

## **CHAPTER 5 Agricultural, Natural and Cultural Resources Element**

66.1001(2)(e) Wis. Statutes

### **Section 5.1 Introduction**

The agricultural, natural and cultural resources of the Town of Sharon are major reasons why people choose to live here. Hilly moraines, woodlands, lakes, rivers & streams, wetlands, sand plain, varied and abundant wildlife, and farmland all come together to create a unique and attractive Wisconsin landscape.

The residents of the Town of Sharon recognize the value of their unique landscape and understand that it supports and sustains a way of life they are proud of. For those who choose to farm the land here, the community supports their efforts and works to minimize barriers that impede this industry where possible. Agriculture plays a major role in the Town economically and contributes to the Town's quality of life. In the late 1960's and into the 1970's, Dairy declined quite rapidly due to several factors such as small sized farms going out of business, aging ownership, and young people leaving the farm, to name a few. This occurred primarily on the more marginal soils of the Town. This also caused a decline in infrastructure in the Dairy industry.

At the same time this was occurring, vegetable and potato farming were increasing. This continued to put additional pressure on the dairy industry as competition for the Town's more productive lands increased. By the early 1980's, potato and vegetable production were the driving force for the agricultural industry in the Town. Increased demand for a higher quality product, as well as competition amongst processors at the retail level has created economic challenges at the producer level of this industry. The Town of Sharon is at a greater disadvantage in this situation due to stony ground, lack of contiguous large tracts of productive land (a big factor in processors contracting in this area), and inability to attain the yields necessary to compete for contracts as compared to lands in southern Portage County and beyond where the base for prices and profit margins are set. In the Town of Sharon these factors have contributed to an overall decline in relative net worth and inability to exit the agricultural industry economically due to low agricultural land prices relative to other potato and vegetable production areas. The residents also understand that the identification and protection of the natural, historical and cultural resources of the community will help sustain a rich quality of life that is enjoyed by all who live here.

### **Section 5.2 Agricultural Resources**

#### **A. Basis for Agricultural Potential**

Agriculture has provided, to a large part, the strong economic foundation and history found in the Town of Sharon. With biological and technical advances throughout the farm land production industry, the face of agriculture has changed.

#### **B. Highly Productive Agricultural Soils**

Highly Productive agricultural soils in the Town of Sharon have been identified with the assistance of the County Conservationist, based on highest productivity and lowest degree of limitations for farming (see **Map #30** Productive Agricultural Soils). Slopes greater than 6% were excluded from the "highly productive" designation (due to severe hazard for water or wind erosion), along with small parcels and stony, rough and eroded sites. Highly Productive Soils in Sharon are listed:

- Billet sandy loam 0-2% slope
- Rosholt loam, 2-6% slope
- Wyocena sandy loam, 2-6% slope
- Osterle sandy loam, 2-6% slope (prime Ag if drained)
- Richford loamy sand, 0-6% slope (prime Ag is irrigated)

### **C. Farming Systems, Demographics & Land Tenure**

The Town is located within two major farm regions in Wisconsin. First and most prominent is the dairy region. In Wisconsin, dairying is most concentrated in a belt that begins near Hudson (St. Croix County), heads east to Wausau and Green Bay (Brown County), then turns southwest through Fond du Lac, Madison and ends near Dubuque (Iowa County). Wisconsin Department of Agriculture 2002 permit information listed 18 active grade-A dairy farms operating in the Town of Sharon. To the north in Bevent there are 12 farms; to the west in Town of Dewey 4 farms and in the Town of Hull 2 farms; to the south in Town of Stockton 22 farms; and to the east in Town of Alban there are 11 farms and in Town of New Hope 11 farms.

The second farming region that includes Sharon is that of fresh vegetable production. The irrigated soils of the “Golden Sands” region of Wisconsin lay between Portage and the Stevens Point area. Sharon is on the northern edge of this large irrigated plain and there are several producers who have vegetable operations within the Town. While no exact acreage numbers are available, the presence of pivot irrigation rigs is one key indicator of vegetable production. Although there were approximately 28 irrigation pivots in Sharon in 2000, some of these fields may not have been used for vegetable production.

The amount of land dedicated to agricultural production can and often does change from one year to the next. In 2000, the Portage County Planning and Zoning Department analyzed aerial photographs of Sharon to identify active farmland within the Town. The land in farms was broken down by presence of irrigation, 3495.71 acres; use for row crops or hay, 8709.22 acres; and permanent pasture, 216.46 acres. Total agricultural acres identified for 2000 were 12,421.39.

There were 80 persons employed in an agriculturally-related field in the Town of Sharon in 2000 (Table 1.10 Issues and Opportunities section). This represented 7.0% of the employment for the Town. Although this is substantially down from the 1980 figure of 145 persons (22.3%), it is similar to the Portage County Town average (6.9%). Decreasing farm employment is not a unique trend by any means. The number of farms is decreasing, while acreage per farm is up. Farm consolidation is a common practice in this industry (see **Map #030 Productive Ag Soils**).

### **D. Farm Economy and Infrastructure**

Dairying is on a continual decline. Initially discontinued dairy operations converted to raising beef cattle to utilize buildings etc. Most recently they have converted to corn and soybeans. Please see the discussion of farm economy in Chapter 5E of the Portage County Comprehensive Plan.

### **E. Other Local Influences on Agriculture**

The Sharon area has the possibility of seeing increased population in the future. With this comes increased demand for housing and services. One source of pressure for the development of rural residential properties is the expansion of US Hwy 10 to 4 lanes between Appleton and Amherst; growth of Hwy 10 E out of Stevens Point; building of Crossroad Commons at Hwy HH and I 39; and the desire for people to have rural property. The possible interest in Sharon can bring more homes onto the agricultural landscape, which in turn could lead to increased potential for life-

style conflicts; increased assessed value of non-farm lands; and most importantly, increases in the sale price per acre of land beyond the point of being economically viable to purchase as farmland.

Agriculture will continue to contribute to the economic well being and overall growth in the area. The demand for food and feed crops continues to build. With world markets and new emerging demands for production of “energy based” crops, agriculture remains an economically competitive and viable industry at present and for the potential future.

