



## Introduction

Linn’s long-term wellbeing is dependent upon the adequacy of its public utilities, community facilities, and municipal services. Energy infrastructure (electricity, natural gas, solar and wind, etc.), public safety, road maintenance, and the like are all vital services provided or regulated by local government. Anticipating and preparing for the future needs of its residents and businesses is essential to ensuring a sustainable future for the community.

During the preparation of this chapter, utilities and facilities were evaluated to determine their present condition and adequacy to meet future needs. Its recommendations are based on general long-range planning considerations and should not be substituted for the detailed architectural and engineering studies required prior to expending capital on specific public works projects. The information contained herein, coupled with the demographic trends and population projections in *Chapter 1: Issues & Opportunities* are intended to ensure that the township is prepared to serve the needs of the community for the next two decades.



Linn Town Hall, courtesy Lange Custom Woodworking

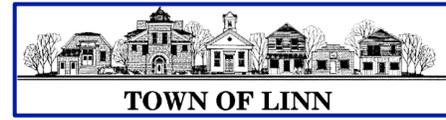
## Comprehensive Planning Law

Wisconsin’s Comprehensive Planning Law (Section 66.1001(2)(c), Wis. Stats.) requires that the utilities and community facilities element of a comprehensive plan contain all of the following:

- A compilation of objectives, policies, goals, maps and programs to guide the future development of utilities and community facilities such as sanitary sewer service, stormwater management, water supply, solid waste disposal, on-site wastewater treatment technologies, recycling facilities, parks, telecommunications facilities, power-generating plants and transmission lines, cemeteries, health care facilities, childcare facilities, and other public facilities, such as police, fire and rescue facilities, libraries, schools, and other governmental facilities.
- A description of the location, use, and capacity of existing public utilities and community facilities that serve the local governmental unit.
- An approximate timetable that forecasts the need to expand or rehabilitate existing utilities and facilities or to create new utilities and facilities.
- An assessment of future needs for government services that are related to such utilities and facilities.

### Utilities & Community Facilities Vision

*The Town of Linn will provide well-planned, cost-effective infrastructure and municipal services, in harmony with its rural character and natural environment, to provide for the current and future needs of its residents, landowners, and businesses.*



## Current Utilities & Community Facilities

This section describes the utilities, facilities, and other municipal services presently serving the community. The information presented on the following pages represents the most up-to-date available at the time this chapter was drafted.

### Town Hall

The Town Hall is located at W3728 Franklin Walsh Street in Zenda. The Town of Linn Police Station and Highway Shop are also part of the Town Hall facility. The Town of Linn Protective Services building, located at the corner of Hillside Road and South Lakeshore Drive, houses the Town of Linn Fire Department and rescue squad. Staff includes:

- Clerk's Office – One full-time, one part-time.
- Highway Department – Two full-time, two seasonal.
- Boat Launch – Four seasonal.



Courtesy Town of Linn

### Police<sup>1</sup>

The Town of Linn has maintained a police department since 1938. As of January 2017, the department is comprised of a Police Chief, Captain, Detective, and three full-time uniformed officers. They are supported by an administrative position and supplemented by two part-time officers. Backup services are provided by the Walworth County Sheriffs Department from their headquarters in Elkhorn.

### Fire and EMS<sup>2</sup>

Town of Linn Fire/EMS is a paid-on call department providing services to the township. Its roster includes several members on the Walworth County Fire Investigation Team and county Haz-Mat Team. It also has a Dive/Water Rescue Team for summer and winter conditions. The Linn Fire/EMS Department is a member of M.A.B.A.S. (Mutual-Aid Box Alarm System) Division 103 providing and receiving resources and support from area departments when necessary. EMS provides Intermediate level care, transporting to Mercy and Lakeland Hospitals as necessary. The Auxiliary provides scene support and assists in fundraising and interdepartmental events.



Courtesy Town of Linn

<sup>1</sup> Source: Town of Linn Police Department website, 2017.

<sup>2</sup> Source: Town of Linn Fire/EMS Department website, 2017.



The department is comprised of a staff of thirty-five firefighters, EMTs, and staff including a Chief and two Assistant Chiefs. Current equipment includes two engines, three tenders, a brushfire truck, a squad/water rescue/hazmat truck, a utility pickup truck, a fire boat, a water rescue/dive boat, an SUV, and an ambulance.

### **Solid Waste Management / Recycling<sup>3</sup>**

Johns Disposal Services, Inc. provides weekly garbage and recyclables collection for the Town of Linn. Collection for homes north of and including South Lakeshore Drive (including all homes on the north side of the lake and Academy Hills area) occurs on Mondays. Those south of South Lakeshore Drive (excluding Academy Hills area) are serviced on Wednesdays.

