

# 5 Agricultural, Natural, & Cultural Resources

This element includes an analysis of existing agricultural, natural, and cultural resources in and around the Town of Brigham. The chapter includes existing conditions, goals, objectives, and recommendations for the effective management of resources in the town.

## 5.1 Agricultural Resource Inventory

### 5.1.1 Active Agriculture

A majority of Town lands are engaged in agricultural production. Appropriate conditions for farming exist in a variety of locations throughout the jurisdiction, where steep slopes don't impede effective farming practice. Large tracts of agricultural land are especially prevalent south of the USH 18/151 corridor.



Farming is a way of life for many residents in Brigham.

### 5.1.2 Productive Farmland Soils

Prime farmland soils are plentiful throughout the town corporate area. The prime farmland designation indicates Class I, II, or III soils. These class designations refer to the quality of soils for growing crops and are based on United States Department of Agriculture (USDA) classifications delineated locally through the Iowa County Soil Survey. Class 1 soils are the best soils in Iowa County for growing all crops. Class 2 soils are also very good agricultural soils, however, they may be prone to wetness and are therefore less desirable than Class 1 soils. Map 5-1 maps all soils, including Class 1, 2, and 3 soils, which are primarily used for agriculture. In Brigham, these soil classifications can be found in low-lying areas, especially along the Pecatonica River. It should be noted that not all prime farm soils are used for farming; some have been developed with residential or other uses before Brigham had a land use plan and ordinances. The "prime farmland" designation simply indicates that these soils are good for productive farming. See Map 5-1.

### 5.1.3 Agricultural Land Sales

According to the Wisconsin Department of Revenue, land values in Wisconsin continued to rise in 2005. The total value of all agricultural land sold rose 25 percent to \$4,728 per acre. In Iowa County, land continuing in agriculture sold for an average of \$3,318 in 2005, while land diverted out of agriculture sold for \$4,022 per acre. The climb in values for agricultural land being diverted to other uses came from land being developed for residential or commercial use. This attractive premium is enough for some farmers to sell land, decreasing the overall amount of land available for agricultural use making continued farming more challenging.

## 5.2 Natural Resource Inventory

### 5.2.1 Topography

Brigham lies in the "driftless" region of the state, an area not covered by the last glacier. Soils in the driftless region are generally moderately to excessively well-drained mineral soils that have a high mineral content and low organic matter content. Farming occurs on the ridgetops or in the stream valleys with the region's steep hillsides often left wooded. Streams in the driftless region have a higher gradient than those in other parts of southern Wisconsin. Wetlands usually only occur along stream and river margins. There are some larger wetland complexes along the Pecatonica and Sugar rivers.

### 5.2.2 Watershed/ River Basins

The northern portion of the Town is located in the Mill and Blue Mounds Creeks Watershed (LW15) which is part of the Lower Wisconsin River Basin. This basin drains approximately 4,940 square miles of south central and southwestern Wisconsin. The basin includes the Wisconsin River from the Castle Rock Flowage dam to its confluence with the Mississippi River near Prairie du Chien, and all the streams tributary to the Wisconsin River along this reach, spanning all or parts of 12 counties: Adams, Columbia, Crawford, Dane, Grant, Iowa, Jackson, Juneau, Monroe, Richland, Sauk, and Vernon.

Water quality in the basin is generally considered good. The primary water quality problems are caused by nonpoint sources of pollution, particularly from agricultural operations, excessive populations of rough fish and hydrologic modifications such as dams, stream straightening, and the ditching, draining or other alteration of wetlands.

The southern portion of Brigham is located in the Sugar-Pecatonica River Basin. This basin drains approximately 1,860 square miles in southwestern Wisconsin. This includes all or parts of five counties. Major streams in the basin in addition to the Sugar and Pecatonica rivers are the Little Sugar River, East Branch Pecatonica River, West Branch Pecatonica River, Raccoon Creek and Mineral Point Branch.

Water quality in the Sugar-Pecatonica River basin is generally fair to good. The primary water quality problems are the result of nonpoint sources of pollution—particularly from agricultural operations and urban runoff—excessive populations of rough fish and hydrologic modifications such as dams, stream straightening, and ditching, draining or other alterations of wetlands.

### 5.2.3 Groundwater

The topography of the Town and the majority of Southern Wisconsin have influenced the quality and availability of groundwater in the area. This region of the State, known as the Driftless area, has little soil layered over limestone and sandstone. This make-up tends to have very few natural features to limit contamination from sources above ground, which can make groundwater in the area vulnerable to pollution.

