

3.0 AGRICULTURAL, NATURAL AND CULTURAL RESOURCES



Wisconsin State Statute 66.1001(2)(e)

(e) Agricultural, Natural and Cultural Resources.

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, parks, open spaces, historical and cultural resources, community design, recreational resources and other natural resources.

3.1 AGRICULTURAL RESOURCES

3.1.1 AGRICULTURAL RESOURCES SUMMARY

The purpose of the Agricultural element is to present agricultural data and provide direction for land use decisions impacting agriculture for the next 20 years. Since most residents of Woodman make their living from agriculture, it is considered culturally important to the Town. This also holds true for economics: agriculture is the economic mainstay of Woodman. Agriculture also is important recreationally and aesthetically as the land provides habitat and food for deer and pheasants and thus, hunting and wildlife appreciation.

3.1.2 GOALS

The following is the Agricultural Resource Goal, one of the fourteen Smart Growth Planning Goals required by the planning grant contract.

1. Protect economically productive areas, including farmland and forests.

3.1.3 OBJECTIVES AND POLICY AND PROGRAM RECOMMENDATIONS

The following agricultural resource objectives and policy recommendations (not in order of priority) support the above goal. They will guide agricultural resource decisions in the Town of Woodman over the next 20 years.

NOT IN ORDER OF PRIORITY

1. **Encourage educational programs on the importance of agricultural resources for residents.**
2. **Maintain land in productive farm operations or land capable of productive agricultural uses, while exploring and encouraging innovative methods of preserving land for agriculture.**
3. **Maintain the rural and agricultural character of the community.**
4. **Emphasize the preservation of the environmental quality and rural character of the jurisdiction when considering future land use proposals.**
5. **Encourage the preservation of the family farm and farmland in the community.**
6. **Encourage all rural landowners to become cooperators with the Grant County Land and Water Conservation District (LWCD) and to implement conservation plans worked out between landowners and the LWCD.**
7. **Encourage proper separation distances between suburbs and rural land uses to avoid conflicts.**
8. **Encourage residential, commercial, and industrial development to areas least suited for agricultural purposes.**
9. **Encourage the location of rural non-farm land uses on soils and sites judged to be of relatively low value for agricultural purposes.**

3.1.4 FARMING SYSTEM

Using farm related data gathered at the County level from the Agricultural Census, it is possible to draw an inference about the state of agricultural health in the Town of Woodman. (The Agricultural Census does not collect data at the town level and defines a farm as any place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the year.)

Table 3.1.1 Trends in Farm Numbers 1987 – 2002

Grant County	1987	1992	1997	2002
Farms (number)	2,470	2,340	2,238	2,490
Land in farms (acres)	648,318	620,951	599,617	605,836
Average size of farm (acres)	262	265	268	243
Number of farms by size – 1 to 9 acres	136	115	73	105
Number of farms by size – 10 to 49 acres	178	204	234	398
Number of farms by size – 50 to 179 acres	728	645	681	836
Number of farms by size – 180 to 499 acres	1,155	1,100	982	900
Number of farms by size – 500 to 999 acres	230	226	221	193
Number of farms by size – 1,000 acres or more	43	50	47	58
Total cropland (farms)	2,307	2,159	2,051	2,185
Total cropland (acres)	419,596	400,489	376,191	374,984

(Source: 1987, 1992, 1997, 2002 US Census of Agriculture)

Table 3.1.1 gives the number of farms in Grant County for the years 1987 through 2002. The County showed a 0.8% increase in farms between 1987 and 2002. Paradoxically, as the number of farms has increased, the acres of farmland have decreased 7% in the same timeframe.

Although average farm size decreased 7% from 1987 to 2002, in the same period, small farms (10 to 49 acres) increased 124%. Very large farms (1,000+ acres) increased 35%, as did farms from 50 to 179 acres (15%). All

other farm size classes decreased. The conclusion is that there are more very large (“super”) farms, “hobby” farms have more than doubled, while “working” or “family” farms have declined.

Table 3.1.2 Trends in Dairy Farms 1987 – 2002

Grant County	1987	1992	1997	2002
Milk cows (farms)	1,313	1,089	878	665
Milk cows (number)	66,728	58,995	52,702	46,564

(Source: 1997, 2002, US Census of Agriculture)

Table 3.1.2 shows clearly that both the number dairy farms and dairy cows in Grant County dropped dramatically (49% and 30% respectively) between 1987 and 2002.

3.1.5 LAND SALES STATISTICS

As required by the comprehensive planning process, statistics and graphs of land sales information are included below. Unfortunately, the data does not document land sales at the town level, nor is it as current as one would like. However, despite these limitations, it is clear from Table 3.1.3 that the value of land (both Ag and land sold for non-Ag uses) has been rising and for some time, too (in particular, the value of agricultural land diverted to other uses peaked in 2003). This trend of the last decade is no doubt continuing and therefore it is likely to affect future efforts by farmers to compete for the land base needed to remain in agriculture.

Table 3.1.3 Grant County Agricultural Land Sales: Total Agricultural Land

Agricultural land continuing in agricultural use							
	1999	2000	2001	2002	2003	2004	2005
Number of transactions	78	43	32	25	29	67	43
Acres sold	9,772	6,603	3,652	2,173	3,872	9,459	4,967
Dollars per acre	\$1,326	\$1,512	\$1,822	\$1,549	\$2,073	\$2,377	\$2,532
Agricultural land diverted to other uses							
Number of transactions	41	9	13	9	5	9	12
Acres sold	3,114	822	981	311	360	528	1,241
Dollars per acre	\$1,137	\$1,572	\$1,750	\$1,435	\$2,676	\$2,336	\$2,857
Totals							
Number of transactions	119	52	45	34	34	76	55
Acres sold	12,886	7,425	4,633	2,484	4,232	9,987	6,208
Dollars per acre	\$1,280	\$1,519	\$1,807	\$1,535	\$2,124	\$2,375	\$2,597

(Source: 2006, National Agricultural Statistics Service)

3.1.6 AGRICULTURAL ECONOMY

As shown in Table 3.1.4, twelve persons living in the Town of Woodman listed their occupations as farmer or farm manager in the 2000 census. Note that these occupations may not be in the Town the farmer or farm manager is living in. However, it does provide a general overview of the Town’s population of farmers.

Table 3.1.4 Farmers and Farm Managers as Number and Percent of Total Town Population

Jurisdiction	Population	Number of Persons Employed as Farmers and Farm Managers	Percent of Persons Employed as Farmers and Farm Managers
Town of Beetown	734	93	12.7%
Town of Bloomington	399	43	10.8%
Town of Boscobel	433	4	0.9%
Town of Cassville	487	54	11.1%
Town of Castle Rock	487	37	7.6%
Town of Clifton	304	42	13.8%
Town of Ellenboro	608	35	5.8%
Town of Fennimore	599	31	5.2%
Town of Glen Haven	490	48	9.8%
Town of Harrison	497	36	7.2%

Table 3.1.4 (cont.) Farmers and Farm Managers as Number and Percent of Total Town Population

Jurisdiction	Population	Number of Persons Employed as Farmers and Farm Managers	Percent of Persons Employed as Farmers and Farm Managers
Town of Hazel Green	1043	63	6.0%
Town of Hickory Grove	443	40	9.0%
Town of Jamestown	2077	48	2.3%
Town of Liberty	552	57	10.3%
Town of Lima	721	85	11.8%
Town of Little Grant	257	66	25.7%
Town of Marion	517	25	4.8%
Town of Millville	147	9	6.1%
Town of Mount Hope	225	33	14.7%
Town of Mount Ida	523	52	9.9%
Town of Muscoda	674	20	3.0%
Town of North Lancaster	515	65	12.6%
Town of Paris	754	63	8.4%
Town of Patch Grove	390	58	14.9%
Town of Platteville	1343	48	3.6%
Town of Potosi	831	43	5.2%
Town of Smelser	756	48	6.3%
Town of South Lancaster	808	67	8.3%
Town of Waterloo	557	51	9.2%
Town of Waterstown	362	23	6.4%
Town of Wingville	394	59	15.0%
Town of Woodman	194	12	6.2%
Town of Wyalusing	370	31	8.4%
Village of Bagley	339	0	0.0%
Village of Bloomington	701	14	2.0%
Village of Blue River	429	2	0.5%
Village of Cassville	1085	7	0.6%
Village of Dickeyville	1043	2	0.2%
Village of Hazel Green	1171	11	0.9%
Village of Livingston	584	10	1.7%
Village of Montfort	603	0	0.0%
Village of Mount Hope	186	2	1.1%
Village of Muscoda	1357	5	0.4%
Village of Patch Grove	166	4	2.4%
Village of Potosi	711	2	0.3%
Village of Tennyson	370	6	1.6%
Village of Woodman	96	0	0.0%
City of Boscobel	3047	3	0.1%
City of Cuba City	1945	17	0.9%
City of Fennimore	2387	19	0.8%
City of Lancaster	4070	32	0.8%
City of Platteville	9989	48	0.5%
Total	49770	1673	

(Source: 2000 Population Census)

3.1.7 AGRICULTURAL INFRASTRUCTURE

Farming infrastructure includes businesses and services such as feed mills, adequate roads, equipment vendors, cheese factories, seed dealers, or veterinarians might supply. Farm supply businesses and food processing facilities represent important resources to area farmers as well as the broader local economy.

3.1.8 PHYSICAL CHARACTERISTICS

Attached is the soils map (Map 3.1.1) for the Town of Woodman.