### **Water**

Residents and landowners rely exclusively on private wells for potable water. Information related to the aquifer serving the township can be found in *Chapter 5: Agricultural, Natural, and Cultural Resources*.

### **Wastewater Treatment<sup>4</sup>**

Private on-site wastewater treatment systems (POWTS) and holding tanks are the only means of wastewater management/treatment within the Town of Linn, excluding a few areas where private agreements have been made between individuals and a neighboring community for collection and transport of wastewater. In the late 1990's, the Linn Sanitary District initiated an effort to identify and evaluate the current wastewater treatment, collection and disposal facilities within the township. The effort included several surveys, a selected inspection program, and meetings with residents and homeowners. The Linn Sanitary District's Wastewater Facilities Plan released in January 2000 was the result (see map on following page). The plan looked at sanitary waste management options within the District. It addressed purpose and scope, an assessment of current conditions, an assessment of future conditions, development and evaluation of alternatives, and financial considerations before determining that POWTS would remain the primary means of wastewater treatment through 2020.

### **Stormwater management**

Stormwater in the Town is drained via surface systems including swales, ditches, and culverts. There is no formal storm sewer system in the community.

### **Electricity / Natural Gas<sup>5</sup>**

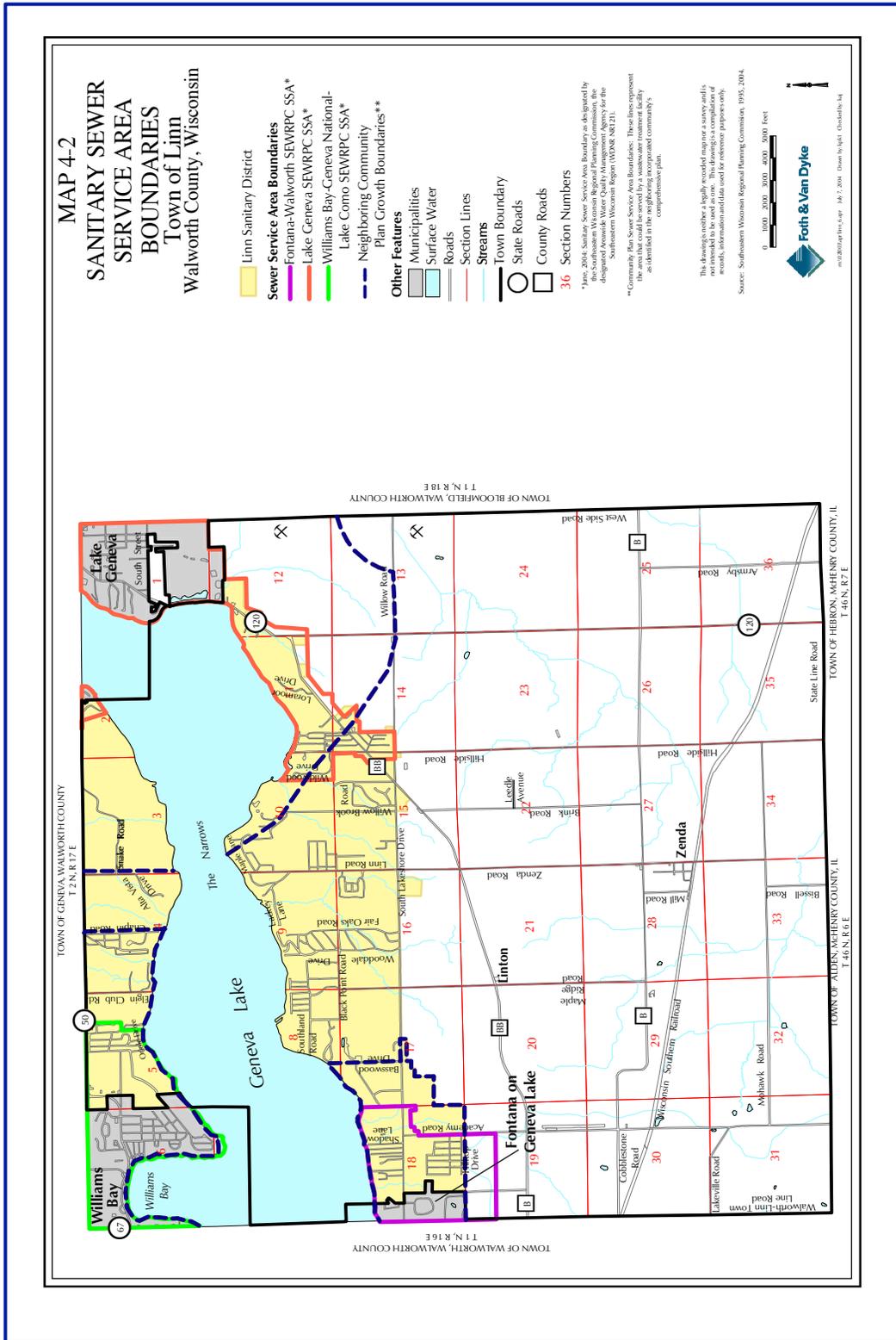
Electricity and natural gas for landowners and business owners in the township is provided by WE Energies and Alliant Energy. WE Energies is headquartered in Milwaukee and provides service to nearly 2.5 million customers in Wisconsin and Michigan's Upper Peninsula. We also serve natural gas customers in Wisconsin and steam customers in downtown Milwaukee. Alliant Energy is located in Madison and employs nearly 4,000 people at its various locations around the state. It serves approximately 950,000 electric and 410,000 natural gas customers throughout Wisconsin. Rural areas in Linn are served by onsite propane.