## **F. Agricultural Programs**

A number of programs are available to agricultural landowners to help achieve desired outcomes ranging from enhancing wildlife habitat to minimizing soil erosion. The following is a partial list from the Natural Resources Conservation Service (NRCS). For more information about these and other programs contact the local NRCS office at 715-346-1325, the Farm Service Agency at 715-346-1313, or the County Land Conservation Department at 715-346-1334.

### Priority Watershed Program

The Priority Watershed Program is a state program that was created in 1978 to provide financial assistance to local units of government in selected watersheds to address land management activities. The goal of the program is to improve and protect surface and groundwater quality by reducing pollutants from urban and rural non-point sources. Erosion from ag operations, stream banks, and developing urban areas and runoff from livestock wastes and urban areas are examples of non-point sources of pollution.

A portion of the Town of Sharon is in the Tomorrow/Waupaca Priority Watershed Project. The Tomorrow project began in the spring of 1994 and is expected to be completed in 2007. The watershed is approximately 291 square miles and includes land in Portage, Waupaca and Waushara counties. The plan outlines actions and funds needed to meet the project’s objectives, an implementation strategy, and the monitoring component to evaluate the program’s success.

### Soil and Water Resource Management Program (SWRM-DATCP 50)

The Soil and Water Resource Management Program is administered under state code DATCP 50. The program is designed to conserve Wisconsin’s soil and water resources, reduce soil erosion, prevent non-point source pollution and enhance water quality. Cost sharing is provided to qualified applicants who enroll in long term agreements to help manage practices, such as intensive grazing. For more information, contact the County Land Conservation Department.

### Conservation Reserve Program (CRP)

The Conservation Reserve Program, administered through the Farm Service Agency (FSA) is a voluntary program for agricultural landowners. Through CRP, one can receive annual rental payments and cost-share assistance to establish long-term, resource conserving covers on eligible farmland. Participants enroll in CRP for 10 – 15 years or permanent easements.

### Environmental Quality Incentives Programs (EQUIP)

The Environmental Quality Incentives Program (EQUIP) is a voluntary conservation program. It supports production agriculture and environmental quality as compatible goals. Through EQUIP, farmers may receive financial and technical help with structural and management conservation practices on agricultural land.

EQUIP may pay up to 75 percent of the costs of eligible conservation practices. Incentive payments may be made to encourage a farmer to adopt land management practices, such as nutrient management, manure management, integrated pest management, and wildlife habitat management.

#### Wetlands Reserve Program (WRP)

The Wetlands Reserve Program is a voluntary program to restore and protect wetlands on private property. It is an opportunity for landowners to receive financial incentives to restore wetlands that have been drained for agriculture.

Landowners who choose to participate in WRP may sell a conservation easement or enter into a cost-share restoration agreement with USDA to restore and protect wetlands. The landowner voluntarily limits future use of the land, yet retains private ownership. The landowner and NRCS develop a plan for the restoration and maintenance of the wetland.

The program offers landowners three options: permanent easements, 30-year easements, and restoration cost-share agreements of minimum 10-year duration.

#### Wildlife Habitat Incentives Program (WHIP)

The Wildlife Habitat Incentives Program is a voluntary program for people who want to develop or improve wildlife habitat on private lands. It provides both technical assistance and cost sharing to help establish and improve fish and wildlife habitat.

Landowners agree to prepare and implement a wildlife habitat development plan. NRCS provides technical and financial assistance to implement the wildlife habitat restoration practices.

### **Section 5.3 Agricultural Issues**

The following issues relating to agriculture were identified through the planning process:

- To what extent should productive agricultural lands in the Town be protected?
- How can farmers enhance their land value, have more flexible land use options and protect natural resources and the rural character of the Town?
- Changes in the economics of agriculture have put great pressures on the need to produce income from the sale of land for non-agricultural purposes.
- How can conflicts between farm and non-farm uses be minimized?
- Niche markets should be explored and developed. How can the Town promote specialty agricultural operations?
- Buffers between intensive agricultural and sensitive environmental areas should be considered.
- Nitrates in the groundwater are of concern in the Town, but it is difficult to pinpoint an exact source, be it natural or man-made. Concentrations of nitrates in well water vary greatly based on location, depth of well and rate of draw.
- How can groundwater be protected from excess pesticides and herbicides?
- Due to concerns, to what extent can the Town direct large agricultural operations toward areas suitable for this type of use?

## **Section 5.4 Agricultural Goals, Objectives and Policies**

**Goal 1:** Support agricultural areas.

**Objectives:**

- Identify agricultural productive areas.
- Use practices that minimize farm/non-farm conflicts

**Policies:**

- Develop a system to identify productive agricultural land that includes soils, stones, contiguous acreage, proximity to markets and canning contracts. (L.E.S.A. System could be used.)
- Encourage the use of vegetative or spatial buffers between agricultural and residential uses.
- Encourage non-farm development in areas away from intensive agricultural activities, in order to minimize farm-non-farm conflicts.
- Recommend that new residences be set 100 feet from agriculture land.
- Support crop production that supports alternative fuel/energy sources.

**Goal 2:** Educate the public about operations and activities of the agricultural community.

**Objective:** Work with organizations and agencies to educate the public regarding expectations of living near or adjacent to agricultural uses.

**Policies:**

- Support the Right-to-Farm Law (Wis. Stat. 823.08).
- Encourage the Portage County Zoning Department and the Board of Adjustment to defend farming operations rights under zoning and educate the public of these afforded rights.

**Goal 3:** Encourage practices that protect air, soil, water and wildlife resources.

**Objective:** Promote agriculture that is appropriate with existing topography and which protects the quality of surface and groundwater resources, including minimizing the loss of soil or agricultural chemicals to ground and surface water, as well as the proper location and maintenance of on-site sewage systems associated with residential development.

**Policies:**

- Encourage farmers to work with agencies and organizations to develop and implement farm plans, procedures and Best Management Practices that help protect surface and groundwater, riparian lands and minimize field and feedlot runoff into surface waters.
- Consider new or expanding livestock operations in the Town according to State Standards and Regulations.