3.1.9 CONFLICTS AND THREATS TO AGRICULTURE

With the changes in development pressure and the transition out of farming by many, the nature of the industry is rapidly changing. Some of the conflicts and threats are within local control and some are tied to state, national and global decisions. This comprehensive plan cannot impact decisions such as commodity prices, which are set on the world market and the reduced marketing opportunities as a result of consolidation. What the plan can do, is respond to local conflicts and issues such as

- Conflicts with new residents with non-agriculture backgrounds, including smells and odors, traffic conflicts, animal waste disposal, trespassing, dust, manure and mud on the roads, chemical applications, equipment noise, lights, and fencing requirements.
- Fragmentation of farm fields as new parcels are created.
- Agricultural land values exceeding possible agricultural income opportunities.
- The challenges of developing a new generation of farmers.

3.1.10 FUTURE OF AGRICULTURE

Agriculture is changing rapidly and it is likely to continue to do so. It appears that the future will include three types of operations: larger commodity producers, niche/specialty producers, and life-style farming operations. In the past, the commodity producers were dominant, but this is changing as traditional dairy producers and older farmers are leaving the business.

3.1.11 AGRICULTURE RESOURCES, AGENCIES AND PROGRAMS

There are a number of available county, state and federal programs to assist with agricultural planning and protection. Below are brief descriptions of the various agencies and programs. The Farm Service Agency, Natural Resources Conservation Services, and the Conservation District offices are located at the Grant County Land Conservation Department, at 150 W. Alona Lane, Suite 1, Lancaster, WI 53813-2188 (608-723-6377). The UW Extension office is located at the Youth and Agriculture Center, 916 E. Elm Street, Fairgrounds, PO Box 31, Lancaster WI 53818-2125 (phone 608- 723-2125 and fax 608-723-4315).

USDA FARM SERVICE AGENCY

The U.S. Department of Agriculture's Farm Service Agency (FSA) has a direct financial impact on rural Wisconsin families through the programs and services they offer. They are dedicated to stabilizing farm income, helping farmers conserve land and water resources, providing credit to new or disadvantaged farmers and ranchers, and helping farm operations recover from the effects of disaster. Programs and services offered by the FSA are

- **Farm Loan Program (FLP)**
The Farm Service Agency offers direct and guaranteed farm ownership and operating loans to farmers who are temporarily unable to obtain private, commercial credit. Often, FLP borrowers are beginning farmers who cannot qualify for conventional loans because they have insufficient financial resources. The Agency also helps established farmers who have suffered financial setbacks from natural disasters, or whose resources are too limited to maintain profitable farming operations.
- **Conservation Reserve Program (CRP)**
The CRP is a voluntary program that offers annual rental payments, incentive payments for certain activities, and cost-share assistance to establish approved cover on eligible cropland. The program encourages farmers to plant long-term resource-conserving covers to improve soil, water, and wildlife resources. The Commodity Credit Corporation (CCC) makes available assistance in an amount equal to not more than 50 percent of the participant's costs in establishing approved practices. Contract duration is between 10 and 15 years.

USDA FARM SERVICE AGENCY

WISCONSIN STATE OFFICE
8030 Excelsior Drive
Madison, WI 53717-2905

Phone (608) 662-4422
Fax (608) 662-9425

<http://www.fsa.usda.gov/WI>

- **Direct and Counter-Cyclical Payments (DCP)** The 2002 Farm Bill makes payments to eligible producers of covered commodities for the 2002 through 2007 crop years. Direct and counter-cyclical payments are made to producers with established crop bases and payment yields. Payment rates for direct payments were established by the 2002 Farm Bill and are issued regardless of market prices. Producers also are eligible for counter-cyclical payments, but payments are issued only if effective prices are less than the target prices set in the 2002 Farm Bill. Commodities eligible for both direct and counter-cyclical payments include wheat, corn, sorghum, barley, oats, upland cotton, rice, soybeans, sunflower seeds, canola, flaxseed, mustard, safflower, rapeseed, and peanuts.
- **Milk Income Loss Contract Program (MILC)**
This program, authorized by the 2002 Farm Bill, financially compensates dairy producers when domestic milk prices fall below a specified level. Eligible dairy producers are those who produced milk in any state and marketed the milk commercially beginning December 2001. To be approved for the program, producers must be in compliance with highly erodible and wetland conservation provisions and must enter into a contract with USDA's Commodity Credit Corporation to provide monthly marketing data.

NATURAL RESOURCES CONSERVATION SERVICE

The Natural Resources Conservation Service (NRCS) is the federal agency that works with landowners on private lands to conserve natural resources. NRCS is part of the U.S. Department of Agriculture, formerly the Soil Conservation Service. Nearly three-fourths of the technical assistance provided by the agency goes to helping farmers and ranchers develop conservation systems uniquely suited to their land and individual ways of doing business. The agency also assists other private landowners and rural and urban communities to reduce erosion, conserve and protect water, and solve other resource problems. NRCS provides:

**WISCONSIN NATURAL
RESOURCES CONSERVATION
SERVICE (NRCS)**

**6515 Watts Road
Suite 200
Madison, WI 53719**

Phone (608) 276-USDA

<http://www.wi.nrcs.usda.gov>

- **Technical Assistance for Conservation**
Conservation technical assistance is the basis of NRCS mission to conserve, sustain, and improve America's private lands. NRCS staff works one-on-one with private landowners to develop and implement conservation plans that protect the soil, water, air, plant and animal resources on the 1.5 billion acres of privately owned land in the United States.
- **Soil Survey**
NRCS is responsible for surveying the soils of the United States, publishing and interpreting soil information. Soil information is the basis for natural resource and land use planning, key to assessing site potential for specific uses and identifying soil characteristics and properties.
- **National Resources Inventory**
Every five years, NRCS conducts the National Resources Inventory (NRI) on nonfederal rural land in the United States. This inventory shows natural resource trends, such as land cover and use, soil erosion, prime farmland, and wetlands. The 1992 NRI, for example, shows that farmers are dramatically reducing soil erosion on cropland. From 1982 to 1992, erosion on all cropland declined by about one-third, going from 3.1 billion to 2.1 billion tons a year.
- **Wetlands**
Wetland conservation is an important and sensitive issue. During 1982-1992, wetland losses due to agriculture slowed to about 31,000 acres a year, a more than 90 percent reduction compared to conversion rates between 1954 and 1974. NRCS is one of the four primary federal agencies involved with wetlands.
- **Wetlands Reserve Program**
In the Wetlands Reserve Program, conservation easements are purchased from landowners to restore or enhance wetland areas. Ownership, control of access, and some compatible uses remain with the landowner.

- **Wetland Identification**
NRCS has technical leadership for identification and delineation of wetlands on agricultural lands and on all USDA program participant's lands. NRCS maintains a list of hydric soils and a wetland inventory on agricultural land.
- **Soil Quality**
Over the past decade, NRCS has been helping producers develop and implement 1.7 million conservation plans on 143 million acres of highly erodible cropland as part of the conservation compliance provision of the Food Security Act of 1985. As a result, erosion on the most highly erodible cropland has been cut by two-thirds.
- **Water Quality**
NRCS assists farmers to improve water quality. This includes improving nutrient and pesticide management and reducing soil erosion, thus decreasing sediment that would otherwise end up in lakes and streams. Technical assistance, including engineering, structure design and layout for manure management and water quality practices contributes significantly to state water quality efforts. Through the Environmental Quality Incentive Program, NRCS provides technical and financial assistance for local resource priorities.

WISCONSIN FARM CENTER

The Wisconsin Farm Center provides services to Wisconsin farmers and agribusinesses to promote the vitality of the state's agricultural economy and rural communities. Services include:

- **Growing Wisconsin Agriculture**
Wisconsin is committed to the long-term profitability of agricultural businesses. Legislation passed in 2004 strengthens agriculture and invites producers to invest, reinvest and expand.
- **Financial Counseling and Advising**
The Farm Center's financial experts are trained in feasibility analysis, enterprise analysis, debt analysis along with restructuring and cash flow projection. They can personally assist producers and answer specific questions, providing useful resource materials.
- **Farm Mediation**
The Farm Center's farm mediation program provides dispute resolution services to farmers with problems involving creditor-debtor issues; U.S. Department of Agriculture program benefits; contracts with food processors, fertilizer, seed or feed dealers; conflicts within farm families; and landlord-tenant issues.
- **Stray Voltage**
Through Rural Electrical Power Services, the Farm Center provides information about stray voltage and power quality issues; answers to regulatory questions; on-farm and distribution system investigations by a technical team that can assist farmers in working with the utility or electrician to resolve a power quality conflict; a format for dispute resolution; and research on electrical issues.
- **Legal**
The Farm Center's agricultural attorney can answer general legal questions about farm business organization, landlord-tenant issues, debt restructuring, legal procedures, creditor-debtor law, and tax reorganization and estate planning.
- **Vocational**
The Farm Center can help farmers or their family members make a successful transition to off-farm employment. It can help them examine their skills and explore their career options, regardless of whether they are looking to add off-farm income to the farm operation, starting a new small business, or seeking off-farm employment.

WISCONSIN DEPARTMENT OF TRADE AND CONSUMER PROTECTION (DATCP)

WISCONSIN FARM CENTER

2811 Agriculture Drive
PO Box 8911
Madison, WI 53708

Phone (608) 224-4960

<http://www.datcp.state.wi.us>

- **Farm Transfers**
Through its Farm Link program, the Farm Center can help farmers who want to start their own operation, retiring farmers who want someone to take over their operation, or farmers who want to relocate due to urban or environmental pressures.
- **Animal Agriculture**
Animals are a vital part of agriculture in Wisconsin. Whether you are a farmer, a veterinarian, a livestock dealer or trucker, or a consumer, DATCP provides information and regulates many aspects of animal agriculture.
- **Crops**
Statistics show Wisconsin ranks first in production of a number of agriculture crops. Farmers in the State continue to adopt traditional and specialty crops. Cultivating and protecting them is key.
- **Land and Water**
The State works with county land conservation departments to protect the environment through conservation practices, incentive programs and regulation.

