

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

66.1001 (2)(e) Wis. Stat.:

**Agricultural, Natural and Cultural Resources element.** A compilation of objectives, policies, goals, maps, and programs of the conservation, and promotion of the effective management of natural resources such as groundwater, forests, productive agricultural area, environmentally sensitive areas, threatened and endangered species, stream corridors, surface water, floodplains, wetlands, wildlife habitat, metallic and non metallic mineral resources, parks, open spaces, historical and cultural resources, community design, recreational resources and other natural resources.

### **Section 5.1      Agricultural Resources**

#### A. Agricultural Lands

The Village of Whiting has no agricultural land located within the Village limits.

#### B. Farm numbers, type, size

There are no farms located within the Village limits

#### C. Farm Economy and Infrastructure

The Village of Whiting has no businesses directly related to agriculture.

### **Section 5.2      Natural Resources**

This section will describe the existing conditions of natural resources in the Village of Whiting and surrounding area. Natural resources include: soils, watersheds, lakes, rivers, groundwater, shore land, floodplains, wetlands, forests, vegetation and wildlife.

#### A. Geology

The Village of Whiting is located near the boundary line between two geological provinces, the northern highlands and the central sand plain. The former area is characterized by high bedrock, low available groundwater supply, clay type soils, poor land drainage and northern climate vegetation. Generally, this area lies to the north and west of the Village. The Village primarily lies within the central sand plain, which is characterized by flat topography, ample groundwater supply and sand plain features, including sandy soils that are well drained.

The surface geology of the region along the Wisconsin River is characterized as an “outwash plain”, formed from materials deposited in the area from melt water flowing to the Wisconsin River from the edges of the glacial ice sheets to the east. As a result, the Village’s landscape was not shaped directly by glacial action, as was the case with lands a few miles east of the Village where glacial “drift” has formed a hilly landscape.

## B. Bed Rock

The Village's location near a series of rapids (now inundated) on the Wisconsin River is evidence of the presence of bedrock near the surface of the ground throughout the northwestern area of the Village.

## C. Topography

Glacial outwash formed a relatively flat topography in the Village, which averages about 1,085 feet above sea level. The flat topography contributes to some drainage problems in areas that have been hard surfaced for development purposes. There are no hills or steep grades which present significant problems to development. The shoreland area along the Plover River presents the sharpest change in topography, although the grades are relatively gentle (Map 5.1).

## D. Soils

The most prevalent soil type in the Village is Plainfield loamy sand, which occurs throughout the majority of the Village. The remaining soil types were formed from residual bedrock materials near the ground surface and are generally denser. These soils are subject to heaving and swelling from frost and present potential problems to urban development. Further complications can be expected by the presence of shallow bedrock in this same area (Map 5.2).

## E. Groundwater

Groundwater is generally plentiful in the Village. Groundwater quantity is generally more limited in the northwestern areas of the Village, where the groundwater aquifer is shallow due to bedrock. The Village originally derived its community water supply from a Village wellfield located on Elm Street, on the Village's east side. The Village discontinued use of the community well in 1979 because of nitrate levels that exceeded the federal standard of 10 parts per million (PPM). Between 1979 and 1991, the Village's public water supply was provided by the City of Stevens Point through connections to the City water supply. The City's public water supply is from wells that are 55 to 60 feet deep and located in the Plover River Valley, where the Plover River provides large quantities of very high quality groundwater.

During 1991, the Village installed a denitrification system to the Village's community well in an effort to reduce nitrate levels to a point where the Village could again provide a public water supply. The denitrification process has proved extremely effective, to the point where the Village began operating its own municipal water system, on January 30, 1992.

As described in the Utilities and Community Facilities Chapter, the Whiting well fields are protected by wellhead protection ordinances through the Village of Whiting, City of Stevens Point, Village of Plover and Portage County. Please see Section 4.1(C)(3) and Map 4.3 for a description of these regulations.

