. The information was forwarded by the county to the Bay-Lake Regional Planning Commission (Bay-Lake RPC) and was incorporated into the Sheboygan Urbanized Area Sewer Service Plan in 1989 with the plan's adoption. In January 1994, Bay-Lake RPC was contracted through the WDNR to develop an update to the plan, which resulted in the adoption of the *2015 Sheboygan Urbanized Area Sewer Service Plan* in 1997. In January 2009, Bay-Lake RPC was contracted through the WDNR to again update the plan.

Once the WDNR approves the sewer service plan, permits for wastewater treatment facilities, facility plans, interceptors, and sewer extensions will need to be in conformance with the current plan. The Sheboygan Urbanized Area Sewer Service Plan Technical Advisory Committee should serve as the local body to review such projects and to ensure plan conformance.



In addition to delineating a sewer service area, the plan provides a framework for further planning among the individual municipalities. Much of the data, trends, and projections developed in this plan may be used for detailed community plans. The goals, objectives, and policy statements adopted in this plan will provide guidance in developing detailed statements of community direction through the local plans.

This plan also provides a framework for modifying the sewer service boundary, which amends the boundary to provide an equitable and logical means for responding to changing physical and economic conditions. Amendments are subject to WDNR approval. In addition, an update of this 208 Municipal Point Source Plan should be undertaken every five years to address changing conditions in community growth patterns and incorporate new information into the SSA amendment process.

### **LOCATION AND DELINEATION OF THE PLANNING AREA**

The City of Sheboygan urbanized area is located in the eastern portion of Sheboygan County, Wisconsin along Lake Michigan approximately 60 miles north of Milwaukee. The Sheboygan Urbanized Planning Area consists of approximately 94,421 acres (148 square miles), and is defined as containing the following municipalities:

- City of Sheboygan
- City of Sheboygan Falls
- Village of Kohler
- Town of Lima
- Town of Mosel
- Town of Sheboygan
- Town of Sheboygan Falls
- Town of Wilson

The Sheboygan-Manitowoc county line comprises the northern border of the planning area, Lake Michigan comprises the eastern border, the south border matches the southern borders of the towns of Lima and Wilson, and the west border matches the western borders of the towns of Herman, Sheboygan Falls, and Lima. The Sheboygan River flows from the west through the planning area to Lake Michigan. Interstate Highway 43 running north-south, and State Highway 23 running east-west, bisect the planning area. These highways provide easy access to the communities of the Sheboygan urbanized area.

The Sheboygan Urbanized Area Sewer Service Area (SSA) boundary encompasses approximately 31,769 acres (50 square miles) of land within the overall planning area.

Map 1.1 illustrates the location of the Sheboygan Urbanized Planning Area SSA, while Map 1.2 displays the SSA boundary within the Sheboygan Urbanized Planning Area.

The delineation of the planning area assists in focusing the study efforts on a clearly-defined geographic area and facilitates a comprehensive examination of available data needed in the planning effort. The criteria that were examined in delineating the *Sheboygan Urbanized Area Sewer Service Plan* include:

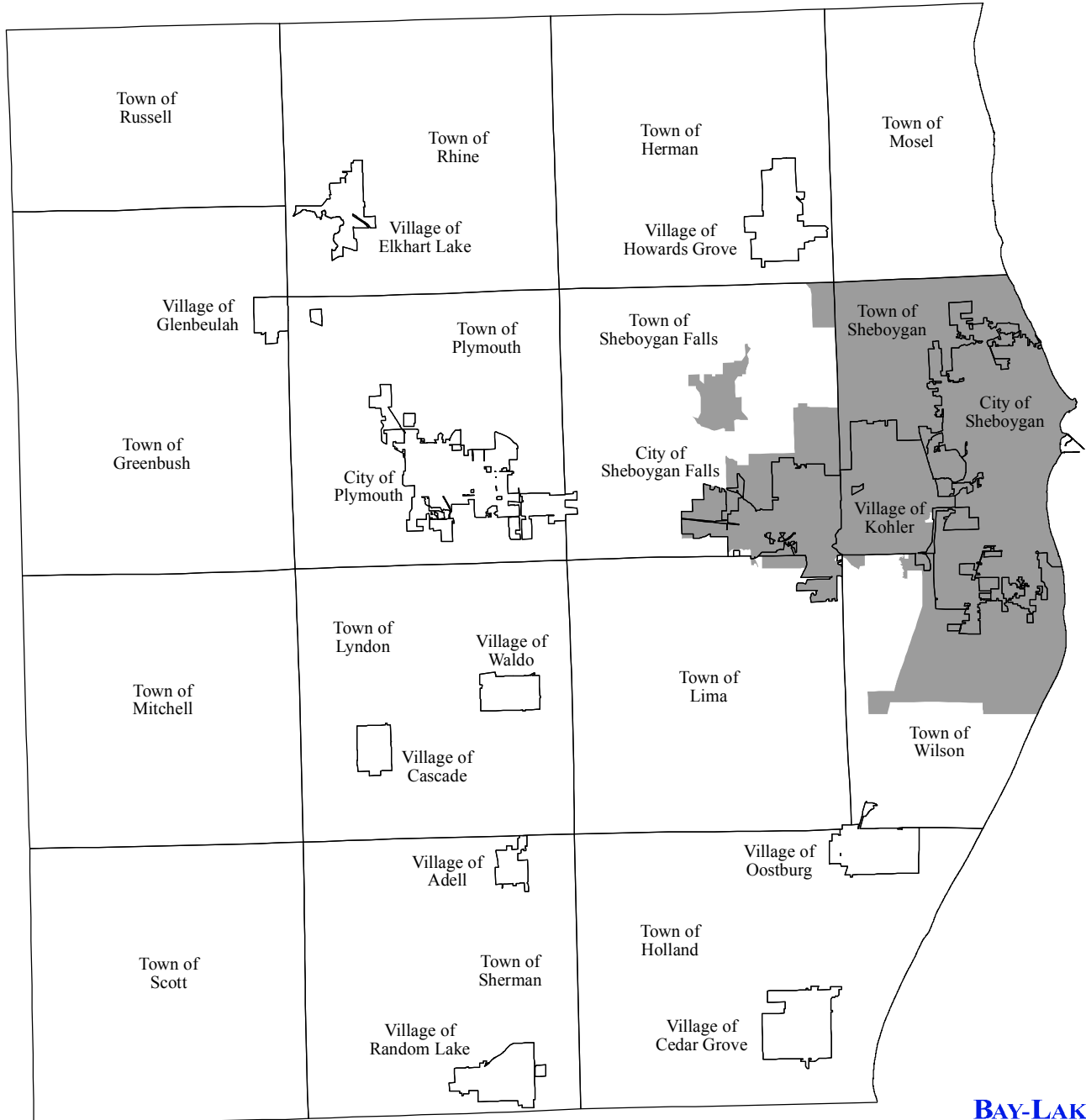
1. The area that potentially could be provided with public sewer service.
2. The recognition of extraterritorial powers for subdivision review, and official mapping.
3. The recognition of formally adopted comprehensive plans and other land use related studies or reports.
4. The recognition of areawide land use trends and patterns.
5. The recognition of water quality concerns.
6. The delineation of planning areas in previous water quality-related planning efforts.

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# Location Map

## Sheboygan Urbanized Area SSA

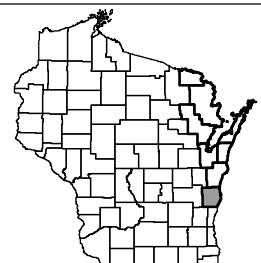
### Sheboygan, Wisconsin



**BAY-LAKE**  
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Bay-Lake Regional Planning Commission is a non-profit organization.



 Sewer Service Area



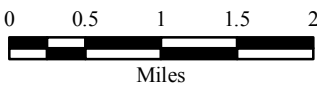
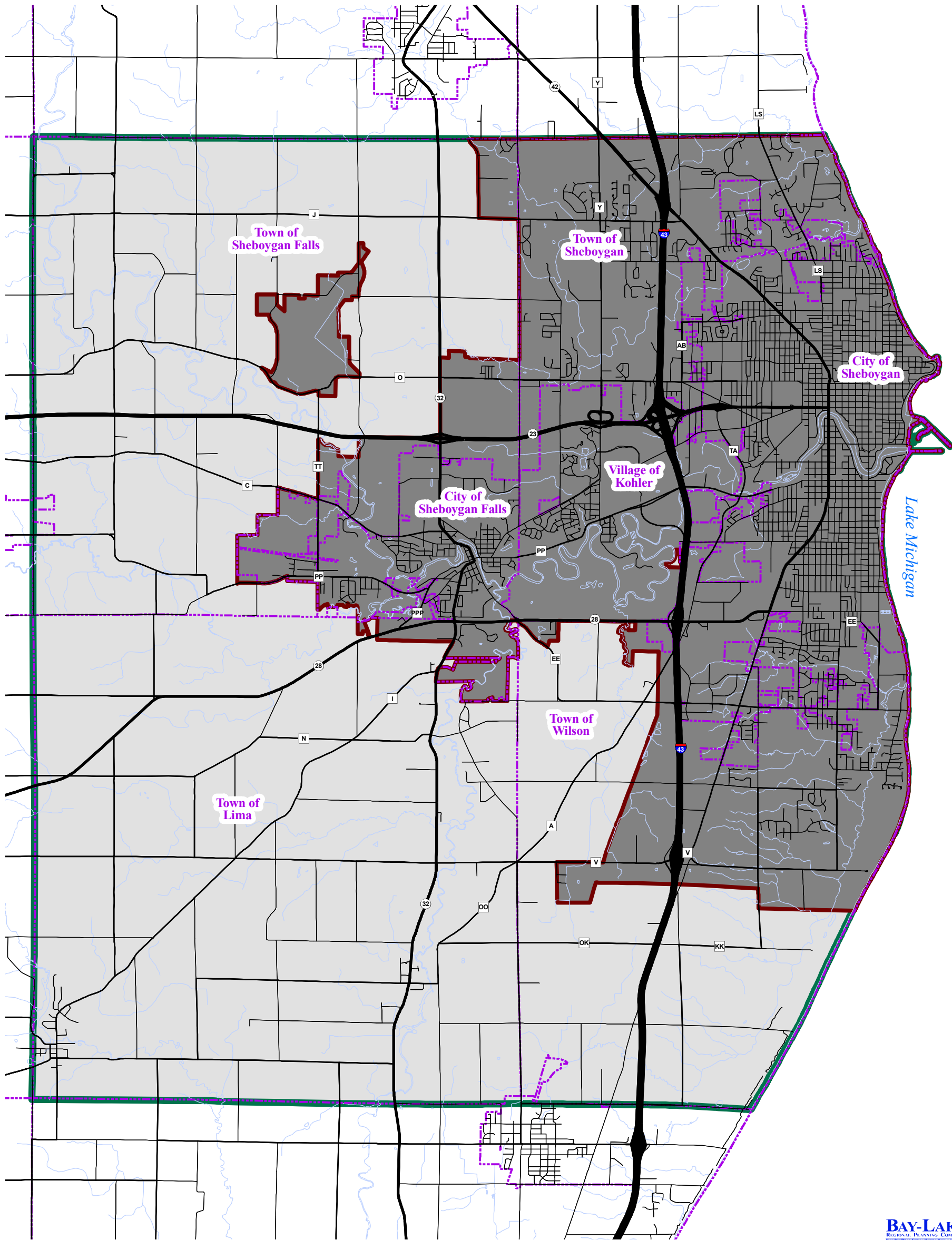
This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only. Bay-Lake RPC is not responsible for any inaccuracies herein contained.  
Source: Sheboygan County, Bay-Lake Regional Planning Commission, 2011.

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# Planning Area

## Sheboygan Urbanized Area

### Sheboygan, Wisconsin



- Sheboygan SSA
- Planning Area

#### Base Map Features

- Interstate Highway
- State Highway
- County Highway
- Local Road
- MCD Boundary
- Surface Water

This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only. Bay-Lake RPC is not responsible for any inaccuracies herein contained.  
Source: Sheboygan County; Bay-Lake Regional Planning Commission, 2011.

## CHAPTER 2: GOALS, OBJECTIVES, AND POLICIES

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An early task in any planning process is to establish the goals and objectives that will provide the direction and a framework for the development of policies which lead to final plan implementation. The goals are a statement of direction, while the objectives consist of measurable results that determine if the goals are being attained. Policy statements are guidelines for action that achieve the goals and objectives.

### **ESTABLISHED GOALS, OBJECTIVES, AND POLICIES**

The planning process establishes goals and objectives to provide a direction and a framework for the development of policies which assist plan implementation. *Goals* are a statement of direction; *objectives* identify measurable results that determine if the goals are being attained; and *policies* are guidelines for action that achieve the goals and objectives.

The diversity of local community interest requires that common concepts are established for the SSA plan. Establishing common concepts, such as goals, objectives, and policies provides a framework for cooperative planning efforts in other areas of inter-community interest such as transportation, recreation, public safety, and economic development. These goals and objectives are based on regionwide goals and objectives that the Bay-Lake Regional RPC uses as a base to ensure consistency in its planning efforts on a local and regional scale. On March 4, 2011, the TAC finalized and approved the following goals, objectives, and policies:

### **GOAL 1:**

Guide the future growth within the defined urban service area in an efficient and orderly manner to promote contiguous and compact development.

#### **Objective 1:**

Provide sanitary sewer to areas with failing systems, and to those areas where needs are documented and where provision of sewers is economically and environmentally feasible and is in the best interests of the municipalities.

#### **Policies:**

1. The Sheboygan Urbanized Area Sewer Service Plan should be reviewed and updated every five years to assess population, household and land use conditions and trends.
2. Sewer extensions that reflect the contiguous and compact pattern of development should receive priority over extensions which may cause “sprawl” development.
3. Sewer extensions should not be made beyond the 20-year urban and sewer service area unless the plan is amended.
4. Sewer service should be adequately sized to handle projected sewage and water volumes.
5. New users should pay a percentage share of the cost of the sewage treatment and collection facility based upon the proposed use of their property.
6. Consideration should be given to increasing development opportunities in areas where service capacities are available.

7. Sewer extensions should be used as an important tool to implement community plans and growth policies.

**Objective 2:**

Delineate sufficient land area for reasonable future development of municipalities.

**Policy:**

Community plans should be reviewed, developed, adopted, and updated at least every ten years to reflect changing economic and physical conditions.

**Objective 3:**

Encourage utilization of lands within municipalities that are currently provided with urban services.

**Policy:**

1. Promote in-fill development and redevelopment.

**GOAL 2:**

Guide future rural development in an efficient, orderly, and compatible manner.

**Objective 1:**

Encourage development that is consistent with each municipal plan.

**Policies:**

1. Planning should be addressed on an area wide basis by the representatives of the participating governing units; however, specific plans should be implemented by the local units of government employing local zoning, subdivision review, urban services standards, and environmental standards.
2. Efforts should continue to be made to increase governmental cooperation regarding local development in the Sheboygan metropolitan area.

**GOAL 3:**

Protect water quality, natural resources, and sensitive natural areas from the encroachment of urban development.

**Objective 1:**

Delineate environmental corridors and encourage future development to locate in areas that result in minimal environmental impacts.

**Policies:**

1. Local land use plans and zoning ordinances should be adopted or revised by the county, cities, villages and towns as needed to guide urban development away from encroaching upon the plan's designated environmental corridors, as defined by the Bay-Lake Regional Planning Commission.
2. Environmental corridors should be maintained and routinely updated by the Bay-Lake Regional Planning Commission as new and updated data becomes available.

3. Encourage municipalities to practice good stormwater management.
4. Sewer extensions to natural areas not included in environmental corridors should conform to applicable rules and regulations and should be reviewed on a case by case basis.
5. Sewer extensions should be discouraged in areas identified as being in an environmental corridor unless the extension is to serve uses which are compatible with the corridor designation, such as public parks and outdoor recreation facilities.

**GOAL 4:**

Eliminate health hazards associated with failing wastewater disposal systems and protect the quality of the water and land resources in the planning area.

**Objective 1:**

Correct inadequate sewage collection and treatment facilities which result in potential threats to the health and welfare of the public.