**Goal 4:** Support the agricultural community in finding viable markets for their products.

**Objective:** Support farmers who identify niche markets suitable for their operations. Acknowledge the volatile nature of the agricultural economy and the need to be flexible and timely in adjustments to regulations that affect their economic viability.

**Policy:** Permit farmers participating in the farmland preservation program to have their lands classified exclusive agriculture, consistent with state law.

## **Section 5.5 Natural Resources**

Natural resources in the Town of Sharon serve as the foundation for residents physical, emotional and economic well being – from surface and ground water quality to land suitability for agricultural, residential or commercial development. According to the results of the 2001 County Comprehensive Planning and Zoning Survey and the 2005 Town of Sharon Planning Survey, some town residents favor identifying, managing and protecting natural resources that sustain them (see survey results **Appendix C**).

This section will describe the existing natural resources inventory and state the issues, goals, objectives and policies.

### **A. Geomorphology**

The present Portage County landscape primarily reflects the last or Wisconsin stage of the Pleistocene –glacial epoch (Holt 1965). The glacial ice transported large amounts of rock debris known as drift. The drift is called till if deposited directly by the ice and outwash if placed by glacial melt water.

The central and eastern part of the Town of Sharon is characterized as drift, being well drained, gently sloping to very steep soils formed in loamy deposits, and sandy glacial till or outwash sand and gravel. The hilly moraine area presents a significant problem in many areas for large scale farming.

The Ellis area forms the northern tip of the sand plain area of the County. This area is characterized by relatively deep sand deposits that extend down to sandstone and granite bedrock. These deep sand deposits function as an extensive aquifer which has changed farmland from marginally productive farmland to productive by way of high capacity irrigation, as well as other modern agricultural practices.

Bedrock ranges 0–50 ft deep on the northwestern part of the Town to 50–100 ft deep in the southeastern part of the Town and 0-30 ft deep along the Plover River corridor and part of the southwest areas of the Town.

Extending north and south through the Town is a series of parallel or glacial moraine ridges. These ridges are just east of Ellis and continue south throughout the County. The Town also has isolated sandstone deposits located at or near the surface.

The landscape of the Town is generally flat to hilly with numerous lowland wet areas and glacial kettles. The elevation ranges from 1,210 feet above sea level on the western border of the Town in the Jordan Marsh, to 1,250 feet on the top of the moraine running through the center of the Town, just south of Polonia (see Topography **Map # 031**).

### **B. Soils**

Soils in the Town are characterized by a diversity of soil types supporting a variety of land uses. According to the Soil Survey of Portage County, there are 46 distinct soil types that can be grouped into soil associations as follows. These associations are generalized based on the majority of soils in an area.

- Point-Dancy-Mosinee association: Well-drained to somewhat poorly drained, nearly level to gently sloping soils that formed in loamy and silty deposits and the underlying loamy residuum from igneous rocks. These soils are found in northwest corner of the Town. These soils are forested or shrub/scrub wetlands.

- Wyocena-Rosholt association: Well-drained, gently sloping to very steep soils that formed in loamy deposits and sand glacial till or outwash sand and gravel. These soils are found in the northern, central, eastern and southern portions of the Town. The lesser sloping areas tend to be used for crops or pasture, while the steeper areas are used for woodlands or pasture. The steeper soils in this association have very severe limitations for septic absorption fields.
- Kranski-Coloma-Mecan association: Excessively drained and well-drained, gently sloping to very steep soils that formed in sandy glacial till or in deep sandy deposits. These soils are found in the northern, western, southern and eastern portions of the Town. These soils are used for woodlands and irrigated and non-irrigated crops including vegetables, grain, forage crops, and pasture. These soils are subject to soil blowing, water erosion when cropped or exposed.
- Richford-Rosholt-Billett association: Well-drained, nearly level to gently sloping soils that formed in sandy and loamy deposits and outwash sand and gravel. These soils are found north and south of Ellis, in the northwest, west central, and east central portions of the Town. These soils are used for irrigated and non-irrigated crops including potatoes, grains, forage crops and pasture. These soils are subject to wind and water erosion. The sandy soils have high permeability that is conducive to contamination of the groundwater. This is an important concern for both Ellis and Polonia because the drinking water supply is via private wells.
- Plainfield-Friendship association: Excessively drained and moderately well drained, nearly level to sloping soils that formed in deep sandy deposits. These soils are found in the northwestern and western part of the Town west of the Plover River. They are used for potatoes and pasture. The northwestern portion is not shown on map but lies east of the Plover River and west of Hwy Y.
- Roscommon-Meehan-Markey association: Somewhat poorly drained to very poorly drained, nearly level soils that formed in deep sandy deposits or, in places, in organic deposits that overlie the sand. These soils are found along the Plover River corridor in the western part of the Town from north to south. These soils are used for crops, pasture and wildlife habitation.
- Markey-Seelyeville-Cathro association: Very poorly drained, nearly level soils that formed in organic deposits over sandy and loamy deposits. These soils are found along the Plover River, Tomorrow River and Jordan Park. They are also found in the northern part of the Town. These soils are wildlife habitat with a few wooded areas on higher ground. This association has very severe limitations for septic drain fields and basements. Note: a section of this association in the northwestern portion of the Town is not on the map (lies east of the Plover River and west of Hwy Y).

NOTE: Soil testing by a certified soil tester is strongly recommended. For more detailed, site specific information, please see **Map #032** General Soil Associations; **Map #030** Highly Productive Ag Soils; and **Map #040** Land Capability for On-Site Waste Systems.

### **C. Surface Water, Wetlands and Flood Plains**

The Town of Sharon has two rivers, several streams, 12 named and 7 unnamed lakes, many wetlands and several flood plains. According to 2001 County survey data, 89% of respondents felt lakes, rivers and streams should be identified and protected.

**Rivers & Streams** in the Town of Sharon include:

The Tomorrow River: headwaters begin as an intermittent stream from Mudhole Lake in the west central part of the Town. The river gathers clear, hard water from springs and tributaries on its southeasterly route through Portage County and into Waupaca County. This is a Class 1 trout stream and is listed as Exceptional and Outstanding Water Resources by Wisconsin Department of Natural Resources (see WI Administrative Code NR102).