3.2 NATURAL RESOURCES



3.2.1 NATURAL RESOURCE SUMMARY

It is vital for the Town of Woodman to consider its future in conjunction with its natural resources. It can be very challenging for rural communities to allow new development, while at the same time protecting the natural environment, preserving the character of an area. At first, development may have only a limited impact on the natural landscape, but as it development continues, visual and environmental impacts become increasingly apparent. In order to protect natural resources for the future, it is crucial to be aware of existing natural resources, such as water, the geology of the region, forests and woodlands, wildlife habitat, and wetlands.

3.2.2 GOALS

The following are the Natural Resource Goals, two of the fourteen Smart Growth Planning Goals required by the planning grant contract.

1. Protect natural areas, including wetlands, wildlife habitats, lakes, woodlands, open spaces, and groundwater resources.
2. Protect economically productive areas, including farmland and forests.

3.2.3 OBJECTIVES AND POLICY AND PROGRAM RECOMMENDATIONS

The following natural resource objectives and policy recommendations will support the above goals and will guide natural resource decisions in the Town of Woodman over the next 20 years.

NOT IN ORDER OF PRIORITY

1. **Work with the Wisconsin DNR to develop additional recreational opportunities on State land in the Town.**
2. **Encourage the preservation of scenic, historic, and scientific areas for the benefit of present and future generations.**
3. **Avoid disturbances to wetlands, shorelands, and floodplains, discouraging disturbances to other environmentally sensitive areas and corridors.**
4. **Encourage residents to implement sustainable forestry practices**
5. **Encourage the suppression and limitation of noxious weeds.**

6. Protect major drainage corridors from development to aid in stormwater runoff and prevent flooding.

3.2.4 COMMON NATURAL RESOURCES

Natural resources are materials such as water, topsoil, air, land, forests, fish and wildlife, and minerals occurring in nature that are essential or useful to humans. They have significance economically, recreationally, culturally, and aesthetically. These resources are combined into the recognized natural systems in which we live. These systems, or combinations of natural materials, can be referred to as “natural environments”, “ecosystems”, “biomes”, or “natural habitats”. Human activities affect all natural resources which in turn can have significant, sometimes adverse, impacts on the human community.

Natural resources are culturally, economically, recreationally, and aesthetically important to the residents of the Town of Woodman.

Keeping residents informed of their jurisdiction’s natural resources is a proactive first step in supporting natural resource protection efforts. Flyers included with a tax mailing, articles in the local newspaper, workshops, or other similar education efforts can all help to educate residents on natural resource issues. The Town of Woodman keeps its residents informed of natural resource issues through word-of-mouth.

Fostering working relationships with your neighboring jurisdictions can help the Town of Woodman protect shared, contiguous natural areas that give local residents space to pursue recreational opportunities. Tapping into state and federal programs aimed specifically at protecting farmland, wetlands, and forests can help protect Woodman’s natural resources. State and federal agencies and contact information are listed at the end of this chapter.

3.2.5 WATER RESOURCES

Water is probably the most commonly used natural resource, serving intrinsic and essential functions in the community on a daily basis for people, plants, and animals. A watershed is the land area from which all area waters (surface and groundwater) drain into stream systems and aquifers. Groundwater aquifers can be contained within a single watershed or can be so large that several watersheds are within the aquifer. Over 70% of all Wisconsin communities (that is, every two out of three State residents) rely on groundwater not only for domestic use, but also for agriculture, industrial uses, and recreational purposes. The Town of Woodman is in the Green River and Crooked Creek Watershed and the Millville Creek Watershed. See Map 3.2.1, for the Town of Woodman Water Resource Map and Map 3.2.2, Depth to Water Table Map for more information.

3.2.5.1 GROUNDWATER

Groundwater is the water beneath the earth’s surface filling spaces between rocks and soil particles and flowing between them. Groundwater fills wells and supplies the flow from springs. It is a critical resource, not only because it is used constantly, but also because rivers, streams, and other surface water depend on it for recharge. Groundwater can easily be contaminated through non-point source pollution, particularly in regions with thin soils over fractured limestone, sandstone, and shale bedrock.

All Town of Woodman residents use groundwater, via private wells, for their domestic water consumption. Woodman does not supply water to any other jurisdictions.

3.2.5.2 GROUNDWATER CONTAMINATION

It is important to keep groundwater in mind for many areas of comprehensive planning. Ultimately, what takes place above ground affects groundwater below. There are a variety of land use practices influencing water resource quality. Potential pollution sources that can affect groundwater in Woodman include but are not limited to

- Surface Waste Water Discharge
- Feedlots
- Junkyards
- Pesticide and Fertilizer Applications

Because of its mobile nature, contaminants can travel far from their source through the water cycle. Contaminants in water coming from a variety of sources identified as non-point source pollution (NPSP), which can come from things like agriculture runoff, leaking septic systems, road salt and road building, parking lots, lawn, and golf course runoff, all of which directly impact water resources. Point source pollution comes from identifiable sources such as

a single factory or overflow from a sewage treatment facility. The major potential point and NPSP sources in Woodman are feedlots and junkyards.

Pinpointing pollution sources can be made easier by identifying the location of potential pollutants, so communities can plan where and how much development can be built with the least amount of impact to the watershed. Contamination of local drinking water resources can be devastating, very costly to reverse, and affects all area residents. The Town of Woodman does not do anything to protect its water resources from pollution.

A wellhead protection plan lists potential contaminants as well as aim at preventing those contaminants from entering the area of land around wells. This area includes, "the surface or subsurface area surrounding a water well or wellfield supplying a water system, through which contaminants are reasonably likely to move toward and reach such well or wellfield" (US EPA. 1987).

3.2.5.3 GROUNDWATER SUPPLY

Water supply is impacted as communities grow, bringing increased demand to supply water to new homes, businesses, and industries. High capacity wells and an increasing number of wells, both private and public, can reduce the amount of recharge to surface waters, causing streamflow reduction, loss of springs, and changes in wetland vegetative communities. The strains of meeting growing water demand from a sprawling population are starting to show. Statewide water use has increased 33% in the last 15 years and water tables are plummeting in many urban areas as the thirst for more water outstrips the land's ability to provide it. (Lisa Gaumnitz, Tim Asplund, and Megan R. Matthews, "A Growing Thirst for Groundwater", August 2004.)

The Groundwater Bill (2003 Act 310) addresses groundwater quantity issues, requiring approval for siting, fees, and an environmental review. While this legislation is currently more relevant in areas of the state experiencing severe water quantity issues (such as Southeast Wisconsin), the principle of controlling groundwater withdrawal in all parts of the state is quite important and is a growing concern for the future. A State level groundwater advisory committee is now meeting to address groundwater management issues to be of help to communities.

3.2.5.4 SURFACE WATER

Surface water, which is all water naturally open to the atmosphere such as rivers, lakes, reservoirs, ponds, streams, impoundments, seas, and estuaries, in the Town of Woodman includes the Wisconsin River, the Little Grant River, and the Big Green River. These watercourses provide recreational opportunities, such as fishing, canoeing, wildlife viewing, swimming, and bird watching. These same rivers and their feeder streams also provide essential habitat for fish, mussels, insects, and other wildlife. See Map 3.2.1, Water Resource Map for more information.

3.2.5.5 WETLANDS

Wetlands serve a variety of functions, including an important role in stormwater management and flood control, filtering pollutants, recharging groundwater, providing a habitat for many wildlife species and plants, and offering open space and passive recreational opportunities. Wetlands include all marshes, swamps, fens, bogs, and those areas excluded from cultivation or other uses because they are intermittently wet and have hydric soils.

The Town of Woodman is within the Western Coulee and Ridges ecological landscape, an area in which most wetlands are associated primarily with the rivers and streams. The importance of glacial activity in forming lakes and wetlands is illustrated by the lack of these water bodies in the Driftless Area of southwestern Wisconsin (see Map 3.2.1.). In fact, wetlands comprise only 1% of the land cover in Southwest Savanna landscape (Wisconsin Land Legacy Report, 2002). The Western Coulee and Ridges region (of which northern Grant County is a part of) has much more wetland area (22% open wetland, 24% forested wetland) but the overall percentage of wetland for Grant County is still only 3.1% (WI-DNR 2007). Grant County wetlands are mainly associated with either the Wisconsin or Mississippi rivers because most of the County has experienced wetland drainage for agricultural purposes or the landscape is too hilly. Also, the Driftless Area has very little open, natural lakes with associated wetlands.

3.2.5.6 FLOODPLAINS

A floodplain is a low area of land adjacent to a stream or other watercourse subject to flooding. Floodplains hold water overflow during a flood and are delineated based on the 100-year storm event - the area that would be covered by water during a flood so big it theoretically only happens every 100 years. However, the magnitude of the 100-

year storm flooding can occur any year. For that reason, development should not occur in drainage ways and floodplains since they serve as stormwater runoff systems and flood mitigation landscape features.

Counties, cities, and villages are required to adopt reasonable and effective floodplain zoning ordinances in order to participate in the Federal Emergency Management Agency’s (FEMA) National Flood Insurance Program. Towns generally rely on their county for floodplain control.