**Policies:**

1. Investigate alternative methods that may be used to oversee the installation, maintenance and cleaning of on-site sewage systems.
2. Eliminate inadequate on-site sewage systems within the 20-year sewer service boundary through cost-effective systems which should economically be adapted to the municipality's collection system.
3. Identified health hazard areas contiguous to existing sewer development should be given priority for sewer extension.
4. Based upon cost-effectiveness and environmental suitability, the extension of sanitary sewers or the installation of individual or cluster on-site disposal systems in health hazard/pollution areas should be given high priority.
5. All private and public sewage collection and treatment facilities should be designed and constructed employing current engineering standards, and be consistent with the water quality and environmental criteria of the State of Wisconsin.

**Objective 2:**

Sheboygan County should assure functional operation of all on-site wastewater systems.



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## **CHAPTER 3: LAND CHARACTERISTICS**

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Examining the existing land characteristics within the planning area will assist in defining development patterns which have occurred in recent years. This, in turn, can be utilized to project where and how future growth and development may occur. The land characteristics that affect development can be identified, and builders, elected officials, and property owners need to consider these factors in development proposals to eliminate costly mistakes, and construction and environmental problems. Some of the factors that should be considered include existing land uses, soil types, steep slopes, construction site erosion, distance to surface waters, stormwater runoff, high groundwater, wetlands, floodways and floodplains, bedrock geology, wildlife habitats, scientific area, forested lands, and prime agricultural lands.

### **NATURAL FEATURES**

Areas of unique natural features and environmental significance in the Sheboygan area have been identified by the WDNR, the Wisconsin Coastal Management Program, the Sheboygan County Planning and Resources Department, and Bay-Lake RPC. Many of these features are found in corridors that are located along rivers, creeks, shorelines and natural drainageways, and are essential to the maintenance of an ecological balance and diversity, and the preservation of the natural beauty of the area.

The delineation of sensitive environmental areas plays an important role in the sewer service planning process and assists in directing future urban development in order to protect these resources. The natural features found in the area are defined in the following sections.

### **Surface and Ground Water**

The principal surface water resources within the Sheboygan Urbanized Area planning area are the Sheboygan River, Pigeon River, Onion River, and Mullet River, which drain to Lake Michigan. The other surface waters in the planning area include the Black River, Jetzer's Lake, and a number of creeks that run directly into Lake Michigan. Jetzer's Lake is a 19-acre spring fed lake with a maximum depth of 42 feet. The study area also contains many navigable tributaries to the main rivers. Lake Michigan is the primary source of Sheboygan's municipal water supply. Most of the areas not served by the Sheboygan municipal system rely on groundwater.

The Town of Sheboygan has wellhead protection areas established for three municipal wells. These wellhead protection areas lie partially or entirely within the SSA boundary. The Town of Sheboygan includes these areas within their local wellhead protection ordinance, and they have approved wellhead protection plans, which include delineations of the wellhead protection areas, contaminant source inventory, and management strategies.

### **Sheboygan River Area of Concern**

The area encompassing the lower Sheboygan River downstream from the Sheboygan Falls Dam, including the entire harbor and nearshore waters of Lake Michigan has been identified by the U.S. EPA as a Great Lakes Area of Concern (AOC). Great Lakes AOCs are designated geographic areas within the Great Lakes Basin that show severe environmental degradation. There are a total of 43 areas of concern within the Great Lakes, 26 being in the U.S., 17 in Canada, with five shared by the two countries.

In 1985, the lower Sheboygan River and Harbor were designated an AOC because of water quality and habitat problems associated with the historical discharge of pollutants into the AOC and the potential adverse effect the pollutants could have on Lake Michigan. The high levels of nutrients, solids, and toxics entering the river had caused a series of problems including nuisance algal blooms, fish consumption advisories and contaminated sediments. The pollutant discharges also were suspected of contributing to the degradation of wildlife, fish, benthos and plankton populations and the reduction in fish and wildlife habitat.

Nine impairments have been identified for the Sheboygan River AOC. These impairments include the following:

- Restrictions on fish and wildlife consumption
- Eutrophication or undesirable algae
- Degradation of fish and wildlife populations
- Fish tumors or other deformities
- Bird or animal deformities or reproduction problems
- Degradation of benthos
- Degradation of phytoplankton and zooplankton populations
- Restriction on dredging activities
- Loss of fish and wildlife habitat

To address these impairments, the WDNR and the citizen group, Sheboygan River Basin Partnership, identified clean-up priorities that include remediation of contaminated sediments, nonpoint source pollution control, brownfield and waterfront restoration, and habitat protection and restoration.

### **Shorelands and Floodplains**

Shorelands and floodplains are often viewed as valuable recreational and environmental resources in an urbanized area. These areas may also provide stormwater retention and habitat for various kinds of wildlife unique to the area.

Development may have an adverse effect on the ability of these areas to improve water quality, provide wildlife habitat, and protect from flooding. In addition, increased development and maintenance costs may be necessary due to the need for floodproofing, increased flood insurance premiums, extensive site preparation, and maintenance and repairs of roads, sewers, and water mains. As a result, the State of Wisconsin requires that counties adopt shoreland/floodplain zoning ordinances to address the problems associated with development in floodplain areas.

Development in shoreland and floodplain areas is strictly regulated, and in some instances is not permitted. The authority to enact and enforce these types of zoning provisions is set forth in Chapter 59.692 and Chapter 87.30 of the Wisconsin Statutes, and Wisconsin Administrative Codes NR 115 and NR 116, as well as Sheboygan County's Shoreland Ordinance (Chapter 72 of the Sheboygan County Code of General Ordinances) and Floodplain Ordinance (Chapter 73 of the Sheboygan County Code of General Ordinances).

The jurisdiction of the Sheboygan County shoreland zoning ordinance and floodplain zoning ordinance includes shorelands and wetlands of all navigable waters in the unincorporated areas of Sheboygan County, which are 1,000 feet from the normal high water elevation of a lake, pond

or flowage; and 300 feet from the normal high water elevation of a river or stream or to the landward side of a floodplain, whichever is greater.

Navigable waters are defined in Chapter 281.31(2)(d), *Wis. Stats.*, and including many of the waterways identified on the USGS topographic maps as perennial or intermittent.

### **Wetlands**

Wetlands are areas where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which has soils indicative of wet conditions. [s. 23.32(1), *Wis. Stats.*].

Wetlands play an important role since they serve as a filter system of pollutants, and are invaluable in controlling flood waters, recharging groundwater, and retaining water during drought. They may also provide valuable habitat for waterfowl and other wildlife, excellent cover and migration corridors for wildlife, and may support spawning and nursery habitat for fish and sanctuaries for rare and endangered species. Wetlands also offer education, recreational, and aesthetic benefits and opportunities.

Wisconsin Administrative Codes NR 115 and NR 117 mandate that wetlands be protected in both the rural and urban areas of the state. In the unincorporated areas, NR 115 protects wetlands or portions of wetlands within the shoreland zone that are designated on Wisconsin Wetland Inventory maps prepared by WDNR. To protect wetlands in incorporated areas, NR 117 was enacted in 1983 and requires that all wetlands and portions of 5 acres or more in size located in the shoreland zone be protected, and outlines minimum shoreland zoning standards for Wisconsin cities and villages. In addition to NR 115 and 117, NR 103 outlines water quality standards for wetlands and requires that all practicable alternatives be considered to avoid and minimize wetland disturbance and to ensure preservation, protection, restoration, and management of wetlands

Any alternations that are to be made to any wetland, regardless of size, need to be reviewed and approved by the U.S. Army Corps of Engineers and the WDNR before any action can be taken.

### **Topography and Steep Slope**

Topography in the planning area is the result of bedrock configuration, glacial deposition, and erosion. The planning area topography varies from level to rolling with several areas of steep slope of 12 percent or greater.

Along the coast of Lake Michigan, the elevations are slightly less than 600 feet above sea level, and approximately 800-foot elevations exist in the western part of the planning area. Along the northeastern half of the coastline, the topography is steep with 40 to 60 feet bluffs. Rolling sand dunes exist in both the northeastern and southeastern portions of the planning area. The areas between the sand dunes and the bluffs are generally low-lying flat areas of fine sand and muck soils. Moving inland along the southeastern half of the planning area, the bluffs retreat, and the topography begins to rise to form a broad band of gently rolling or occasionally flat land, which comprises the bulk of the agricultural lands.

Areas of steep slope are often highly erodible areas that are unsuitable for development as development on steep slopes can result in erosion and flooding during site preparation and construction. To make development suitable, greater excavations efforts are required in areas of

steep slope, and the additional effort is reflected in the construction costs. In addition, septic systems on steep slopes may be unreliable due to the slope and shallow soils.

### **Bedrock Geology**

The bedrock units, which underlie the planning area, range in age from Precambrian at depth, to Silurian at the surface. The oldest are impermeable crystalline rock of Precambrian age at depths that average more than 1,500 feet below the land surface.

Silurian dolomite (often referred to as Niagara) is the uppermost bedrock, and reaches thicknesses up to 580 feet. Rocks underlying the Niagara dolomite are not visible in the County. Below the Niagara dolomite is a shale formation known as Maquoketa. It reaches a maximum thickness of 450 feet. The Maquoketa Shale overlies a dolomite formation, termed Platteville-Galena, which is approximately 500 feet in thickness. This rock formation, in turn, overlies Cambrian sandstones, which are 450 feet thick. All of these sedimentary rock formations overlie Precambrian igneous rocks.

Where large stones and bedrock exist near the soil surface, there is potential for hindering excavation for development, which considerably increases the cost of construction. Where shallow depth-to-bedrock exists, conventional on-site septic systems may not function properly, resulting in wastewater passing through fractured bedrock and contaminating groundwater.

### **Soil Limitations**

Soils, in part, determine how much rainfall or snow melt directly flows into the rivers, lakes, and wetlands, and how much infiltrates the ground. That which infiltrates the ground replenishes soil moisture and recharges the groundwater system. The general soils in this area consist of: Mosel-Oakville-Hebron; Kewaunee-Waymor-Manaw, and Hochheim-Theresa Associations.

Soil is composed of varying proportions of sand, gravel, silt, clay, and organic material. The composition of a soil affects the specific properties of that soil in determining the capacity for supporting on-site wastewater treatment facilities. These properties must be evaluated prior to development. Without such considerations, on-site wastewater treatment systems may fail and collection systems may require expensive and frequent maintenance. Factors which are considered when evaluating soils for on-site waste systems include:

1. **High or Fluctuating Water Table** - When groundwater is near the soil surface, proper filtering cannot take place and often results in on-site systems either backing-up into the home or contamination of groundwater. In addition, construction techniques used to de-water systems are costly. If sewer lines in wet soils have been placed improperly or if they break from the adverse soil conditions, groundwater infiltration occurs. As a result, the additional water would then enter the sewer lines and reduce the available capacity of the pipe and the overall effectiveness of the wastewater treatment plant.
2. **Bedrock** - Large stones or bedrock near the soil surface may hinder excavation and considerably increase the cost of construction. Where shallow depth-to-bedrock exists, conventional on-site septic systems may not function properly, resulting in wastewater passing through fractured bedrock and contaminating groundwater.
3. **Soil Permeability** - Permeability refers to the rate at which water flows through the soil. For an on-site disposal system to be successful, the soil must be capable of

removing pollutants and contaminants, and transmitting liquids. When passage is too rapid, the soil cannot properly filter the effluent and groundwater can become polluted. If it is too slow, the soils can become saturated and effluent ponding may result.

4. **Flooding** - On-site waste disposal systems that are located within a floodplain can result in significant problems. As water levels rise during periods of flooding, the system becomes saturated and results in untreated solid and liquid waste being discharged into surface waters or groundwater.

## **ENVIRONMENTALLY SENSITIVE AREAS**

### **Introduction**

Wisconsin Administrative Code NR 121.05(1)(g)2c describes natural features and sensitive environmental areas that are to be excluded from sewer service areas and protected from sewer development in order to protect water quality. These areas are referred to as “environmentally sensitive areas” (ESAs) and are defined by the code as follows:

*“Major areas unsuitable for the installation of waste treatment systems because of physical or environmental constraints are to be excluded from the service area. Areas to be considered for exclusion from the sewer service area because of the potential for adverse impacts on the quality of the waters of the state from both point and nonpoint sources of pollution include but are not limited to wetlands, shorelands, floodways and floodplains, steep slopes, highly erodible soils and other limiting soil types, groundwater recharge areas, and other such physical constraints.”*

Other areas, including areas of scientific value or other important natural, historical, archaeological, and cultural features that warrant protection from sewer development may also be included in the definition of an ESA.

The designation of ESAs is intended to:

1. Protect general public health, safety, and welfare;
2. Protect surface and groundwater quality;
3. Reduce damage from flooding and stormwater runoff;
4. Maintain important wildlife habitats or outdoor recreation areas (with the support of local units of government); and
5. Reduce the costs of public utilities and environmental damages.

Some examples of potential cost benefits to the community and individuals include: less property damage from stormwater runoff and sedimentation; fewer insurance claims which result in lower insurance rates; lower maintenance costs for public utilities; and the potential for community recreation and aesthetic opportunities.

The ESA concept has been effectively adopted in many regions of Wisconsin and is being applied to the planning area to help preserve remaining undisturbed natural resources. Buffering of ESAs, particularly wetlands, can avoid negative impacts caused when development occurs directly adjacent or adjoining to the ESA.

### **ESA Definition**

The *Sheboygan Urbanized Area 2030 Areawide Sewer Service Plan* sets forth the following definition of important natural and sensitive environmental features, hereinafter referred to as Environmentally Sensitive Areas or ESAs and shown on Map 3.1 to be used within this plan for the purpose of implementing NR 121:

- All land within 100 feet from Lake Michigan “from the north county line to the south county line” (*Sheboygan County Shoreland Ordinance - Chapter 72*) shall be designated as ESAs.
- All land within 225 feet from Lake Michigan “from the City of Sheboygan north to the north county line” (*Sheboygan County Shoreland Ordinance - Chapter 72*) shall be designated as ESAs.
- All lakes, ponds, flowages, rivers and streams identified on the 7.5 minute U.S.G.S quadrangle maps and their adjacent 75-foot shoreland buffer, as measured from the ordinary high water mark, shall be designated as ESAs.
  - All lakes, ponds, flowages, rivers and streams identified on the USGS quadrangle maps shall be considered navigable until such time as an official Wisconsin Department of Natural Resources determination indicates otherwise.
- Any Environmentally Sensitive Area associated with a non-navigable lake or pond shall extend 25 feet from the ordinary high water mark.
- Any Environmentally Sensitive Area associated with a non-navigable flowage, river or stream shall extend 25 feet from the both sides of the center of the channel of such feature.
- All floodplains (FEMA 100-year) shall be designated as ESAs.
- All Department of Natural Resources (DNR) mapped wetlands shall be included in an ESA. Any Environmentally Sensitive Area associated with such a wetland two acres in size shall extend 50 feet beyond the edge of the wetland.
- Areas of steep slope (12 percent or greater) shall be designated as ESAs.
- Publicly-owned scientific and natural areas and areas with identified archaeological sites shall be included in the ESA.
- Other significant natural resource features, including but not limited to, river and stream headwaters, high-value wildlife habitat areas, geologic and natural area sites, steep slopes and wet, poorly drained and organic soils, shall be considered for inclusion as an ESA on a case-by-case basis by the SSA Technical Advisory Committee.

The Sheboygan Urbanized Sewer Service Area is comprised of approximately 5,839 acres of environmentally sensitive areas. Wetlands with buffer comprise approximately 2,881 acres, floodplains comprise approximately 2,623 acres, waterways with setbacks comprise approximately 2,305 acres, and steep slopes comprise approximately 867 acres. The sum of the acreage of individual ESA features will not total the 5,839 acres of ESAs combined. This is because ESA features may be counted more than once when taken individually due to features overlapping such as wetlands that lie within floodplains or waterway setbacks, etc.

### **Sewer Extensions**

Sewer extensions for development within designated ESAs will be discouraged. An exception to this exclusion does exist as the plan recognizes that it may be necessary, in some case, to construct sanitary sewers across and through identified environmental corridors, and that compatible land uses such as public parks and outdoor recreation facilities may need sewer at a future date. Additionally, mapping detail may not portray exact boundaries of physical features

as they currently exist, in which case an onsite inspection would need to be conducted to properly identify the ESA.

