

CHAPTER 2 - AGRICULTURAL, NATURAL AND CULTURAL RESOURCES

INTRODUCTION TO THIS ELEMENT

Farming and farm-related businesses provide important contributions to many local economies. **Agriculture** is also significant because farmland and working farms dominate the rural landscape and help define local community identity and culture. Farmland in Wisconsin has been under increasing pressure in the last decade because a relatively poor agricultural economy prompted farmers to sell land and a robust non-farm economy enabled many urban dwellers to realize their dream of living in the country. From 1996 through 2000, over 313,000 acres of Wisconsin farmland have been removed from agriculture. In addition, the state's most productive soils are located in the southeastern third of the state where most population growth is occurring. The American Farmland Trust has identified southeastern Wisconsin as one of the three most threatened farmland resources in the United States. Together, these issues make planning for agriculture essential.

We depend on **natural resources** in many ways: to provide a clean and abundant supply of groundwater and surface water; assure safe air to breathe; and to provide a natural landscape of terrestrial and aquatic habitats, such as forests, prairies and wetlands that are fundamental to a healthy and diverse biological community. Natural resources include the parks, trails, scenic areas, and other outdoor places we rely on for recreation. Also, natural resources are essential to a vibrant economy—measured in tourism revenues, enhanced property values, sustainable agriculture, low cost raw materials (such as sand, gravel, and stone), available water for manufacturing processes, etc. Since these resources are limited, it is important to care for them, use them wisely, and avoid unplanned or poorly planned development patterns, which unnecessarily increase demand for water, land, and raw materials.

Cultural resources include historic buildings and structures as well as ancient and historic archeological sites. A preservation ethic provides the historical context for future planning and land use policies, because older neighborhoods and historic buildings can determine the style and scale of future development. In addition, preserving the unique history of a community helps build a “sense of place” and brings a long-term perspective that promotes stability and more careful decision making.

66.1001(2)(e)

Agricultural, natural and cultural resources element. A compilation of objectives, policies, goals, maps and programs for the conservation, and promotion of the effective management, of natural resources such as groundwater, forests, productive agricultural areas, environmentally sensitive areas, threatened and endangered species, stream corridors, surface water, floodplains, wetlands, wildlife habitat, metallic and nonmetallic mineral resources consistent with zoning limitations under 295.20(2)s. 295.20 (2), parks, open spaces, historical and cultural resources, community design, recreational resources and other natural resources.

SUMMARY AND IMPLICATIONS OF INVENTORY AND RECOMMENDATIONS

Summary: **Agriculture** is the major land use within the Town of Sherman and according to 2004 citizen input survey results, Town residents would like to keep it that way. The Villages of Random Lake and Adell can help encourage the continued health of agriculture in the Town of Sherman by 1) encouraging development by making it possible for growth to occur within or adjacent to the villages, and 2) making it possible for businesses and infrastructure that support agriculture in Adell and Random Lake as appropriate.

Implications: The large amount of agricultural use within the Town is important to the local economy and preserves open space, both which are valued by residents. Agricultural lands with long vistas are part of the Town's identity, but they are also prized by developers of new residential lots. The Town's agricultural areas should be preserved to maintain the agricultural community and open space values of the local residents within the Town and adjacent Villages of Adell and Random Lake.

Summary: **Natural resources** play a major role in the Town of Sherman primarily due to the rolling landscape, abundant open space, expansive woodlands and wetlands, and rivers and streams. The State of Wisconsin has recognized this by including a significant portion of the southwestern part of the Town in the North Branch Milwaukee River Wildlife and Farming Heritage Area.

Implications: The 2004 Town of Sherman citizen input survey showed 74.6% of respondents agreed or strongly agreed that protection of woodlands, wetlands, open spaces, and cultural resources in the Town was necessary. Just over 69% felt leaving land along river and stream corridors in its natural state was the best use of such land. In light of the importance of natural resources and the opinions of residents, specific efforts should be made to protect the Town's natural resources, especially in ways that stress voluntary landowner participation and do not impose burdens on Town taxpayers.



Rolling farmlands and natural areas in the Town of Sherman.

Summary: **Cultural resources** are limited in the Town of Sherman due to its small population. While local officials would seldom discourage private investments in cultural resource inventory or preservation, public investments are unlikely due to limited funds.

Implications: There may be a small number of historically significant sites within the Town that are overlooked or neglected. Without the enhancement of these sites, the Town may lose some of what makes it unique.

INVENTORY

Climate

Sheboygan County typically experiences continental weather with some modification by Lake Michigan. The cool waters of the lake delay spring, while relatively warm water in fall retards early frost. Summers, on average, are mild due to the proximity to water that moderates daily extremes.

About two-thirds of the annual precipitation falls during the growing season. It is normally adequate for vegetation, although drought is occasionally reported. The climate is most favorable for dairy farming; the primary crops are corn, small grains, hay, and vegetables.

The growing season averages 126 to 165 days. The average date of the last spring freeze varies from the first week to the last week of May, with a median date of last frost of May 11. The first autumn freezes occur in early to mid-October, with a median date of first frost of October 6. The mean date of first snowfall of consequence, an inch or more, occurs in early November. The snow cover acts as protective insulation for grasses, autumn seeded grains, and other vegetation.

While a detailed site assessment for the Town of Sherman has never been done, Wisconsin Division of Energy computerized models indicate wind speeds average 10-12 miles per hour at a height of 30 meters, which is a typical height for small private wind generators (in general, winds exceeding 11 mph are required for cost-effective installations). Computerized models indicate wind speeds average 13-14 miles per hour at a height of 60 meters, which is a typical height for large commercial wind turbines (in general, winds exceeding 13 mph are required for financially feasible projects).

Figure 2.1 – Town of Sherman Weather Data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average temp. (°F)	18.4	22.9	32.8	44.1	55.6	65.2	70.7	69.0	61.0	49.8	36.5	24.3
High temperature (°F)	26.2	30.7	40.6	52.8	65.5	75.3	80.2	78.1	70.4	58.5	43.7	31.3
Low temperature (°F)	10.7	15.0	24.9	35.5	45.7	55.1	61.1	60.0	51.6	41.0	29.3	17.3
Precipitation (in)	1.4	1.2	2.2	3.3	3.3	3.8	3.9	4.3	3.7	2.6	2.6	1.8

Based on data from the weather station at Plymouth, Wis., latitude 43°45' N, longitude 87°59' W, elevation 865 ft.

Figure 2.2 – Town of Sherman Weather Data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Days with precip.	11	10	12	12	12	11	10	9	9	9	10	11
Wind speed (mph)	12.1	11.8	12.2	12.4	11.1	10.1	9.3	9.1	10.0	11.0	12.0	11.7
Morning humidity (%)	77	78	79	78	78	80	83	87	86	81	80	80
Afternoon humidity (%)	70	68	66	62	61	63	63	66	66	64	69	72
Sunshine (%)	45	48	51	53	60	65	68	65	59	53	39	38
Days clear of clouds	7	6	6	6	7	8	10	10	9	9	5	6
Partly cloudy days	6	6	8	8	10	10	11	11	9	8	6	6
Cloudy days	18	15	17	16	14	12	10	10	12	13	18	19
Snowfall (in)	13.3	9.0	8.4	2.1	0.1	0.0	0.0	0.0	0.0	0.2	3.3	10.6

Based on data from the weather station at Plymouth, Wis., latitude 43°45' N, longitude 87°59' W, elevation 865 ft.

Geology

Two different types of geologic settings, Quaternary geology and bedrock geology, characterize Sheboygan County. Quaternary geology refers primarily to the effects that continental glaciations have had on the region within the last 20,000 years, and to a lesser extent, the surface effects of more recent erosion and deposition. Bedrock geology refers to the much older, solid rock layers that lie beneath Quaternary sediments.

Bedrock Geology

The bedrock units underlying Sheboygan County 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 in Sheboygan County 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.

[Map: Figure 2.3 Pleistocene geology]

Quaternary (Glacial) Geology

The last glacial ice of Quaternary glaciation, which left the planning area approximately 10,000 years ago, modified the bedrock surface by scouring highlands and depositing material in lowlands created by pre-glacial erosion. Four types of Quaternary deposits are recognized within the region, including till, glaciofluvial sediments, shoreline deposits and organic deposits.