FEMA has designated flood hazard areas along many surface water resources. The importance of respecting floodways and floodplains is critical in terms of planning and development. Ignoring these constraints can cause serious problems relating to property damage and the overall safety of residents. See Map 3.2.3 for the Town’s Flooding Frequency map. The Town of Woodman complies with the County’s Floodplain Ordinance to protect itself in the event of a flood.

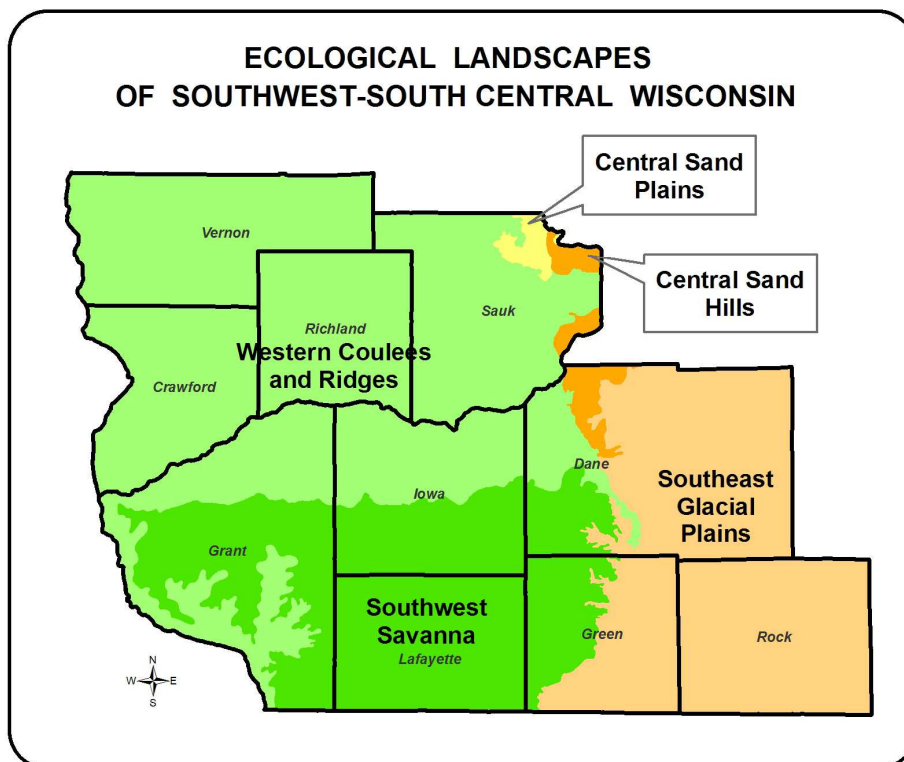
3.2.6 WILDLIFE

It is vital to provide sufficient natural habitat at a distance from human activities where wildlife will not be in contact or conflict with humans and can live and breed without interference. Wildlife can sometimes cause problems by destroying property, carrying diseases, producing unsanitary waste, or conflicting with human activities so having enough habitat is critical.

Habitat is the combination of food, water, shelter, and space necessary to meet the needs of wildlife.

3.2.6.1 IMPORTANCE OF BIODIVERSITY

Biodiversity is the full spectrum of life forms and the many ecological processes supporting them. Protecting biodiversity is essential to core necessities such as maintaining clean air and water, providing adequate habitat for the state’s flora and fauna, maintaining a vibrant economy and providing recreational opportunities. Biodiversity protection depends on the sustainability of diverse ecosystems, such as the mosaic of forests, agricultural lands, grasslands, bluffs, coastal zones and aquatic communities present in Wisconsin. It also depends upon the conservation of each ecosystem’s basic components – the natural communities, plants and animals within them. Ecosystems contain a variety of species that are unique and provide value to the diversity of the individual ecosystem and the state overall. It is important to view biodiversity at all levels to ensure the adequate conservation of Wisconsin’s environment.



At the broadest scale, the State of Wisconsin is divided into distinct “ecological landscapes” based on unique combinations of physical and biological characteristics that make up the ecosystems, such as climate, geology, soils, water, or vegetation. They differ in levels of biological productivity, habitat suitability for wildlife, presence of rare species and natural communities, and in many other ways that affect land use and management. The Town of Woodman is located in the Western Coulee and Ridges landscape. See Map 3.2.4 for detailed

descriptions and management opportunities for each ecological landscape.

3.2.6.2 NATURAL COMMUNITIES

Ecological landscapes are comprised of natural communities – assemblages of plants and animals at specific locations. Because of the biotic and abiotic differences between ecological landscapes, the natural communities within each are typically different as well. The highly eroded, unglaciated Western Coulee and Ridges hilly landscape is primarily forested and often managed for hardwood production. Agricultural activities are primarily dairy and beef farming, confined mainly to valley floors and ridge tops. This landscape has the world's largest concentration of hillside prairies, which often support species of rare plants, insects, and reptiles.

3.2.6.3 STATE NATURAL AREAS

Wisconsin harbors a diverse mix of natural biotic communities and native species. Some species and natural communities have very limited distribution or only occur at small locations around the state. In 1951, Wisconsin initiated the United State's first statewide program to identify and protect areas of outstanding and unique ecological, geological, and archeological value. These natural areas provide the best examples of natural processes acting over time with limited impact of human activity. The State Natural Areas (SNA) program has grown to become the largest and most successful program of its kind in the nation; there are over 335 sites are designated in Wisconsin.

State Natural Areas are important not only because they showcase the best and most pristine parts of Wisconsin, but also because they provide excellent wildlife habitat and undisturbed natural communities. Many threatened, endangered, and state special concern species can be found only in these areas.

There are eleven State Natural Areas in Grant County and include the Wyalusing Hardwood Forest, Dewey Heights Prairie, Blue River Sand Barrens, Wyalusing Walnut Forest, Ipswich Prairie, Adiantum Woods, Woodman Lake Sand Prairie and Dead Lake, Gasner Hollow Prairie, Snow Bottom, Blue River Bluffs, and Cassville Bluffs. All Grant County SNAs are open to the public.

3.2.6.4 ENDANGERED SPECIES

While the conservation of plants, animals and their habitat should be considered for all species, this is particularly important for rare or declining species. An endangered species is one whose continued existence is in jeopardy and may become extinct. A threatened species is one that is likely, within the foreseeable future, to become endangered. A special concern species is one about which some problem of abundance or distribution is suspected but not yet proven. The main purpose of the special concern category is to focus attention on certain species before they become endangered or threatened. Remaining examples of Wisconsin's intact native communities are also tracked but not protected by the law. Natural communities capture much of our native biodiversity and provide benchmarks for future scientific studies. Protection of such species is a valuable and vital component of sustaining biodiversity.

Both the state and federal governments prepare their own separate lists of such plant and animal species but do so working in cooperation with one another, as well as with various other organizations and universities. The WI DNR's Endangered Resources Program monitors endangered, threatened, and special concern species and maintains the state's Natural Heritage Inventory (NHI) database. This program maintains data on the locations and status of rare species in Wisconsin and these data are exempt from the open records law due to their sensitive nature.

The Wisconsin Endangered Species Law was enacted to afford protection for certain wild animals and plants that the Legislature recognized as endangered or threatened and in need of protection as a matter of general state concern. It is illegal to

- 1) take, transport, possess, process or sell any wild animal that is included on the Wisconsin Endangered and Threatened Species List;
- 2) process or sell any wild plant that is a listed species;
- 3) cut, root up, sever, injure, destroy, remove, transport or carry away a listed plant on public lands or lands a person does not own, lease, or have the permission of the landowner. There are exemptions to the plant protection on public lands for forestry, agriculture and utility activities. In some cases, a person can conduct the above activities if permitted under a Department permit (i.e. "Scientific Take" Permit or an "Incidental Take" Permit).

The Federal Endangered Species Act also protects animals and plants that are considered endangered or threatened at a national level. The law prohibits the direct killing, taking, or other activities that may be detrimental to the species, including habitat modification or degradation, for all federally listed animals and designated critical habitat. Federally listed plants are also protected but only on federal lands. Implementation of the Endangered Species laws is usually accomplished during the state permit review process, but is ultimately the responsibility of a project proponent and property owner to ensure that they are not in violation of the laws.

According to the NHI database and listed in Table 3.2.1, forty-nine elements have been recorded in the Town of Woodman. **Data is only provided to the town level.** Map 3.2.4 shows all elements known to occur within Grant County. Thorough inventories of the entire county have not been conducted for rare species. Additional rare species and their habitat may occur in other locations but they are not recorded within the NHI database. Remaining examples of Wisconsin's intact native communities are tracked but not protected by the law. The descriptions of these threatened or endangered native communities in the jurisdiction are listed after Table 3.2.1.