<sup>3</sup> Excerpted from Johns Disposal Services, Inc. website, 2017.

<sup>4</sup> Excerpted from Linn Sanitary District website, 2017.

<sup>5</sup> Excerpted from WE Energies and Alliant Energy websites, 2017.

# Chapter 4: Utilities & Community Facilities





## **Communications**

Television and high-speed Internet services are available from a number of cable and satellite providers including Charter Communications, Time Warner Cable, Dish Network, and DirecTV, among others.

## **Post Office**

The main post office serving the Town of Linn is located in Zenda. Nearby post offices are located in the City of Lake Geneva and Villages of Fontana-on-Lake Geneva and Williams Bay.

## **Library**

The nearest library is located at 918 W. Main Street in the City of Lake Geneva. One of the city's most



Courtesy lake Geneva Public Library

recognizable buildings, Lake Geneva Public Library was designed by Frank Lloyd Wright protégé James R. Dresser. The prairie style building overlooks the lake from its downtown location in Library Park.<sup>6</sup>

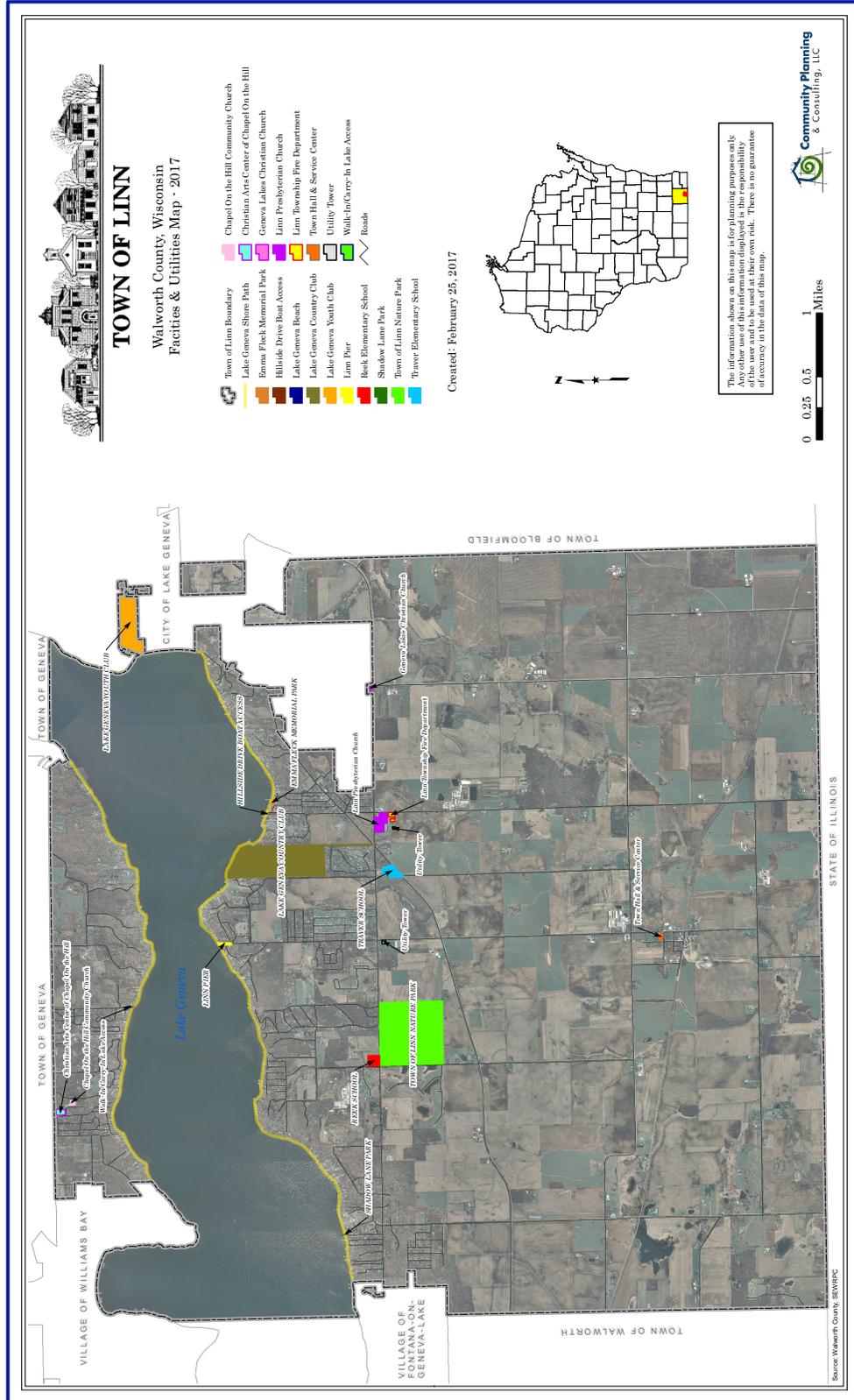
## **Healthcare Facilities**

Nearby healthcare providers include Mercy Lake Geneva Medical Center, Aurora Health Center, Mercy Health Hospital and Medical Center-Walworth in Williams Bay, and Mercy Walworth Psychiatry Center in Lake Geneva; and, Aurora Lakeland Medical Center in Elkhorn.



<sup>6</sup> Excerpted from Lake Geneva Public Library website, 2017.

# Chapter 4: Utilities & Community Facilities





### **Daycare Facilities**

There are no daycare providers currently located in the township. Childcare services are available in the City of Lake Geneva and Villages of Fontana-on-Lake Geneva and Williams Bay.

### **Educational Facilities**

School-age children in Linn are served by eight separate school districts. As of the 2016 Third Friday count, total enrollment for each district was:

- Big Foot UHS:509
- Geneva J4: 210 students
- Linn J4: 106 students
- Linn J6: 122 students
- Lake Geneva J1: 2,079
- Lake Geneva – Genoa City: 1,461
- Walworth J1: 489
- Williams Bay: 680

Reek Elementary and Traver Elementary Schools are located in the township. Linn residents attend high school at Bigfoot HS in Walworth, Badger (Lake Geneva-Genoa City) HS in Lake Geneva, and Williams Bay HS in Williams Bay.