Till or unstratified drift is a mixture of unsorted, angular- to round-shaped sediments ranging in size from clay to boulders. Tills are ice-contact deposits originating directly from glacial ice.

Unlike till, glaciofluvial sediments are sorted by particle size that delineates the stratification.

Glaciofluvial sediments were deposited in a fluvioglacial environment involving glacial meltwater flow. Each individual layer of glaciofluvial sediments are characterized by a given grain size, ranging from pebbles and cobbles to sand or finer.

Ground and end moraines are two types of topographic landforms found in the region that consist primarily of till. A ground moraine is an irregular surface of till deposited by a receding glacier. The steeper slope points in the direction from which the glacier advanced. An end moraine is an accumulation of earth, stones, and other debris deposited at a glacier's end stage.

At least one type of topographic landform consisting of glaciofluvial sediments occurs in some areas of the planning area. This type of topographic feature is an outwash plain, which is an apron of well sorted, stratified sand and gravel deposited by glacial meltwater. Glaciofluvial deposits, which contained large ice blocks that eventually melted, were pitted with depressions known as kettles. Glaciofluvial deposits of sand and gravel surround many drumlins; but these are often covered with a thin silt cap. Figure 2.3 shows the Pleistocene Geology of the Town of Sherman.

Soils

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. These properties must be evaluated prior to any development.

General Soils Description

Soils, in part, determine how much rainfall or snowmelt directly flows into the rivers, lakes, and wetlands, and how much infiltrates the ground. Water that infiltrates the ground replenishes soil moisture and recharges the groundwater system. Soils are grouped into general soil associations that have similar patterns of relief and drainage. These associations typically consist of one or more major soils and some minor soils. The general soil types can be divided into three broad categories: areas dominated by soils formed in glacial till; areas dominated by soils formed in glacial outwash and till; and areas dominated by organic soils.

The soils in Sheboygan County are diverse ranging from sandy loam to loam or shallow silt loam, and from poorly drained to well drained. In some areas, lacustrine sands are found overlying clays or bedrock within only a few feet of the surface. Figure 2.4 shows the general soils in Sheboygan County. Important soils in the County include clays, loams, sands, and gravels. The dominant associations found in Sheboygan County include the Boots, Casco, Oakville, Theresa, Kewaunee, and Hochheim soils.

The soils within the Town of Sherman are part of the Hochheim-Theresa and Casco-Fox-Rodman Associations. The predominant soil types found east of STH 57 (approximately 10 percent of the Town) are Casco and Fox. Whereas, the predominant soil types found west of STH 57 are Hochheim and Casco (approximately 90 percent of the Town).



These soils are well-drained and have few agricultural limitations, with the exception of severe slopes and exposed stones. The soils consist of an upper layer of loamy deposits, underlain by clayey deposits. Stratified sand and gravel deposits are typically encountered at a depth of approximately two feet. Large areas of poorly drained soils, including Otter, Pella, Poygan, Sebewa, and Navan and very poorly drained soils including Houghton, Palms, and Willette muck are found in low lying areas throughout the Town. Soils classified as poorly drained and very poorly drained are often problematic and prone to flooding, high groundwater, and poor drainage.

As can be seen from Figure 2.4, soils within the Town are diverse and inconsistent from one area or property to the next.

[Map: Figure 2.4 General Soils]

[Map: Figure 2.5 Prime Agricultural Soils]

Prime Agricultural Lands

The USDA, Natural Resources Conservation Service defines prime farmland as land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops, with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion. Prime farmland includes land that is being used currently to produce livestock and timber. It does not include land already committed to urban development or water storage.

In general, prime farmland in Wisconsin:

- Has an adequate and dependable water supply from precipitation or irrigation
- Has a favorable temperature and growing season
- Has acceptable acidity or alkalinity
- Has few or no rocks
- Is permeable to air and water
- Is not excessively erodible
- Is not saturated with water for long periods of time
- Does not flood frequently, or is protected from flooding

Prime farmland has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. Figure 2.5 provides a representation of areas designated as prime farmland in the Town of Sherman.

Suitability for Dwellings with Basements

Within the *Soil Survey of Sheboygan County*, the Natural Resource Conservation Service (NRCS) provides information on the suitability and limitations of soils for a variety of natural resources and engineering uses. In particular, the soil survey provides information on the limitations of each soil for building site development, including the construction of dwellings with basements. Dwellings are considered to be structures built on shallow excavations on undisturbed soil with a load limit the same as for a single-family dwelling no higher than three stories. The ratings are based on soil properties, site features, and observed performance of the soils.

According to the NRCS, *severe limitations* mean soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required. *Moderate limitations* mean soil properties or site features that are not favorable for the indicated use may require special planning, design, or maintenance to overcome or minimize limitations. *Slight limitations* mean soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome. Refer to the *Soil Survey* for additional information regarding soil limitations for building site development. Figure 2.6 shows possible soil suitability for dwellings with basements in the Town of Sherman. This map is based on generalized data and is not a substitute for on-site soil testing.

[Map: Figure 2.6 Soil Limitations for Dwellings with Basements]

[Map: Figure 2.7 Steep Slopes]

Suitability for Septic Systems

The Town relies on private sewage systems for the majority of its residents. Without consideration of the traits of soils, private sewage systems may fail and collection systems may require expensive and frequent maintenance. Factors that are considered when evaluating soils for on-site waste systems are high or fluctuating water table, bedrock, soil permeability, and flooding frequency.

New technologies for private sewage systems are allowed under the revised COMM 83 health and safety code. The code will allow the use of soil absorption systems on sites with at least six inches of suitable native soil. The revised code gives property owners the opportunity and flexibility to meet environmental performance standards with several treatment technologies.

The code will allow for infill development where it was not permitted previously by the former plumbing code as interpreted by the Department of Industry, Labor and Human Relations. Housing and population density will likely increase in some areas due to the revised COMM 83 code. This in turn may increase the need for land use planning and integration of environmental corridors to address the adverse impacts related to development. Planning along with land use controls such as zoning will help achieve more efficient development patterns.

Topography

The Town has a rolling topography with many vistas with long views that help distinguish the Town for other locales. Elevations range from a low of about 805 feet above sea level near Wayside Park to just over 1030 feet along Indian Mound Road just west of Bates Road. The central portion of Sherman is relatively flat. The areas surrounding each Village have high elevations, specifically directly south of Random Lake and just north of Adell. These areas are also desirable for developers and valued by local residents for the open space. Figure 2.7 shows areas of steep slope (12 percent slope or greater) based on the soil characteristics in the Town of Sherman.

Agriculture

Agriculture creates jobs, provides a product for sale, and pays taxes. Farmland can also provide other substantial benefits to the environment, including floodplain protection, groundwater recharge areas, and wildlife habitat.

There are also social benefits, including scenic views and open space.

As of 2002, there was just under 15,000 acres of land used for farming within the Town of Sherman, which is about 68% of the Town's total area. There are four districts for agricultural lands within the Town of Sherman's Zoning Ordinance. The purpose of each district is listed on the next page.



A-1 Agricultural Land Preservation District. Preserve productive farmland for agricultural operations; preserve woodland and to prevent the encroachment of conflicting uses.

A-1-PR Agricultural Parcel Remnants District. Accommodate the necessary, often unavoidable creation of parcel remnants less than 20 acres in size, yet worthy of A-1 type preservation.

A-2 Agricultural Land Preservation District (small-scale). Encourage smaller farms such as horse farms, hobby farms, tree farms, and similar agricultural and recreational pursuits.

A-3 Agricultural Land Transition District. Provide for orderly transition of agricultural land adjacent to population centers into other uses in areas planned for eventual urban expansion; and to defer urban development until the appropriate local governmental bodies determine that adequate public services and facilities can be provided at a reasonable cost.

General Ag Soil Associations

Much of the Town of Sherman is covered by soils in the Hochheim-Theresa series. These are generally well-drained soils that have a sub-soil of mainly clay loam or silty clay loam and are underlain by gravelly sandy loam glacial till. The predominate Hochheim and Theresa soil classes in the area have 2-6% slopes and are moderately well suited to all crops commonly grown in the County, as well as pasture and woodland.