Map 5.1: Topography

Map 5.2: Soils

## F. Surface Water

The Village is located in the Plover River and Little Plover River Watersheds (Map 5.3).

Surface water features and natural forest land are important recreational and scenic resources for the Village of Whiting. Surface waters include the Wisconsin River, Plover River, and McDill Pond.

Wisconsin River – The Wisconsin River is the Village’s principal surface water resource and is located on the western edge of the Village. The water is soft and darkly stained. Most of the River is in flowage condition due to the Stora Enso paper company and Kimberly Clark dams within the Whiting section of the River. Much of the River’s shoreland is undeveloped and owned by two paper companies.

Plover River – The Plover River is the only other significant stream within the Village. The Plover River corridor has many environmental and recreational qualities, which have been a strong factor in shaping urban development in the area.

McDill Pond – McDill Pond was formed in 1853 as an impoundment of the Plover River for Logging purposes. Today the 261 acre impoundment occupies portions of the City of Stevens Point, the Village of Whiting and the Town of Plover. A dam located at the Cty Rd HH Bridge, at the southwest limit of McDill Pond, impounds the lower portion of the Plover River. Due to its proximity to urban development, McDill Pond has historically been a local source of water-based recreation for the urban area community. It is used by owners and members of the surrounding municipalities for fishing, boating, swimming, canoeing, and other recreational uses.

Around the mid-1960’s, a group of property owners formed the Riverwoods Association. The activities back then mainly included a nuisance weed control program and an annual cleanup and debris removal.

In 1991, the Riverwoods Association changed its name to the McDill Pond Association. Although steps were taken as early as 1977 to form a Lake District, it wasn’t until 1994 that the McDill Pond Inland Lake Protection and Rehabilitation District was officially created. The Lake District was created and operates under Chapter 33 of the Wisconsin State statutes. There is a 5-member board in addition to a city and county council representative. The board members serve a 3-year term and are elected at the fall annual membership meeting. The board meets on a regular basis and these meetings are open to anyone.

Lake District members are generally assessed Lake District dues every year as needed to cover expenses for weed harvesting and district expenses. There are currently 171 properties in the Lake District. 23 parcels (24 acres) in the Village of Whiting are located within the Lake District.

The Mission Statement of the Lake District is: Protect and preserve McDill Pond and the Plover River as recreational assets for our community.

## G. Wetlands

There are limited wetland areas within the Village. Wetland areas are situated primarily near bottomlands adjacent to the Plover River and along the banks of the Wisconsin River (Map 5.4).

## H. Shore Lands

Shore lands in the Village of Whiting are located along the Wisconsin River, Plover River and McDill Pond. The typical setback requirement for structures along these waterways is currently approximately 30 feet. As of 2004, no additional Shore Land Ordinance restrictions apply to these properties. Increasing the building setback may be an avenue for the Village to explore to enhance protection of these water resources.

## I. Floodplains

Numerous dams and flowages along the Wisconsin River near the Village greatly minimize the potential for flooding of developed lands within the Village. Flooding potential exists along the Plover River. McDill Pond water levels are controlled by the dam on Water Street that is owned and operated by the Village. Recent reconstruction of the dam substantially reduces the chances that properties which front on McDill Pond may be affected during the spring. Iverson Park, located in Stevens Point, is regularly inundated by flood waters from the Plover River.

Map 5.5 shows floodplain designated for the Village of Whiting. Floodplain is defined as land which has been or may be covered by floodwater during the regional flood. The floodplain 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 Floodplain then, is the area adjoining a river, stream, or watercourse covered by water in the event of a 100-year flood. A 500-Year Flood is a flood event having a 0.2 percent chance of reaching the 500-Year flood elevation in any given year.

Floodplains provide many benefits, including natural flood and erosion control, water quality maintenance, ground water recharge, and fish and wildlife habitat. 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. If development in these areas increases, the benefits listed above will decrease.