The Technical Advisory Committee and WDNR will review exceptions/modification of ESA mapping on a case-by-case basis. Pursuant to NR 1.95, when an exception of this particular nature exists, all reasonable alternatives to crossing the environmental corridor with sanitary sewer will be considered. Any changes to the ESA delineation would require a plan amendment and WDNR approval.

Intensive uses to be considered for exclusion from within ESAs include but are not limited to permanent structures such as residential, commercial, or industrial buildings; impervious surfaces such as parking lots and concrete or asphalt surfaced storage areas; and site disturbing activities such as clearing, grubbing, grading and filling. Any consideration of development within or adjacent to an ESA must be in conformance with all applicable federal, state, and local rules and regulations including the provisions and requirements of the Federal Clean Water Act; Wisconsin Administrative Codes NR 103, 115, 116, 117, 121, 216, and 299; and county and local zoning ordinances.

Uses which may be compatible with the protection and preservation of ESAs include non-intensive recreational facilities such as trails and picnic areas; and in some instances, utility facilities such as sewer and water lines, detention basins and stormwater drainageways; and limited clearing, grubbing, grading, and filling.

If there is any doubt as to the location of, or infringement on ESAs at the time of sewer extension or boundary amendment requests (as delineated on the review maps), the Bay-Lake Regional Planning Commission will consult with and request site specific information (including proposed building footprints) from the local municipality and/or the petitioner. This information, along with the ESA criteria from this plan, will be used to make a recommendation on the proposal.

ESAs have been delineated by Bay-Lake RPC using GIS software. Map 3.1 shows the general location of ESAs throughout the Sheboygan Urbanized Area Sewer Service Area. Although ESAs may overlay existing developed lands, it is their location throughout the undeveloped portion of the SSA that will determine future sewered development.

## **LAND USE**

In 2003, Bay-Lake RPC conducted an inventory of the existing land uses within the planning area. Existing land use conditions were inventoried through a windshield survey of the rural areas, on 1998 1"= 400' orthophotography. The data was then transferred onto a digital base map of the area and digitized into Bay-Lake RPC's Geographic Information System (GIS) for mapping. In 2009, the land use data for the Sheboygan Urbanized Area was updated in Bay-Lake RPC's GIS using on-screen, "heads-up" methodology of air photo interpretation with groundtruthing where needed.

### **Planning Area Land Use**

The planning area consists of a 94,421-acre (148-square mile) area that includes the cities of Sheboygan and Sheboygan Falls, the Village of Kohler, and the towns of Sheboygan Falls, Sheboygan, Lima, Mosel, and Wilson. Map 3.2 shows the land use in the planning area.

Table 3.1 lists the land use acreage for the planning area, as well as the percentage of developed and undeveloped land within the planning area.



**Table 3.1: Planning Area Land Use Calculations**

<b>2009 Land Use</b>			
<b>Sheboygan Urbanized Area Planning Area</b>			
<b>Land Use Type</b>	<b>Total Acres</b>	<b>Percentage of Total Land</b>	<b>Percentage of Developed Land</b>
<b>DEVELOPED</b>			
Residential	9,079.7	9.6%	42.8%
Single Family	7,954.8	8.4%	37.5%
Two Family	512.8	0.5%	2.4%
Multi-Family	375.4	0.4%	1.8%
Mobile Homes	149.1	0.2%	0.7%
Land Under Development	87.6	0.1%	0.4%
Commercial	1,451.7	1.5%	6.9%
Industrial	1,723.1	1.8%	8.1%
Transportation	2,903.9	3.1%	13.7%
Communications/Utilities	369.2	0.4%	1.7%
Institutional/Governmental	919.6	1.0%	4.3%
Recreational	3,644.3	3.9%	17.2%
Agricultural Structures	1,098.6	1.2%	5.2%
<b>Total Developed Acres</b>	<b>21,190.0</b>	<b>22.4%</b>	<b>100.0%</b>
<b>Land Use Type</b>	<b>Total Acres</b>	<b>Percentage of Total Land</b>	<b>Percentage of Undeveloped Land</b>
<b>UNDEVELOPED</b>			
Agricultural Lands	53,303.8	56.5%	72.8%
Woodlands/Grasslands	11,164.5	11.8%	15.2%
Vacant Lands	49.9	0.1%	0.1%
Natural Areas	7,716.9	8.2%	10.5%
Water Features	996.2	1.1%	1.4%
<b>Total Undeveloped Acres</b>	<b>73,231.3</b>	<b>77.6%</b>	<b>100.0%</b>
<b>Total Land Area (Acres)</b>	<b>94,421.3</b>	<b>100.0%</b>	<b>NA</b>

Source: Bay-Lake Regional Planning Commission, 2011.

### **SSA Land Use**

The Sheboygan Urbanized Area SSA consists of 31,769 acres (50 square miles) within the larger planning area. Table 3.2 lists the land use acreage for the SSA, as well as the percentage of developed and undeveloped land within the SSA. The sewer service area is comprised of half developed and half undeveloped lands. Map 3.3 shows the land use within the SSA.

The most prevalent land uses within the SSA are agricultural lands and residential lands, each comprising 24 percent of the total land use. Approximately 14 percent of the total land used is comprised of environmentally sensitive areas.

With urban land uses (i.e. developed lands) comprising approximately 50 percent of the SSA, primarily within the City of Sheboygan, it is imperative to pursue solutions to urban runoff. Urban runoff can have a significant negative impact to water quality. Impervious surfaces and storm sewer drains provide immediate delivery of pollutants to the waterways without any

filtering. Additionally, construction sites can lead to significant delivery of sediments to waterways.

**Table 3.2: SSA Land Use Calculations**

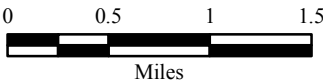
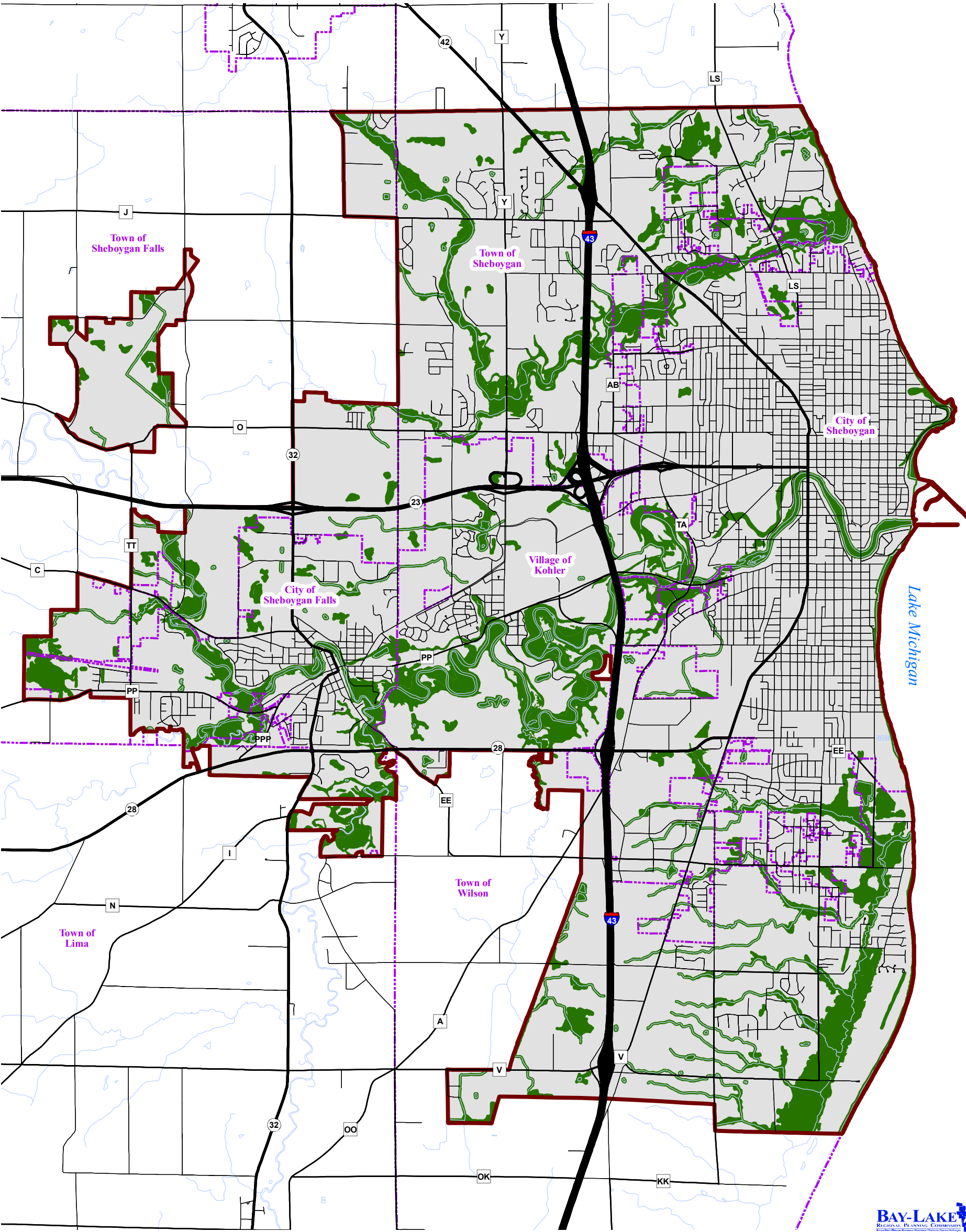
<b>2009 Land Use Sheboygan SSA</b>			
<b>Land Use Type</b>	<b>Total Acres</b>	<b>Percentage of Total Land</b>	<b>Percentage of Developed Land</b>
<b>DEVELOPED</b>			
Residential	7,467.1	23.5%	46.8%
Single Family	6,365.4	20.0%	39.9%
Two Family	503.2	1.6%	3.2%
Multi-Family	370.0	1.2%	2.3%
Mobile Homes	140.8	0.4%	0.9%
Land Under Development	87.6	0.3%	0.5%
Commercial	1,250.0	3.9%	7.8%
Industrial	1,326.7	4.2%	8.3%
Transportation	2,052.9	6.5%	12.9%
Communications/Utilities	290.4	0.9%	1.8%
Institutional/Governmental	814.6	2.6%	5.1%
Recreational	2,563.9	8.1%	16.1%
Agricultural Structures	174.4	0.5%	1.1%
<b>Total Developed Acres</b>	<b>15,940.0</b>	<b>50.2%</b>	<b>100.0%</b>
<b>Land Use Type</b>	<b>Total Acres</b>	<b>Percentage of Total Land</b>	<b>Percentage of Undeveloped Land</b>
<b>UNDEVELOPED</b>			
Agricultural Lands	7,653.4	24.1%	48.4%
Woodlands/Grasslands	3,777.1	11.9%	23.9%
Vacant Lands	38.6	0.1%	0.2%
Natural Areas	3,784.8	11.9%	23.9%
Water Features	574.9	1.8%	3.6%
<b>Total Undeveloped Acres</b>	<b>15,828.9</b>	<b>49.8%</b>	<b>100.0%</b>
<b>Total Land Area (Acres)</b>	<b>31,768.9</b>	<b>100.0%</b>	<b>NA</b>

Source: Bay-Lake Regional Planning Commission, 2011.

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# Environmentally Sensitive Areas (ESAs)

Sheboygan Urbanized Area SSA  
Sheboygan, Wisconsin



 Environmentally Sensitive Areas (ESAs)

### Base Map Features

-  Sheboygan SSA
-  Interstate Highway
-  State Highway
-  County Highway
-  Local Road
-  MCD Boundary
-  Surface Water

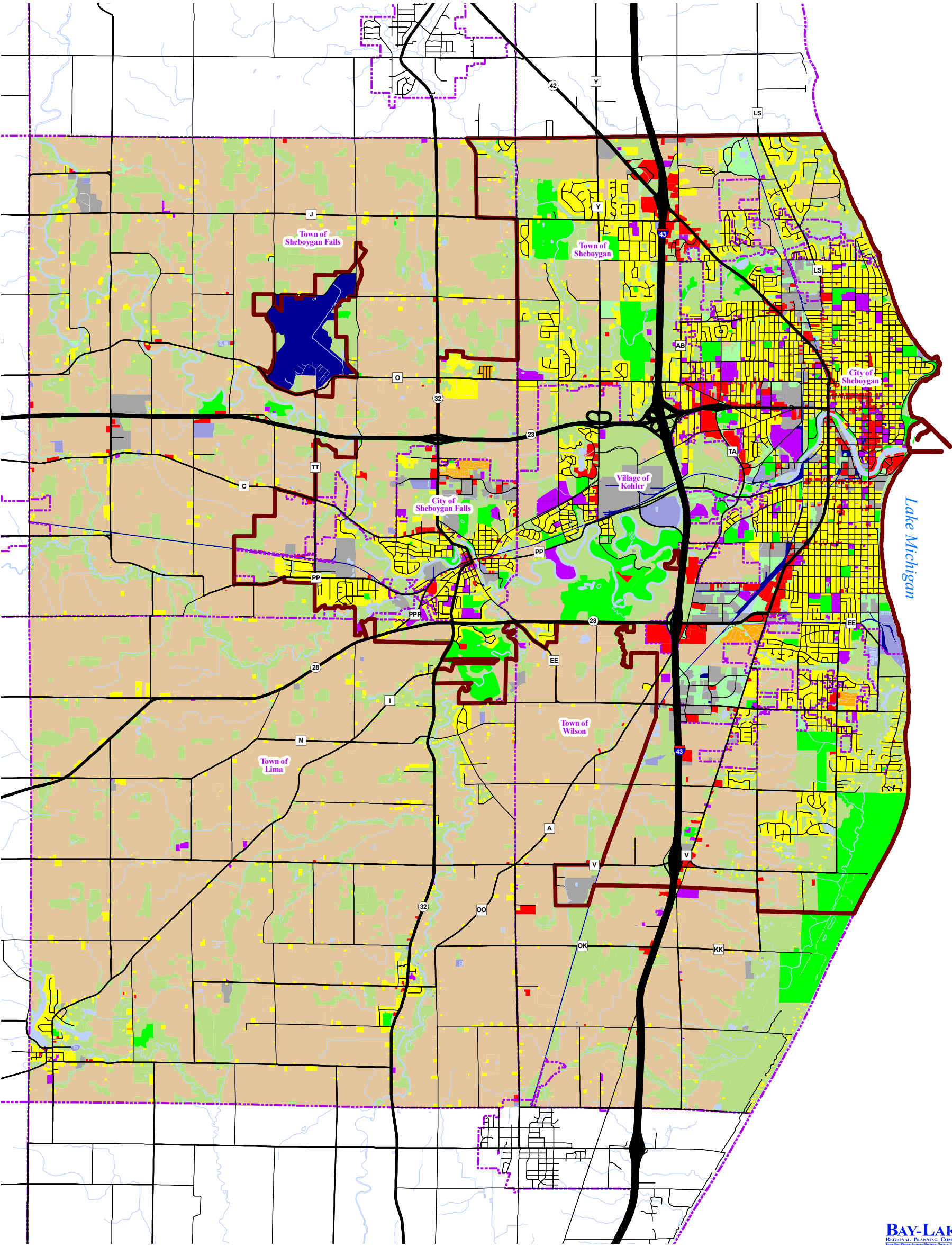
This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only. Bay-Lake RPC is not responsible for any inaccuracies herein contained.  
Source: WDNR; FEMA; NRCS, FEMA; Sheboygan County; Bay-Lake Regional Planning Commission, 2011.