### **Churches and Cemeteries**

Two churches are located in the Town of Linn: Linn Presbyterian at W3335 Willow Road and Chapel on the Hill at N2440 Ara Glen Drive. There are no cemeteries in the township.

### **Public Parks & Recreation Facilities<sup>7</sup>**

Public parks and recreation facilities in the township include the Linn Road and Hillside Road accesses to Geneva Lake and Linn Township Park. Linn Road and Hillside Road accesses each provide boat launches, swimming beaches, and parking facilities. Linn Township Parks includes 160 acre of undeveloped land accesses by a walking trail.



Courtesy Town of Linn

## **Utilities & Community Facilities Plan**

This section of the chapter describes the various issues and opportunities related to utilities and community facilities. Factors associated with the provision of municipal utilities are related to: the timing, location, and construction of new infrastructure; the need for increasing levels of services as the community ages; greater economic competition within the region; and fiscal constraints, among others. Opportunities include a steadily growing local population, strong seasonal and year-round economy and business climate, and possibilities for intergovernmental cooperation. Properly designed public utility

<sup>7</sup> Source: Town of Linn Year 2025 Comprehensive Plan, Foth & Van Dyke, June 2004.

systems will provide maximum protection of community health and guide desirable future growth on the basis of a fair and equitable distribution of benefits and costs.

### **Maintaining Reasonable Tax Levels**

Residents respect the fiscal discipline demonstrated by local officials and value reasonable tax rates. Given limited finances, coupled with long-term uncertainties surrounding Wisconsin's shared revenue program and state-imposed levy limits, local government must carefully consider all expenditures. This consideration extends to providing utilities and community facilities for the community. To ensure the supply of efficient, cost-effective services, the Town will continue to consider shared service opportunities with neighboring communities.