The Plover River: enters the County through the northwest part of the Town as it flows west into the Wisconsin River. Much of the volume of this river is contributed by springs and groundwater. The river in turn supplies drinking water to the Stevens Point area through the City well fields. According to the Plover River Plan, 2/3 of the water that comes from the well originates directly from the Plover River. The Plover River is also groundwater recharge to rural residential and agricultural wells in the area. The dam along the river in the Town is located ¼ mile east of Bentley Rd and County Highway Y. There are also numerous agricultural activities adjacent to the river.

A study of the length of the Plover River through 3 counties was conducted from 2000-2001 by the **Environmental Task Force Program** at The University of Wisconsin-Stevens Point. (This Study can be obtained at the Sharon Town Hall.) The study concluded that overall, the Plover River has good water quality when compared to other rivers located in Central Wisconsin. This is likely due to the fact that the river is well buffered through most of the system, most natural wetlands still exist and development is not very intense except in the Stevens Point area. Wetlands act as nutrient sinks and reduce the impacts of heavy rain events. The mid section of the river runs through the Town of Sharon and receives some pesticides and nutrients. To maintain current water quality status, efforts should be made to protect the watershed and river corridor.

Other Streams: North Creek (northwest and north central), Lost Creek (west) and a tributary of the headwaters of Flume Creek (eastern boundary).

**Lakes** are located throughout the Town of Sharon and include (see **Map #039**):

Adams Lake	12.0 acres (north of Adams Ln, east of State Rd 66)
Becker (Bakers) Lake	31.5 acres
**Bentley Pond (Millpond ***)	85.9 acres
**Collins Lake`	10.0 acres (within the Town of Sharon)
Glisezinski Lake	9.87 acres
**Jacqueline Lake	38.7 acres
Kranski Lake	17.1 acres
Mudhole Lake	25.8 acres
Oesterle Lake	30.8 acres
Pallen Lake	12.6 acres
North Twin Lake	36.5 acres
South Twin Lake	52.7 acres
7 unnamed lakes	approximately 43 acres

\*\* = lakes with public access      \*\*\*=a shallow impoundment of the Plover River

**A recent two year study of 29 water bodies in Portage County** was conducted by the University of Wisconsin-Stevens Point and the Portage County Land Conservation Office. Six lakes in the Town of Sharon were studied including Bentley & Jordan Pond; Becker, Collins,

Jacqueline and South Twin Lakes. Key information is listed below. Additional details on these lakes can be obtained from the Sharon Town Hall office as well as from the above-mentioned agencies.

Jacqueline, North & South Twin, Becker and Mudhole Lakes are classified as shallow soft water seepage lakes. Shallow lakes are considered Wisconsin gems due to their unique aquatic life. South Twin is especially unique due to its very low alkalinity (2 parts per million, ppm)-usually only found in northernmost Wisconsin. Soft water seepage lakes are more susceptible to runoff contamination since they have no river system coming into or going out of them. Acid rain is also a concern for these lakes. An earlier study by UWSP determined that alkaline lakes like Jacqueline and South Twin are more susceptible to acid rain since their alkalinity is 15 ppm or less.

Normally mesophilic, Jacqueline and South Twin lakes are becoming eutrophic due to increased nutrients from runoff and stirred up phosphorous rich sediment. Water clarity is poor. Eutrophic lakes become weedy and/or have frequent algae blooms. Winterkill of fish is much more common under these conditions.

To maintain health of these shallow lakes, they need different management than deep water lakes. Boat traffic can damage plant beds that protect the quality of shallow lakes. Damage is directly due to cutting and tearing out of plant material with propellers or indirect via stirring up of lake sediment that clouds water and reduces light to plant growth. Shallow lakes need large areas of appropriate vegetation to remain healthy. Large scale harvesting of plants and chemical treatment of plants can damage shallow lakes much more than a deep lake. Shallow lakes are not appropriate for high-speed recreation or large boat motors even at no wake speeds. As sediment is re-suspended, phosphorus that was adsorbed to sediment particles becomes available for plant use and studies have shown an increase in algae and nuisance levels of aquatic plant growth. It is recommended that these lakes have a boating “Carry-On Only”, and “No Motor” lake ordinance. “No Wake” is recommended for lakes with public landings such as Jacqueline Lake.

Development also affects these and other lakes. Jacqueline Lake has considerable development and residents created a lake district to make improvements and rehabilitate aquatic quality. Progress has been made, but the water quality is still poor, numerous plant species have disappeared and aeration is required year round to reduce fish kill. There is limited development on South Twin and none on North Twin at this time. However, some development may occur in these areas. Any development should work with the county to ensure new storm water regulations are met and no additional run off occurs from roads, construction, fertilizers, manure, and/or soil erosion. Development needs to maintain 100 ft setbacks with no setback averaging, create or maintain shoreline buffers, recommend septic systems be put behind the dwelling (away from the lake), maintain septic systems properly, observe and manage non-native aquatic plants, reduce or eliminate pesticides and continue to monitor lakes where possible. Twin Lakes’ property owners should consider developing a lake district at some future time.

Collins Lake is a drainage lake with a depth of 56 ft. It has the largest flora of aquatic and wetland species on record in Portage County. However, the current high phosphorous levels of 44 parts per billion (ppb) have made it eutrophic and subject to nuisance algae and aquatic plant growth. Filamentous algae are increasing due to increased nutrients. Water quality is fair due to elevated phosphorous levels, algae populations, sedimentation and water color from wetland vegetation. Although only 10 acres of Collins Lake is in the Township, there is an extensive wetland complex west and southwest of the lake that is important to the health of the lake and for habitat of many plants and animals. Attention to invasive species is needed to protect the lake.

The county should consider adding land northwest of the Collins Park entrance for trails and to reduce run-off. It is recommended that the Town of Sharon also work with the Town of Alban on water quality and lake protection issues.