# 2009 Land Use

## Sheboygan Urbanized Planning Area

### Sheboygan, Wisconsin

2030 Sheboygan Urbanized Area Sewer Service Plan



0 0.5 1 1.5 2  
Miles

Residential	Governmental/Institutional
Mobile Homes	Parks and Recreation
Commercial	Open Space/Fallow Fields
Industrial	Agricultural
Transportation	Woodlands/Natural Areas
Communications/Utilities	

**Base Map Features**

- Sheboygan SSA
- Interstate Highway
- State Highway
- County Highway
- Local Road
- MCD Boundary
- Surface Water

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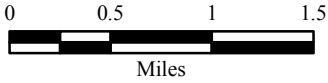
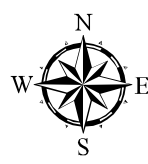
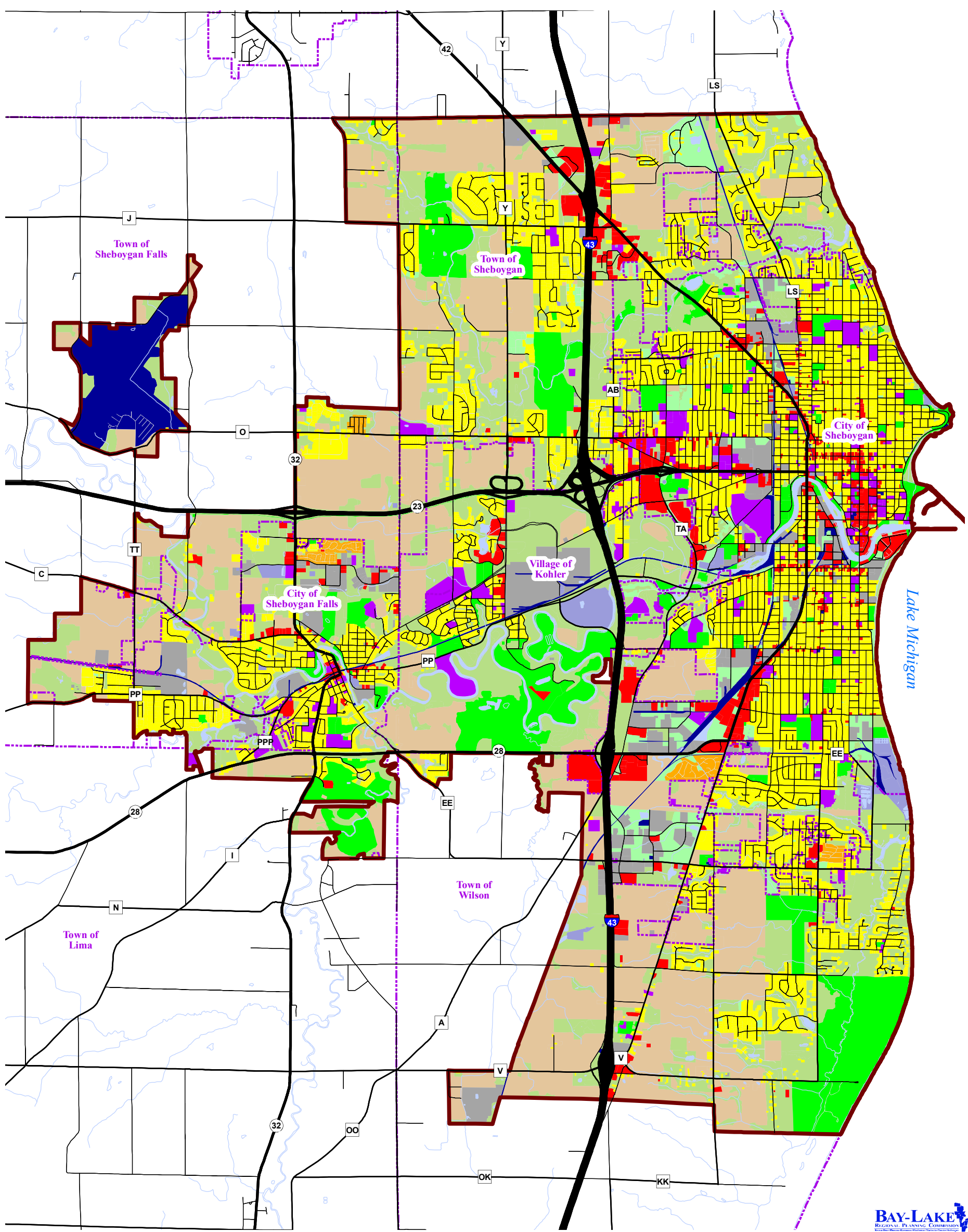


# 2009 Land Use

## Sheboygan Urbanized Area SSA

### Sheboygan, Wisconsin

2030 Sheboygan Urbanized Area Sewer Service Plan



- |                          |                            |
|--------------------------|----------------------------|
| Residential              | Governmental/Institutional |
| Mobile Homes             | Parks and Recreation       |
| Commercial               | Open Space/Fallow Fields   |
| Industrial               | Agricultural               |
| Transportation           | Woodlands/Natural Areas    |
| Communications/Utilities |                            |

- Base Map Features**
- Sheboygan SSA
  - Interstate Highway
  - State Highway
  - County Highway
  - Local Road
  - MCD Boundary
  - Surface Water

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## **CHAPTER 4: WASTEWATER AND STORMWATER MANAGEMENT**

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This chapter outlines the current wastewater treatment plant (WWTP) and collection systems, and stormwater management policies that exist throughout the planning area, as well as an overview of the sanitary districts in the planning area.

### **WASTEWATER TREATMENT AND COLLECTION FACILITIES**

The WDNR regulates municipal and industrial operations discharging wastewater to surface or groundwater through the Wisconsin Pollutant Discharge Elimination System (WPDES) permit program. There are seven municipal wastewater treatment and collection facilities in the SSA planning area that are permitted under the WPDES program; the Sheboygan Regional Wastewater Treatment Facility; Sheboygan Sanitary District #2; Town of Sheboygan Falls Sanitary Districts #4, #5, and #6; and Wilson Sanitary Districts #1 and #2.

Map 4.1 displays the wastewater treatment service areas for the Sheboygan Urbanized Area SSA.

### **Sheboygan Regional Wastewater Treatment Plant**

The Sheboygan Regional Wastewater Treatment Facility is owned and operated by the City of Sheboygan, and collects wastewater from the cities of Sheboygan and Sheboygan Falls, the Village of Kohler, and the towns of Wilson and Sheboygan. The wastewater treatment plant was originally constructed in 1936 as a primary treatment facility. During 1957, a trickling filter system was added to treat secondary wastes. Regionalizing the plant was first discussed in the mid 1970's. The WDNR was successful in getting the concept of shared services accepted by the municipalities and the regional facility concept was adopted. In January 1978, construction of the \$23.9 million regional treatment facilities commenced. In 1998, work was completed on the North/South Interceptor sanitary sewer project. The North/South Interceptor was a major project identified in the 1970's during the sanitary sewer system analysis. The North/South Interceptor would be built when development in the northwest quadrant of the regional planning area (The Town of Sheboygan and the Town of Sheboygan Falls) reached adequate size to necessitate construction of the larger sanitary sewer pipe and wastewater pump station. The process of acquiring easements for the project began in 1994 and continued into 1996. Most recently, in 2010, major reconstruction was done on the east-west interceptor that runs from the Deer Trace Shopping Center west of Interstate Highway 43 to the treatment plant making it a 100-year fixture.

The WWTP met all of the Wisconsin Pollutant Discharge Elimination System (WPDES) discharge permit limits for conventional pollutants in 2009. The WPDES permit is issued by the WDNR and lists specific limits considered necessary to prevent Lake Michigan pollution.

The Sheboygan Regional Wastewater Treatment Facility is owned and operated by the City of Sheboygan. The plant is designed to process 18.4 million gallons per day (mgd); it treats an average daily flow of 11.03 mgd of wastewater (2009 data). The plant is designed to process a peak flow of 56.8 mgd and is operating at approximately two-thirds of the hydraulic capacity; the largest recorded peak flow was 62 mgd on June 13, 2008.

The treatment plant achieves more than a 98 percent removal of organics and solids loading. In 2009, the yearly influent concentration of biochemical oxygen demand (BOD) was 16,098 pounds per day (lbs/day), and the effluent discharge was 285 lbs/day. The yearly average loading

for suspended solids in 2009 was 18,674 lbs/day influent and the effluent discharge was 368 lbs/day. The phosphorus removal efficiency for 2009 was 87 percent. The yearly average loading for phosphorus in 2009 was 432 lbs/day (influent) and effluent discharge was 56 lbs/day. These effluent discharge levels are well below the WDNR permitted effluent limits of 4,600 lbs/day for BOD and suspended solids, and 154 lbs/day for phosphorus.

The City of Sheboygan is serviced by a wastewater collection system that is comprised of both separate sanitary and storm sewers. The system collects and conveys domestic, commercial, and industrial wastewater generated within the city along with some stormwater runoff to the wastewater plant for treatment. The wastewater collection system provides approximately 180 miles of sewer pipe and approximately 3,800 manholes within the city public right-of-way. The average depth of the sewer system is approximately 11 to 12 feet with depths ranging between six and 30 feet throughout the entire system. There are four major lift stations and four major interceptor sewer lines. The lift stations are incorporated into the city's sewer system and are designed to move wastewater from lower areas and then allow it to continue moving by gravity flow. The lift stations are located at Seventh Street and Kentucky Avenue, North Avenue and Lake Michigan, Indiana Ave east of Taylor Drive, and the WWTP. There are five large interceptor sewers: Western, South Side, North Avenue, Sheboygan River, and North/South. The Western interceptor runs 1,100 feet west of I-43 and along Washington Avenue to the treatment plant. The South Side interceptor runs from the Seventh Street and Kentucky Avenue lift station to the treatment plant. The North Avenue interceptor connects the North Avenue and Lake Michigan lift station to the Seventh Street and Kentucky Avenue lift station. The Sheboygan River interceptor runs along Wisconsin Street and links into the lift station at Seventh Street and Kentucky Avenue. The North/South Interceptor begins at the head of the Plank Trail Road and connects to the Western Interceptor near the railroad trestle on Washington Ave.

The Town of Sheboygan has seven lift stations. These stations are located at the following locations: at the north end of Riverview Drive; east of County Highway Y between Grote and Longacre Roads; at the south end of North 47th Street; at the south end of North 38th Street; on Blackstock Road; County Road J; and Charter Hills Road.

The Town of Wilson has one pump station shared with the City of Sheboygan and four lift stations. One of the stations is located in Sanitary District #2; the other three stations are located in Sanitary District #1.

The City of Sheboygan Falls has two lift stations. One of the stations is located next to the city's sanitary pump station, located off of Hickory Street and Cleveland Street. The other station is located off of Forest Avenue and Range Line Road.

The Village of Kohler has three lift stations. One of the lift stations is located just off of Sunset Road; one is located just off of the intersection of Willow Creek Drive and Woodlake Road; and the other is located off of Riverside Drive.

The sanitary sewer collection system is not overloaded during normal dry weather conditions; however, during wet weather conditions several areas in the sanitary sewer collection system do become surcharged from the Inflow and Infiltration (I&I) of clear-water into the sewer pipes. Clear-water enters the sanitary sewer pipes through cracks pipes and manholes (some of sewer pipes and manholes are more than 100 years old, having been installed in the late 1890s) and from illegal sump pump connections. Analysis of the existing sanitary sewer collection system has pinpointed isolated segments that become surcharged and overloaded sewers during



excessive wet weather events. [*Dale Doerr, Sheboygan Regional Wastewater Treatment Plant Superintendent; 2010*]

### **Town of Sheboygan Sanitary District #2**

The Town of Sheboygan Sanitary District #2 is located in the Town of Sheboygan and serves the towns of Sheboygan and Sheboygan Falls.

### **Town of Sheboygan Falls Sanitary District #4, #5, and #6**

The Town of Sheboygan Falls Sanitary Districts #4, #5, and #6 are located in, and serve the Town of Sheboygan Falls.

### **Town of Wilson Sanitary District #1 and #2**

The Wilson Sanitary Districts #1 and #2 are located in, and serve, the Town of Wilson.

## **STORMWATER MANAGEMENT**

NR 216 of the Wisconsin Administrative Code regulates stormwater and related discharge permits to minimize the discharge of pollutants carried by stormwater runoff from certain industrial facilities, construction sites, and municipal separate storm sewer systems. NR216 establishes criteria defining those stormwater discharges needing WPDES stormwater permits, as required by s. 283.33, Stats., and to implement the appropriate performance standards of subchapters III and IV of chapter NR 151.

The Village of Kohler, Cities of Sheboygan and Sheboygan Falls, and the Towns of Sheboygan and Wilson are obligated to meet the requirements of this rule and submit individual permit applications to the WDNR.

To address the negative impacts of polluted runoff on the streams, rivers, and lakes, and fulfill the public education and outreach component requirements of NR216, Sheboygan County, has formed a “clean water partnership” with the Cities of Sheboygan and Sheboygan Falls, the Villages of Howards Grove and Kohler, and the Towns of Sheboygan and Wilson. These municipalities have been working together to provide information and education to residents of the County, as well as working collaboratively to meet stormwater management goals.

### **Sheboygan County Erosion Control and Stormwater Management Ordinance**

Sheboygan County addresses erosion control and stormwater management activities through Chapter 75 of County Code of Ordinances. This ordinance applies to erosion control and stormwater management activities for unincorporated areas of the County, with a few exceptions, which are laid out in the ordinance. Having more stringent ordinances in place, the towns of Sheboygan and Wilson do not fall under the jurisdiction of the County’s stormwater ordinances.

The Sheboygan County stormwater management ordinance, administered by the county Land and Water Conservation Department (LWCD), aims to minimize threats to public health, safety, welfare, and the aquatic environment by limiting the rate of runoff and sediment loads discharged from development to the waters of the State and regulatory wetlands in Sheboygan County.

The purpose of the ordinance includes the following:

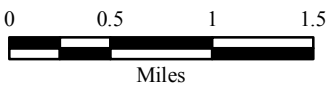
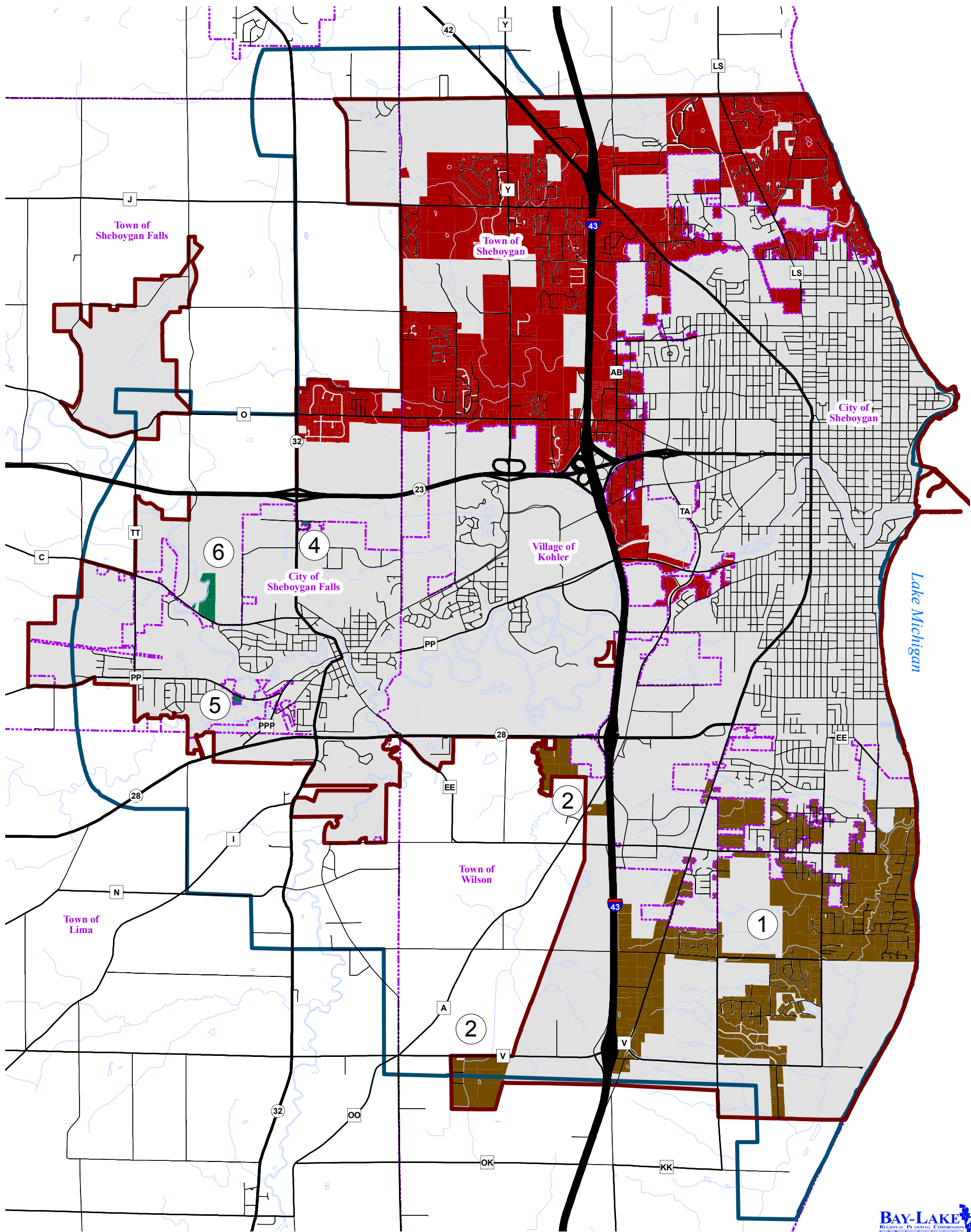
- Controlling sediment loss from the site during construction.