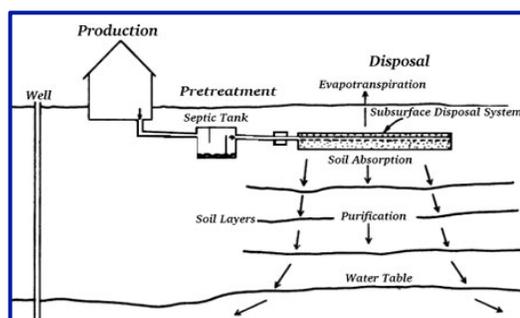
### **Conventional POWTS vs. Alternative Wastewater Treatment Systems**

As presented earlier in this chapter, landowners in the township are served by personal onsite wastewater treatment systems, or POWTS. The most common of these are septic systems, mounds systems, and holding tanks. Chapter SPS 383 (Wis. Stats.) establishes uniform standards and criteria for the design, installation, inspection and management of POWTS.

#### Septic Systems<sup>8</sup>

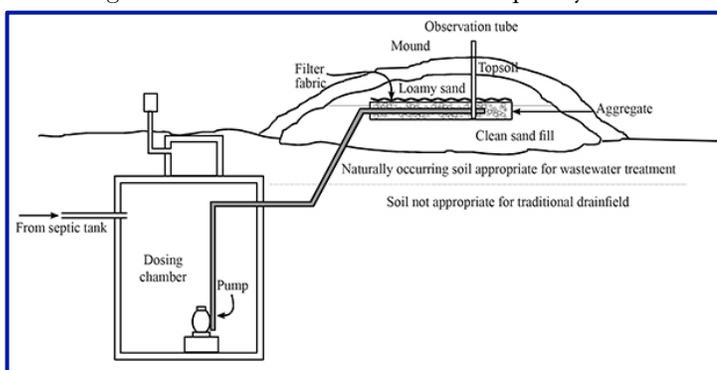
The modern onsite system consists primarily of an anaerobic reactor (septic tank) and a soil absorption field. Septic tanks remove most solids and floatable material and function as an anaerobic bioreactor that promotes partial digestion of organic matter. Septic tank effluent, which contains significant concentrations of pathogens and nutrients, is discharged to an absorption field for further treatment through biological processes, adsorption, filtration, and infiltration into underlying soils.

Conventional septic systems work well if they are located in areas with appropriate soils and hydraulic capacities, designed to treat the incoming waste load, installed properly, and maintained to ensure long-term performance. If not, they become primary sources of groundwater contamination. All septic systems eventually fail and must be replaced.



#### Mound Systems<sup>9</sup>

A mound system is one of a number of alternative systems that have been developed to overcome site conditions that limit the use of conventional septic systems, including soils with slow or fast permeability, shallow soils over bedrock, or a high water table. Mound systems create suitable conditions for initial



Courtesy Residential Onsite Wastewater Treatment Systems

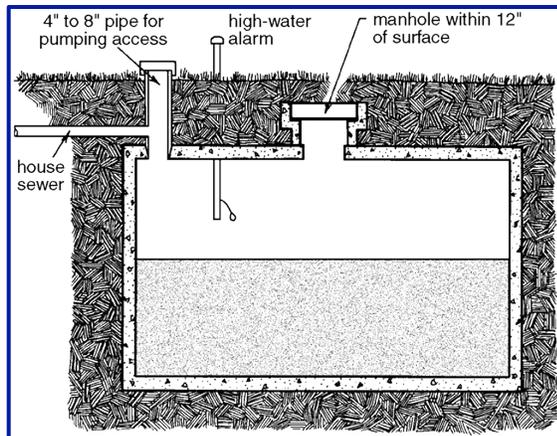
<sup>8</sup> Excerpted from USEPA Onsite Wastewater Treatment Manual.

<sup>9</sup> Excerpted from Residential Onsite Wastewater Treatment: Mound Systems.

wastewater treatment above the natural soil surface. Following preliminary treatment in a septic tank, effluent flows to a dosing chamber. It is then pumped to the mound for further treatment before ‘discharging’ to the underlying soil strata.

### Holding Tanks<sup>10</sup>

A holding tank is simply a tight, leak-proof steel or composite drum that acts as a temporary collection for all sewage effluent. When the tank nears its full point the tank contents are then pumped into a truck operated by a state licensed waste hauler. The effluent is trucked to the nearest community having a public sewage treatment system, and dumped under permit via a special metered manhole into that system for treatment.