Town residents are served by private wells, as there is no municipal well service. Private testing of wells has been conducted in the past by Iowa County. The majority of the wells tested in the Town were over 200 feet deep and therefore further removed from risks of contamination. In the study conducted by Iowa County, coliform bacteria, nitrate-nitrogen, triazine, and arsenic were found in some private wells.

### 5.2.4 Stream Corridors

There are a number of streams and creeks in the town; the Pecatonica River is the largest. It rises in the hills of southwest Wisconsin in southwest Iowa County before flowing south, eventually joining the Rock River. The river is the focus of the 110-acre *Pecatonica River Woods State Natural Area* near Mineral Point, Wisconsin in Iowa County, owned by the Wisconsin Department of Natural Resources and designated as a natural area in 1992.

Smaller creeks also proliferate the area including the Barneveld Creek, Blue Mounds Creek, Duesler Creek, Trout Creek and others.



Spring-fed trout streams bring anglers to Brigham during spring trout season.

### 5.2.5 Surface Water

Birch Lake is located off of Country Trunk T in the Village of Barneveld. This is the only lake within the Township boundaries. Beyond the Brigham borders, the nearest lakes are located west of the Town in Governor Dodge State Park.

### 5.2.6 Floodplains

Floodplain areas are designated by the Federal Emergency Management Agency (FEMA). Designated areas are those that are prone to flooding during a 100-year storm event adjacent to navigable waters. Floodplains within the Town are located along riverways throughout the jurisdiction.

### 5.2.7 Wetlands

Wetlands are areas where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic (water-loving) vegetation and which has soils indicative of wet conditions. Wetlands are located throughout Brigham along riverways and in low-lying areas.

### 5.2.8 Woodlands

There are a number of forested lands in Brigham with a majority located north of USH 18/151. The presence of Blue Mound State Park in the northeast, and numerous large stands of deciduous and coniferous trees throughout the northern area of Brigham help to define this area as separate from the more agricultural south.

### 5.2.9 Steep Slopes

Map 5-1 divides slopes into several categories less than 15 percent, there is also a 15%+ category. Slopes greater than 15 percent are found throughout the town. Particular concentrations of great slope (15%+) are located north of Barneveld in the forested areas of Brigham.

### 5.2.10 Rare Species Occurrences/Wildlife Habitat

The diverse topography in the Town of Brigham area makes the Town home to a variety of wildlife. The Wisconsin Natural Heritage Inventory (NHI) database available through the Department of Natural Resources maintains a listing of rare or sensitive species that may exist within the area.

The elements tracked by the NHI program are compiled on a “working list” of rare plants, animals, and natural communities. The “working list” is dynamic, with species added and deleted as determined by NHI staff. Wisconsin's NHI program tracks the following element types: plant and animal species considered endangered or threatened by the U.S. Fish and Wildlife Service (USFWS) and/or the WDNR; plants and animals species considered by the USFWS and/or the WDNR as a species of special concern (a species whose numbers are thought to be low but has not yet been proven); natural communities as classified and described by the program ecologist and in John Curtis' Vegetation of Wisconsin; unique geological features and animal aggregation sites (such as bat hibernacula).



Wildlife, particularly white-tailed deer, are common in Brigham countrysides.

The Brigham area contains a number of sensitive bird, natural community, and plant life see Appendix D for a complete listing.

### 5.2.11 Environmental Feature/Prairies

As in most agricultural communities, open spaces are plentiful since there is not a great deal of land disturbed for building. Aside from the vast agricultural areas, the diverse topography provides natural landscapes and environmental corridors for a variety of wildlife.

The Military Ridge Prairie Heritage Area is a large grassland landscape, supporting many prairie remnants, pastures, lands enrolled in the Conservation Reserve Program (CRP), and new enrollments in the Conservation Reserve Enhancement Program Grassland Bird project area. The Military Ridge area is located in eastern Iowa and western Dane counties.



Prairies used to be very common in Brigham, and still represent some of the Town's open space.

Within the Military Ridge area are more than 20 prairie remnants and 14 rare and declining grassland bird species. Grassland birds are the fastest declining group of species in North America, primarily due to loss of critical habitat. Scientists from the Department of Natural Resources, The Nature Conservancy and other agencies and experts are working to preserve these precious lands.

### 5.2.12 Nonmetallic Mineral Resources

There is one quarry within the Town of Brigham. The Thoni quarry is active. Iowa County permits nonmetallic mines under the authority of Wisconsin Administrative Code.