- Maintaining pre-development runoff rates for the 2-, 10-, and 100-year storm events after construction.
- Reducing total suspended sediment loads from new development, re-development, and in-fill development.
- Promote infiltration practices such that the increase in runoff volumes and loss of groundwater recharge are to some extent mitigated.

# Wastewater Treatment Service Areas

Sheboygan Urbanized Area SSA  
Sheboygan, Wisconsin

2030 Sheboygan Urbanized Area Sewer Service Plan



- Sheboygan Regional Wastewater Treatment Service Area
- Town of Sheboygan SD #2
- Town of Sheboygan Falls SD
- Town of Wilson SD
- ④ - Town of Sheboygan Falls SD #4
- ⑤ - Town of Sheboygan Falls SD #5
- ⑥ - Town of Sheboygan Falls SD #6
- ① - Town of Wilson SD #1
- ② - Town of Wilson SD #2

### Base Map Features

- Sheboygan SSA
- Interstate Highway
- State Highway
- County Highway
- Local Road
- MCD Boundary
- Surface Water

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Note: SD = Sanitary District

## **CHAPTER 5: DEMOGRAPHIC TRENDS AND PROJECTIONS**

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Many factors affect the future growth of a community. These factors can generally be included in the following three broad-based categories:

1. Political, social, and economic conditions that affect population change;
2. Natural, environmental, and engineering limitations that affect development; and
3. Existing growth patterns.

Of these, the first category is most often the hardest to predict with accuracy. The best method to evaluate these factors is to provide a population increase estimate (projection) and apply that growth to various areas. This will allow for economic evaluation of alternative locations for future growth. Physical factors directly affect where the future development should occur. These factors can make development in some areas physically difficult, uneconomical, or undesirable. Examples of limiting physical factors include: wetlands, floodplains, shorelands, steep slopes (or highly erodible soils) near surface waters. Existing growth influences development through the location and extension of necessary public facilities and utilities. If future growth is allowed to go uncontrolled and developable areas are abundant, development is likely to occur in a scattered manner.

Careful analysis of all of these factors will provide a basis for projecting and guiding growth within the planning area. This chapter examines these factors and how they may affect future growth in the Sheboygan Urbanized Area planning area.

In order to obtain a clear understanding of the planning area, important factors pertaining to the population of the area must be carefully analyzed. For the majority of the planning decisions, population analysis and projections play an important role for long-range planning.

### **POPULATION PROJECTIONS**

Projecting the future total populations within the planning area is of great importance in determining the finalized sewer service area boundary. The population size (past, present and projected) and household characteristics provides one indication of how much land will be needed for future land uses. The population distribution also provides an indication of where the various land uses and community facilities should be located in the future. The projections used come from the most recent Wisconsin Department of Administration (WDOA) Demographic Services report, *Wisconsin Population 2035: A Report on Projected State and County Populations and Households for the Period 2000-2035 and Municipal Populations, 2000-2030* (October 2008).

WDOA applies the cohort-component methodology, a method widely used by applied demographers in states that have comparatively steady population change. This model involves the review of recent historical patterns (in this current set of projections, the 1990-2000 period between the federal censuses and the 2000-2005 estimated population change) to produce base age- and sex-specific rates of fertility, mortality and migration. WDOA develops projected rates of fertility and mortality in relationship to national ones. On the whole, these projections are “base-lines” that take recent demographic experience and carry those experiences into the future, incorporating likely modifications as the population ages.

Although a couple of the municipalities within the Sheboygan Urbanized Area planning area have experienced population declines, the population of the area as a whole has increased in population since 1980 (Table 5.1).

WDOA projected the Sheboygan Urbanized Area planning area to have a population of 84,510 persons by 2030. This would be an increase of 9,236 persons from the 2010 Census population of 75,274 persons. According to WDOA, the towns of Sheboygan Falls and Mosel are expected to continue declining in population through 2030.

**Table 5.1: Population and Projections**

Municipality					WDOA Population Projections <sup>1</sup>					2010-2030	
	1980	1990	2000	2010	2010	2015	2220	2025	2030	Number Change	Percent Change
<b>Cities</b>											
Sheboygan	48,085	49,587	50,792	49,288	50,993	51,541	52,150	52,624	52,862	3,574	7.3%
Sheboygan Falls	5,253	5,823	6,772	7,775	7,748	8,275	8,816	9,338	9,819	2,044	26.3%
<b>Villages</b>											
Kohler	1,651	1,817	1,926	2,120	2,102	2,192	2,286	2,373	2,452	332	15.7%
<b>Towns</b>											
Sheboygan Falls	2,281	1,908	1,706	1,718	1,688	1,653	1,619	1,580	1,534	-184	-10.7%
Sheboygan	3,962	3,866	5,874	7,271	7,669	8,324	8,992	9,643	10,252	2,981	41.0%
Lima	2,809	2,715	2,948	2,982	2,962	3,001	3,044	3,079	3,101	119	4.0%
Mosel	1,035	918	839	790	786	769	753	735	715	-75	-9.5%
Wilson	3,604	2,931	3,227	3,330	3,478	3,558	3,641	3,716	3,775	445	13.4%
<b>Planning Area Total</b>	<b>68,680</b>	<b>69,565</b>	<b>74,084</b>	<b>75,274</b>	<b>77,426</b>	<b>79,313</b>	<b>81,301</b>	<b>83,088</b>	<b>84,510</b>	<b>9,236</b>	<b>12.3%</b>

1. WDOA Population Projections are based on the 2000 US Census population.

Source: U. S. Census for years cited; WDOA 2009 Population Estimate, WDOA Population Projections; and BLRPC; 2011.

## **HOUSING PROJECTIONS**

Another determining factor in allocating acreage for the sewer service area is that of household size, or more commonly referred to as “persons per household.” The projected number of persons per household is expected to decline throughout the 20-year planning period throughout the planning area and within respective municipalities. Table 5.2 depicts the most recent WDOA current and projected persons per household figures for the Sheboygan Urbanized Area planning area municipalities.

**Table 5.2: Persons Per Household**

Municipality	Year						
	2000	2005	2010	2015	2020	2025	2030
<b>Cities</b>							
Sheboygan	2.39	2.36	2.32	2.30	2.28	2.27	2.25
Sheboygan Falls	2.39	2.36	2.32	2.30	2.28	2.27	2.25
<b>Villages</b>							
Kohler	2.61	2.58	2.54	2.52	2.50	2.48	2.46
<b>Towns</b>							
Sheboygan Falls	2.59	2.56	2.52	2.50	2.48	2.46	2.44
Sheboygan	2.73	2.70	2.66	2.64	2.62	2.60	2.57
Lima	2.81	2.78	2.74	2.71	2.69	2.67	2.65
Mosel	2.85	2.82	2.78	2.76	2.74	2.70	2.67
Wilson	2.59	2.56	2.52	2.50	2.48	2.46	2.44
<b>Sheboygan County</b>	<b>2.51</b>	<b>2.48</b>	<b>2.44</b>	<b>2.42</b>	<b>2.41</b>	<b>2.39</b>	<b>2.37</b>

Source: WDOA Household and Household Population Projections, 2005 - 2030; and BLRPC; 2011.

Persons per household figures relate directly to future land uses. Positive population projections divided by household size yields the number of additional dwelling units needed to house the increased population, as shown in Table 5.3. A total of 4,213 dwelling units are projected to be needed by 2030. The towns of Sheboygan Falls and Mosel are projected to experience a decrease in population, resulting in no increase in housing units.

**Table 5.3: Housing Projections**

<b>Municipality</b>	<b>2000</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>Population Change 2000-2030</b>	<b>Projected Dwelling Units Needed by 2030</b>
<b>Cities</b>								
Sheboygan	50,792	50,993	51,541	52,150	52,624	52,862	2,070	867
Sheboygan Falls	6,772	7,748	8,275	8,816	9,338	9,819	3,047	1,277
<b>Villages</b>								
Kohler	1,926	2,102	2,192	2,286	2,373	2,452	526	201
<b>Towns</b>								
Sheboygan Falls	1,706	1,688	1,653	1,619	1,580	1,534	-172	0
Sheboygan	5,874	7,669	8,324	8,992	9,643	10,252	4,378	1,601
Lima	2,948	2,962	3,001	3,044	3,079	3,101	153	54
Mosel	839	786	769	753	735	715	-124	0
Wilson	3,227	3,478	3,558	3,641	3,716	3,775	548	212
<b>Planning Area Total</b>	<b>74,084</b>	<b>77,426</b>	<b>79,313</b>	<b>81,301</b>	<b>83,088</b>	<b>84,510</b>	<b>10,426</b>	<b>4,213</b>

Source: U.S. Census, 2000; WDOA, 2009; and BLRPC, 2011.

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## CHAPTER 6: SEWER SERVICE AREA ANALYSIS

As was documented in the preceding chapters of this document, a variety of physical and socio-economic factors contribute to the future growth of a community. An analysis of some of these factors may provide some insight into the anticipated growth patterns of an area enabling the guidance of such growth in a logical and cost-effective manner. This chapter presents the factors that were utilized in determining the Sewer Service Area boundary for the Sheboygan Urbanized Area.

### **LAND USE PROJECTIONS AND ALLOCATIONS**

The delineation of the final sewer service area boundary consisted of the following four steps to derive the land use projections and allocations.

- 1) 20-year projection of population (to the year 2030) (see Chapter 5);
- 2) application of density ratio methodology to the projections to determine acres needed for future development;
- 3) modification of the land use allocation based on local policies and locally adopted plans through an iterative review process; and
- 4) delineation of a sewer service area boundary based on the results.

A number of models were reviewed by the SSA TAC to guide delineation of the sewer service area boundary. The *population density model* was selected as the most conservative projection to represent the anticipated growth for the planning area.

### **Land Use Projections Methodology**

The acres needed for future development for the design year of 2030 was based on a *population density model* that used land use density ratios (Table 6.1) derived from 2009 land use mapping and the 2010 population for each community in the Sheboygan Urbanized Planning Area to determine the persons per developed acre and the persons per residential acre. Referring to Table 6.2, a total of 3,914 acres are projected to be needed to accommodate future growth to 2030.

**Table 6.1: Land Use Density Ratios, Sheboygan Urbanized Planning Area**

Geographic Area	2010 Population	2009 Developed Land (Acres)	2009 Residential Land (Acres)	Percent Residential Land	Persons Per Developed Acre	Persons Per Residential Acre
<b>Cities</b>						
Sheboygan	49,288	7,449.0	3,662.6	49.2%	6.62	13.46
Sheboygan Falls	7,775	2,415.7	940.3	38.9%	3.22	8.27
<b>Villages</b>						
Kohler	2,120	2,230.1	255.1	11.4%	0.95	8.31
<b>Towns</b>						
Sheboygan Falls	1,718	3,865.2	621.3	16.1%	0.44	2.77
Sheboygan	7,271	4,070.1	1,625.1	39.9%	1.79	4.47
Lima	2,982	2,924.6	835.1	28.6%	1.02	3.57
Mosel	790	2,411.4	301.2	12.5%	0.33	2.62
Wilson	3,330	4,522.2	837.3	18.5%	0.74	3.98
<b>Total</b>	<b>75,274</b>	<b>29,888.2</b>	<b>9,078.1</b>	<b>30.4%</b>	<b>2.52</b>	<b>8.29</b>

Source: 2010 US Census, 2011; WDOA Projections, 2010; and 2009 Land Use, Bay-Lake Regional Planning Commission, 2011.



**Table 6.2: Acreage Needed to 2030 - Population Density Model, Sheboygan Urbanized Planning Area**

Geographic Area	2010 Population	2030 Projection*	Population Change	Persons Per Developed Acre	Persons Per Residential Acre	Acres Need for Development**	
						Total	Residential
<b>Cities</b>							
Sheboygan	49,288	52,862	3,574	6.62	13.46	540.1	265.6
Sheboygan Falls	7,775	9,819	2,044	3.22	8.27	635.1	247.2
<b>Villages</b>							
Kohler	2,120	2,452	332	0.95	8.31	349.2	40.0
<b>Towns</b>							
Sheboygan Falls	1,718	1,534	(184)	0.44	2.77	NA	NA
Sheboygan	7,271	10,252	2,981	1.79	4.47	1,668.7	666.3
Lima	2,982	3,101	119	1.02	3.57	116.7	33.3
Mosel	790	715	(75)	0.33	2.62	NA	NA
Wilson	3,330	3,775	445	0.74	3.98	604.3	111.9
<b>Total</b>	<b>75,274</b>	<b>84,510</b>	<b>9,236</b>	<b>1.89</b>	<b>5.93</b>	<b>3,914</b>	<b>1,364</b>

Source: 2010 US Census, 2011; WDOA Projections, 2010; and 2009 Land Use, Bay-Lake Regional Planning Commission, 2011.

Notes:

\*WDOA Projections based on 2000 Census

\*\* Formula: Population Change / Persons Per Acre

N.A. - No Allocation (negative #)

### **Available Acreage for Future Growth**

Although 3,914 acres are projected to be needed for future growth of the Sheboygan Urbanized Planning Area, no additional acreage is needed within the delineated SSA boundary because there is sufficient available acreage (between vacant and undeveloped lands) with 11,469 acres available to accommodate projected future growth to 2030 (Table 6.3).

**Table 6.3: Available Acreage<sup>1</sup>, Sheboygan Urbanized Area Sewer Service Area**

	Residential	Industrial and Commerical	Parks and Recreation	Institutional and Gov'tal	Agricultural and Natural Areas	Total
Acreage Available	8	29	0	0	11,432	11,469

Source: Bay-Lake Regional Planning Commission, 2011.

1. Available Acreage = vacant lands + undeveloped lands

### **SSA BOUNDARY DETERMINATION**

As discussed above, no additional land would be required within the Sheboygan Urbanized Area SSA to meet future growth. Based on this determination, coupled with consensus of the SSA TAC, it was determined after considerable deliberations that there would be no change to the sewer service area boundary. However, due to changes in the accuracy of parcel mapping over the years, the SSA boundary was no longer consistent with parcel lines. Therefore, the SSA TAC decided to revise the SSA boundary to follow roads and parcel lines where they most closely match the original intent of the SSA boundary.

After “clean-up” of the mapping for the SSA boundary, the area of the SSA boundary decreased a bit from 32,465 acres to 31,769 acres, a difference of 696 acres.

### **Sheboygan Urbanized Area SSA Boundary**

Map 6.1 depicts the delineated sewer service area. Note that areas within 200-foot buffer from a road centerline, outside of the SSA boundary, could be served when the SSA boundary is on a roadway, with the exception that pressure lines cannot serve such extensions.

The Sheboygan Urbanized Area Sewer Service Area boundary encompasses approximately 31,769 acres. Environmentally sensitive areas (ESAs), as depicted on Map 3.1, are displayed within the delineated SSA boundary. ESAs comprise approximately 5,839 acres (18.4 percent) of the SSA.

This boundary configuration aids in the protection of environmentally sensitive areas, provides adequate acreage of developable lands for the SSA, and allows for flexibility in terms of the future locations for development.