Land capability subclasses place soils into groups with similar suitability and limitations for agricultural use. The risks of soil damage or limitations in use become progressively greater from class 1 to class 8. Class 1 and 2 soils have the best capability for agricultural production and the capability diminishes as the classes advance. Figure 2.5 shows soil classes in the Town of Sherman.

Agricultural Preservation

Farmland Preservation Tax Credit: The Wisconsin Farmland Preservation Program was created in 1977 to preserve agricultural resources by supporting local government efforts to manage growth. This program was replaced by the Working Lands Initiative (WLI) in 2009. Eligible farmland owners receive a state income tax credit. To participate in the program, the county must have a certified farmland preservation plan that meets the standards of Chapter 91, Wisconsin Statutes. Sheboygan County updated its plan in 2013. The County plan helped lay the groundwork for the Town of Sherman to develop a farmland preservation zoning district.

The WLI provides state income tax credits to farmers who meet the program's requirements; meet soil and water conservation standards; and use their land for agriculture only. In the past, the Farmland Preservation Credit Program and Farmland Tax Relief Credit Program have provided at least some incentive to farmers to keep their lands in exclusive agricultural use. Today, however, the tax credits the typical farmer receives are small compared to the six-figure payouts farmers may be able to get for subdividing their land.

There are also other shortcomings with state programs. Seldom are farmers who develop their land forced to fully pay back the credits they received under the programs. Second, rezonings for residential uses in exclusive agricultural districts have been common in some towns, creating a patchwork of conflicting uses in many areas. Finally, in the end tax credits do not provide long term protection.

Use-Value Assessment: The changes in the structure of Wisconsin's property taxation, implementing a use-value assessment, have been generally favorable to farmland preservation. Agricultural lands are now assessed for their value in agriculture and not other potential uses. However, while this assessment policy may benefit owners of lands being used only for farming, the tax revenues lost through this reduction on farmlands must be made up by other properties within a town. Since there is seldom an extensive tax base of industrial and commercial properties within a town to absorb the shortfall, residential properties—including the homes of farmers—are taxed at a higher rate.

The preservation of farmland is a controversial issue. Many rural, non-farm residents want to preserve farmland while many farmers also want to preserve the land while retaining the option to sell.

The effect of residential development expanding outward from cities and villages into productive agricultural areas creates many issues. New development can make daily farming activities difficult and sometimes dangerous. New residents in farming areas may not understand basic farming practices, such as manure handling or harvesting. As a result, farmers are forced to contend with conflicts such as; increased traffic and nuisance complaints by new neighbors related to slow moving vehicles on roadways, noise, dust, odors, and late hours of operation. As development pressures increase, so will conflicts with agricultural practices.

Concentrated Animal Feeding Operations (CAFOs)

Every farm, regardless of size, is responsible for proper manure management to protect water quality from discharges. Over the past ten years, Wisconsin has become home to an increasing number of Concentrated Animal Feeding Operations (CAFOs), those operations with 1,000 or more animal units. Due to the increased number and concentration of animals, it is particularly important for these facilities to properly manage manure in order to protect water quality in Wisconsin.

A specific regulatory program for the handling, storage, and utilization of manure was developed by the DNR in 1984 in Chapter NR 243 of the Wisconsin Administrative Code. The rule creates

criteria and standards to be used in issuing permits to CAFOs as well as establishing procedures for investigating water quality problems caused by smaller animal feeding operations. Because of the potential water quality impacts from CAFOs, animal feeding operations with 1,000 animal units or more are required to have a Wisconsin Pollutant Discharge Elimination System (WPDES) Concentrated Animal Feeding Operation permit. These permits are designed to ensure that operations choosing to expand to 1,000 animal units or more use proper planning, construction, and manure management to protect water quality from adverse impacts.

On April 13, 2004, Governor Doyle signed a new law that strikes a balance between growing animal agriculture, protecting the environment, and respecting local decision making. The new law, 2003 Wisconsin Act 235, directed the Wisconsin Department of Agriculture, Trade and Consumer Protection to develop a rule to provide a predictable framework for county and municipal decisions to site or expand livestock facilities. The rule eventually developed by the ATCP Board took effect in 2006.

Water Resources

Watersheds

A watershed can be defined as an interconnected area of land draining from surrounding ridge tops to a common point such as a lake or stream confluence with a neighboring watershed. All lands and waterways contribute drainage to one watershed or another. Each watershed is comprised of one main-stem of a river. A river basin is made up of a number of watersheds that drain into one larger river. The majority of Sheboygan County lies within the Sheboygan or Milwaukee River Basins. Sherman, specifically, lies at the northeastern extent of the North Branch Milwaukee River watershed, a watershed encompassing about 95,000 acres total.

Priority Watersheds

Sheboygan County encompasses some of the most scenic and critical watersheds within Wisconsin. All the watersheds in Sheboygan County drain into the Lake Michigan Watershed either through major rivers or direct drainage to the lake. These watersheds have been classified as either Priority or Non-Priority watersheds for water quality purposes by the Wisconsin Department of Natural Resources. Figure 2.8 shows the watersheds in Sheboygan County.

One of the major components within a watershed is runoff, which is rainfall and snowmelt that “runs off” hillsides, parking lots, streets, and so forth into drainageways and storm sewers. Eventually, runoff finds its way into streams and lakes. Since runoff is capable of carrying sediment, toxins, and other materials, it is possible over time to harm a waterbody’s ecosystem if steps are not taken to limit or filter runoff. For example, rainfall running off a farm field, residential lawn, construction site, or parking lot may contain fertilizers, pesticides, silt, and automobile oil, respectively—all of which will impact a lake. Expensive dredging may eventually be necessary to remove accumulated sediment from runoff; chemical treatments may be needed to eradicate algae blooms; and so forth. Fortunately, there are many ways to help limit or clean up runoff before it gets to a waterbody. These include erosion control practices; using less pavement or porous pavement; using rainbarrels to catch precipitation off roofs; planting rain gardens to catch runoff and encourage percolation into the ground; and planting open spaces with prairie or natural groundcovers rather than lawn grasses.

[Map: Figure 2.8 Watersheds]

[Map: Figure 2.9 Silver Creek Subwatershed]

The Wisconsin Nonpoint Source Water Pollution Abatement Program (NPS Program) was created in 1978 by the state legislature. This program selected priority watersheds based on numerous factors including, but not limited to: unique species, potential to respond positively to nonpoint source controls and sensitivity to phosphorus loading. The program has provided financial and technical assistance to landowners and local governments to reduce nonpoint source pollution. Four watersheds within Sheboygan County have been designated as Priority Watersheds through this program, including the North Branch Milwaukee River Priority Watershed (designated in 1984).

Silver Creek Subwatershed

Silver Creek is a 9,774 acre subwatershed within the North Branch Milwaukee River watershed (see Figure 2.9 for the extents of the Silver Creek subwatershed). Silver Creek originates in the Adell Swamp as an intermittent stream. The outlet of Random Lake and the Village of Random Lake municipal sewage treatment plant contribute to the flow of Silver Creek. According to “A Nonpoint Source Control Plan for the North Branch Milwaukee River Priority Watershed Project” (1989), an estimated 7.1 of the 9.3 miles of Silver Creek capable of supporting warmwater fish community are only partially achieving their potential biological uses. Siltation, poor quality instream habitat and bacterial contamination limit the biological potential of this stream. (See page 2-21 for more information on Silver Creek.)

The Random Lake waterbody is within the Silver Creek subwatershed. A substantial portion of the runoff from rainfall and snowmelt occurring within the Silver Creek basin eventually finds its way into the waters of Random Lake and discharges to Silver Creek. The lake is a drainage lake, having stream flow as its main water source from Spring Lake to the south. This means the lake is especially susceptible to polluted and/or sediment filled runoff from the lands surrounding it. This includes pesticide and fertilizer runoff from some farm fields in Sherman. One way to help protect a lake is by individual landowners planting or preserving natural vegetative buffers along streams that drain into the lake. Programs, such as the Conservation Reserve Enhancement Program (CREP), which have been used by landowners in the Town, and the Sheboygan County Vegetated Buffer Strip Program, which will likely become available in the Town in the future, provide financial incentives for enhancing water quality in streams through the planting of vegetative buffers.