NOTE: END = Endangered; THR = Threatened; SC = Special Concern; NA = Not applicable

Table 3.2.1 Natural Heritage Inventory: Town of Woodman

Group	Scientific Name	Common Name	State Status	Date Listed
Bird	<i>Dendroica cerulea</i>	Cerulean Warbler	THR	2002
Bird	<i>Buteo lineatus</i>	Red-shouldered Hawk	THR	1975
Community	<i>Emergent marsh</i>	Emergent Marsh	NA	1976
Community	<i>Shrub-carr</i>	Shrub-carr	NA	1976
Community	<i>Southern sedge meadow</i>	Southern Sedge Meadow	NA	1976
Community	<i>Floodplain forest</i>	Floodplain Forest	NA	1985
Community	<i>Sand prairie</i>	Sand Prairie	NA	1992
Community	<i>Dry prairie</i>	Dry Prairie	NA	1976
Dragonfly	<i>Nasiaeschna pentacantha</i>	Cyrano Darner	SC	1992
Dragonfly	<i>Gomphurus externus</i>	Plains Clubtail	SC	1907
Dragonfly	<i>Neurocordulia molesta</i>	Smoky Shadowfly	SC	1993
Dragonfly	<i>Stylurus plagiatu</i>	Russet-tipped Clubtail	SC	1988
Fish	<i>Aphredoderus sayanus</i>	Pirate Perch	SC	1980
Fish	<i>Notropis amnis</i>	Pallid Shiner	END	1962
Fish	<i>Macrhybopsis aestivalis</i>	Shoal Chub	THR	1994
Fish	<i>Notropis texanus</i>	Weed Shiner	SC	1977
Fish	<i>Etheostoma clarum</i>	Western Sand Darter	SC	1994
Fish	<i>Notropis nubilus</i>	Ozark Minnow	THR	1976
Fish	<i>Erimyzon sucetta</i>	Lake Cubsucker	SC	1992
Fish	<i>Macrhybopsis storeriana</i>	Silver Chub	SC	1993
Fish	<i>Cycleptus elongatus</i>	Blue Sucker	THR	1995
Fish	<i>Opsopoeodus emiliae</i>	Pugnose Minnow	SC	1966
Fish	<i>Fundulus dispar</i>	Starhead Topminnow	END	1992
Mayfly	<i>Paracloeodes minutus</i>	A Small Minnow Mayfly	SC	1995
Mayfly	<i>Macdunnoa persimplex</i>	A Flat-headed Mayfly	SC	1995
Mayfly	<i>Spinadis simplex</i>	Wallace's Deepwater Mayfly	END	1990
Mayfly	<i>Acanthametropus pecatonica</i>	Pecatonica River Mayfly	END	1998
Mussel	<i>Fusconaia ebena</i>	Ebony Shell	END	1988
Mussel	<i>Quadrula metanevra</i>	Monkeyface	THR	1988
Mussel	<i>Plethobasus cyphus</i>	Bullhead	END	1988
Mussel	<i>Ellipsaria lineolata</i>	Butterfly	END	1997
Mussel	<i>Alasmidonta marginata</i>	Elktoe	SC	1988
Mussel	<i>Anodonta suborbiculata</i>	Flat Floater	SC	1988
Mussel	<i>Pleurobema sintoxia</i>	Round Pigtoe	SC	1997
Mussel	<i>Tritogonia verrucosa</i>	Buckhorn	THR	1997
Mussel	<i>simpsonaias amigua</i>	Salamander Mussel	THR	1988
Mussel	<i>Arcidens confragosus</i>	Rock Pocketbook	THR	1997
Mussel	<i>Lampsilis higginsii</i>	Higgins' Eye	END	1988
Other	<i>Mussel bed</i>	Mussel Bed	SC	1988
Plant	<i>Cacalia tuberosa</i>	Prairie Indian Plantain	THR	1968

Table 3.2.1 (cont.) Natural Heritage Inventory: Town of Woodman

Group	Scientific Name	Common Name	State Status	Date Listed
Plant	<i>Callirhoe triangulata</i>	Clustered Poppy-mallow	SC	1992
Plant	<i>Dodecatheon amethystinum</i>	Jewelled Shooting Star	SC	2002
Plant	<i>Gymnocladus dioicus</i>	Kentucky Coffee-tree	SC	2002
Plant	<i>Gentiana alba</i>	Yellow Gentian	THR	2002
Plant	<i>Carex richardsonii</i>	Richardson Sedge	SC	1970
Plant	<i>Parthenium integrifolium</i>	American Fever-few	THR	1930
Plant	<i>Pellaea atropurpurea</i>	Purple-stem Cliff-brake	SC	1968
Plant	<i>Asclepias purpurascens</i>	Purple Milkweed	END	2001
Plant	<i>Lespedeza violacea</i>	Violet Bush-clover	SC	1970

Dry Prairie

This dry grassland community usually occurs on steep south or west facing slopes or at the summits of river bluffs with sandstone or dolomite bedrock near the surface. Short to medium-sized prairie grasses such as little bluestem, side-oats grama, hairy grama, and prairie dropseed are the dominants in this community. Common shrubs and forbs include lead plant, silky aster, flowering spurge, purple prairie-clover, cylindrical blazing-star, and gray goldenrod. Stands on knolls in the Kettle Moraine region of southeastern Wisconsin, and on bluffs along the St. Croix River on the Minnesota-Wisconsin border, occur on gravelly substrates and may warrant recognition as distinctive subtypes of "Dry Prairie."

Because Dry Prairie occurs on sites that are not well suited to other uses, it is better represented in today's landscape than any other prairie community. It is still a relatively rare natural community that is more abundant in Wisconsin than anywhere else because of the many steep-sided bluffs in the extensive Driftless Area, the rough terrain of the kettle interlobate moraine, and the north-south orientation of several major river valleys such as the Mississippi, the Chippewa, and the St. Croix. These topographic attributes provide suitable sites for the development and persistence of this prairie type.

Sand Prairie (or Dry Sand Prairie)

Sand prairie is a dry native grassland community dominated by grasses such as little bluestem, J junegrass, panic grasses, and poverty-oat grass. Common herbaceous associates are sand cress, field sage-wort, western ragweed, several sedges (e.g., *Carex muhlenbergii*, *Cyperus filiculmis*, and *Cyperus schweinitzii*), flowering spurge, frostweed, round-headed bush-clover, western sunflower, false-heather, long-bearded hawkweed, stiff goldenrod, horsebalm, and spiderwort. Drought-adapted fungi, lichens, and mosses are significant components of sand prairie communities.

At least some stands classified as sand prairie are oak or pine barrens remnants that now lack appreciable woody cover. Extensive stands may have occurred historically on broad sand terraces bordering the Mississippi, Wisconsin, Black, and Chippewa Rivers. Sand prairie may be more prevalent now in some areas than it was in historical times. Failed attempts to farm many of these prairies created blowouts, and may have even reactivated small dunes once the prairie sod was removed. We have included the 'sand barrens' community described by Curtis (1959) with this type.

Emergent Marsh

These open, marsh, lake, riverine and estuarine communities with permanent standing water are dominated by robust emergent macrophytes, in pure stands of single species or in various mixtures. Dominants include cattails, bulrushes (particularly *Scirpus acutus*, *S. fluviatilis*, and *S. validus*), bur-reeds, giant reed, pickerel-weed, water-plantains, arrowheads, the larger species of spikerush (such as *Eleocharis smallii*), and wild rice.

Aquatic plants, including both emergent and submergent aquatic vegetation, form the foundation of healthy and flourishing aquatic ecosystems - both within lakes and rivers and on the shores and wetlands around them. They not only protect water quality, but they also produce life-giving oxygen. Aquatic plants are a lake's own filtering system, helping to clarify the water by absorbing nutrients like phosphorus and nitrogen that could stimulate algal blooms. Plant beds stabilize soft lake and river bottoms and reduce shoreline erosion by reducing the effect of waves and current.

Aquatic plants also serve as spawning habitat for fish and amphibians, as shelter for various life stages of a variety of species, and as nesting habitat for birds. Plant beds support populations of aquatic insects that serve as a food base for other species. Seeds and other plant parts provide vital nutrition to a number of waterfowl and other bird species. Healthy, native aquatic plant communities also help prevent the establishment of invasive exotic plants like Eurasian watermilfoil.

Shrub-Carr

This wetland community is dominated by tall shrubs such as red-osier dogwood, silky dogwood, meadowsweet, and various willows. Canada bluejoint grass is often very common. Associates are similar to those found in alder thickets and tussock-type sedge meadows. This type occupies areas that are transitional between open wetlands such as wet prairie, calcareous fen, or southern sedge meadow, and forested wetlands such as floodplain forest or southern hardwood swamp. Shrub-carr can persist at a given site for a very long time if natural hydrologic cycles are maintained. This type often occurs in bands around lakes or ponds, on the margins of river floodplains, or, more extensively, in glacial lakebeds. It is common and widespread in southern Wisconsin but also occurs in the north. In the south, shrub-carr was often an integral part of prairie-savanna landscapes, though it

also occurred in wetlands within more forested regions. In the north, the landscape matrix around the shrub-carr type was usually upland forest. Statewide, shrub-carr remains quite common, and has fared considerably better than many of the other native wetland types within its range.

Past drainage and marsh hay mowing likely had a negative effect on shrub-carr, whereas clearing of conifer swamps likely produced more of this habitat. Once fire was controlled and hay mowing was discontinued in lowland meadows, shrub-carr likely increased in extent. Drainage of meadows and marshes has also allowed shrub-carr habitats to increase in some areas. As a result of wetland drainage and fire suppression, shrub-carr now occupies many sites that formerly supported much more extensive marsh, wet meadow, prairie, and fen vegetation, and therefore, it is sometimes targeted for elimination. However, it is an important native wetland type that has its place on our landscape and should be protected, managed, and restored at appropriate locations.