Courtesy NDSU Agriculture

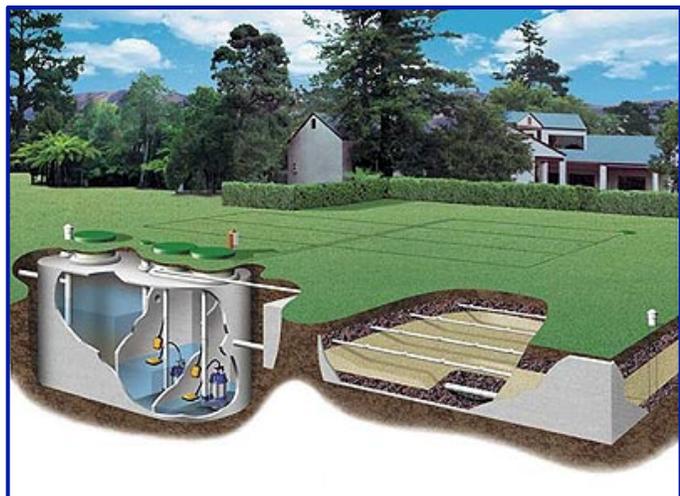
All POWTS must comply with Wisconsin Statute SPS 383 to ensure that they do not threaten groundwater resources and to keep each system functioning properly over its expected lifetime. Septic and mound systems are short- to mid-term treatment options that meet minimum water quality standards; while holding tanks are a last option available when site limitations the previous system(s) have failed.

However, some systems far exceed minimum water quality standards. When expansion of a municipal sewer system is not feasible and it is desirable or preferable to avoid installation of multiple POWTS in localized development, alternative sanitary systems may be considered. Options for clustered sanitary systems permissible in the state of Wisconsin include recirculating sand filters and constructed wetlands, among others. A brief description of these systems is provided below.

### Recirculating Sand Filters

A recirculating sand filter (RSF) offers an economically viable, environmentally benign alternative to conventional drain field-based treatment systems. The basic components of a RSF system include a septic tank, recirculation tank, and sand or gravel filter. Effluent discharged from the system typically exceeds the quality of a conventional system.

RSFs are a viable alternative to conventional methods when soil conditions are not conducive to the proper treatment and disposal of wastewater through percolation beds. Sand filters may be used on sites that have shallow soil cover, inadequate permeability, high groundwater, and limited



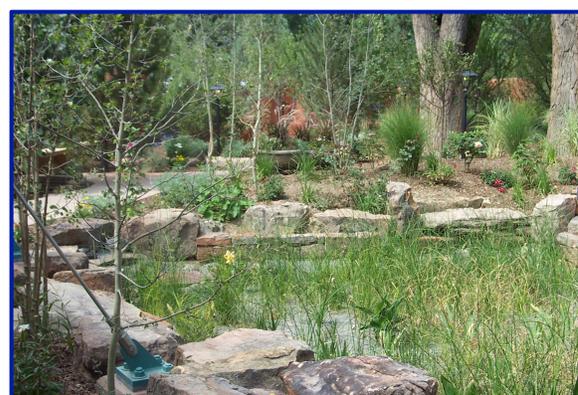
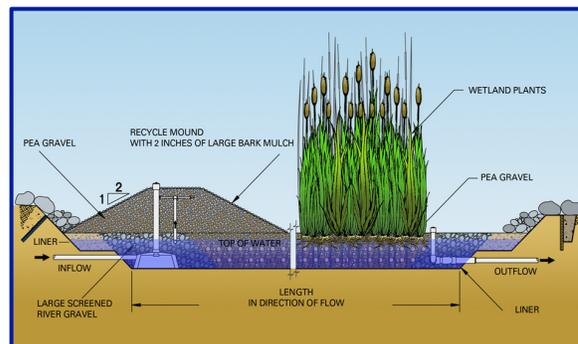
Courtesy Reflection Wastewater Systems

<sup>10</sup> Excerpted from *Septic, Mound, and Holding Tank Systems in Wisconsin Under Comm 83*, Russell Knetzger and Barry Sullivan, April 2005.

land area. RSF systems commonly serve subdivisions, mobile home parks, rural schools, small municipalities, and other generators of small wastewater flows.<sup>11</sup>

### Constructed Wetlands

Constructed wetlands have been used as effective wastewater treatment systems for more than forty years. They have become the dominant treatment system for communities in the Minneapolis metropolitan region not served by municipal wastewater treatment. Although a variety of wetland-based systems are used to treat effluent, the most common is a subsurface flow wetland. Subsurface flow wetlands utilize an anaerobic reactor (septic tank) for pretreatment followed by a forced-bed aeration system and wetland treatment cells. Constructed wetlands are designed to achieve tertiary treatment at a fraction of the cost of a municipal system. They tend to become cost-competitive in comparison to conventional onsite systems when treating effluent from eight or more homes.