Groundwater

Sheboygan County's groundwater reserves are held in two principal aquifers: the eastern dolomite aquifer, and the sandstone and dolomite aquifer.

The Eastern Dolomite Aquifer occurs from Door County to the Wisconsin Illinois border. It consists of Niagara dolomite underlain by Maquoketa shale. In areas where fractured dolomite bedrock occurs at or near the land surface, the groundwater in shallow portions of the western dolomite aquifer can easily become contaminated.

The Sandstone and Dolomite Aquifer consists of layers of sandstone and dolomite bedrock that vary greatly in their water-yielding properties. In eastern Wisconsin, this aquifer lies below the eastern dolomite aquifer and the Maquoketa shale layer. In eastern Wisconsin, most users of substantial quantities of groundwater tap this deep aquifer to obtain a sufficient amount of water.

An individual well, however, is recharged by local rain and snow seeping into the ground and migrating through the soil to groundwater, which then flows toward the well. This recharge area

[Map: Figure 2.10 Well Depths]

typically extends no farther than one-quarter to one-half mile from the well itself. Since contaminants can also seep into the groundwater in this recharge area, many communities have established wellhead protection programs to manage what occurs in the recharge area. In Wisconsin, the primary sources of groundwater contamination are agricultural activities, municipal landfills, leaky underground storage tanks, abandoned hazardous waste sites, and hazardous/toxic spills. The most common groundwater contaminant is nitrate-nitrogen, which comes from fertilizers, animal waste storage sites and feedlots, municipal and industrial wastewater and sludge disposal, refuse disposal areas, and leaking septic systems.

Wellhead protection also includes striving to limit the amount of paved and impervious surfaces in the recharge area, since rain and snow will run off these surfaces into drainageways and will not soak into the ground as intended.

According to well construction reports filed since 1988, residents in the Town of Sherman draw their water from wells at depths ranging from 54 feet to 380 feet. Deep wells sometimes indicate contamination, water scarcity, or other problems. Figure 2.10 shows remediation sites listed by WDNR and private well sites categorized by depth; potential problem areas are outlined. In several instances the deeper well depths are simply due to well sites on top of hills and ridges. The overall average depth for new wells drilled since 1988 in the Town has been 178 feet. Drilling depths have been increasing over time. For the period 1990-1995, average depths were 171 feet; for the period 1997-2003, average depths were 188 feet.

According to DNR data, there are eight non-municipal high-capacity wells located in or near the planning area (Sections 10 and 13, Town of Scott; Sections 1 and 11, Town of Fredonia; and Section 2, Town of Sherman). Prior DNR approval is necessary for the construction, reconstruction, or operation of a high capacity well system, school well or wastewater treatment plant well. Prior approval is also necessary before a high capacity well or well system can be operated after a change of ownership. Section NR 812.07(53), Wisconsin Administrative Code, defines a high capacity well system as one or more wells, drillholes or mine shafts used or to be used to withdraw water for any purpose on one property, if the total pumping or flowing capacity of all wells, drillholes or mine shafts on one property is 70 or more gallons per minute based on the pump curve at the lowest system pressure setting, or based on the flow rate.

Lakes and Ponds

There is one lake, **Spring Lake**, partially within the Town of Sherman, located in the SE ¼ of Section 34. This mostly undeveloped landlocked lake is relatively small at 57 acres and has a mean depth of seven feet, with a maximum depth of 22 feet. Despite its name, Spring Lake is classified as a seepage lake, which is defined as a water body with its water level maintained by the groundwater table and basin seal. As such, its water level tends to be somewhat more stable and typical problems associated with runoff are less common. The lake is mostly undeveloped, with shoreline consisting of wooded wetlands. Since the shoreline is primarily landlocked by several private landowners, public access along the shore is not available, but boat access is provided for a fee along the west shore of the lake. The limited fish survey information on the lake suggests that largemouth bass and northern pike are the only gamefish found in the lake. Other species found in the surveys include bluegill, yellow perch, pumpkinseed, green sunfish, white sucker, and bluntnose minnow. Carp are present but do not cause serious management problems. Water quality is generally good and the water is very clear. The marl and sand bottom supports generally sparse, but well-balanced, aquatic

plant populations in most shallow areas of the lake. The lake outlets to Random Lake in the southeast corner, near the railroad tracks.

Gooseville Pond is an approximately 16-acre impoundment on the North Branch of the Milwaukee River, east of Silver Creek Road. The dam was constructed in the 1850s to power a feed mill. The mill was converted to a sawmill, which operated at the site until the 1990s. The dam is in private ownership and has been recently upgraded to current WDNR dam safety standards.

Rivers and Streams

Approximately 13 miles of the **North Branch of the Milwaukee River** traverse the Town of Sherman. This river begins in the Nichols Creek State Wildlife Area in Sheboygan County and runs in a southerly direction for 28 miles to its junction with the Milwaukee River in Ozaukee County. The upper four miles of the river were formerly officially known as Nichols Creek. The stretch that runs through the Nichols Creek State Wildlife Area is designated as an Outstanding Resource Water in Wisconsin Administrative Code NR 102. Outstanding resource waters are those that are of such outstanding quality that discharges from municipal and industrial wastewater treatment plants must be of the same or better quality as the receiving water. This designation is based on the quality of the fisheries, protection of recreational uses, water quality and pollution sources. Only about 2% of the surface waters in the state are designated as outstanding or exceptional resource waters.

A dam in the Village of Cascade creates a barrier to fish migration and slows the flow of water, allowing it to warm. As a result, the river reach below the dam cannot support trout. Dams also allow for depositing large amounts of sediment, and collecting nutrients leading to nuisance algae and plant blooms. The remainder of the North Branch Milwaukee River south of the trout stream portion is capable of supporting a diverse warmwater sport fishery. Other fish species found in the North Branch include blacknose dace, hornyhead chub, creek chub, bluntnose minnow, southern redbelly dace, mottled sculpin, white sucker, brown trout, greater redhorse, black bullhead, common shiner, spotfin shiner, northern pike, golden redhorse, rock bass, green sunfish, pumpkinseed, bluegill, johnny darter, yellow perch, spotfin shiner, sand shiner, common carp, and logperch.

Agriculture is the major land use along the North Branch with some urban/residential. Many areas along the North Branch exhibit high quality streamside corridor and aquatic habitat interspersed with agricultural uses up to the streambanks, especially in the mid to lower reaches of the North Branch system. Water quality in the North Branch Milwaukee River is considered fair to good. The Nichols Creek portion exhibits the best habitat and water quality in the North Branch. As the river flows downstream, the effects of nonpoint sources of pollution become more apparent. The Cascade and Gooseville dams also contribute to degraded water quality by slowing the flow of the river. Instead, the water warms, and sediment and nutrients build up, leading to degraded water quality. Carp are abundant in these areas and contribute to turbidity problems in certain stretches by rooting up vegetation, and thereby stirring up the collected sediments. Carp are not a problem in the areas with high quality habitat and stable water temperatures where more sensitive species can successfully compete.

The North Branch Milwaukee River has many areas of high quality terrestrial and aquatic habitat. Protecting these areas, including wetlands, while developing buffers to connect the high quality habitats and reduce the effects of nonpoint source pollution will help the North Branch to be even better than it is today.

Silver Creek originates in the Adell swamp and flows in a generally southwesterly direction for 10 miles to its confluence with the North Branch Milwaukee River. Land uses adjacent to Silver Creek range from urban (Village of Random Lake) to rural (agriculture, wetlands, grasslands and woodlands). Along the length of the creek, farm fields up to the stream edge are interspersed with wooded areas of varying widths and lengths. Water quality problems documented in Silver Creek include sedimentation, high bacteria during summer months, and lack of high-quality in-stream cover.

Nonpoint sources of pollution to Silver Creek include runoff from livestock operations, upland erosion, streambank erosion, and urban runoff.