Floodplain Forest (replaces in part the Southern Wet and Southern Wet-Mesic Forests of Curtis)

This lowland hardwood forest community type occurs along large rivers, usually of Stream Order 3 or higher. Most of these rivers originate in northern Wisconsin and flow southward, growing in size as the volume of water they carry increases. As the stream gradients diminish, the floodplains become broader. Periodic floods, particularly in the spring, are the key natural disturbance event to which species of this community are adapted. Silt deposition and development of microtopography during flood events creates suitable sites for tree germination and establishment, and floods also carry seeds and propagules of plant species. The most extensive occurrences of floodplain forest are found along the large rivers of southern Wisconsin, but the community also occurs at scattered locations in the north. The type was uncommon historically, occupying only about 3% of the Western Coulees and Ridges Ecological Landscape and even smaller percentages of other Ecological Landscapes (Finley 1976). Canopy dominants vary, but may include silver maple, river birch, green and black ashes, hackberry, swamp white oak, and eastern cottonwood. Black willow, basswood, red oak, and red maple are associated tree species found in these forests. Historically, the elms were highly significant components of the floodplain forests, but Dutch elm disease has eliminated most large elm trees that formerly provided supercanopy structure, snag and den sites, and large woody debris. Northern occurrences of this type tend to be less extensive, are often discontinuous, and are relatively species-poor compared to those in the south. Silver maple and green ash remain among the dominant species, with balsam-poplar, bur oak, and box elder replacing some of the many missing southern trees.

Understory composition is also quite variable, and follows the pattern exhibited by the canopy species, with the most extensive stands and highest plant species diversity occurring in southwestern Wisconsin. Buttonbush is a locally dominant shrub that may form dense thickets on the margins of oxbow lakes, sloughs and ponds, which are often important aquatic habitats within these forests. Wood nettle, stinging nettle, sedges (e.g., *Carex grayii*, *C. lupulina*, *C. hystericina*, *C. tuckermanii*), native grasses (e.g., *Cinna arundinacea*, *Elymus villosus*, *Leersia virginica*), ostrich fern and green-headed coneflower are important understory herbs, and lianas such as Virginia creepers, grapes, Canada moonseed, and poison-ivy are often common. Among the more striking herbs of this community are cardinal flower, fringed loosestrife, and green dragon.

The sprawling floodplains found along the largest rivers sometimes consist of several terraces capable of supporting forests. These are subject to floods with differing frequencies and levels of inundation, and support patches of varying floristic composition depending upon local elevation differences, edaphic factors, and disturbance history. The lower terraces experience the most frequent, severe, and long-lasting floods; the uppermost terraces flood infrequently, and the rich alluvial soils can support mesophytic trees species and rich groundlayers similar to those of the mesic hardwood forests.

Southern Sedge Meadow

Widespread in southern Wisconsin, this open wetland community is most typically dominated by tussock sedge and Canada bluejoint grass. Common associates of relatively undisturbed sedge meadows are other sedges (e.g., *Carex diandra*, *C. sartwellii*), marsh bellflower, marsh wild-timothy, water horehound, panicled aster, swamp aster, blue flag, spotted Joe-Pye weed, marsh fern, and swamp milkweed. Reed canary grass may be dominant in grazed and/or ditched stands, sometimes to the exclusion of virtually all other species.

Sedge meadows are most common in glaciated landscapes, where they often border streams or drainage lakes. The southern sedge meadow community occurred with prairie, savanna, and hardwood forest communities, and many of them apparently burned periodically. In the absence of fire, shrubs and trees are able to readily encroach on the open wetlands; encroachment can be exacerbated when wetlands are drained. Many sedge meadows in southeastern Wisconsin are influenced by alkaline groundwater, and occur in complexes with emergent marsh, calcareous fen, wet prairie, wet-mesic prairie, and shrub-carr. Differentiating between these communities can be difficult, as they frequently intergrade.

3.2.7 FOREST RESOURCES

Forests provide raw materials for the forest products industry and a venue for hunting, hiking, and fishing. Forests help sustain water resources and provide habitat for a wide variety of plants and animals, including threatened and endangered species and by balancing global warming effects and air pollution by producing oxygen and storing carbon. Over half the forested lands in Wisconsin are privately owned (57%). See Map 3.2.5 for forested lands in the Town of Woodman. Forest land in Woodman has been impacted by dutch elm disease.

Trees are important components of a community's green infrastructure, offering substantial environmental benefits, including cleaner air and water, quieter streets, cheaper energy bills, cooler temperatures, and wildlife habitat. Tree-planting programs, preserving established trees, and using sustainable forestry techniques not only increase property values for Town residents, but also lower air and water remediation costs for the environment.

While Grant County has a great deal of land in agriculture, over a quarter of the County is forested: in 1983, 25% of Grant County (186,400 acres) was forested. As of 2004 (the most recent data available), 28% of the County was forested (209,623 acres). Most was in private ownership: 187,356 acres. (Data showing amount of forested land per town was not available.) In Grant County in 2006, the total number of privately owned acres of land in the Managed Forest Law program (MFL) was 19,510 acres, 3,751 of which were open to public for hunting and recreation.

3.2.8 ENVIRONMENTAL CORRIDORS

Environmental corridors are physical areas containing groups of features (such as hedgerows or river bottoms) allowing animals and plants to move unobstructed across the landscape. Areas of concentrated natural resource activity ("rooms"), such as wetlands, woodlands, prairies, lakes, and other features, become even more functional and supportive of wildlife when linked by such corridors ("hallways"). If corridor resource features are mapped, they can depict linear spaces that can be helpful in future land development decisions. Fish and wildlife populations, native plant distribution, and even clean water all depend on movement through environmental corridors. For example, wildlife populations isolated in one wooded location can overpopulate, die out, or cause problems for neighbors if there are not adequate corridors to allow the population to move about and disperse freely. Over 70% of all terrestrial wildlife species use riparian corridors, according to the USDA Natural Resources Conservation Service (NRCS). By preserving environmental corridors, wildlife populations, both plant and animals can maintain themselves and be healthier. See Map 3.2.5, Natural and Recreational Resources, for natural resources that might lend themselves to providing wildlife unimpeded access through the landscape.

Environmental Corridor Benefits:

- Improved Wildlife Habitat
- Greater Biodiversity
- Reduced Flooding
- Reduced Soil Erosion
- Improved Water Quality
- Improved Water Quantity
- Groundwater Recharge
- Bank Stabilization
- Improved Air Quality

Social Benefits:

- Walking and Hiking
- Cross Country Skiing
- Horseback Riding
- Photography
- Wildlife Viewing

3.2.9 LIGHT, AIR, AND NOISE POLLUTION

Light, air, and noise pollution are not often considered when doing planning. However, improper environmental controls can produce air (odor) pollution and noise pollution. The most common air pollutants (dust, pollen, fuel fumes, ash, etc.) including odors, come from industrial, automotive, and agriculture sources. Burn barrels are significant local contributors to air pollution.

Inappropriate or overly bright outdoor lighting can spill over property lines provoking altercations with neighbors or impair driving conditions (e.g. very bright lighting for businesses producing eye level glare to passing drivers). Improper night lighting or light pollution, affects the night sky anywhere improperly shaded nighttime outdoor lights are used. Lighting ordinances recognize the benefits of appropriate outdoor lighting and can provide guidelines for installation, helping to maintain and compliment a community's character.

A number of land uses can contribute to noise pollution, such as vehicle noise from highways, airport noise, or sounds from manufacturing facilities. Repetitive excessive noises like those from boom cars, loud stereos, powered lawn and garden equipment, and construction activities have been shown to have serious health consequences (e.g. tinnitus, balance problems), not to mention problems between neighbors.

3.2.10 GEOLOGIC AND MINERAL RESOURCES

Soils and geology are important planning considerations, particularly when thinking about new development. Today, technological advances can overcome many challenges relating to soil and geology. However, it is important that these resources not be abused, overused, or contaminated. For example, particular attention must be paid to soils when development is occurring on steeper slopes. Maps showing Slope limitations (Map 3.2.6) and Depth to bedrock (Map 3.2.7) have been included at the end of this Chapter.

Most of south/southwest Wisconsin’s bedrock is sedimentary rock, consisting of sandstone and shale or limestone. Mineral resources are divided into two categories, metallic and non-metallic. Metallic resources in the region include lead and zinc. Historically, there was a great deal of lead and zinc mining in southern Grant County.

3.2.10.1 NON-METALLIC MINE RECLAMATION

In June of 2001, all Wisconsin counties were obliged to adopt an ordinance for nonmetallic mine reclamation. The purpose of the ordinance is to achieve acceptable final site reclamation to an approved post-mining land use in compliance with uniform reclamation standards. Uniform reclamation standards address environmental protection measures including topsoil salvage and storage, surface and groundwater protection, and concurrent reclamation to minimize acreage exposed to wind and water erosion. Woodman complies with the County’s Non-metallic Mining Ordinance.

3.2.10.2 QUARRIES

Non-metallic resources include sand, gravel, and limestone, resources that come from quarries. A quarry is an open-pit mine from which rock or minerals are extracted. Such rocks and minerals are generally used as dimension stone. Rock quarries are usually shallower than other types of open-pit mines. Types of rock extracted from quarries include cinders, coquina (a type of limestone), blue rock, granite, gritstone, limestone, marble, sandstone, and slate. Limestone for road building is one of the most significant non-metallic geologic resources in the area today.

In level areas, quarries often have special engineering problems for drainage. Groundwater seeping into the quarry pit must be pumped out. Many quarries fill with water to become ponds or small lakes after abandonment. Others have become landfills. Restricting access to quarries helps protect these areas from becoming groundwater pollution source points. Therefore, determining quarry locations within the jurisdiction’s local watersheds can help communities plan where and how much development can be built, with respect to its water resources. Refer to Map 3.1.1, Soils Map.

3.2.11 NATURAL OPEN SPACE AND PARKS

Natural open space is that part of the landscape without obvious development. It can take the form of cropland and pastures, greenbelts, wetlands, woodlands, parks, or floodplains. The value of open space lies not only in its inherent protection of ecologically sensitive areas, but also in its appeal of naturalness to the passerby, the vacationer, and the outdoor enthusiast. Preserving open spaces not only protects natural resources, but also gives the viewer a sense of freedom with its visual impact of open space, whether it is agricultural land, woodlands, or a park.