## J. Natural Areas and Open Spaces

Natural areas and open space provide Whiting with both resource protection and aesthetic beauty, and are an important part of the Village's identity. The Village well field properties located north and south of Cty Rd HH, along with the "Mainland" property south of Cty Rd HH adjacent to the well field were purchased by the Village of Whiting with the intent that they remain public open space. See the Utilities and Community Facilities Element for a complete listing of parks and open spaces within Whiting.

## K. Wildlife

Fish and wildlife habitat is concentrated in the Wisconsin and Plover River corridors. Scattered woodlands exist throughout the Village, which provide habitat for various wildlife species, including white-tailed deer. These woodlands are slowly being eliminated by development. This trend is expected to continue.

The white-tailed deer population within the Village limits has grown in recent years to a point where it is considered a nuisance for Whiting residents. In an attempt to reduce the herd to a manageable number, the Village employed the services of a group of professional hunters in the winters of 2001, 2002 and 2003. 116 deer were harvested during these hunts (22, 43, and 52 respectively). Whiting will continue to monitor the size of the herd.

Map 5.3: Groundwater and Surface Water Flow

Map 5.4: Wetlands

Map 5.5: Floodplains

## L. Endangered Species

Nineteen known rare and endangered species have been identified by the Wisconsin Natural Heritage Inventory (NHI) located within Township 42308. Due to their sensitivity, the location of these species cannot be specifically identified; some or all may be found within the Village of Whiting:

### **Red-Shouldered Hawk**

The reddish shoulder patches that give this hawk its name are not easily visible, except at close range. Underparts are pale rust with horizontal barring. From below, this hawk shows translucent "window" patches at the base of the primaries, and narrow white bands on a dark tail. Suitable habitat includes unfragmented, mature floodplain forests along major rivers. Breeding habitat includes bottomland hardwoods, mesic deciduous or mixed deciduous-conifer forests, and wooded margins of marshes.

### **Osprey**

Ospreys are large birds, black-brown on top and white below. Its white head has a broad, black cheek patch and its tail is barred with brown. The osprey's long, narrow wings are angled back at the wrist when it flies, and a black wrist patch contrasts with white underwings. Habitat is usually forested with second growth pine, aspen, and hardwood forests. Most frequent nest sites are supercanopy snags and dead-topped pines located along lake and stream shoreline, in recent clearcut areas near water, in swamp conifer stands, and on snags in marshes and bogs.

### **Karner Blue Butterfly**

The Karner Blue Butterfly prefers semi-open oak openings, pine barrens, and oak-pine barrens supporting wild Lupine, its only larval foodplant. This butterfly has two flight periods: one beginning in late May through mid-June and a second from mid-to-late July to early August.

### **Stygian Shadowfly**

The Stygian Shadowfly prefers aerated rocky segments of streams and lakes. The flight period extends through June.

### **Prairie Vole**

Prairie Voles are rodents with a large head, short legs, and a short tail. Fur is long and coarse, grayish to blackish-brown above, whitish or buff yellow below. They prefer native dry and sandy prairies and slopes with moderate ground cover. Prairie voles avoid marshes, wet places.

### **Pigmy Shrew**

The Pigmy Shrew is the smallest mammal in North America, with brownish or grayish hair above, and pale or silvery hair below. They possess a narrow head, pointed nose, and obvious whiskers. This species' preferred habitat includes old fields to hardwood and coniferous forests. They have been collected under decaying logs as well as in deep leaf litter. Pygmy shrews feed on small arthropods such as grasshoppers and beetles, worms, and on limited amounts of seeds and berries.

### **Dwarf Huckleberry**

This is a boreal species that prefers openings in pine barrens, and is often most easily found by searching for the Northern blue butterfly, whose larvae feed exclusively on this shrub. Blooming occurs from mid-May to late June. Optimal identification period is mid-May to late August.