Location of an area within the sewer service area boundary does not mean that it is to be immediately served by public sewers, nor does it guarantee that it will ever be served by public sewer. Decisions concerning timing of services, the conditions of service, or whether to provide sewer service are controlled by the Sheboygan Urbanized Area SSA TAC and the Sheboygan Regional Wastewater Treatment Facility. However, as a general rule, the extension of sewers should be carried out so that areas that are presently undeveloped and are contiguous to the wastewater collection system and/or that can be served by existing wastewater collection facilities are developed prior to areas requiring the development of new collection facilities.

The sewer service area boundary lines are drawn as near to scale as possible. Generally the sewer service area lines are drawn to follow municipal boundaries, quarter section lines (or fractions thereof), parcel lines, the center line of roads or streams, or a fixed distance from the aforementioned features. The boundary lines are tied to the Sheboygan County Coordinate System on the county base map, and has real world coordinates in a geographic information system (GIS).

### **SSA Boundary Description**

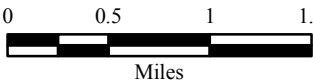
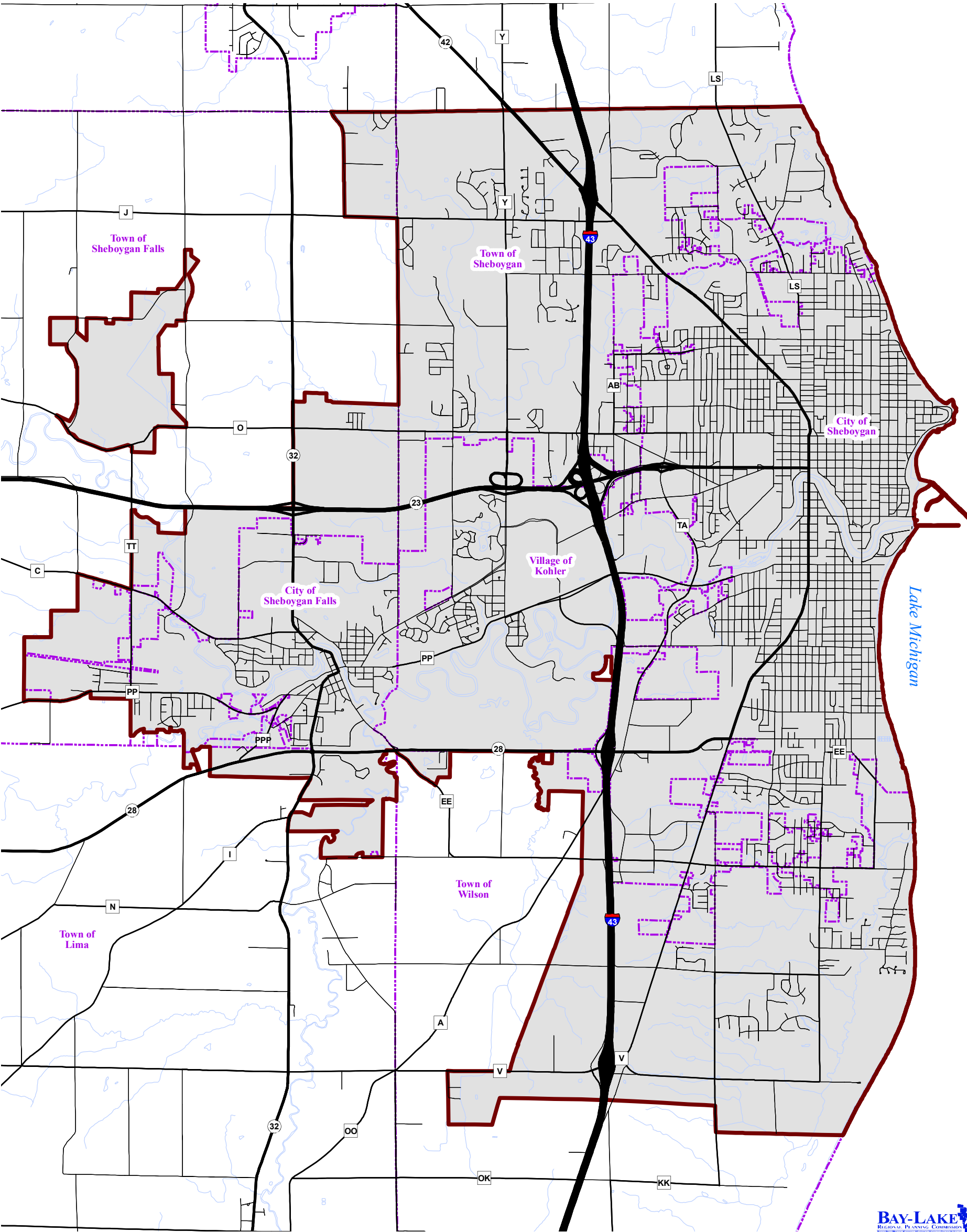
Appendix A provides a detailed written boundary description for the 2030 Sheboygan Urbanized Area SSA boundary.


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# Sheboygan Urbanized Area SSA







Sheboygan, Wisconsin

2030 Sheboygan Urbanized Area Sewer Service Plan



 Sheboygan SSA

### Base Map Features

-  Interstate Highway
-  State Highway
-  County Highway
-  Local Road
-  MCD Boundary
-  Surface Water

This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only. Bay-Lake RPC is not responsible for any inaccuracies herein contained. Source: Sheboygan County; Bay-Lake Regional Planning Commission, 2011.

## **CHAPTER 7: PLAN IMPLEMENTATION AND INSTITUTIONAL STRUCTURE**

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The success of any planning program can best be measured by the extent to which the program is implemented and by how well the plan provides a framework for further investigation into the problems or issues being addressed.

The following sections describe the institutional mechanism for implementing this plan. These include:

- Technical Advisory Committee;
- Procedures for Sewer Extension Review;
- Wastewater Treatment Facility Review;
- Subdivision Review for Plan Conformance;
- Sewer Service Area Boundary Amendments;
- Plan Amendments; and
- Plan Update.

### **TECHNICAL ADVISORY COMMITTEE**

The Technical Advisory Committee (TAC) is the board of members that assisted the Bay-Lake RPC in creating the SSA plan. The responsibility of the TAC is to provide information, guidance, and recommendations for the proposals and future development within the Sheboygan Urbanized Area Sewer Service Plan boundaries. The TAC shall assist Bay-Lake RPC in overseeing development so that it proceeds in accordance with the goals, objectives, and policies of this plan and that all necessary actions be implemented by the Bay-Lake RPC to advance development that is in agreement with this plan. The TAC consists of eight representatives, with each municipality having the following number of committee members and votes:

<u>Municipality</u>	<u>Committee Members/Votes</u>
C. Sheboygan	4
C. Sheboygan Falls	1
V. Kohler	1
T. Mosel	1
T. Sheboygan	1
T. Sheboygan Falls	1
T. Wilson	1
Sheboygan County	1

The Wisconsin Department of Natural Resources and the Bay-Lake Regional Planning Commission staff representatives attend the TAC meetings as ex-officio, non-voting members.

### **PROCEDURE FOR SEWER EXTENSION REVIEWS**

With the final approval of this plan, WDNR will require that applications for sewer extensions in the Sheboygan Urbanized Area SSA be reviewed by Bay-Lake RPC to determine if the extensions are in conformance with the sewer service plan. This local review process is illustrated in Figure 7.1 and is outlined below:

1. The Sheboygan Urbanized Area or their consulting engineers should submit a letter and a plan map of the proposed sewer extension to the Bay-Lake RPC (via mail or email).

To avoid delays, this **submittal shall be made early in the planning process, prior to completing detailed plans and specifications for the project.** Submitting the plans early will ensure that local review is made prior to submittal of the plans to WDNR and that costly detailed sewer design and specification documents are not prepared for areas that do not conform to the plan and are subsequently rejected by WDNR.

2. The Bay-Lake RPC will review all submissions for sewer extension projects and will provide a recommendation as to whether or not the proposed project is in conformance with the plan.
3. The Bay-Lake RPC will review all submissions and will provide the applicant with a review letter within 15 days of receipt of the plan map.

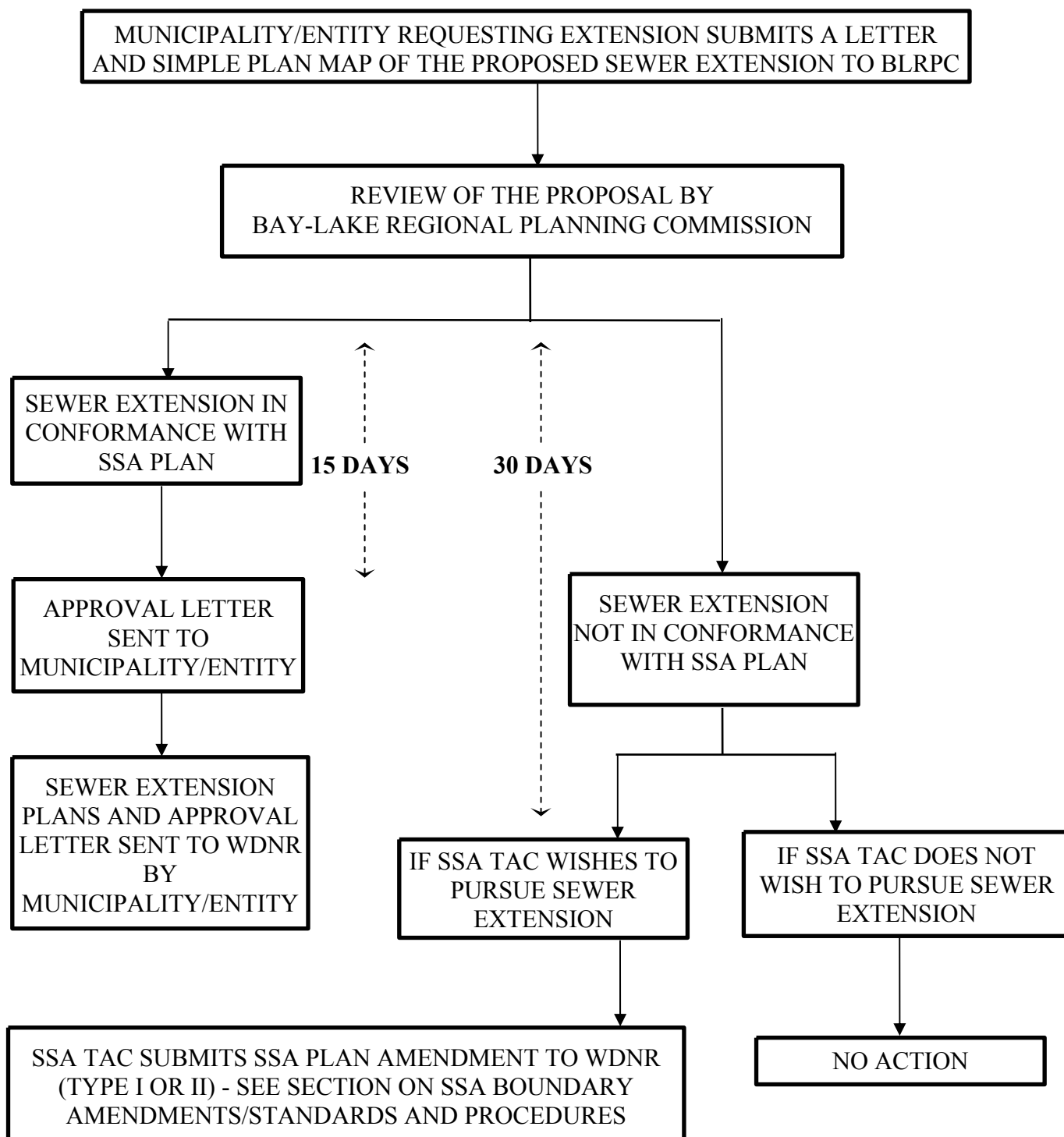
If the proposed sewer extension is in conformance with the plan, the letter should be attached to the sewer extension plans that are submitted to WDNR by the applicant. Additionally, the Bay-Lake Regional Planning Commission will notify the affected municipality within the Sheboygan Urbanized Area of the issuance of a conformance letter.

4. If the proposed extension is not in conformance with the plan or if there are questions about consistency, the applicant and the Sheboygan Urbanized Area SSA TAC will be notified by letter within 30 days.
  - a) The TAC should then decide if it wishes to further pursue the sewer extension. If not, no further action is necessary.
  - b) If the sewer extension is pursued, the plan must be amended in order for the proposed extension to be in conformance with the plan. The process for adopting plan amendments is discussed in the section titled, “*Sewer Service Area Boundary Amendments: Standards and Procedures.*”

Note: After the plan is amended, the proposed sewer extension request should be resubmitted as discussed in number 1 above.

5. Additionally, in accordance with NR 113.07(1)(e), proposals for large holding tanks (greater than 3,000 gpd) would require an amendment to the plan.

**Figure 7.1: Flow Diagram of Procedure for Sewer Extension Review**



Source: Bay-Lake Regional Planning Commission, 2011.

## **WASTEWATER TREATMENT FACILITIES REVIEW**

The *Sheboygan Urbanized Area Sewer Service Plan* does not anticipate that there will be any need for additional sewage treatment facilities to serve non-industrial development in the planning area. Any sewage collection facilities built within the established 20-year sewer service area should be connected to existing wastewater treatment plants.

Proposals for new wastewater treatment facilities are subject to WDNR regulations, including NR 110.08(5), which states: “*It is the policy of the department to restrict the construction of new sewage treatment facilities in order to preserve and protect the quality of the waters of the state.*” This policy is defined by the other specific requirements found in NR 110.08(5). These requirements generally serve to discourage or disallow new wastewater treatment plants, especially small private plants, but whether any particular proposal for a new or upgraded facility is approved depends on the particular circumstances involved.

It should also be noted that NR 110 regulations apply to regulated facilities discharging to surface water or upon the ground surface, as opposed to Privately Owned Wastewater Treatment Systems (POWTS) discharging into the soil subsurface, which are regulated by the Wisconsin Department of Safety and Professional Services in the Safety and Buildings Division. POWTS greater than 12,000 gallons per day require WDNR concurrence as well. Larger, regional wastewater facilities are usually preferable for the following reasons:

- Economies of scale exist in the construction, operation, and maintenance of regional treatment plants.
- Owners of small treatment plants generally have less financial capability to hire a competent operator and carry out necessary maintenance and repairs.
- The administrative costs are greater with the regulation of large numbers of small plants.
- In urban areas, there is usually a significant investment of public dollars in existing treatment plants designed to serve all anticipated development in the urban area; the provision of additional treatment facilities in these areas is not cost-effective.

Note: It is also recognized by the WDNR that connection to an existing treatment facility is not always cost-effective or environmentally sound and there may be instances where a small sewage treatment facility is the most feasible solution.

Additional treatment facilities to serve residential, commercial, or public facilities should not be approved by the Sheboygan Urbanized Area SSA TAC as being in conformance with this plan unless it is documented that it is cost-effective, environmentally-sound, and in the best interest of the municipality.

One common reason for the construction of a small wastewater treatment facility is to provide interim sewage treatment service to an area of development until sewers may be extended to serve that area. At such time public sewers are extended to serve the development, the treatment plant may be phased out. This approach may be used to solve wastewater treatment problems in areas that are not currently considered to be cost-effective for regional sewer extensions.

If new wastewater treatment is needed in a particular circumstance, it should only be approved if it satisfies the requirements for specific situations specified in Section 110.08(5) of the Wisconsin Administrative Code. These situations and subsequent requirements include:



1. Treatment Facility to Serve Existing Residential Development: It is necessary to solve a documented and severe existing water quality (groundwater or surface water) or public health problem related to failing on-site systems; or, it is needed to replace an existing treatment facility which is not in compliance with its Wisconsin Pollutant Discharge Elimination System (WPDES) permit.
  - It is the cost-effective solution to the existing problem.
  - It is municipally owned, operated, and maintained.
2. Interim Treatment Facility: It is necessary to solve a documented and severe existing water quality (groundwater or surface water) or public health problem related to failing on-site systems; or it is needed to replace an existing treatment facility which is not in compliance with its WPDES permit.
  - It is the most cost-effective solution to the existing problem.
  - It is municipally owned, operated, and maintained.
  - The sewage collection system is designed so that it may be easily connected to the regional system in the future.
  - The service area of the proposed system lies entirely within the planned service area of the regional system as delineated in this plan.
  - An agreement is signed by all involved municipalities that provides for a specified date of abandonment and connection; this inter-municipal agreement shall be reviewed and approved by the WDNR prior to facilities plan approval; the WPDES permits shall contain schedules for facilities abandonment and connection.
3. Treatment Facility Serving Isolated Non-Residential Development: The development may not be more rationally and efficiently located in an urban area and thus be accommodated by an existing municipal plant.
  - Joint treatment with adjacent wastewater treatment system is not feasible.
  - The proposed facility is designed to handle only the waste generated by the development.
  - The WPDES permit limits service to the development specified in number 3.
  - In the case of a commercial facility, only commercial facilities that serve and facilitate travel on public highways.
4. Treatment Facility to Serve New Residential Development: Proposals for a new treatment facility intended to serve new residential development may be denied.