Communities have signs and billboards for economic, safety, and information purposes. However, sometimes they can have a negative visual impact on the landscape, particularly if there are a lot of them, are very large, or are poorly placed. The Town of Woodman does not have a sign ordinance of its own.

3.2.12 LOCAL PARK AND RECREATION RESOURCES

Every jurisdiction is unique and can capitalize on its natural beauty. Only in your community do those particular views, walks, and landmarks exist. Because each place is unique, opportunities exist to capitalize on its assets. For example, biking, driving, or walking tours can be designed to thread through areas of cultural, historical, or environmental significance. ATV, horse, or bike trails can be dotted with parks, scenic waysides, or rest stops.

Parks are attractions in their own right. They can serve a limited neighborhood area, a portion of the community, or the entire community or region and provide land and facilities for outdoor recreation for residents and visitors. Depending on park size, parks and recreation areas can attract campers, ball players, bird watchers, cyclists, snowmobilers, bikers, 4-wheelers, horseback riders, hunters, anglers, and other recreational users. Amenities such as ballparks, trails, camping areas, playground equipment are only some of the facilities that make parks and recreation areas so inviting. Refer to the Natural and Recreational Resources Map 3.2.5 for park locations. Table 3.2.2 shows recreational spaces in the Town and the amenities available. Woodman does not have an Outdoor Recreation Plan but the Town is confident there are enough recreational spaces for residents.

Table 3.2.2 Town of Woodman Recreational Amenities

Park/Recreation Location	Shared Park/Recreation Locations	Recreational Amenities Available
Woodman Lake	Shared w/DNR	Fishing access to water
Big Green River	Shared w/DNR	

3.2.13 LAND COVER

Map 3.2.5 shows the natural resources in the Town of Woodman. It also shows the location of natural resources such as forested lands, open water, wetlands, and wildlife corridors.

3.2.14 NATURAL RESOURCE AGENCIES AND PROGRAMS

There are a number of available state and federal programs to assist with agricultural, natural, and cultural resource planning and protection. Below are brief descriptions of various agencies and programs. Contact information is provided for each agency. To find out more specific information or which program best fits your needs contact them directly.

WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WI-DNR)

The Department of Natural Resources is dedicated to the preservation, protection, effective management, and maintenance of Wisconsin's natural resources. It is responsible for implementing the laws of the state and, where applicable, the laws of the federal government that protect and enhance the natural resources of our state. It is the one agency charged with full responsibility for coordinating the many disciplines and programs necessary to provide a clean environment and a full range of outdoor recreational opportunities for Wisconsin citizens and visitors. The Wisconsin DNR has a number of programs available ranging from threatened and endangered species to water quality to parks and open space to wetlands. The DNR is available to provide information on endangered and threatened species. See their website for the Endangered Resources (ER) Program at <http://www.dnr.state.wi.us/org/land/er/> or contact the Program at 608/266-7012.

WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WI-DNR)

101 S Webster St
Madison WI 53703

Phone: 608-266-2621
Fax: 608-261-4380

<http://www.dnr.state.wi.us>

The Bureau of Community Financial Assistance (CFA) administers grant and loan programs, under the WI-DNR. Financial program staff works closely with local governments and interested groups to develop and support projects that protect public health and the environment, and provide recreational opportunities.

WISCONSIN DEPARTMENT OF TRADE AND CONSUMER PROTECTION (DATCP)

The Wisconsin Department of Trade and Consumer Protection inspects and licenses more than 100,000 businesses and individuals, analyzes millions of laboratory samples, conducts hundreds of hearings and investigations, educates businesses and consumers about best practices, adopts rules that have the force of law, and promotes Wisconsin agriculture at home and abroad.

Specifically DATCP has two divisions that relate directly to the agriculture and natural resource section of the comprehensive plan. The Environmental Division focuses on insects, land and water, as well as plants and animals. The Agricultural Division focuses on animals, crops, agricultural resources, and land and water resources.

WISCONSIN DEPARTMENT OF TRADE AND CONSUMER PROTECTION (DATCP)

2811 Agriculture Drive
PO Box 8911
Madison WI 53708

Phone: 608-224-4960

<http://www.datcp.state.wi.us>

WISCONSIN NATURAL RESOURCE CONSERVATION SERVICE (NRCS)

The Natural Resources Conservation Service is the federal agency that works with landowners on private lands to conserve natural resources. NRCS is part of the U.S. Department of Agriculture, formerly the Soil Conservation Service (SCS). Nearly three-fourths of the technical assistance provided by the agency goes to helping farmers and ranchers develop conservation systems uniquely suited to their land and individual ways of doing business. The agency also assists other private landowners and rural and urban communities to reduce erosion, conserve and protect water, and solve other resource problems.

WISCONSIN NATURAL RESOURCES CONSERVATION SERVICE (NRCS)

6515 Watts Road,
Suite 200
Madison, WI 53719

Phone (608) 276-USDA

<http://www.wi.nrcs.usda.gov>

**ENVIRONMENTAL PROTECTION AGENCY (EPA)
REGION 5**

The Environmental Protection Agency is a federal agency of the United States government, responsible for regulating environmental pollution and environmental quality. The EPA has been one of the lead agencies within the United States Government on the climate change issue.

**Environmental Protection Agency
Region 5
(Illinois, Indiana, Michigan, Minnesota,
Ohio, Wisconsin)**

**Phone Toll Free within Region 5:
1-800-621-8431
9:00AM to 4:30PM CST**

**Phone: 312-353-2000
(<http://www.epa.gov>)**

3.3 CULTURAL RESOURCES



3.3.1 CHAPTER SUMMARY

The purpose of this section is to inventory and support the management of cultural resources in the Town of Woodman. Many communities often ignore cultural and historic resources in order to deal with “real” issues facing their community. However, the proper appreciation of these assets is vital to the long-term success of a community. Respecting and utilizing these available resources increases the overall quality of life and provides opportunities for tourism. Cultural resources are felt to be economically, aesthetically, and recreationally significant to Woodman.

Determining what cultural and historic resources are has been left open to some interpretation. For this Plan, historic resources include historic buildings and sites (as identified by the national register of historic places), museums, archeological sites, churches, cemeteries, old country schools, and other sites deemed appropriate by the community. The information is to serve as a guide to cultural and historic resources and is not inclusive.

3.3.2 GOALS

The following is the Cultural Resource Goal, one of the fourteen Smart Growth Planning Goals required by the planning grant contract.

1. Preserve cultural, historic, and archaeological sites.

3.3.3 OBJECTIVES AND POLICY AND PROGRAM RECOMMENDATIONS

The following cultural resources objectives and policy recommendation will support the above goal and will guide cultural resource decisions in the Town of Woodman the next 20 years.

NOT IN ORDER OF PRIORITY

1. Encourage the protection of important cultural resources in the community.
2. Consider implementing a historical preservation ordinance, in order to preserve and/or enhance irreplaceable historic structures, locations, and archeological sites in the community.

3. Where and when appropriate, utilize county, state, and federal programs or grants to conserve, maintain, and protect cultural resources.

3.3.4 A BRIEF HISTORY OF GRANT COUNTY

Grant County was formed in 1836, the same year Wisconsin became a territory. It is the 10th largest county in the state with an area of 1,169 square miles. According to the 2000 census, the population, as adjusted, is 49,597. Grant County is located in the unglaciated region – the Driftless region.

Grant County received its name in 1810 from a white Indian trader named Grant, who visited the area regularly. Lead strikes attracted the first European settlers as early as 1825. When mining began to decline, the settlers discovered wealth in the rich soil and turned to farming. Agriculture is still the County's chief source of income.

Lancaster, the County seat, is the home of the courthouse which was built in 1902 with an annex added on in 1999. The Courthouse is among the finest in the State. Monuments in the courtyard include the Soldiers Monument – one of the oldest monuments in the nation to the Civil War dead. It was built by public and private funds and dedicated July 4, 1867. The Fountain on the west side of the courtyard was purchased by the Ladies of the G.A.R. and given to the County in 1906. The bronze monument to Nelson Dewey on the courtyard's east side was given by the State as a tribute to Wisconsin's first governor. Dewey was also the first Register of Deeds for Grant County. He died in Cassville, WI and is buried in Westwood Cemetery, next to the Episcopal Church in Lancaster. His grave is marked by an official State marker dedicated October 1, 1961. *Source: Grant County Historical Society and Grant County Official Directory, 2006-2007*

3.3.5 CULTURAL RESOURCE PUBLICATIONS OR DOCUMENTATION

Maintaining a written record of cultural resources is an excellent way of educating residents about a community's past as well as encouraging tourism. For more information, contact the Grant County Historical Society at 129 E Maple St., Lancaster, WI, 53813; Phone: (608) 723-4925.

3.3.6 LOCAL HISTORICAL SOCIETIES

Local historical societies provide an important service to communities by documenting, rehabilitating, maintaining, or promoting local cultural resources. Through the Grant County Historical Society the Town has a source of historical information to go to if need be.

3.3.7 CULTURAL RESOURCES OF NOTE

Although it is understandable that parts of a community's cultural fabric wear thin, it is still important to at least recognize the community's cultural resources so the knowledge of what does exist is available to preservationists. And while a professional may be able to document significant buildings or landmarks as cultural important, it is the members of the community, those who live and die there, who are the best experts at identifying those aspects that make their community unique in the world. Woodman's cultural resources include the Rocky Dell Springs, Civil War Cemetery, and the hills and bluffs of the Town. There is no museum in the Town.