### **Northern Mesic Forest**

This forest complex covered the largest acreage of any Wisconsin vegetation type prior to European settlement. Sugar maple is dominant or co-dominant in most stands, while hemlock was the second most important species, sometimes occurring in nearly pure stands with white pine. Beech can be a co-dominant with sugar maple in the counties near Lake Michigan. Other important tree species were yellow birch, basswood, and white ash. The ground layer varies from sparse and species poor (especially in hemlock stands) with woodferns (especially *Dryopteris intermedia*), bluebead lily, clubmosses, and Canada mayflower prevalent, to lush and species-rich with fine spring ephemeral

displays. After old-growth stands were cut, trees such as quaking and big-toothed aspens, white birch, and red maple became and still are important in many second-growth Northern Mesic Forests. Several distinct associations within this complex warrant recognition as communities, and draft abstracts of these are currently undergoing review.

### **Northern Dry-Mesic Forest**

In this forest community, mature stands are dominated by white and red pines, sometimes mixed with red oak and red maple. Common understory shrubs are hazelnuts, blueberries, wintergreen, and partridge-berry; among the dominant herbs are wild sarsaparilla, Canada mayflower, and cow-wheat. Stands usually occur on sandy loams, sands or sometimes rocky soils.

### **Floodplain Forest**

This is a lowland hardwood forest community that occurs along large rivers, usually stream order 3 or higher, that flood periodically. The best-development occurs along large rivers in southern Wisconsin, but this community is also found in the north. Canopy dominants may include silver maple, river birch, green ash, hackberry, swamp white oak, and cottonwood. Northern stands are often species poor, but balsam-poplar, bur oak, and box elder may replace some of the missing “southern” trees. Buttonbush is a locally dominant shrub and may form dense thickets on the margins of oxbow lakes, sloughs and ponds within the forest. Nettles, sedges, ostrich fern and gray-headed coneflower are important understory herbs, and lianas such as Virginia creepers, grapes, Canada moonseed, and poison-ivy are often common. Among the striking and characteristic herbs of this community are cardinal flower and green dragon.

### **Alder Thicket**

These wetlands are dominated by thick growths of tall shrubs, especially speckled alder. Among the common herbaceous species are Canada bluejoint grass, orange jewelweed, several asters, boneset, rough bedstraw, marsh fern, arrow-leaved tearthumb, and sensitive fern. This type is common and widespread in northern and central Wisconsin, but also occurs in the southern part of the state.

### **Deam’s Rockcress**

This species prefers mesic alluvial floodplain forests. Blooming occurs throughout the month of May. Optimal identification period is from early May to mid-June.

### **Woolly Milkweed**

This species prefers dry, sandy or gravelly hillside prairies. Blooming occurs from mid-May through late June. Optimal identification period is from mid-May to late June.

### **Pale Beardtongue**

The Pale Beardtongue has small stalked clusters of 1 inch long tubular flowers in branched clusters. The flowers are usually white and marked with lavender lines. Species prefers dry, often calcareous prairies, or hillside oak or jack pine woodlands; naturalized on roadsides and in pine plantations. Blooms late May through late June/ Fruits late July through late Aug. Optimum identification is late May through late June.

### **Yellow Screwstem**

This plant is found commonly in acid ditches and along trails, often in moss mats, and is usually present only in small numbers. Blooming occurs from mid-June through late July. Optimal identification period is from early July to mid-September.

### **Wild Licorice**

Wild licorice is perennial from long, tough taproots and interconnected root crowns. The Plants are hairless and may grow up to three feet tall. Leaves are pinnate (arranged like two combs set back-to-back) and up to eight inches long. This plant can be found naturalized on cinders of railroads; its natural habitat is uncertain, but it probably includes gravelly prairies and stream banks. Blooming occurs throughout the month of July. Optimal identification period is from early August to late October.

These elements should be taken into consideration when development and protection measures are considered.

#### M. Invasive, Non-native Species

Invasive, non-native species have become a growing problem for property owners within Whiting. The gypsy moth is an example of a non-native insect causing problems with vegetation within the Village. The Village Board needs to establish which steps or actions are appropriate to curb or eradicate pests or plants deemed detrimental to the overall welfare of Whiting.