Note: Variances may be granted only after the general public interest, environmental impacts, and socioeconomic impacts have been considered as well as the impact on orderly development and the provision of general government services and the following criteria have been met:

- The proposal is consistent with the responsibility to protect, maintain, and improve water quality management.
- It is municipally owned, operated, and maintained.

- It is the cost-effective solution to the problem.
- All other federal, state, and local approvals and permits have been obtained.

### **SSA BOUNDARY AMENDMENTS: STANDARDS AND PROCEDURES**

Since unanticipated development may occur beyond that acreage which was determined necessary for the 20-year sewer service area boundary, a mechanism for reviewing and revising the service area boundary is essential. Amendments will provide the municipalities of the Sheboygan Urbanized Area and private developers with the needed flexibility to incorporate community growth, additional technical data, new community needs, and ongoing public input into the sewer service planning process.

The Bay-Lake RPC will review amendment requests and forward them to the TAC, maintain the records of boundary amendments, review requests for sewer extensions, and update the service area boundary map.

Two types of amendments to the service area boundaries may be expected: *Type I Amendments* and *Type II Amendments*.

*Type I Amendments* are required when the service area boundary changes but the total acreage is not increased. The amendment would be reviewed by Bay-Lake RPC and the TAC and, if approved according to the Amendment Procedures, a request for a sewer service area amendment is forwarded to the WDNR.

*Type II Amendments* would result in an increase in the service area acreage. This type of amendment would be used to add to the total acres that have been projected for land development up to the existing corporate limits or for municipalities that are experiencing population growth in excess of that projected in the plan. The amendment would be reviewed by Bay-Lake RPC and the TAC and, if approved according to the Amendment Procedures, a request for a sewer service area amendment is forwarded to the WDNR.

In both types of amendments, procedures were developed to provide a fair and reasonable means of reviewing service area boundary changes. These procedures include public notice, public comment period, public hearings, and public records of the proceedings of the hearing. The public notice shall be published in the official paper of the municipality affected by the change. All costs associated with the preparation and publishing of the public notice shall be borne by the petitioner.

Standards were established to provide a framework for analyzing the merits of proposed SSA boundary amendments and to identify basic parameters necessary for amendment evaluation. These amendment standards and their established procedures are outlined below.

#### **Amendment Standards**

To provide an equitable and uniform basis for revising the sewer service boundaries, all proposed amendments that would shift or add acreage to the service area shall meet standards one through six, and number seven when applicable.

1. There shall be minimal adverse impacts on environmental corridors and water quality as a result of development stimulated by the amendment.

2. Existing or planned sewage treatment facilities must have sufficient capacity to treat the projected wastewater flows generated by the added territory.
3. The SSA boundary amendment area must be in conformance with the local comprehensive plans adopted under s. 66.1001, *Wis. Stats.* and zoning regulations and the established goals and objectives of this plan.
4. The configuration of sewer service area boundaries may be modified provided that the amendment area has a common boundary with the current sewer service area and will not create a void within the sewer service area (i.e. no satellites or voids).
5. Modifications of the boundary can be shown to be cost-effective, orderly, and a logical extension of urban development.
6. The delivery of other services by the existing and proposed community facilities (i.e. parks, schools, fire protection, etc.) will be available and will be provided for the amended area.
7. When the projected number of acres of the *Sheboygan Urbanized Area Sewer Service Plan* have been developed, the service area may be increased by amending the boundary when it can be demonstrated that:
  - a) the current population growth rate exceeds the plan's projected population growth rate for the municipality; and
  - b) the population density standard is modified by the TAC to reflect quantifiable changes in the municipality population distribution.

Annexations or detachments of territory (as defined in s. 66, *Wis. Stats.*) within the boundaries of the sewer service area do not constitute amendments to the SSA boundary and are therefore not subject to amendment procedures.

### **Amendment Procedures**

**Type I Amendment:** A municipality amends the service area boundaries without increasing the land area the municipality has within its sewer service boundary. For every acre added to the municipality's service area, an area of developable land of equal size is removed. For this type of amendment, the following procedure is used (a flow diagram of this procedure is shown in Figure 7.2):

1. A petition to include or exclude a particular area from the Sheboygan Urbanized Area SSA is filed by the municipality. The petition shall include the following:
  - a) a map showing the location of the properties;
  - b) general development plans for the area including land use proposals and a preliminary timetable for implementing the development plan;
  - c) an indication of the specific service needs of the site (i.e., sewer and water line size, water pressure, roadways, etc.); and

- d) a check for \$1,000 from the developer of the property to the Bay-Lake Regional Planning Commission to cover some of the costs associated with the development of the staff report prepared for the WDNR.
2. The municipality refers the petition to the Bay-Lake RPC for initial review. The Bay-Lake RPC conducts an initial review, develops a recommendation, compiles information for the TAC, and forwards the request to the TAC. The TAC reviews the request and develops a recommendation to the WDNR.
3. Within **60 days** of the Bay-Lake RPC receiving a completed amendment application, the TAC holds a public meeting and public hearing on the petition following publication of a Class 1 Notice according to s. 985, *Wis. Stats.* The public notice shall be published in the official paper of the municipality affected by the request. All costs associated with the preparation and publishing of the public notice shall be borne by the petitioner.

Representatives submitting the petition, Bay-Lake RPC staff, WDNR staff, and interested citizens may testify. A record of the public hearing proceedings and testimony shall be maintained by the Bay-Lake RPC on behalf of the TAC.
4. The TAC shall review the recommendations and take final action on the amendment request. All or any part of the petitioned land may be added to the service area along with additional safeguards or conditions deemed necessary by the TAC to carry out the intent of the sewer service area amendment standards.

In formulating a recommendation, Bay-Lake RPC and the TAC should consider citizen input received at the meeting; comments from other local committees and the WDNR; conformance with community plans; development trends in the area; possible impacts on the physical environment; and conformance with the adopted sewer service plan goals and objectives and the amendment standards. Land recommended for removal from the service area should have a low development potential in terms of recent development trends within the municipality, inadequate urban services, unique environmental features, or poor site conditions due to soils or groundwater. Additionally, signed statements from affected landowners acknowledging withdrawal from the sewer service area will be required.

Amendments approved by the TAC shall be transmitted by Bay-Lake within **30 days** of the Public Hearing.

5. The Bay-Lake RPC shall develop a Staff Report for the amendment and submit it to WDNR within **30 days** after the TAC has transmitted their recommendation to the Bay-Lake RPC.
6. The WDNR will review the amendment and approve or deny it in writing to the municipality and the Bay-Lake RPC. If the WDNR rejects the amendment, their decision may be appealed in accordance with the procedures in s. 227.52 and 227.53, *Wis. Stats.*, which allows for a party to file a petition for judicial review. Approval conflicts between the WDNR and the TAC must be resolved before sewer lines are extended into any new area.

Note: The WDNR should normally approve the amendment within approximately 45 days unless an environmental assessment (EA) is deemed necessary in accordance with NR 150. If an EA is required, the WDNR will prepare it and issue a public notification to allow for

receipt of public comments to be considered prior to final approval. When an EA is required, the WDNR review period may extend to approximately three months or more. An EA is normally required if the amendment proposal delineates an area of over 1,000 acres that may be served with sewer, or if it may result in the sewered area increasing by more than five (5) percent per year. The WDNR may require an EA under any project circumstances if they determine the proposal has the potential to cause significant environmental effects and may involve unresolved conflicts in the use of available resources.

**Type II Amendment:** A municipality amends the sewer service boundary to increase the total acreage of the service area.

It was previously stated that Type II Amendments would be used when the Sheboygan Urbanized Area Sewer Service boundary is modified to accommodate land for new development over the next 20 years, or for municipalities that are experiencing growth in excess of that projected in the sewer service plan. In addition, the plan will be reviewed every two and a half years and updated every five years to incorporate modifications to the service boundary based upon unanticipated growth occurrences. When a Type II Amendment is made, the following procedure is used (a flow diagram of this procedure is shown in Figure 7.2):

1. If the municipality receives a development petition that requires the expansion of the sewer service area, a boundary amendment petition is submitted to the municipality. If the municipality seeks to expand the sewer service boundary beyond the allotted acreage, a petition shall be sent to the Bay-Lake RPC and TAC for review. The petitioner's request should include:
  - e) Comparisons of population projections of the sewer service plan with actual population increases in the municipality.
  - b) Comparisons of land acreage projections in the plan with the actual amount of vacant land.
  - c) Provide data on the current development density of the municipality.
  - d) Supply information on the capacity of existing sewer lines and treatment facilities to serve the area proposed for additions to the sewer service boundary.

The petitioner's request shall include a check for \$1,000 to the Bay-Lake Regional Planning Commission to cover some of the costs associated with the development of the staff report prepared for the WDNR.

2. The Bay-Lake RPC conducts an initial review, develops a recommendation, compiles information for the TAC, and forwards the request to the TAC. The TAC reviews the request and develops a recommendation to the WDNR.
3. Within **60 days** of the Bay-Lake RPC receiving a completed amendment application, the TAC holds a public meeting and public hearing on the petition following publication of a Class 1 Notice according to s. 985, *Wis. Stats.* The public notice shall be published in the official paper of the municipality affected by the request. All costs associated with the preparation and publishing of the public notice shall be borne by the petitioner.

Representatives submitting the petition, Bay-Lake RPC staff, WDNR staff, and interested citizens may testify. A record of the public hearing proceedings and testimony shall be maintained by the Bay-Lake RPC on behalf of the TAC.

4. The TAC shall review the recommendations and take final action on the amendment request. All or any part of the petitioned land may be added to the service area along with additional safeguards or conditions deemed necessary by the TAC to carry out the intent of the sewer service area amendment standards.

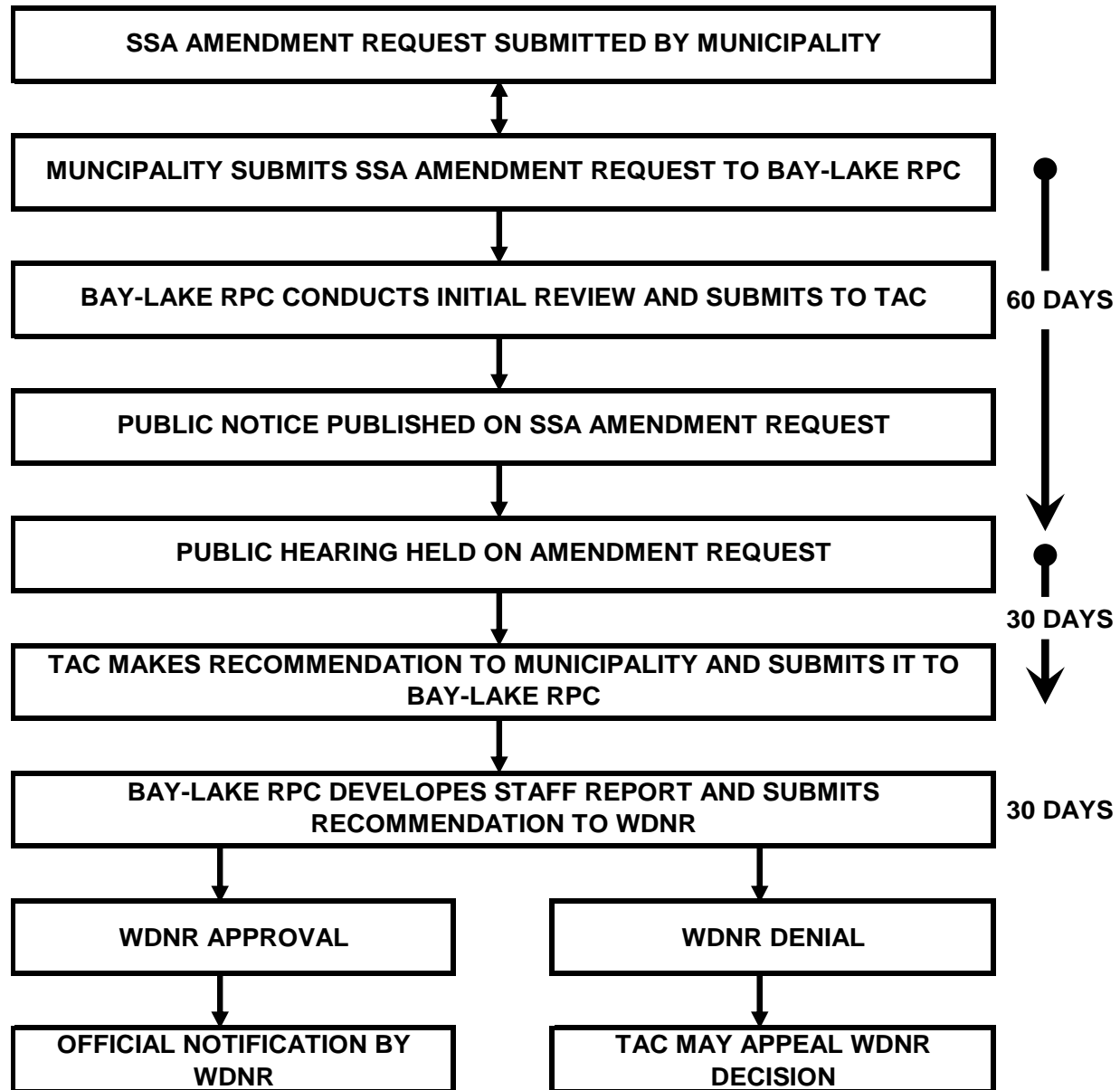
In formulating a recommendation, Bay-Lake RPC and the TAC should consider citizen input received at the meeting; comments from other local committees and the WDNR; conformance with community plans; development trends in the area; possible impacts on the physical environment; and conformance with the adopted sewer service plan goals and objectives and the amendment standards. Land recommended for removal from the service area should have a low development potential in terms of recent development trends within the municipality, inadequate urban services, unique environmental features, or poor site conditions due to soils or groundwater. Additionally, signed statements from affected landowners acknowledging withdrawal from the sewer service area will be required.

Amendments approved by the TAC shall be transmitted by Bay-Lake within **30 days** of the Public Hearing.

5. The Bay-Lake RPC shall develop a Staff Report for the amendment and submit it to WDNR within **30 days** after the TAC has transmitted their recommendation to the Bay-Lake RPC.
6. The WDNR will review the amendment and approve or deny it in writing to the municipality and the Bay-Lake RPC. If the WDNR rejects the amendment, their decision may be appealed in accordance with the procedures in s. 227.52 and 227.53, Wis. Stats., which allows for a party to file a petition for judicial review. Approval conflicts between the WDNR and the TAC must be resolved before sewer lines are extended into any new area.

Note: The WDNR should normally approve the amendment within approximately 45 days unless an environmental assessment (EA) is deemed necessary in accordance with NR 150. If an EA is required, the WDNR will prepare it and issue a public notification to allow for receipt of public comments to be considered prior to final approval. When an EA is required, the WDNR review period may extend to approximately three months or more. An EA is normally required if the amendment proposal delineates an area of over 1,000 acres that may be served with sewer, or if it may result in the sewered area increasing by more than five (5) percent per year. The WDNR may require an EA under any project circumstances if they determine the proposal has the potential to cause significant environmental effects and may involve unresolved conflicts in the use of available resources.

**Figure 7.2: Flow Diagram of Procedures for SSA Boundary Amendment (Type I and II)**



Source: Bay-Lake Regional Planning Commission, 2011.

## **OTHER AMENDMENTS TO THE PLAN**

All other portions of this SSA plan (including text, data, and maps) may be amended by the TAC. Proposed amendments shall be submitted to Bay-Lake RPC and forwarded to the members of the TAC at least seven (7) days prior to the meeting at which action on the amendment will be taken. Amendments approved by the TAC will be transmitted to the WDNR for review and final approval.