Courtesy San Francisco Chronicle (top) and Science for Environmental Policy (bottom)

### Personal Energy Systems

With rising energy prices and a greater awareness of the environmental impacts of conventional power plants, more Americans are utilizing personal energy systems to reduce costs associated with electricity, heating, and cooling. In addition, state and federal tax incentives have reduced the total costs of these systems making them available to a greater percentage of users. Personal energy systems include photovoltaic solar, solar thermal, small wind, geothermal, and wood-fired boilers, among others.

Wisconsin's Solar and Wind Access Law (Chapter 66.0401, Wis. Stats.), defines how local governments may regulate solar and wind energy systems. These laws cover zoning restrictions, private land use restrictions, and system owner rights to unobstructed access to resources, among others. Under the law, local government may not place any restriction on the installation or use of solar or wind energy systems unless the restriction:

- Serves to preserve or protect public health or safety.
- Does not significantly increase the cost of the system or decrease its efficiency.
- Allows for an alternative system of comparable cost and efficiency.



Courtesy CleanTechnica (top) and Green Building Advisor (bottom)

<sup>11</sup> Source: Environmental Technology Institute: Recirculating Sand Filters, 1998.

The law effectively prohibits unreasonable public land use controls covering solar and wind energy systems by defining a fairly narrow set of reasonable conditions; however it allows for a local permitting procedure for guaranteeing unobstructed access to wind or solar resources.

### **Distributed Energy Production**

Distributed energy, also referred to as decentralized energy, is generated or stored by a variety of small, grid-connected devices known as distributed energy systems. Conventional power stations, such as coal-fired, gas, and nuclear power plants, and hydroelectric dams (among others), are centralized and often require electricity to be transmitted over long distances. By contrast, distributed systems are decentralized, modular, and utilize flexible technologies. The energy is produced at or near the point of use.

Decentralized systems typically use renewable energy sources, including, but not limited to, solar, wind, geothermal, small hydro, biomass, and biogas, and increasingly play an important role in the electric power distribution system. A grid-connected device for electricity storage can also be classified as a decentralized system.

### **Stormwater Management Planning**

Stormwater management is required to mitigate the effects of urbanization on the hydrologic cycle including increased runoff, and decreased infiltration, of rain and snowmelt. Without proper stormwater management, reduced base flow, degradation of water quality, and increased flooding and erosion can lead to reduced diversity of aquatic life, fewer opportunities for human uses of water resources, and loss of property and human life. A preferred stormwater management system will be selected based on its cost, as well as other factors such as technical feasibility, effectiveness, and social acceptability. The overall cost must include capital, operating, and maintenance costs.<sup>12</sup>

#### Low Impact Development



Courtesy City of Kirkland, Washington

The term *low impact development* (LID) refers to systems and practices that use or mimic natural processes that result in the infiltration, evapotranspiration, or use of stormwater in order to protect water quality and associated aquatic habitat. LID is an approach to land development (or re-development) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features and minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product.

Some of the techniques that adhere to these principles include bio-retention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable (or pervious) pavements. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed. Applied on a broad scale, LID can maintain or restore a watershed's hydrologic and ecological functions.<sup>13</sup>

<sup>12</sup> Excerpted from Stormwater Management Planning and Design Manual, Ontario Ministry of the Environment, March 2003.

<sup>13</sup> Source: Urban Runoff: Low Impact Development, US Environmental Protection Agency, 2016.



## **Parks and Recreation Planning**

The most effective tool for parks and recreation planning in Wisconsin is the Comprehensive Outdoor Recreation plan, or CORP. A CORP is a document that describes current parks, recreation, and open space assets and presents a strategy for meeting future needs. The purpose of the plan is to guide land acquisition, development, and maintenance activities by identifying the general location, character, and extent of existing and desired parks, playgrounds, and special recreation areas. By statute, a CORP must be updated every five years.

The funding of local parkland acquisition and development has become more difficult with legislation limiting local government's ability to establish and enforce impact fees upon new residential development projects. As a result, more Wisconsin communities are seeking grant funding to offset the cost of park and recreation development. Wisconsin statutes prohibit local government from applying for state and federal parks and recreation funding without an adopted CORP.

## **Capital Improvements Plan**

As mentioned in *Chapter 3: Transportation*, a Capital Improvements Plan (CIP) is a budgeting tool used to plan for major capital expenditures. CIPs are typically five-year plans identifying necessary and desired improvements related to infrastructure, facilities, and parks and recreation areas. A CIP is often the primary implementation tool for a CORP.