Becker Lake is a shallow soft water lake with an adjacent bog. The water quality is good but it is susceptible to nutrient inputs like N & S Twin and Jacqueline Lakes. It has the highest number of vascular plants (87 species) and the highest floristic quality found in all Portage County lakes. Plants of special concern include Farwell's milfoil (*Myriophyllum farwellii* Morong) and Bright-green spikerush (*Elocharis olivacea*). The bog on the northwest side is rich in plants. Care is needed to protect these plant communities and the water quality. Data on surface watersheds is being tabulated and will be in the **UW-SP Lakes of Portage County Study** (this study can be found in the Sharon Town Hall office).

Bentley & Jordan Pond are part of the Plover River that overall has good water quality. These two impoundments have phosphorous concentrations less than the average for similar areas in the county. Water clarity is fair for both. To maintain current water quality status, efforts should be made to protect the watershed and river corridor.

**Watersheds** are interconnected areas of land draining from surrounding ridge tops to a common point such as a lake or stream junction with a neighboring land area. The Town of Sharon is divided into 3 watersheds – The Plover-Little Plover watershed on the western border, the Tomorrow-Waupaca watershed on the eastern and southeastern portion and the Lower Little Wolf on the north eastern corner of the Town. Some areas in these watersheds are subject to occasional flooding from major storm events and melt water from the spring thaw.

**Wetlands** are an important part of the watershed, as they act as a filter system for pollutants, nutrients and sediments, along with serving as buffers for shore lands and providing essential wildlife habitat, flood control and groundwater recharge. There are numerous wetlands in the Town of Sharon (see **Map #033**) that include 3 general types: forested, scrub or shrub, Emergent “Wet” Meadows. The predominant type is forested wetlands. In this section “wetland” means an area where water is at, near of above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which has soils indicative of wet conditions.

- Forested wetlands are the predominant type (approximately 10,216 acres) – including bogs and forested floodplain complexes that are characterized by trees 20 feet or more in height such as tamarack, white cedar, black spruce, elm, black ash and silver maple. These wetlands are located in most parts of the Town except in south central part of the Town. They are along and east of the Plover River; between CTH J, Y and K and north of STH 66; east of CTH J, south of County Line Dr and north of CTH CC; and north of CTH Z, east of STH 66 by Rustic Rd and west of Township boundary with Town of Alban.
- Scrub/shrub wetlands are the second abundant type (approximately 2,404 acres). These wetlands, which include bogs and alder thickets, are characterized by wood shrub and small trees such as tag alder, bog birch, willow and dogwood. These are found throughout the Town in many areas adjacent to forested wetlands.
- Emergent/wet meadows are the third abundant type of wetland (approximately 912 acres) and consist of areas that may have saturated soils more often than having standing water. Vegetation includes sedges, grasses and reeds as dominant plants, but may also include blue flag iris, milkweed, sneezeweed, mint and several species of goldenrod and aster. These types of wetlands are found primarily along the Plover River and its feeder creeks; along

parts of the Tomorrow River; around Osterle Lake; east of N & S Twin Lakes; and scattered in the north central and northeastern parts of the Town.

**Flood Plains** are defined as that land which has been or may be covered by floodwater during a regional flood. The flood plain includes the floodway and flood-fringe areas. A 100-year flood is defined as a flood event having a one percent chance of reaching the 100-year flood elevation in any given year. Contrary to popular belief, it is not a flood occurring once every 100 years. A 100-year flood plain then, is the area adjoining a river, stream or watercourse covered by water in the event of a 100-year flood.

Flood plains provide many benefits including: natural flood and erosion control, water quality maintenance, and groundwater recharge. Some of these areas are also desirable for residential development due to aesthetic reasons, and agricultural development due to the presence of nutrient rich soils. According to Federal Emergency Management Agency maps, flood plains occur in two main areas: in the north western, western and southwestern portions of the Town of Sharon along the Plover River, North Creek and other tributaries flowing into the Plover River and along Lost Creek in the west central part of the Town. (**See Map #033 Wetlands; and Map #035 Floodplains.**)

#### **D. Groundwater**

All Town residential water use comes from groundwater sources. Therefore, protection of this resource for quantity and quality is vital. Depth to water table, soil texture and permeability all play a role in diminishing the negative effects pollutants may have on water quality. (**See also Utilities and Community Facilities Chapter, 4.2C, Water Supply.**)

The Town of Sharon is located in 2 geologic provinces. The drift province makes up the eastern and central  $\frac{3}{4}$ s of the Town, while the sand-plain province makes up the western  $\frac{1}{4}$  of the Town. The drift province is considerably different from the western half of the County in that the basement granitic bedrock is far from the surface and the unconsolidated aquifers above it are not limited. Depth to bedrock is generally greater than 100 ft and the depth to groundwater ranges from a few feet below the surface to 30-157 ft. The sand-plain province is considerably different from the rest of the County in that the basement sandstone bedrock is far from the surface and the unconsolidated aquifers above it are not very limited. The depth to bedrock is 0 to >150 ft. and the depth to groundwater varies greatly, between 0 and 68 ft.

In the drift province, the depth to groundwater in some areas of the township is of a nature that is more conducive to intercepting pollutants; however the sub-surface soil texture is sandy and coarse, allowing liquids a faster rate of travel through the soil column such that pollutants in these strata migrate with relative ease.

In the sand-plain province, generally a thick unsaturated zone exists; however given the sandy soil types, there exists little second line defense against pollutants regardless of the nature of the subsurface materials. Although some of the soils ranked moderate to good in pollution attenuation, this area of the County should be considered vulnerable overall given the sandy soil type.

Potential pumping yield rates (**see Map #022**) for groundwater generally range from 10-1,000 gallons per minute, indicative of a large potential supply in most of the Town. However, large removals could affect groundwater levels, wetlands and surface water. The Town of Sharon will review any development proposals which would require large scale groundwater extraction with the express guideline of preserving and protecting the important resource.

The Town is split by the groundwater divide formed by glacial moraines that run north and south through the Town of Sharon just east of CTH J (see **Map #034**). The land east of the divide is part of a larger watershed that drains into Lake Michigan and eventually into the Atlantic Ocean. Land west of the divide flows into the Wisconsin River and eventually into the Gulf of Mexico. Knowing the direction of groundwater can be very helpful when determining proper siting of well and on-site waste systems.