In accordance with NR 113.07(1)(e), proposals for large holding tanks (greater than 3,000 gpd) would require an amendment to the plan.

## **PLAN UPDATE**

A comprehensive review of the *Sheboygan Urbanized Area Sewer Service Plan* should be undertaken every 2 ½ years and updated, if necessary; otherwise updated every 5 years, with the first such review and update to be initiated by 2016. The update should include as a minimum:

1. A review and update of 2010 to 2015 population trends.
2. A review and update of population and demographic projections to the year 2035.
3. A review of population densities, household size, and urban development trends.
4. An assessment of impact from major land use changes or developments.
5. A review of any significant changes to environmentally sensitive lands.
6. A review and revision, if necessary, of the policy statements.
7. A description of relevant events occurring during the preceding five years that were made during the preceding five years.
8. A description of amendments to the plan and service area boundaries that were made during the preceding five years.
9. A review and revision of service area boundary extended to accommodate the area's population for the next 20-year planning period.
10. A review of changes in the institutional structure for plan review and implementation.
11. An update on citizen participation efforts.



## **APPENDIX A: SSA BOUNDARY DESCRIPTION**

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### **2030 Sheboygan Urbanized Area Sewer Service Area Boundary Description**

Note: A 200-foot buffer from a road centerline, outside of the SSA boundary, could be served when the SSA boundary is on a roadway, with the exception that pressure lines cannot serve such extensions.

Starting Point in the Northeast corner of the SSA at the intersection of the northern City of Sheboygan boundary and Lake Michigan. From there head west along the City boundary until joining the centerline of Playbird Road. Continue west along the centerline of Playbird Road until the intersection of Playbird Road and N Star Road. Continue south following the centerline of N Star Road until the intersection of N Star Road and County Highway J. Continue east along the centerline of County Highway J until the intersection of County Highway J and Rangeline Road. Continue south along the centerline of Rangeline Road until point (43.716055, -87.77108), then follow the parcel line west to point (43.765133, -87.812503), then follow the parcel line Northwest to point (43.7654, -87.813712), then follow the parcel line north to point (43.766371, -87.813709), then follow the parcel line west to point (43.766454, -87.81777), then follow the parcel line south to point (43.765219, -87.817756), then follow the parcel line west to point (43.764284, -87.819993). Continue south along the centerline of State Highway 32 until the intersection of State Highway 32 and State Highway 23. Continue west along the centerline of State Highway 23 until point (43.750812, -87.840157), then follow the parcel line south to point (43.747196, -87.840174), then follow the parcel line west to point (43.716055, -87.77108), then follow the parcel line north to point (43.748549, -87.845209), then follow the meandering parcel line northwest to point (43.750371, -87.849559), then follow the parcel line west to point (43.750385, -87.850251). Continue south along the centerline of County Highway TT until the intersection of County Highway TT and County Highway C. Continue west along County Highway C until the intersection of County Highway C and the northwest corner of the City of Sheboygan Falls boundary. Continue to follow the City of Sheboygan Falls boundary south, then west, then south, then west, then south until the boundary extended intersects with County Highway PP. Continue east along the centerline of County Highway PP until City of Sheboygan boundary heads south. Continue to follow boundary south, then east, then south to point

(43.719604, -87.850325), then follow the parcel line northeast to point (43.720594, -87.847811), then follow the parcel line south to point (43.720082, -87.847814), then follow the parcel line east to point (43.720056, -87.845301), then follow the meandering parcel line east to point (43.720062, -87.845275), then follow the parcel line south to point (43.715242, -87.840291), then follow the parcel line east to point (43.715243, -87.838996), then follow the parcel line north to point (43.715729, -87.838996), then follow the parcel line east to point (43.715729, -87.837919), then follow the parcel line southeast to point (43.714628, -87.837463), then follow the parcel line northeast to point (43.71468, -87.837224), then follow the parcel line northwest to point (43.717522, -87.838721), then follow the meandering parcel line northeast to point (43.718138, -87.835362), then follow the parcel line south to point (43.71415, -87.835369), then follow the parcel line east to point (43.713956, -87.816399). Continue south along the centerline of State Highway 32 until the intersection of the City of Sheboygan Falls boundary. Continue to follow the City of Sheboygan Falls boundary east, then southwest, then south, then west, then southwest, then northwest, then west until the intersection of State Highway 32. Continue south along the centerline of State Highway 32 until the intersection of the City of Sheboygan Falls boundary. Continue to follow the City of Sheboygan Falls boundary east, then meandering southwest, then south, then east, then north, then northeast, then south, then east along the centerline of Koene Court, then north along the City of Sheboygan Falls boundary, then east then north, then meandering north until the intersection of State Highway 28. Continue east on State Highway 28 until the intersection of State Highway 28 and County Highway EE. Continue southeast along the centerline of County Highway EE until point (43.712967, -87.792939), then follow the parcel line northwest to point (43.714088, -87.79241), then follow the parcel line east to point (43.716055, -87.77108), then follow the parcel line north to point (43.717678, -87.790192). Continue east along the centerline of State Highway 28 until point (43.717617, -87.771029), then continue south along the parcel line to point (43.716055, -87.77108), then follow the parcel line west to point (43.716062, -87.772794), then follow the parcel line north to point (43.717372, -87.772755), then follow the parcel line west to point (43.717393, -87.77331), then continue to follow the meandering parcel line south to point (43.709626, -87.771765), then follow the parcel line north to point (43.712255, -87.771687), then follow the parcel line east to point (43.712183, -87.765217), then follow the parcel line south to point (43.700774, -87.764491). Continue southwest along the eastern boundary of the railroad right-of-way until the

intersection of the right-of-way and County Highway V. Continue west along the centerline of County Highway V until the intersection of County Highway V and Trimberger Court. Continue south along the centerline of Trimberger Court until its terminus at point (43.670396, -87.790408), then follow the parcel line south to point (43.66675, -87.790297), then follow the parcel line east to point (43.666739, -87.78216), then follow the parcel line northeast to point (43.670382, -87.780711), then follow the parcel line east to point (43.6694, -87.740257). Continue south along the centerline of County Highway KK until point (43.665769, -87.740138). Continue east along the parcel line until it intersects Lake Michigan

### **Extracted Island in Main Portion of SSA**

Starting at point (43.730602, -87.759962), then head west to point (43.730604, -87.76108), then continue southwest along a buffer of Sheboygan River to point (43.728317, -87.763388), then continue south to point (43.727659, -87.7634), then continue southeast to point (43.727434, -87.762978), then continue east to point (43.727416, -87.759724), then follow the Village of Kohler boundary north to the starting point (43.730602, -87.759962).

### **Airport Satellite Portion of SSA**

Starting at point (43.785878, -87.840399), then follow centerline of Meadowlark Road south to point (43.782279, -87.84037), then follow the parcel line southwest to point (43.780541, -87.842059), then follow the parcel line west to point (43.780521, -87.845459), then follow the parcel line south to point (43.779977, -87.845453), then follow the parcel line south to point (43.727659, -87.7634), then follow the parcel line west to point (43.780061, -87.850473), then follow the parcel line south to point (43.727659, -87.850455). Continue west along the centerline of Woodland Road to point (43.776441, -87.853785), then follow the parcel line south to point (43.775808, -87.853768), then follow the parcel line west to point (43.77583, -87.855195), then follow the parcel line north to point (43.776463, -87.855212). Continue west along the centerline of Woodland Road to point (43.776472, -87.858849), then follow the parcel line south to point (43.773503, -87.858814), then follow the parcel line northwest to point (43.774634, -87.860669), then follow the parcel line north until it intersects Highland Road, continue north along the center line until point (43.776548, -87.860696). Continue west along the parcel line to point (43.776522, -87.86573), then follow the parcel line south to point (43.772905, -87.86569),

then follow the parcel line east to point (43.77291, -87.862578), then follow the meandering parcel line southeast to point (43.769818, -87.860779), then continue south along the centerline of Highland Road to point (43.764794, -87.86066), then follow the parcel line southwest to point (43.762476, -87.86202), then follow the parcel line northwest to point (43.76328, -87.864424). Continue southeast following the centerline of County Highway O until the intersection of County Highway O and County Highway TT. Continue south along the centerline of County Highway TT until point (43.758282, -87.850265), then follow the parcel line east to point (43.758187, -87.846002), then follow the parcel line north to point (43.761536, -87.845986). Continue east following the centerline of County Highway O until the intersection of County Highway O and Meadowlark Road. Continue north along the centerline of Meadowlark Road until point (43.762354, -87.840028), then follow the parcel line northwest to point (43.76423, -87.842546), then follow the parcel line north to point (43.768961, -87.842609), then follow the parcel line east to point (43.768977, -87.845208), then follow the parcel line north to point (43.774118, -87.845345), then follow the parcel line northeast to point (43.775582, -87.843869), then follow the parcel line east to point (43.775552, -87.841993), then follow the parcel line north to point (43.776254, -87.841964). Continue east following the centerline of Woodland Road until the intersection of Woodland Road and Meadowlark Road. Continue north along the centerline of Meadowlark Road until point (43.777314, -87.840194), then follow the meandering parcel line north to point (43.782525, -87.839667), then follow the parcel line northeast to point (43.784401, -87.837852), then follow the parcel line northwest to point (43.785079, -87.839188), then follow the parcel line north to point (43.785885, -87.839197), then follow the parcel line west back to the starting point (43.785878, -87.840399).

## **APPENDIX B: AFFIDAVIT OF PUBLICATION FOR PUBLIC HEARING**

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STATE OF WISCONSIN, }  
SHEBOYGAN COUNTY, } SS

PLEASE TAKE NOTICE THAT the Sheboygan Urbanized Area Sewer Service Technical Advisory Committee will hold an Open House (Informational meeting) and Public Hearing on the proposed 2030 Sheboygan Urbanized Area Sewer Service Plan. The Open House will be held on Wednesday, October 19, 2011, from 5:30 to 6:30 pm. The Public Hearing will be held at 6:30 pm following the Open House. The meetings will be held at Mead Public Library at 710 N. 8 Street in Sheboygan in the Rocca Meeting Room.


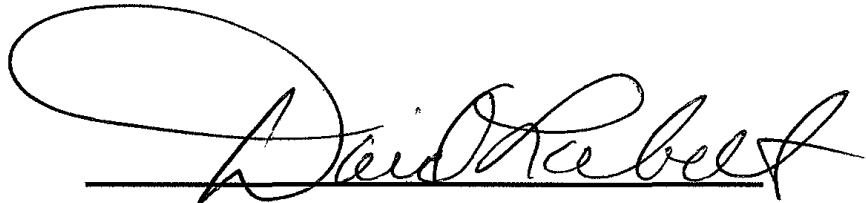
A complete draft of the 2030 Sheboygan Urbanized Area Sewer Service Plan is available for review at the following locations until October 19, 2011:

\*Mead Public Library, 710 N. 8 Street, Sheboygan, WI

\*Sheboygan Falls Memorial Library, 330 Buffalo Street, Sheboygan Falls, WI

Your comments are welcome and encouraged at the open house and the public hearing. Questions and/or comments can be addressed to Angela Pierce at Bay-Lake Regional Planning Commission, (920) 448-2820 or apierce@baylakerpc.org. Pub. Oct 5, 2011 WNAJLP

Dave Liebelt being duly sworn on oath says, that he is a manager of the Advertising Department of THE SHEBOYGAN PRESS, a daily newspaper published in said county and that notice, of which the annexed is a true printed copy taken from said newspaper, has been published in said newspaper, 1 time(s), the first publication being on the 5<sup>th</sup> day of October, A.D., 2011, and the last publication on the \_\_\_\_ day of \_\_\_\_ A.D., \_\_\_\_.



Notary Public, Sheboygan County, Wisconsin

Subscribed and sworn to before me this  
5<sup>th</sup> day of October, A.D., 2011.

Ad Number: 6438557

Total Charge: \$ 24.50

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## **APPENDIX C: TAC APPROVAL DOCUMENTATION**

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## Sheboygan Sewer Service Area Plan Technical Advisory Committee

October 31, 2011

A motion to accept the plan as is, and to submit the plan update to the WDNR for approval was made. The TAC vote was 7 to 0 in favor of submittal.

Community	Aye	Aye Vote by E-Mail	Not Present
City of Sheboygan	X		
City of Sheboygan Falls			X
Village of Kohler	X		
Town of Mosel	X		
Town of Sheboygan	X		
Town of Sheboygan Falls	X		
Town of Wilson		X	
Sheboygan County	X		

  
Technical Advisory Committee Chairperson

Oct 31, 2011  
Date

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## **APPENDIX D: WDNR APPROVAL DOCUMENTATION**

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December 15, 2011

DNR Project No. BL-0014

Richard Heath, Executive Director  
Bay-Lake Regional Planning Commission  
441 South Jackson Street  
Green Bay, WI 54301

Subject: 2030 Sheboygan Urbanized Area Sewer Service Plan

Dear Mr. Heath:

We have completed our review of the subject Sewer Service Area (SSA) Plan update originally submitted to the Department on November 10, 2011, and a revision submitted on December 12, 2011. The Department hereby approves the plan update which results in a net total acreage in the Sewer Service Area of 31,769 acres, which includes 5,839 acres of environmentally sensitive areas.

A public hearing was held by the Sheboygan Urbanized Area Sewer Service Technical Advisory Committee on October 19, 2011 and the Technical Advisory Committee voted unanimously to submit the plan to the Department of Natural Resources for approval on October 31, 2011.

The Technical Advisory Committee included representatives from the Cities of Sheboygan and Sheboygan Falls, the Village of Kohler, the Towns of Mosel, Sheboygan, Sheboygan Falls and Wilson, and Sheboygan County. The Department expresses its appreciation to these representatives and their communities for their time and commitment to developing this plan and the Bay-Lake Regional Planning Commission is to be commended for coordinating this effort and bringing it to completion.

The approval of this sewer service area plan update does not constitute approval of any other local, state, or federal permit that may be required for sewer construction or associated land development activities.

If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes, administrative rules and case law establish time periods within which requests to review Department decisions must be filed. To request a contested case hearing pursuant to section 227.42, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with section NR 2.05(5), Wis. Adm. Code, and served on the Secretary in accordance with section NR 2.03, Wis. Adm. Code. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the time period for filing a petition for judicial review.

For judicial review of a decision pursuant to sections 227.52 and 227.53, Wis. Stats., you must file your petition with the appropriate circuit court and serve the petition on the Department within the prescribed time period. A petition for judicial review must name the Department of Natural Resources as the respondent.

Sincerely,

A handwritten signature in cursive script, reading "Thomas J. Mugan".

Thomas J. Mugan, P.E., Chief  
Wastewater Section  
Bureau of Water Quality

cc:

Angela Pierce, Planner, BLRPC, 441 S. Jackson St., Green Bay, WI 54301  
Dirk Zylman, TAC Chairperson, Town of Mosel, W982 CTH FF, Sheboygan, WI 53083  
Curt Nickels, DNR- NER - Plymouth  
Vic Pappas – DNR – NER - Plymouth  
Fran Keally - WQ/3



# ***Bay-Lake Regional Planning Commission***

## **Commission Members**

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William Clancy

### ***Door County***

Paul DeWitt

### ***Florence County***

Edwin Kelley

Bruce Osterberg

Yvonne Van Pembroke

### ***Kewaunee County***

Jim Abrahamson

*Nomination Pending*

Charles R. Wagner

### ***Manitowoc County***

Donald C. Markwardt

*Nomination Pending*

Valerie Mellon

### ***Marinette County***

Alice Baumgarten

Cheryl R. Maxwell

Mary G. Meyer

### ***Oconto County***

Lois L. Trever

Thomas D. Kussow

Donald A. Glynn

### ***Sheboygan County***

Ed Procek

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Ron McDonald

### ***Wisconsin Economic Development Corporation***

CEO, Paul Jadin

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Executive Director

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### **Richard J. Malone**

Office Accounts Coordinator

### **Angela M. Pierce**

Natural Resources Planner III

### **Brandon G. Robinson**

Community Assistance Planner III

### **Joshua W. Schedler**

GIS Coordinator