3.3.8 HISTORICAL MARKERS

Wisconsin Historical Markers identify, commemorate and honor the important people, places, and events that have contributed to the state's rich heritage. The Wisconsin Historical Society's Division of Historic Preservation administers the Historical Markers program. Contact them for more information. The table below lists the State registered historical markers in Grant County.

Table 3.3.1 Grant County Historic Markers

Subject	Location/Nearest Community
The Gideons	HWY 61, 0.5 mi S. of Soldiers Grove
Old Denniston House	117 East Front Street, Cassville
The "Dinky"	620 Lincoln Avenue, Fennimore
Point of Beginnings – Survey Point	HWY 80 at WI/IL state line, S. of Hazel Green
Nelson Dewey	Cemetery, 1 block W. HWY 61, 35, & 81, Lancaster
First State Normal School	Rountree Hall, Platteville

(Source: 2005, www.wisconsinhistory.org)

3.3.9 CULTURAL RESOURCE PROGRAMS AND SPECIAL EVENTS

Cultural resource programs and special events are very effective methods of bringing a community together to celebrate their cultural history. Not only do special events build community spirit, but they can also be important to the local economy. The Planning Commission noted that there are no special events or programs in the Town.

3.3.10 THREATS TO AND LOST CULTURAL RESOURCES

Unfortunately, there are many threats to the cultural resources of a community. Whether it is development pressure, rehabilitation and maintenance costs, or simply the effects of time, it is often difficult to preserve the cultural resources in a community. The greatest threats to the culture of the Town of Woodman are factory farms and their expansion.

Sometimes important cultural resources are irreparably lost due to deterioration, apathy, development pressure, lack of maintenance, or merely the march of time. Once lost, such cultural links to the past and the community's history are gone forever. At this time, there are no cultural resources that have been lost.

3.3.11 HISTORICAL PRESERVATION ORDINANCES AND COMMISSIONS

The establishment of a historical preservation ordinance and commission is one of the most proactive actions a community can take to preserve cultural resources. A historical preservation ordinance typically contains criteria for the designation of historic structures, districts, or places, and procedures for the nomination process, as well as regulates the construction, alteration and demolition of a designated historic site or structure. Contact the Wisconsin Historical Society's Division of Historic Preservation for more information. The Town does have a historic preservation commission.

Communities with historic preservation ordinances may apply for Certified Local Government (CLG) status with the Wisconsin State Historical Society. Once a community is certified, they become eligible for

- Matching sub-grants from the federal Historic Preservation Fund,
- Use of Wisconsin Historic Building Code,
- Reviewing National Register of Historic Places nominations allocated to the state.

3.3.12 CHURCHES

Churches historically have had a significant impact on the culture of a community. They are also sometimes the only places in rural areas where residents can gather to discuss important issues in their community. Refer to Map 3.3.1 for churches in the jurisdiction.

3.3.13 CEMETERIES

Cemeteries are identified as prominent historic and cultural resources. They can provide an historic perspective of an area, providing names and ethnicities of previous residents, linking a community to its past. Refer to Map 3.3.1 for cemeteries in the Town of Woodman

3.3.14 ARCHITECTURE AND HISTORY INVENTORY (AHI)

The Architecture and History Inventory (AHI) is a collection of information on historic buildings, structures, sites, objects, and historic districts throughout Wisconsin. The AHI contains all the documented historic sites in a community, as well as a list of those sites that are on the State and National Register of Historic Places.

The AHI is comprised of written text and photographs of each property, which document the property's architecture and history. Most properties became part of the Inventory as a result of a systematic architectural and historical survey beginning in 1970s. (Caution should be used as the list is not comprehensive and some of the information may be dated, as some properties may be altered or no longer exist.) Due to funding cutbacks, the Historical Society has not been able to properly maintain the database. Also, note that many of the properties in the inventory are privately owned and are not open to the public. The Wisconsin Historical Society's Division of Historic Preservation maintains the inventory.

Table 3.3.2 lists the historical sites in the jurisdiction compiled by Richard Bernstein of the Office of Preservation Planning, Division of Historic Preservation of the Wisconsin Historical Society.

Table 3.3.2 Town of Woodman AHI

AHI #	Location	Historic Name
43864	500' E OF NE CORNER OF IRISH RIDGE RD AND 132	Henley Farm
109459	SPRING RD	
109482		
122443	COUNTY HIGHWAY C OVER THE LITTLE GREEN RIVER	Little Green River Bridge
130277	STH 133 OVER BIG GREEN RIVER	Big Green River Bridge
130279	15572 STH 133	

3.3.15 STATE AND NATIONAL REGISTER OF HISTORIC PLACES

The State Register is Wisconsin's official listing of state properties determined to be significant to Wisconsin's heritage and is maintained by the Wisconsin Historical Society's Division of Historic Preservation. Both listings include sites, buildings, structures, objects, and districts that are significant in national, state or local history, architecture, archaeology, engineering and culture. Contact the National Park Service or State Historical Society for more information of registration. The National Register is the official national list of American historic properties worthy of preservation, maintained by the National Park Service (U.S. Department of the Interior).

The Planning Commission noted that two Town cemeteries and the Rocky Dell Spring should be added to the State and/or Federal Register for recognition.

3.3.16 ARCHAEOLOGICAL SITE INVENTORY (ASI)

The Archaeological Site Inventory (ASI) is a collection of archaeological sites, mounds, unmarked cemeteries, marked cemeteries, and cultural sites (at the town level) throughout Wisconsin. The Wisconsin Historical Society's Division of Historic Preservation maintains the inventory. Similar to the AHI, the ASI is not a comprehensive or complete list; it only includes sites reported to the Historical Society. The Historical Society estimates that less than 1% of the state's archaeological sites have been identified. Contact the Wisconsin Historical Society for more information about the inventory.

Table 3.3.3 lists the archeological sites in the jurisdiction compiled by John H. Broihahn of the Office of State Archeology, Historic Preservation Division of the Wisconsin Historical Society.

Table 3.3.3 Town of Woodman ASI

State Site # /Burial Code #	Site Name	Site Type	Cultural Study Unit
GT-0054	Unnamed Site	Campsite/village	
GT-0118	Green River Linear	Mound(s) - Linear	Late Woodland
GT-0119	Unnamed Site	Campsite/village	
GT-0155	JDSA Mounds	Mound(s) - Other/Unk	Woodland
GT-0485	Woodman Depot Mound Group	Mound(s) - Linear	Late Woodland
GT-0742	Woodman Cemetery	Cemetery/burial	Historic Euro-American
BGT-0145	ROSENDALE CEMETERY	Cemetery/burial	Historic Euro-American
GT-0645	Koschkee I site	Campsite/village	Late Archaic Early Woodland
GT-0650	Koschkee VI	Campsite/village	Middle Archaic Early Woodland
GT-0673	Jepsen	Campsite/village	Late Woodland Late Archaic Early Archaic

3.3.17 CULTURAL RESOURCE AGENCIES AND PROGRAMS

WISCONSIN HISTORICAL SOCIETY

The Society serves as the archives of the State of Wisconsin. It collects books, periodicals, maps, manuscripts, relics, newspapers, and audio and graphic materials as they relate to North America. It maintains a museum, library, and research facility in Madison, as well as a statewide system of historic sites, school services, area research centers, administering a broad program of historic preservation and publishing a wide variety of historical materials, both scholarly and popular. The historical society can also provide assistance for various state and federal programs.

WISCONSIN HISTORICAL SOCIETY

Office of Preservation Planning
Division of Historic Preservation
Wisconsin Historical Society
816 State Street
Madison, WI 53706
Phone: 608-264-6500

<http://www.wisconsinhistory.org>

NATIONAL PARK SERVICE

The National Park Service administers the National Register of Historic Places. In addition to honorific recognition, listing in the National Register provides:

- Consideration in planning for Federal, federally licensed, and federally assisted projects,
- Eligibility for certain tax provisions,
- Qualification for Federal grants for historic preservation, when funds are available.

NATIONAL PARK SERVICE

Register of Historic Places
1201 Eye St., NW
8th Floor (MS 2280)
Washington, DC 20005
Phone: 202-354-2213

<http://www.cr.nps.gov/nr>

WISCONSIN TRUST FOR HISTORIC PRESERVATION (WTHP)

The WTHP, established in 1986, is a private, non-profit organization dedicated to the preservation of the historical, architectural and archaeological heritage of Wisconsin. The Trust advocates for legislation and policies designed to encourage statewide historic preservation. Examples of some of the programs they initiate are

- **Wisconsin Main Street**
A comprehensive program designed to revitalize downtowns and give new life to historic business districts
- **Heritage Tourism Initiative**
The Heritage Tourism Initiative has helped develop grassroots heritage tourism organizations, encouraging Wisconsin communities to use their unique features to tap into the mushrooming heritage tourism market -- and protect that heritage at the same time.
- **Agricultural Buildings Preservation Initiative**
Inspired by the National Trust's popular Barn Again! program, this initiative provides information and forums to help owners of historic agricultural buildings determine how to maintain and reuse their buildings.

WISCONSIN TRUST FOR HISTORIC PRESERVATION

23 North Pinckney Street,
Suite 330, PO Box 2288,
Madison, WI 53701-2288
Phone: 608-255-0348

<http://www.wthp.org>

NATIONAL TRUST FOR HISTORIC PRESERVATION

The National Trust for Historic Preservation is a nonprofit organization with more than 200,000 members. The Trust provides leadership, education and advocacy training to save America's historic places.

NATIONAL TRUST FOR HISTORIC PRESERVATION

1785 Massachusetts Ave., NW
Washington, DC 20036-2117

Phone: 202-588-6000

<http://www.nationaltrust.org>