The wellhead protection area in Polonia runs on a north-south line following Polonia Road south to STH 66, west on STH 66 to Church Street, then straight south on a line with Church Street to Lepak Lane, then east on Lepak Lane to CTH Z. It then follows CTH Z south beyond the south border of the Town of Sharon. Lands east of this line are in wellhead protection Zone C. Developments in this zone that are not within a municipal sewer system must be a minimum 2-acre lot size. (**See Map #039**)

Data collection for groundwater monitoring remains an on-going process. Residents are responsible for their own groundwater testing. It is recommended that water is tested on an annual basis. More specific information and recommendations regarding groundwater can be found in the **Portage County Groundwater Management Plan**, adopted by the County Board in March 2004.

### **1. Atrazine Prohibition Areas**

The US Environmental Protection Agency is researching the health effects of atrazine in water. Drinking water that contains atrazine will not cause an immediate sickness or health problems (acute toxicity). However, consuming low levels of Atrazine over time may cause health problems (chronic toxicity). The EPA is also concerned that Atrazine may be an endocrine disruptor which can cause unintentional hormone-like activity in the body.

The Wisconsin Department of Agriculture, Trade and Consumer Protection is responsible for protecting Wisconsin's groundwater from contamination by pesticides and fertilizers. Their authority to restrict the use of a pesticide that is contaminating groundwater at levels above health-based standards is found in the Wisconsin Groundwater Law, Chapter 160 of the Wisconsin Statutes, and by department rule in ATCP 31, Groundwater Protection Program.

The rules for restricting the use of Atrazine and other herbicides in Wisconsin are part of ATCP 30 – Pesticide Product Restrictions and the county maps showing the location of the prohibition areas can also be found in the rule in ATCP 30.

Atrazine has been detected above the health standard in some wells within the Town of Sharon and because of this a prohibition area has been defined within the community (**Map #037, Atrazine Prohibition Areas**). Approximately 3,300 acres of land from three areas are within the prohibition area in the Town of Sharon. The lands are found in the central area and the northwest and southeast corners. (**See Map #034 Groundwater Flow; Map #037 Atrazine prohibition area; and Map #039 Wellhead Protection Map-Polonia.**)

### **E. Wildlife Habitat and Forested Areas**

When people think about wildlife, birds, fish and mammals most likely come to mind. It is important, however, to consider all organisms that make up an ecosystem in order for that system to continue providing the maximum benefit to humans and the environment. Town residents recognize the fact that human beings play a role in protecting or restoring, as well as, degrading or destroying wildlife and its habitat. They also recognize that it will be very difficult to preserve all ecosystems in the Town from human encroachment or interaction.

The biggest threats to wildlife are loss of habitat quality and quantity. These threats can be attributed primarily to fragmentation, invasive species, and pollution. Fragmentation refers to the loss of large, contiguous sections of land through subdivision into smaller parts. These subdivisions can lead to an alteration and possible degradation of the native plant and animal communities. Invasive species, both plant and animal, tend to out compete or prey on native Species also altering the native ecosystem. Pollution can lead to habitat degradation and cause birth defects and increased mortality rates in animal species.

Habitat areas are important for providing food and cover for nesting, brooding and sheltering. Farmland is one type of habitat that also provides food, as well as travel corridors between wetlands and woodlands.

Woodlands, Forested Lands, and Herbaceous Cover and Shrub Lands account for approximately 26,399.05 acres or 64% of the total land area in the Town of Sharon, of which 13,532 acres or 51% are identified as Wetlands as described earlier in this Chapter (**see Map #036**). According to 2001 County survey data, 80% of respondents felt that an effort should be made to identify and protect woodlands, and 74% felt the same about wetlands and floodplains. Loss of these habitat types can threaten the viability of certain species. Woodlands that exist now are primarily due to an inability to sustain successful agricultural practices.

Options for landowners to protect habitat can be accomplished by working with a land trust to place a conservation easement on the property. The easement is usually donated but it can be purchased through the WI Stewardship Fund or other resources. For more information contact the local land trust (North Central Conservancy Trust) or WI Department of Natural Resources.

Another option open to all private landowners owning ten or more acres of woodlands is the Managed Forest Law Program. The MFL program is intended to foster timber production in private forests while promoting other benefits that forested lands provide. Participants in this program have the option to choose a 25 or 50-year contract period and pay property taxes at a reduced rate on enrolled lands. A portion of the difference in property taxes is recouped by the state at the time of a timber harvest when a yield tax is imposed based on the volume of timber removed. For more information regarding specific requirements and how to enroll in this program, contact the WI Department of Natural Resources.

#### Threatened and Endangered Species

Known rare and endangered animal species in the Town of Sharon identified by the Wisconsin Natural Heritage Inventory (NHI), UW-SP Lakes Study, WI Department of Natural Resources and US Fish and Wildlife include: Karner blue butterflies, Wood Turtles and Osprey. Rare and endangered plant types include: Farwell's milfoil (Becker and S. Twin Lake), Vasey's pondweed (S. Twin Lake), violet bladderwort (S. Twin Lake), Valeriana Sitchenesis (deep cedar swamps N of Hwy 66 by Plover River) and bright -green Spikerush (Becker Lake).

Karner blue butterflies have been noted west and south of Lepak Ln, along Hwy CC, east of Lake Jacqueline and likely other locations with stands of wild lupine. Wood Turtles have a historic record on the Plover River. Rare plant communities include wild lupine (see Karner Blue butterflies above). Wild blue lupine is the only food Karner blue butterfly caterpillars eat.

Many areas do not have information available on threatened or endangered species. Two areas of note are S Twin and Becker Lake bogs that need further study for rare species. All these elements should be taken into consideration along with protection measures. A detailed description of rare and endangered plants and animals can be obtained from the WI DNR. (**See Map #036 Forested Lands.**)

## **F. Air Quality**

The following information comes from the WI DNR and the Environmental Protection Agency (EPA):

A few common air pollutants are found all over the United States. These pollutants can injure health, harm the environment and cause property damage. The EPA calls these pollutants **criteria air pollutants** because the agency has regulated them by first developing health-based **criteria** (science-based guidelines) as the basis for setting permissible levels. These pollutants include: ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, particulate matter, and lead.