### **Section 5.3 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.

#### A. Cultural and Historic Resources Inventory

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. The Village of Whiting Park contains Indian burial grounds.

The Village of Whiting Indian burial grounds were first identified in 1912 by researchers from the University of Wisconsin Stevens Point, where they reported four mounds. As part of the current Upper Whiting Park Archaeological survey, an additional six mounds were identified, for a total of ten mounds still visible within the park boundaries. Based on their initial findings, the Whiting Park site may be one of the earliest sites for the Woodland Tradition discovered in north central Wisconsin. The Woodland Tradition occurred during the period of 550BC to 1000/1600AD, and is distinguished by the construction of burial mounds.

All burial mounds and cemeteries, are unique and tangible links to our past. In 1987, the Burial Sites Preservation Program (BSPP) was created with the passage of the Wisconsin Burial Sites Preservation Law (WI Statute 157.70, Appendix F). The Burial Sites Preservation Program advocates to protect all known and unknown human burials, so future generations will be able to explore family or community histories and expand their knowledge of their past. A cataloged burial site means that a legal written description of the site has been filed with the County Register of Deeds and the Wisconsin Historical Society. The Wisconsin Historical Society catalogs burial sites for identification and preservation of sites. Currently the Village of Whiting must comply with Statute 157.70, regardless of whether the site is cataloged or not. Beyond the current Statute, no additional regulations would apply to the Village if they were to catalog the sites.

#### B. Cultural Resource Programs

At the state level, the Wisconsin Historical Records Advisory Board (WHRAB) works 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.

## **Section 5.4 Agricultural, Natural, Cultural Resources Issues/Conclusions**

- A. Protection of groundwater, the source of Village drinking water, is very important.
- B. Surface water features are important recreational and scenic resources for the Village. Most development along McDill Pond and the Plover or Wisconsin Rivers has a minimum 30' setback restriction. The Whiting property along McDill Pond is currently built-out. The Village should examine whether or not to increase the setback requirement to better provide protection for the waterways. This would most specifically become an issue if a large redevelopment project were to be proposed, or a tract of land currently under paper company ownership should become available for development, along the river(s).
- C. An organized clean-up and general assessment has never been undertaken for the lower Plover River within Whiting.
- D. Park and open space areas within Whiting are extremely important to the lifestyles of the Village residents, but also to the image of the Village of Whiting projected to greater Portage County area and beyond.
- E. Non-native, invasive plant or insect species can create problems within the Village, especially on public-owned land. Whiting should take steps to control gypsy moths and any other invasive species found detrimental to Village owned land, and provide information resources where appropriate to Village residents.
- F. The Village of Whiting should contact the State Historical Society to have the burial mounds surveyed and registered.

## **Section 5.5 Agricultural, Natural, Cultural Resources Goals, Objectives and Policies**

### A. Goal

Preserve and protect those features that reflect the unique history, natural resources and character of the Village of Whiting.

### B. Objectives

1. Work with adjacent units of government to protect the Village's groundwater resources.
2. Work with surrounding municipalities to maintain McDill Pond, the Plover River and the Wisconsin River as environmental and recreational assets to the Village.
3. Ensure an adequate supply of open space within the Village.
4. Preserve historic sites and structures within the Village.

### C. Policies

1. Continually review and update the wellhead protection ordinance, as needed, to maintain the best protection possible.
2. The Village should examine whether or not to increase the setback requirement to better provide protection for the waterways.
3. The Village should participate in an organized clean-up and general assessment of the lower Plover River.

4. Maintain and manage park and open spaces within the Village to retain their recreational and aesthetic qualities.
5. Continue to pursue grant funding for development of the area surrounding the handicapped pier at the Plover River/Wisconsin River confluence.
6. Preserve lands as open spaces for passive use within the Village. Formal development of these parcels should be discouraged.
7. Protect Village-owned land from invasive species such as the gypsy moth.
8. Identify and protect Indian burial grounds.
9. Make public more aware of these historic sites.