Fish species documented in Silver Creek include blacknose dace, northern pike, creek chub, Iowa darter, johnny darter, white sucker, common shiner, central mudminnow, black crappie, bluegill, black bullhead, and fathead minnow. Wildlife habitat is very good along intermittent stretches of the creek. Connecting the wooded areas along the creek with vegetated buffers will improve wildlife habitat and filter runoff from adjacent land uses. In addition to providing needed filtering of nonpoint pollution sources and shading of the creek, a contiguous buffer will provide needed nesting cover and migration routes for wildlife species, and contribute woody debris to the creek, thereby enhancing habitat for aquatic life.

This stream is classified as an Exceptional Resource Waters under NR102.10 and NR 102.11. Exceptional Resource Waters have excellent water quality and valued fisheries but already receive wastewater discharges or may receive future discharges necessary to correct environmental or public health problems. In 1989, “A Nonpoint Source Control Plan for the North Branch Milwaukee River Priority Watershed Project” identified several nonpoint pollution source controls needed to enhance the water quality of Silver Creek and to improve its ability to support a warmwater sport fishery. They are:

- 1) Reduce the amount of phosphorus and bacteria in Silver Creek by reducing contributions from barnyards and critical areas winter spread with livestock waste by 50%.
- 2) Reduce the amount of sediment and associated turbidity (cloudiness) in Silver Creek by reducing sediment delivery from eroding cropland by 40%.
- 3) Restrict livestock access to Silver Creek to improve aquatic habitat.
- 4) Reduce the amount of pollutants entering Silver Creek via urban runoff.

Since this report is now over 15 years old, some progress may have been made in addressing these issues. A new study by WDNR would be helpful in determining what kind of policies might need to be implemented.

Batavia Creek is a 1.5-mile long tributary to the North Branch Milwaukee River located primarily in Section 19 of the Town of Sherman. The creek and its three tributaries have been extensively ditched for agricultural purposes. Very little stream-side buffer is located along the creek and its tributaries. Channelization, runoff and lack of buffer contribute to the degraded conditions in Batavia Creek. Portions of the creek have thick silt deposits overlying gravel and rubble.

The creek supports a variety of mostly tolerant fish species including central mudminnow, creek chub, white sucker, bluntnose minnow, brook stickleback and blacknose dace. Extensive ditching, sedimentation and poor habitat are factors limiting fisheries potential. Establishing a riparian buffer

[Map: Figure 2.11 Sheboygan County Shoreland-Floodplain Zone]

throughout the creek's length with a variety of cover types will reduce these impacts and enhance Batavia Creek's resources by reducing soil erosion, filtering nutrients and bacteria, and providing stream shading.

Gooseville Creek (a/k/a Lynn Creek) flows through Sections 9, 10, 16, 17, 21 and 22, and is identified by WDNR as a Class 1 Trout Stream. Class 1 Trout streams "... are high quality trout waters, have sufficient natural reproduction to sustain populations of wild trout at or near capacity. Consequently, streams in this category require no stocking of hatchery trout." (WDNR PUB-FH-806 2002 page 80.) Gooseville Creek and its north branch are Class I streams and the south branch is a Class II stream (not quite as good as Class I because it may need stocking).

Shoreland Corridors

Shorelands are often viewed as valuable recreational and environmental resources both in urbanized and rural areas. As a result, the State of Wisconsin requires that counties adopt shoreline/floodplain zoning ordinances to address the problems associated with development in floodplain areas. Under the *Sheboygan County Shoreland-Floodplain Ordinance*, development in shoreland areas outside a 75-foot setback is generally permitted, but specific design techniques must be considered.

Development in these areas is strictly regulated and in some instances, may not be permitted. For planning and regulatory purposes, the shoreland zone is normally defined as lands within the following distances from the ordinary high water mark of navigable waters: 1,000 feet from a lake, pond, or flowage, or, where approved, to the outer perimeter of contiguous mapped wetlands, whichever distance is greater; and, 300 feet from a river or stream, or to the landward side of the floodplain, or, where approved, to the outer perimeter of contiguous mapped wetlands, whichever distance is greater.

Figure 2.11 shows the County shoreland zoning jurisdiction within the Town of Sherman.

Floodplains

Floodplains are often viewed as valuable recreational and environmental resources. These areas provide for stormwater retention, groundwater recharge, and habitat for various kinds of wildlife unique to the water. For planning and regulatory purposes, the floodplain is normally defined as those areas, excluding the stream channel, that are subject to inundation by the 100-year recurrence interval flood event. This event has a one percent chance of occurring in any given year. Because of this chance of flooding, residential, commercial and similar development in the floodplain should not be allowed, and instead park and open space in these areas should be encouraged.

Development permitted to take place in flood-prone areas is susceptible to storm damage and can have an adverse effect on water quality and wildlife habitat. In addition, building in a floodplain can also result in increased development and maintenance costs such as providing flood proofing, repairing damage associated with flooding and high water, increased flood insurance premiums, extensive site preparation, and repairing water-related damage to roads, sewers, and water mains. Some communities have special ordinances for remodeling and expanding buildings already within the floodplain. New expansions may have to be compliant to the rules of floodplain construction.

Figure 2.12 shows the floodplain areas as mapped by the Federal Emergency Management Agency (FEMA). The original paper copy maps produced by FEMA were re-created in digital format for mapping purposes. An on-site review of the floodplain elevation is necessary to determine the most accurate location of the floodplain boundary.

[Map: Figure 2.12 Floodplain & Wetlands]

Wetlands

According to the Wisconsin Department of Natural Resources, wetlands are areas where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophilic vegetation. Other common names for wetlands are swamps, bogs, or marshes. Wetlands serve as a valuable natural resource. They provide scenic open spaces in both urban and rural areas. There are about 3,500 acres of wetlands in the Town of Sherman (about 15% of the total land area), many of them located near Adell or in the central part of the Town. Figure 2.12 shows wetlands in the Town of Sherman as mapped on the Wisconsin Wetland Inventory.

Wetlands also act as natural pollution filters, making many lakes and streams cleaner and drinking water safer. They act as groundwater discharge areas and retain floodwaters. Filling or draining of wetlands destroys the productive capacity of the ecosystem and can adversely affect surface water quality and drainage. They also provide valuable habitat for many plants and animals.

Because of their importance, there are strict regulations regarding wetlands. Wisconsin Administrative Codes NR 115 and NR 117 fall under the jurisdiction of the Wisconsin Department of Natural Resources, and mandate that shoreland wetlands be protected in both the rural and urban areas of the State. In the unincorporated areas, NR 115 provides the legislation to protect wetlands of five acres or more that are within the jurisdiction of county shoreland zoning ordinances. Wetlands not in the shoreland zone are protected from development by the federal government and the WDNR through Section 404 of the Clean Water Act, and NR 103, respectively. It should be noted that all wetlands, no matter how small, are subject to WDNR and possibly federal regulations, if they meet the State definition.

Woodlands

Woodlands throughout Sheboygan County are comprised primarily of sugar maple, yellow birch, American beach, basswood, red oak, red pine, hemlock, silver maple, paper birch, aspen, white cedar, and small stands of the northern hardwood species. Also seen in the County are balsam firs, white spruce, black spruce, and tamarack. These woodlands provide an aesthetic and natural purpose, providing habitat to many animals. In the Town of Sherman, about 6,000 acres are woodlands (about one-quarter of the land area of the Town). Major woodland areas include the North Branch Milwaukee River corridor, lands west and south of Adell, and lands in Sections 21 and 23. Figure 2.13 shows areas of woodlands in the Town.

The Managed Forest Law (MFL) program can ease the property tax burden for Wisconsin forestland owners who wish to manage their woodlands. The MFL program is intended to foster timber production on private forests, while recognizing other values. MFL participants pay property taxes at a reduced rate. A portion of the foregone taxes is recouped by the state at the time the timber is harvested. The Wisconsin Department of Revenue estimates MFL program participants can reduce their property tax an average of 80% after paying harvest taxes. The MFL program is open to all private landowners with at least 10 acres of forestland, provided that 80% of the land is productive forestland capable of producing wood products (can grow at least 20 cubic feet of wood per acre per year) and the minimum average width of the enrolled land is no less than 120 feet. Participation in the MFL program requires an approved, written forest management plan and the landowner must allow public access to get the lowest annual property tax rate. Access on these “open” lands is only for hunting, fishing, hiking, sightseeing, and cross-country skiing.