One set of limits (**primary standard**) is designed to protect public health, including the health of “sensitive” populations such as asthmatics, children, and the elderly; another set of limits (**secondary standard**) is intended to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. A geographic area that meets or does better than the primary standard is called an **attainment area**; areas that don’t meet the primary standard are called **non-attainment** areas.

All of Portage County, including the Town of Sharon, is listed as an attainment area by the WI DNR.

## **G. Non-Metallic Mining**

The glacial and geologic history of Portage County has made conditions suitable for certain types of non-metallic mining. Along the moraines in the eastern third of the County, glacial deposits have resulted in some lands that are desirable for gravel and aggregate extraction.

There are no active gravel operations in the Town. One closed gravel site (located east of CTH J, north of Merryland Dr. and south of CTH CC) was used in 2000 for the Portage County Business Park and earlier for work in the Town. There is also a known gravel deposit located west of CTH J and north of North Star Drive. Any future non-metallic mining must be sited with care and not placed in areas with nearby homes (see Chapter 2 Housing, Sec 2.3 & 2.4; Chapter 3 Transportation, Sec. 3.4 and 3.5; and Chapter 8, Land Use Sec. 8.3). Any siting must also follow the Town Non-Metallic Ordinance and any County Ordinances.

## **H. Natural Resources Programs & Potential Preservation Sites**

North Central Conservancy Trust (NCCT) is a local land trust serving 10 counties including Portage County. The Trust works with landowners to create conservation easements that protect the land from future development in perpetuity. There are several properties in the Town of Sharon who have conservation easements with NCCT. Contact NCCT at PO Box 1994, Wausau WI 54402.

### Portage County Land Preservation Fund (PCLPF)

This county fund was established in the fall of 2003 to identify and protect natural, cultural, historic and/or agricultural areas in Portage County. Land can be preserved through donations, conservation easements or land purchase. The PCLPF Committee reviews applications on a regular basis for funding and sends recommendations to the Portage County Parks Committee for final approval. Contact: Gary Speckmann, Portage County Parks Director at 715/346-1433.

### Land Legacy Fund of Portage County

The Land Legacy Fund was established in the fall of 2004 as a private fund within the Community Foundation of Portage County. The primary purpose of the fund is to supplement and complement the activities of Portage County’s Land Preservation Fund to identify and

protect natural, cultural, historic and/or agricultural areas in Portage County by acquiring land an/or conservation easements. The secondary purpose is to work with other organization in or near Portage County to purchase land and conservation easements that protect natural, cultural, historic and/or agricultural areas in or near Portage County. Contact The Community Foundation of Portage County at 715/342-4454.

#### Plover River Alliance

The Plover River Alliance is a private non-profit organization working to preserve the Plover River in Portage County through conservation easement donations or purchase. They work with landowners to create permanent buffer strips of 300 ft or more. They have secured funds from private sources and from the WI Stewardship Fund. Contact The Community Foundation of Portage County at 715/342-4454.

#### Wisconsin Stewardship Fund

The WI Stewardship Program was established in 1989 to preserve significant land and water resources for future generations and to provide the land base and recreational facilities needed for quality outdoor experiences. The fund acquires land and easements for conservation and recreation purposes, developing and improving recreational facilities and restoring wildlife habitat. The fund provides 50% match grants to local governments and not-for-profit organizations for eligible projects. Contact in West Central Region is Leslie Gauberti – Local Gov. Grant Manager, Rhinelander 715/365-8955 or Janet Beach Hanson – Nonprofit Grant Manager in Madison at 608/267-0496.

#### Partners in Wildlife

The Wisconsin Karner Blue Butterfly Habitat Conservation Plan (HCP), approved in September 1999, guides the management and monitoring of Karner blue-occupied land in Wisconsin. The HCP is based on a legal agreement between the U.S. Fish and Wildlife Service, the Wisconsin DNR, and an array of public and private land managers. Cost sharing is available up to 100% for approved habitat restoration. Contact: Bob Welch, Waupaca teacher and Karner Blue expert at 715/258-7247; Darcy Kind – WI DNR Landowner Contact Specialist 608/334-2967; Catherine Carnes – US Fish & Wildlife Service, Endangered Species Coordinator – Green Bay 920-465-7415.

### **Section 5.6 Natural Resources Issues**

Natural resources are important to the residents of the Town of Sharon. The following natural resource issues were identified through the planning process:

- How can the shallow, soft water lakes' and other lakes' health be protected?
- How can the Plover and Tomorrow River be protected?
- How can ground and surface water be protected from failing septic systems, road construction, residential development and certain agricultural practices?
- How can groundwater and other natural resources be protected from junk vehicles and other nuisances?
- Excessive groundwater draws can lower surface water levels. How can surface water levels be maintained while accommodating human activity?
- How can fishery resources be protected in the Town?
- How can the Karner blue butterfly and other rare or endangered species be protected?
- How can the impact of oak wilt and gypsy moths be addressed?

- How can the spread of exotic species in the Town be minimized?
- How can the Town maintain the quality of scenic views around surface waters and ridge tops?
- How can forest owners be made aware of Options for land management?
- Increasing Deer population is causing excessive damage. To what extent can the Town control the herd when it's hard to find open areas to hunt?
- Town Park and any recreation plans need to be reflected in the County Outdoor Recreation Plan in order to be considered for state funding.
- What is WI DNR's intent for their properties in Sharon?
- Unique geologic features should be identified.
- How can the integrity of the night sky be maintained?
- How can non-metallic mining occur without negatively impacting nearby homes?

## **Section 5.7 Natural Resource Goals, Objectives and Policies**

### **Goal 1: Identify, manage, preserve and protect natural resources throughout the Town.**

#### **Objectives:**

- Encourage landowners to use accepted best management practices to protect air, soil, surface water, ground water and wildlife resources.
- Work towards preservation of environmental resources.