## **Utilities & Community Facilities Programs**

The following pages describe the various federal and state programs that are available to aid in implementing the utilities and community facilities plan.

### **U.S. Department of Agriculture – Rural Development**

#### **Rural Economic Development Loan and Grant Program**

The Rural Economic Development Loan (REDL) and Grant (REDG) programs provide funding to rural projects through local utility organizations. Under the REDL program, USDA provides zero interest loans to local utilities that are then passed through to local businesses for projects that will create and retain employment in rural areas. The ultimate recipients repay the lending utility directly. The utility is responsible for repayment to USDA. Under the RED program, USDA provides grant funds to local utility organizations to establish revolving loan funds. Loans are made from the revolving loan funds to projects that will create or retain rural jobs. When the revolving loan fund is terminated, the grant is repaid to the Agency.

#### **Rural Utilities Program**

A number of programs are available through the Rural Utilities Program as part of the Water and Environmental Programs (WEP). WEP provides loans, grants, and loan guarantees for drinking water, sanitary sewer, solid waste, and storm drainage facilities in rural areas, cities, and towns of 10,000 or less. Public bodies, non-profit organizations, and recognized Indian Tribes may qualify for assistance. WEP



also makes grants to nonprofit organizations to provide technical assistance and training to assist rural communities with their water, wastewater, and solid waste programs. Available programs include:

- Water and Waste Disposal Direct and Guaranteed Loans
- Water and Waste Disposal Grants
- Technical Assistance and Training Grants
- Solid Waste Management Grants
- Rural Water Circuit Ride Technical Assistance

### Telecommunications Program

The Telecommunications Program improves the quality of life in rural America by providing capital for the deployment of rural telecommunications infrastructure. Funding is available under various grant and loan programs.

### **Wisconsin Department of Administration**

#### Community Development Block Grant – Public Funds

The Community Development Block Grant (CDBG) for Public Funds supports infrastructure and facility projects for communities. Eligible projects include improvements, repairs, or expansions of streets, drainage systems, water and sewer systems, sidewalks, and community centers. Grants are limited to projects that, if implemented, would meet a CDBG National Objective.

#### Community Development Block Grant – Public Facilities Economic Development

Grant funds under the CDBG for Public facilities Economic Development are awarded to local governments for public infrastructure projects that support business expansion or retention. Examples of eligible applications include: new or improved water & sewer service and streets that result in business expansion and job opportunities for low- and moderate-income individuals.

### **Wisconsin Department of Natural Resources<sup>14</sup>**

#### Clean Water Fund Program

The Clean Water Fund Program (CWFP) provides subsidized interest rate loans to municipalities seeking to fund wastewater and stormwater infrastructure projects. The CWFP also includes pilot projects to fund adaptive management and other non-traditional projects to comply with a municipality's permit limit. Applications for funding are accepted year round as long as funding is available.

#### Safe Drinking Water Loan Program

The safe Drinking Water Loan Program provides subsidized interest rate loans to municipalities seeking to fund drinking water infrastructure projects. Applications are accepted year round when funding is available.

---

<sup>14</sup> Excerpted from various WDNR websites.



### Acquisition and Development of Local Parks Program

The Acquisition and Development of Local Parks Program provides assistance to local government to buy land or easements and develop or renovate local parks and recreation area facilities for nature-based outdoor recreation purposes (e.g., trails, fishing access and park support facilities). Applicants compete for funds on a regional basis. This grant program is part of the Knowles-Nelson Stewardship Program.

### Land and Water Conservation Fund

The Land and Water Conservation Fund is a Federal program administered in all states that encourage creation and interpretation of high-quality, outdoor recreational opportunities. Funds received under this program are split between WDNR projects and grants to local governments for outdoor recreation activities. Grants cover fifty percent of eligible project costs.

### Recreational Trail Aids

Municipal governments and incorporated organizations are eligible to receive reimbursement for development and maintenance of recreational trails and trail-related facilities for both motorized and non-motorized recreational trail uses. Eligible sponsors may be reimbursed for up to fifty percent of the total project costs. This program may be used in conjunction with the state snowmobile or ATV programs and Stewardship development projects.

### Municipal Flood Control Grants

Available to all cities, villages, towns, tribes, and metropolitan sewerage districts to provide assistance with items such as the acquisition of property, vacant land, structure removal, flood proofing, administrative support and other activities.

### Urban Nonpoint Source & Stormwater Management Grants

This program provides competitive grants to local governments to reimburse costs of planning or construction projects controlling urban nonpoint source and stormwater runoff pollution.

## **Implementation Plan**

The goals, objectives, and policies related to utilities and community facilities are presented in *Chapter 9: Implementation*.