[Map: Figure 2.13 Woodlands]

Metallic and Non-Metallic Mining Resources

Currently there is no metallic mining occurring in the Town of Sherman or anywhere in Sheboygan County. Mineral resources in the Town are non-metallic in nature and include sand and gravel.

Sand and gravel resources are often referred to as “pits.” (The term “quarry” is most appropriate for limestone, because such operations require controlled blasting to remove material.) The most familiar uses for sand and gravel resources are road building and maintenance. The materials are also used in the construction of residential, commercial and public buildings, bridges, sewer and septic systems, and in erosion control measures.

Figure 2.14 shows the potential gravel source areas in the Town of Sherman, the currently active mining sites, and older, inactive sites. There are extensive potential gravel source areas in the Town of Sherman, especially in the western and southern halves of the Town. The vast majority of these areas are zoned A-1, which provides protection from development unless a zoning change to a residential class is approved. The two active mining sites are in Sections 20 and 25 and are zoned A-1 and M-3 respectively.

Sand, gravel, and crushed stone are nonrenewable resources. As the region undergoes further growth and development, there will be greater demands for these resources. According to the Wisconsin Geological Survey, one new home and its proportional share of the associated schools, libraries, shopping centers, recreational facilities, etc. requires over 325 tons of aggregate.

Approximately 20,000 tons are used per lane-mile for an interstate highway. There is a continuous, substantial need for aggregate resources to support the infrastructure that people rely on every day. As a rule of thumb, one acre mined to a depth of one-foot potential produces 2,000 tons of aggregate. Therefore, 100 acres mined to a depth of 100 feet could produce 20 million tons of aggregate, enough for 60,000 homes or 250 miles of four-lane interstate highway. However, it would take many years of mining to extract this 20 million ton yield.

Even though sand, gravel, and crushed stone are common, some deposits are of far better quality than other deposits. Gravel and crushed stone deposits with low chert content are best suited for concrete. Gravel deposits with low percentages of foliated metamorphic rock, gabbro, and basalt fragments are best suited for sub-base material and concrete. Outwash plains, kames, eskers, dunes, point bars, and stream channels are the best sources for better quality sand and gravel.

Sand, gravel, and crushed stone have low “intrinsic value,” but high “place value.” Intrinsic value refers to cash value of a given unit (weight or volume) of the product, while place value refers to the cost of transporting a given unit of the product. Construction costs increase significantly as the distance from the source of sand, gravel, and crushed stone increases, to the point that transportation costs may exceed production costs. Importing this resource from even 50 miles away can triple the cost, therefore it is important to identify potential local resource sites and protect them from residential or commercial development before they can be mined.

The Town of Sherman currently has a mineral extraction district which is intended to provide for and regulate future gravel and other mineral extraction sites. These areas are completely fenced in and require a conditional use permit. Conditional uses in mineral extraction operations include washing, crushing or other processing.

While mining has economic value to multi-regional areas, it also has the ability to degrade natural resources. Any new mines need to have a permit granted by the WDNR, which includes a

[Map: Figure 2.14 Potential Gravel Sources]

reclamation plan. Wisconsin State Administrative Code NR135 gave this authority to the counties. Sheboygan County has enacted a non-metallic mining program; however, any town or municipality may develop and administer their own non-metallic mining reclamation program within the guidelines of Chapter NR 135. Nevertheless, this program will not improve sites that have discontinued mining operations prior to December 1, 2000.

The reclamation plan is a detailed technical document designed to meet the goals that will lead to successful reclamation and will help reduce the negative effects to the environment once the mine is abandoned. The plan has minimum standards that must be met before acceptance. The WDNR defines successful reclamation as “the restoration of all areas disturbed by mining activities including aspects of the mine itself, waste disposal areas, buildings, roads and utility corridors.” Restoration is defined as “returning of the site to a condition that minimizes erosion and sedimentation, supports productive and diverse plants and animal communities and allows for the desired post-mining land use.”

Environmental Corridors

Environmental corridors serve many purposes. They protect local water quality and wildlife habitat through identification and preservation of environmentally sensitive areas. They can be used as a means of controlling, moderating, and storing floodwaters while providing nutrient and sediment filtration. Environmental corridors can provide fish and wildlife habitat, recreational opportunities, and serve as buffers between land uses while improving the aesthetics of the community. The environmental corridor process is also used as part of the planning process for making planning and zoning decisions at the local level.

Section 3.10 of the Town of Sherman Zoning Ordinance has been established specifically for conservancy of these resources. The district preserves lakes, streams, wetlands and floodplains. The goal of this district is to improve water quality, minimize potential property damage by flooding, protect wildlife habitat, and provide recreational opportunities.

The concept of a corridor is based on the delineation of environmental features adjacent to waterways and water-related resources. The Bay-Lake Regional Planning Commission has defined environmental corridors to include the following set of uniformly available information: Wisconsin Department of Natural Resources wetlands; Federal Emergency Management Agency’s 100-year floodplains; areas with slopes greater than or equal to 12 percent; lakes, rivers, streams and ponds; a 75-foot lake and river setback; and, a 25-foot buffer of wetlands. Many of the Commission’s planning activities require delineation of environmental corridors (comprehensive plans, watershed plans, sewer service area plans, etc.).

Other features that are considered as part of the environmental corridor definition on an area-by-area basis include: designated scientific and natural areas; unique and isolated woodland areas; scenic viewsheds; historic and archaeological sites; unique geology; wetland mitigation sites; isolated wooded areas; unique wildlife habitats; parks and recreation areas; and other locally identified features. The Commission has defined environmental corridors for Sheboygan County to help in identifying areas that have the greatest need for protection. These corridors were delineated using of the Commission’s Geographic Information System (GIS) to overlay a variety of features. Figure 2.15 shows these environmental corridors.

[Map: Figure 2.15 Environmental Corridors]

Air Quality Issues

The U.S. Environment Protection Agency (EPA) uses six “criteria pollutants” as indicators of air quality: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter and lead. For each of these, the EPA has established “primary” standards to protect public health, and “secondary” standards to protect other aspects of public welfare, such as preventing materials damage, preventing crop and vegetation damage, or assuring visibility. These standards are called the National Ambient Air Quality Standards (NAAQS). Areas of the country where air pollution levels persistently exceed these standards may be designated “non-attainment.”

Sheboygan County is considered a non-attainment area for the “8 hour” ozone standard (NAAQS). Sheboygan County was in attainment of the “1 hour” ozone standard, but the new standard has gone into effect. The Governor of the State of Wisconsin recommended non-attainment designation for Sheboygan County under the 8 hour standard in 2003 and the US Environmental Protection Agency designated Sheboygan County as non-attainment on April 15, 2004, with an effective date of June 15, 2004.

Wildlife Habitat

Wildlife habitat can be defined as areas that provide enough food, cover, and water to sustain a species. Major wildlife species using local habitats either within the Town of Sherman may include songbirds, white-tailed deer, squirrels, and small mammals. Several species of geese and ducks inhabit the open water areas in the Town. Some of the old fields, agricultural land, and wetlands provide habitat for turkeys, pheasants, raccoon, skunk, muskrats, red fox, badgers, coyotes, and mink.

Sheboygan County lies within an important migratory corridor for songbirds, shorebirds, waterfowl, and raptors. These birds, possibly including some threatened or endangered species, use wooded and wetland areas for food and shelter during migration.

Threatened and Endangered Resources

Many rare, threatened, and endangered species are found within Sheboygan County. Potential impacts should be discussed before development occurs so as not to disturb potential habitats for these flora and fauna. Page 40 of the *Sheboygan County Natural Areas and Critical Resources Plan (2004)* lists the known rare species and natural communities within the County as recorded in the Wisconsin Natural Heritage Inventory.