## 5.3 Cultural Resources Inventory

### 5.3.1 Historic Resources

Southwestern Wisconsin has several important sites from the Black Hawk War (1832) including two forts in Iowa County—Ft. Jackson in Mineral Point, Ft. Union in Dodgeville. Fort Blue Mounds located in Dane County was also built during the Black Hawk Wars. This site was excavated by the Wisconsin Historical Society in the 1990's approximately 15 miles north of Blue Mound State Park.



Stone Barn on the National Registry

The Wisconsin Architecture and History Inventory (AHI) contains data on buildings, structures and objects that illustrate Wisconsin's unique history. The AHI documents a wide range of historic properties such as the round barns, log houses, metal truss bridges, small town commercial buildings, and Queen Anne houses that create Wisconsin's distinct cultural landscape. It is a permanent record maintained by the Wisconsin Historical Society.

According to the AHI there are 26 properties in Brigham that may have historical significance. A complete listing can be found in Appendix D.

### **5.3.2 Community Design**

The Town has a unique, varied rural character. North of USH 18 / 151, the Town's character is largely defined by its sloping wooded topography and open agricultural fields. This natural character includes several acres of preserved parkland and managed open space. South of the highway, slopes are generally gentler, although several exist along the Pecatonica River and feeding creeks. Recent growth has included larger-lot rural development.

### **5.3.3 Recreational Resources**

There are a number of recreation resources in and around the Town of Brigham:

Blue Mound State Park is on the tallest hill in southern Wisconsin, about 25 miles west of Madison. The 1,153-acre park is a popular place for swimming, hiking, camping, cross-country skiing and mountain biking.

The 40-mile Military Ridge State Trail, connects Dodgeville and Madison. The trail runs along the southern borders of Governor Dodge and Blue Mound state parks. The land around the trail is primarily agricultural, but also includes woods, wetlands, prairies, villages, and small cities.

Other resources include DNR-owned lands, Trout Creek, The Nature Conservancy lands, Thomas Farm, and land managed by the Prairie Enthusiasts.

## **5.4 Agricultural, Natural, & Cultural Resource Goals & Objectives**

Goals and objectives identify what the plan should accomplish. Goals are statements that describe a desired future condition, often in general terms. Objectives are statements that describe a specific future condition to be attained, to reach the established goals. This plan provides brief goal(s) followed by an objective statement.

### **5.4.1 Maintain and preserve rural character.**

The Town of Brigham is characterized by its geography, residents, absentee landowners, and planned development. This includes large open areas, wetlands, forests, croplands, meadows, pastures and undeveloped land. Sweeping countryside vistas overlook valleys and ridge tops. Traffic from driveways and over rural roads is moderate. Many regions have only a moderate density of visible buildings, many of which are farm-related. New homes and other structures are usually located and designed to be compatible with a rural landscape.

Brigham is creating a sense of a rural community among its residents. Many residents know one another; some are long-time residents; some work in the community. Residents are often active participants in community functions and organizations. It is possible to make a living within Brigham, in agriculture, cottage industries and home-based businesses, which are consistent with the Town's conditional uses, ordinances and comprehensive plan.

### **5.4.2 Preserve agricultural opportunities.**

Brigham is a vibrant, rural, agriculture-based community strongly linked to its traditions yet also implements new agricultural methods. Brigham supports actions and policies that maximize farmers' abilities to pursue agricultural-based activities, which are consistent with the comprehensive plan. Many residents are engaged in farming lifestyles, in part because Wisconsin continues to provide support and has policies to protect farm land. The Town recognizes farming as an economic pursuit, as well as a lifestyle.

Continued viability of Brigham's farms depends on adequate cropland. Brigham supports development policies that maximize the preservation of available agricultural land. The Town also recognizes the potential broad spectrum of agriculturally-related activities. For example, the Town is ideally located for production and direct marketing of agricultural products to the local community and nearby urban and suburban residents.

#### **5.4.3 Protect the environment.**

Brigham's natural environment is an irreplaceable resource. Protection of these natural features, such as ground water, wetlands, floodplains and others, is an important consideration when considering development.

Brigham recognizes that diversity of species has an important environmental value. The Town's citizens appreciate the value and scarceness of native communities and understand the need of large tracts of undeveloped land to sustain wildlife. When considering development proposals, Brigham will encourage those that enhance, sustain and protect native communities and wildlife habitat. The Town should be proactive in protecting its environment, particularly in response to environmental issues such as plant and animal diseases and invasive and exotic species.