#### **Policies:**

- Encourage farmers to work with private, government and educational organizations to develop farm plans and procedures that minimize field and feedlot runoff into surface waters.
- Recommend setbacks and use buffers along surface waters for agricultural activities and developments.
- Support efforts to protect the quality of ground water aquifer that supplies drinking water to the Town and surrounding area.
- Support no additional run-off into surface waters from any new development through the use of retention ponds, buffer strips and other techniques.
- Preserve major wetlands and natural resources through the application of the County's Conservancy Zoning District.
- Evaluate creation of a "carry-on only" and "no motors" ordinance for shallow soft water lakes in the Town to reduce stirring up nutrient-rich sediment from damaging lakes.
- Evaluate surface and groundwater watersheds of lakes when making land use decisions on property in watersheds.
- Identify and protect unique natural resources including woodlands, wildlife habitat and water resources.
- Recommend that new development takes into consideration the protection of natural resources.
- Site and monitor any non-metallic mining operations carefully with consideration of impact on any neighboring homes, existing roads and other natural resources. Follow applicable Town and County Ordinances.

## **Goal 2: Partnership efforts**

### **Objectives:**

- Encourage cooperation with Portage County, UW Extension, and DNR to provide educational materials relating to natural resource management.
- Work Together with public and private organizations to protect unique resources in the Township.
- Work with the County to better enforce its Zoning Ordinance relating to inoperable or “junk” vehicles and other items that negatively impact natural resources.
- Consider development of future town parks.

### **Policies:**

- Work with DNR and UW Extension to educate residents, landowners and loggers about control of oak wilt and non-native and invasive species.
- Work with County to educate residents about proper care of septic systems to reduce failure and pollution.
- Work with Town government, residents, businesses and others to protect ground water and surface water quality.
- Work with local land trusts, the Portage County Land Preservation Fund, Land Legacy Fund of Portage County and other funding resources in preserving unique areas in the Township.
- Encourage quality deer management.
- Work with other governmental units to help prevent spread of plant diseases and gypsy moths.
- Work with DNR and other organizations to help maintain or enhance fish habitat.
- Encourage Portage County to expand Collins Lake Park to NW if land is available.
- Encourage the use of shielded lighting to preserve the integrity of the night sky.
- Evaluate existing salvage operations to verify proper permits and operation.
- Encourage residents with inoperable vehicles and other items on their property to dispose or recycle them. If residents feel the need to keep them then they should be kept out of sight in an environmentally safe manner.
- Evaluate development of proposed Town park areas in future subdivisions.

## **Section 5.8 Cultural Resources**

Cultural and historic resources often help link the past with the present and can give a community a sense of place or identity. These resources can include historic buildings and structures along with ancient and archeological sites.

Burial sites are one example of a resource that can add to a community’s sense of history as well as provide a great deal of genealogical information. Formally catalogued burial sites are protected from disturbance in Wisconsin and are given tax treatment equal to that of operating cemeteries.

Information regarding cultural and historic resources in the Town is constrained by limited financial and human resources. This section will provide goals and policies that promote the effective management of historic and cultural resources.

## **A. Cultural and Historic Resources Inventory**

A wide range of historic properties have been documented that help create Wisconsin's distinct cultural landscape. Descriptions of existing locations are identified on the list of historic places by the Wisconsin Historical Society. Keep in mind many of the properties included in this inventory are privately owned and not necessarily open to the public, so please respect the rights of private property owners. At this time there are nine listed in Sharon, which includes buildings, school houses, a church, cemeteries, shrines and a country store/saloon. The Town of Sharon has a strong Polish heritage. It is the second oldest Polish settlement in the country.

### **Schools**

- Town Hall (former Edison School) – a stone building constructed in 1938 as a two room school house later converted to the Town Hall for Sharon, located at 6704 State Rd 66 in Ellis.
- Old Ellis School – one room stone school house constructed prior to the Edison School, located on the grounds of the former St Martins Church.
- McGloughlin School – old school house built in 1920, now used as a private residence, located at 2604 County J N.
- Madison School-school house located at 7789 Merryland Drive, now used as a private residence.

### **Churches**

- Sacred Heart Church and Convent – is a large active Catholic church and includes a grade school and residence for nuns. It is located in Polonia and was originally built in 1872 from the dismantled St. Joseph's church in Ellis. The church burned, was rebuilt and rededicated in 1876. It burned again in 1934, but was reconstructed.
- St. Martins Church – is a wooden "white" church built in 1866. This replaced the original St. Martins Church of 1856. Located next to the Town Hall and by the cemetery in Ellis, this was the German, Irish Catholic church. It is no longer used as a church, but was used for funerals for some time. Currently it is owned and maintained by Sacred Heart Church.

### **Cemeteries**

- Two cemeteries located in the Town, one in Polonia by Sacred Heart Church and one in Ellis by the former St Martin Church. (see the Utilities and Community Facilities Chapter of this Comprehensive Plan).

### **Shrines**

- Two grottoes to the Virgin Mary – located at the corners of CTH I and OO and CTH Z & I. They are small, enclosed structures made of brick, located along the roadside at corners, and often maintained by families living near the grottoes.

### **Other Sites**

- North Star Saloon and Store – was built around the 1880's and later converted to an Antique Shop and Country Store. It is located at 3000 CTH J N.

## **Other Cultural and Historic Resources**

Another source of information comes from the National and State Register of Historic Places. There are currently fourteen sites listed throughout Portage County, however, none of them are located in the Town.

## **Cultural Resource Programs**

Wisconsin Historical Records Advisory Board (WHRAB) works at the state level in association with the Wisconsin Historical Society. The Board's activity falls primarily into three areas: it provides guidance and assistance to archives and records management programs in Wisconsin; promotes the value of historical records as keys to our cultural heritage and works through partnerships with statewide organizations whose purpose and goals support that end; and to bring federal grant funds to Wisconsin for improving access and preservation of historical records.

Portage County Land Preservation Fund (see Sec 5.5 H of Natural Resources Programs).

Land Legacy Fund in Portage County (see Sec 5.5 H of Natural Resources Programs).

## **Section 5.9 Cultural Resource Issues**

The following issues or concerns were identified through the planning process:

- How can the cultural and historic sites be preserved?

## **Section 5.10 Cultural Resource Goals, Objectives and Policies**

### **Goal 1: Identify and protect cultural and historic resources in the Town**

#### **Objectives:**

- Work with Portage County Historical Society, other organizations and area residents to encourage the identification of cultural and historic resources.

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