Four species of plants identified in the North Branch Milwaukee River Wildlife and Farming Heritage Area are listed as of special concern in Wisconsin. They are the cuckoo flower, small yellow lady's-slipper, American gromwell, and Christmas fern. Six species of fish listed as state-threatened or special concern are found in the waters within the study area. Little is known about the invertebrates in the area, although the aquatic invertebrates are assumed to be diverse and plentiful because the rivers harbor many rare fish, which indicates a diverse aquatic community. Endangered, threatened, and special concern reptile, amphibian, bird, mammal, and fish species known to occur in the study area are listed in Appendices B - E of the *North Branch Milwaukee River Wildlife and Farming Heritage Area* report available from WDNR.

Parks and Open Spaces

Parks are discussed in Chapter 6 - Utilities & Community Facilities. As of 2002, approximately 97 percent of the land (about 21,000 acres) within the current Town borders could be described as undeveloped “open space,” characterized primarily by a mixture of farmland, woodlands, and wetlands. The majority of land in towns surrounding Sherman is also “open,” characterized by this same mix. According to data from Bay-Lake Regional Planning Commission in 2002, the Town of Lyndon directly to the north, for example, was approximately 96% “open space.” For comparison’s sake, in 2004 the Town of Richfield, directly north of Waukesha County, was approximately 64% “open space.”

See Figure 2.16 for locations of parks and publicly owned lands within the Town.

Scientific and Natural Areas

As of the date of this planning process, areas within the Town of Sherman have not been designated as State scientific or natural areas. The Wisconsin State Natural Area program was established to formally designate sites in natural or near natural condition for scientific research, the teaching of conservation biology, and most of all, preservation of their natural values and genetic diversity for the future. These areas are not intended for intensive recreation use, but rather to serve the mission of the Natural Areas Program, to locate and preserve a system of State Natural Areas harboring all types of biotic communities, rare species, and other significant natural features native to Wisconsin.

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The North Branch Milwaukee River Wildlife and Farming Heritage Area includes portions of Sheboygan, Ozaukee, and Washington Counties and encompasses a total of 19,487 acres of land. A portion of southwestern Town of Sherman (approximately 1,800 acres) is included in the Heritage Area (see Figure 2.17). The project area includes river and stream corridors, large wetland complexes, three lakes, and rural/agricultural lands and is one of the largest blocks of open space remaining in southeastern Wisconsin where agriculture is the dominant land use. The purpose of the project is to:

- Maintain the rural character of the area.
- Maintain and enhance existing natural resources.
- Restore plant communities and wetlands to improve wildlife habitat and water quality.
- Provide nature-based outdoor recreation and education opportunities.

In an effort to achieve the goal of agricultural land preservation, the Wisconsin Department of Natural Resources is committed to working with local farmers and landowners to participate in Purchase of Development Rights (PDR) projects within the boundary area. Purchase of Development rights programs pay landowners the difference between the market price and the use price (e.g., agricultural use value). In return, the landowner relinquishes his/her right to develop their land.

[Map: Figure 2.16 Publicly Owned Lands]

[Map: Figure 2.17 North Branch Milwaukee River Wildlife and Farming Heritage Area]

Historic and Archeological Resources

When the first European settlers came to the area, there were approximately 1,000 Native Americans living in the county, composed mainly of the Pottawatomi, Chippewa, Ottawa, Winnebago and Menominee tribes. Their villages and camps were clustered on the bank or shore of practically every lake or stream, with the largest villages situated along the shore of Lake Michigan. Figure 2.18 lists historic sites and Figure 2.19 lists archeological sites in the Town of Sherman.

Figure 2.18 Architecture and History Inventory		
Ahi #	Location	Historic Name
16586	CTH A, 0.3 miles east of STH 57	St. Patrick's Roman Catholic Church
16695	Silver Creek – Cascade Road	Gooseville Mill / Grist Mill
17501	CTH A, 0.4 miles west of STH 57	Garett Doyle Farm
74995	N371 STH 57	Joachim Schultz Farmstead
74999	N851 STH 57	August Utech House and Barn
76099	N577 STH 57	Ed and Lillian May House and Barn
76101	W4928 STH 144	Schrantz Barn and Machine Shed
76105	N1793 STH 57	Martin Scholz Service Station
76106	N1995 STH 57	Phil Donovan House and Barn
76108	N2265 STH 57	J. Cantwell House

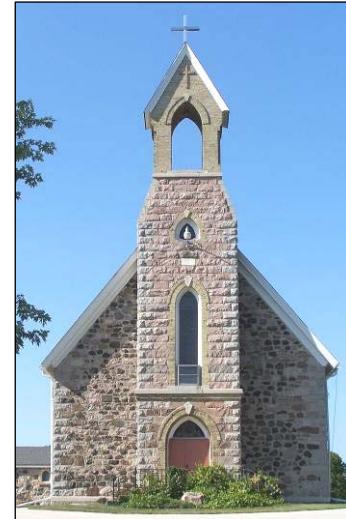
Source: Architecture and History Inventory, Wisconsin State Historical Society. (Not necessarily a comprehensive list of all old buildings and structures.)

Figure 2.19 - Archaeological Sites			
Site # / Burial Code	Site Name / Type	Cultural Study Unit	Section #
SB-0274	SHEBOYGAN COUNTY (?) HISTORICAL MARKER 1. Campsite/village	1. Historic Indian	5
SB-0065	HAAG 1. Campsite/village	1. Unknown Prehistoric	8
SB-0190	GOETSCH 1. Campsite/village	1. Unknown Prehistoric	23
BSB-0001	PILGRIM REST CEMETERY 1. Cemetery/burial	1. Historic Euro-American	7

BSB-0003	ST. PAUL EVANGELICAL LUTHERAN CHURCH CEMETERY 1. Cemetery/burial	1. Historic Euro-American	30
BSB-0004	Unnamed Cemetery 1. Cemetery/burial	1. Historic Euro-American	30
BSB-0015	SHERMAN UNION CEMETERY 1. Cemetery/burial	1. Historic Euro-American	5
BSB-0081	ST. PATRICK CATHOLIC CEMETERY 1. Cemetery/burial	1. Historic Euro-American	1
BSB-0083	OUR LADY OF THE LAKES CATHOLIC CEMETERY 1. Cemetery/burial	1. Historic Euro-American	28
BSB-0084	ST. PAUL'S LUTHERAN CEMETERY 1. Cemetery/burial	1. Historic Euro-American	24
BSB-0085	ST. JOHN'S EVANGELICAL LUTHERAN CEMETERY 1. Cemetery/burial		15
SB-0283	BABS I 1. Isolated finds	1. Middle Archaic	18
SB-0284	BABS II 1. Isolated finds	1. Late Woodland	17
BSB-0180	Unnamed Burial Site 1. Cemetery/burial	1. Historic Euro-American	17
BSB-0187	Unnamed Cemetery 1. Cemetery/burial	1. Historic Euro-American	33
SB-0373	GOETSCH 1. Lithic scatter	1. Early Woodland 2. Late Woodland	27

Source: Sheboygan County Natural Areas and Critical Resources Plan

Other historic features include the bridge over the North Branch Milwaukee River on Cascade Road, built in 1921; and the bridge over Silver Creek on Creek Road, built in 1919.



Cultural Resources

Libraries

- Lakeview Community Library, 112 Butler Street, Random Lake. This library serves the Village of Random Lake, Town of Scott, Town of Sherman, and Village of Adell.

Community Organizations

- Adell Sportsman's Club
- Sherman Workers 4-H Club

Events

- Silver Creek Fireman's Chicken Barbeque and St. Patrick's Day Dance

St. Patrick's Catholic Church

Community Design

Community design addresses the “look” and “feel” of a community.

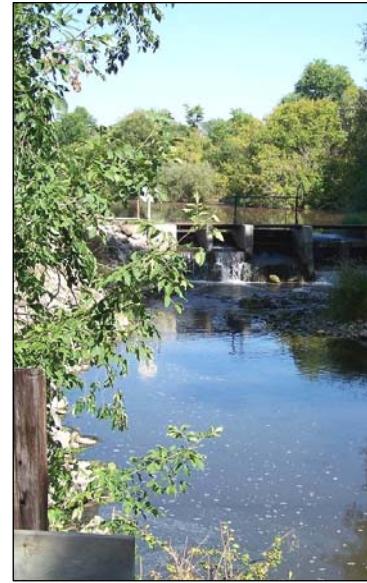
A variety of features contribute to community design, and these are identified below.