The Town shall continue to review existing controls that will protect air, water, and land. The Town shall be proactive and consider development of alternative energy sources, particularly those shown to be economically viable.

#### **5.4.4 Protect and preserve natural beauty.**

Brigham's natural beauty is dependent on many of the qualities that contribute to rural character. The visual richness of the terrain stems from a diverse natural environment, some of which include wetlands, woodlands, prairies, pine relicts, rock outcroppings, and streams. Brigham will consider preservation of this natural beauty when evaluating development proposals.

#### **5.4.5 Preserve and enhance cultural resources.**

Brigham has extensive prehistoric and historic cultural resources and contemporary lifestyles, which shall be protected and enhanced. Native American rock art exists in the Town. Historic structures listed or eligible for listing on State and National historic registries, and lifestyles such as farming and conservation of land are a few examples of Brigham's heritage. The Town shall strive to maintain a good relationship with Barneveld, because the two communities share many cultural resources important to residents, schools, organizations, and community events.

The Town shall work with local, regional and state agencies to educate residents about cultural resources. The Town should encourage those who are seeking funding to preserve and enhance these resources.

#### **5.4.6 Encourage safe and environmentally sound recreational activities.**

The Town's environmental features and cultural resources—such as hunting, bird watching, fishing, bicycling and hiking—could be tourism attractions. The Town should consider tourism development that is safe and seeks to balance tourism needs with safety standards.

## 5.5 Agricultural, Natural, & Cultural Resource Recommendations

Recommendations identify the action necessary to achieve goals and objectives. For this reason, recommendations should be actionable, attainable, and specific. Not all recommendations can be achieved in the short-term, so they should be specific enough so that any individual or group wishing to achieve a stated goal can take action.

The following recommendations were jointly developed by the Town of Brigham Plan Commission and its consultants.

- 5.5.1** Continue prohibition of new residential development on lands with class I, II, and III soils.
- 5.5.2** Continue with 5-acre minimum requirement for all lots.
- 5.5.3** Support Ag-related businesses smaller than 40 acres. Provide assistance and support for these small-acreage businesses in rezoning issues at the county level.
- 5.5.4** Encourage Iowa County to continue incorporating provisions that provide for and even promote agritainment opportunities in its policies, ordinances and regulations.
- 5.5.5** Clarify rules and eliminate loopholes that could allow residential construction on Class I, II, and III agricultural land. Encourage Iowa County to review provisions within the Iowa County Zoning Ordinance that may have the unintended consequences of allowing new residential development in Class I, II, or III soils.
- 5.5.6** Develop restrictions that could mitigate future conflicts between farmers and residential neighbors, such as establishing distance limits for new residences next to agricultural structures and agriculture structures next to existing residences on different properties.
- 5.5.7** Structures that would make high-speed Internet and cellular telephone service available throughout the town should be allowed, but should be limited, multi-use and placed strategically.
- 5.5.8** Utilize existing state and county controls to protect environmental features.
- 5.5.9** Actively maintain a good relationship with the Village of Barneveld to maintain and enhance the cultural resources that exist within both communities.
- 5.5.10** Encourage protection of the natural character and ecological functions by preventing fragmentation of ridge tops, wetlands, woodlands, white oak groves, pine relicts, savannahs, prairies, grasslands, meadows, rock outcroppings, and streams.
- 5.5.11** Support the efforts of local, county, and state organizations to educate residents, promote programming, and protect environmental resources.
- 5.5.12** Work with Iowa County to map and protect groundwater recharge areas to protect quantity and quality of well water.
- 5.5.13** Continue to encourage agricultural producers to follow a conservation farm plan or guidelines, like those that reduce water runoff and erosion and increase water infiltration, to protect supplies of ground and surface water.

- 5.5.14** Encourage homeowners to reduce water runoff , erosion and increase water infiltration to protect supplies of ground and surface water with the following methods:
- a. Use rain gardens to enhance water quality.
  - b. Use landscape, lawn, and garden practices that blend into the natural settings of their sites, including non-invasive plant species.
  - c. Minimize the use of chemical fertilizers and pesticides on lawns and gardens.
- 5.5.15** Encourage the voluntary protection of prehistoric, historic, and contemporary cultural resources.
- 5.5.16** Encourage the development of alternative energy generation.
- 5.5.17** Identify environmentally sensitive areas and preserve them.
- 5.5.18** Encourage voluntary protection of natural landscapes by controlling invasive and exotic species.