Signage

This includes signs that identify businesses; billboards and similar advertising signs; municipal signs; and yard signs. The Town of Sherman implemented a comprehensive sign ordinance in 2004.

Public Landscaping

Parks, medians, and areas around public buildings often contain landscaping that can set a particular tone for a community. Because the Town is predominately agricultural and spread out, without any sort of town center, there is no public landscaping within the Town of Sherman.



Gooseville Millpond Dam

Districts

Districts encompass easily delineated areas within a community, such as a historic district or a central business district. Special regulations may apply in such districts. The Town of Sherman does not currently have any special districts.

Landmarks

Landmarks are well-known reference points, prominent features, or meaningful locations within an area. Care should be taken to preserve landmarks, or enhance them, as necessary, if public opinion is supportive and funds are available. Some of the prominent features within the Town of Sherman are:

- Gooseville Mill and Millpond
- Silver Creek
- The old Town Hall

Highway Entryways

Also known as “front doors” to a community, these are often the first view visitors and residents have of a community upon arrival. Many communities dress up these entryways with special signage, lighting, and landscaping in order to create a favorable impression. CTH A and CTH I are entryways that might warrant discussion in the future.



RESOURCES STRATEGY AND RECOMMENDATIONS

The Town of Sherman will seek direction for this element from the vision and goals identified through the public participation process:

Vision

“We envision Sherman as a predominantly open space, agricultural area surrounding small villages. Sherman residents consider the land to be a great natural asset and encourage careful planning to ensure the land is used wisely. Intergovernmental cooperation will be important in this planning.”

Goals, Objectives, Policies, Programs

1) Farmland and open space/green space are very important in the Town of Sherman.

Over 70% of the participants in the Town of Sherman Citizen Input Survey agreed that farmland and open space/green space was important to the Town and should be protected. These lands help create the Town’s rural character and also provide outdoor recreation, vegetative buffers, flood and stormwater management, habitat preservation, air and surface water quality improvement, aesthetics and community focal points.

- a) *Policy/program:* Consider using a checklist to help analyze land parcels for potential zoning changes out of Farmland Preservation Zoning (FPZ). Criteria for land analysis might include the County’s Land Assessment and Site Evaluation (LESA) score; the recent use of the parcel and adjacent parcels; and the presence of natural buffers. (See Appendix 2A for a sample checklist.)
- b) *Policy/program:* Continue to use the Agricultural zoning districts to preserve productive farmlands in the Town, except in growth areas designated on the 20-Year Land Use Map.
- c) *Policy/program:* Help landowners become aware of programs such as the voluntary purchase of development rights program available through the North Branch Milwaukee River Wildlife and Farming Heritage Area program, as well as the options for conservation easements offered by Glacial Lakes Conservancy.
- d) *Policy/program:* Help landowners become aware of the Managed Forest Law as a tax incentive for keeping land as woodlands.
- e) *Policy/program:* Consider implementing innovative land preservation tools such as the Bonus Lot Preservation Plan; an overlay/density credit; and the Land Investment Program (see Appendix 2B for summaries of these programs).
- f) *Policy/program:* Consider clustering and conservation designs for future residential developments in order to preserve open space and natural areas.

2) Protection of farming activities is necessary within the Town of Sherman.

The Town of Sherman benefits from a vibrant agricultural sector and an open farm landscape. Farm products and the processing of farm products can still be a significant local source of income and employment. In addition, residents in the Town of Sherman view farming as an important occupation that embodies many fundamental American values. When Town residents were asked on the Citizen Input Survey whether a farmer's "right to farm" was important to them—even if they would be bothered by occasional noise, dust, odors, etc.—it over 94% of residents agreed.

- a) *Policy/program:* Create awareness of the intensity and importance of agriculture through a variety of methods that may include special "AG District" signage; road restrictions; lower speed limits; a town board "buyer/seller beware" conflict policy; and a "buyer beware" statement on Certified Survey Maps protecting the right to farm in the Town of Sherman.
- b) *Policy/program:* Develop and distribute, either directly or through area realtors, a "Rural Code of Conduct" that outlines the traditional community norms and expectations for residents. (See Appendix 2C for form used by Realtors Association of South Central Wisconsin.)

3) The Town of Sherman will not encourage additional large-scale livestock operations.

This goal does not mean the Town is discouraging large-scale agriculture. However, due to concerns about odor, noise, truck traffic, etc., the Town will not create policies to promote or solicit new farms of this size.

- a) *Policy/program:* Consider creating a special overlay district to support intensive agriculture in the zoning ordinance. Within this district, regulate livestock operations by requiring conditional use permits for larger operations, establish setback distances from natural and man-made features, and impose environmental performance standards.

4) The Town of Sherman will not discourage efforts to preserve historic resources in the town.

No significant historical, archeological, or other cultural resources concerns arose during the community issue identification and visioning process. Nevertheless, the Town Plan Commission and Board is not opposed to worthy private efforts to preserve historic and archeological resources or initiate cultural activities.

- a) *Policy/program:* Periodically, the Town Plan Commission and Board will evaluate and assess any historic resources in the Town and nominate any of these sites, structures, and artifacts of community significance to appropriate national, state, and local registers.

Furthermore, as the inventory for this chapter was compiled after the initial public participation and visioning, it became apparent that additional goals had to be developed. These additional goals are:

5) The Town of Sherman will strive to work with the Village of Random Lake to maintain or improve the health and water quality of Random Lake.

Because the lake is affected by runoff within its surrounding drainage basin, the Town of Sherman, the Village of Random Lake, and Sheboygan County need to work cooperatively to limit the negative impacts of pollutants entering the lake's drainage basin.

- a) *Policy/program:* Encourage the use of vegetative buffers along the streams and tributaries draining into Random Lake. Financial incentives are currently available through CREP and may be available in the future through the Sheboygan County Land & Water Conservation Department's Vegetated Buffer Strip Program.
- b) *Policy/program:* The Town will support state and county nonpoint pollution source controls to enhance the water quality of Silver Creek.
- c) *Policy/program:* Partner with UW-Extension and similar agencies to help local farmers become more aware of Best Management Practices (BMPs) for pesticide and fertilizer application, erosion control, environmentally friendly tilling strategies, etc.
- d) *Policy/program:* Work with the County to help ensure understanding of and compliance with the *Sheboygan County Runoff/Erosion Control Ordinance*.

6) The Town will monitor the health of natural resources within the Town.

While the Town values good stewardship of natural resources, concerns about any specific natural resource within Sherman did not arise as a significant issue during the community issue identification and visioning process. If in the future a concern with wetlands, groundwater, wildlife habitat, etc. arises, the Town Plan Commission and Board will work to amend this plan in order to adequately address the concern.

- a) *Policy/program:* On an as-needed basis, the Town Plan Commission will file or present a report to the Town Board on the state of natural resources in and adjacent to the Town. This will help local officials stay on top of any concerns before they become problems.

7) Future non-metallic mining sites will not negatively impact the environmental features within the Town of Sherman or its existing developments; current mining sites will limit negative impacts by complying with existing ordinances and carrying out reclamation plans.

Non-metallic mining produces a needed resource for construction projects through the region. The Town's community issue identification and visioning process did not identify any urgent concerns in this area. Nevertheless, truck traffic, noise, dust, and vibration associated with non-metallic mining can introduce conflicts into a neighborhood, and the activity of mining can damage the landscape if improperly managed.

- a) *Policy/program:* The Town shall steer incompatible uses away from current mining sites and areas where the development of new mining is highly likely.
- b) *Policy/program:* The Town should be familiar with the Sheboygan County Non-metallic Mining Reclamation Ordinance and consult it when necessary.
- c) *Policy/program:* The Town recognizes the value of non-metallic resources and will notify local non-metallic mining interests for input before making any rezoning decision that would affect an area of significant potential gravel resources identified on Figure 2.14.