

Agricultural, Natural & Cultural Resources

Introduction

This element provides an inventory of the City's agricultural, natural, and cultural resources. Specific topics include information about the ecological landscape, groundwater, productive agricultural areas, environmentally sensitive areas, threatened and endangered species, stream corridors, surface water, floodplains, wetlands, wildlife habitat, mineral resources, and historical and cultural resources. The purpose of identifying these resources is to identify areas that need to be protected, or characteristics that would limit development potential. By incorporating this information into its land use decisions, the City is better prepared to make sound choices for the future.

Agricultural Resources - Existing Conditions

Predominantly focused in the upper Midwest, America's prime farmland regions coincide with our traditional notions of America's farm belt. According to 1996 findings by the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS), there were over 13 million acres of prime farmland in Wisconsin. This area represents approximately 38 percent of the entire state. Most of this can be found in the southern and eastern portion of the state.

For the majority of Crawford County, up to 40 percent of the land area is classified as prime or potential prime farmland according to the Natural Resources Conservation Service¹. Areas adjacent to the Mississippi River have a higher proportion of land considered potentially prime farmland. Potential prime farmland is land that is prime when improved, for example by drainage, irrigation, or protection from flooding.

In Crawford County, the 1997 Census of Agriculture² revealed a number of interesting findings related to the growth and development of its urbanized areas.

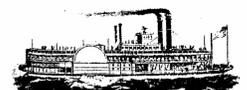
- ◆ Land in farms – decreased 6 percent from 248,956 to 233,481 acres in 1997.
- ◆ Average size of farms – decreased 4 percent from 255 to 244 acres in 1997.
- ◆ Number of farms – decreased 2 percent from 978 to 958 in 1997.

There are 55 parcels within the City that are classified by the Wisconsin Department of Revenue³ as agricultural. These parcels comprise a total of 426 acres. Agricultural lands are 34 percent of the total land area, and 0.2 percent of the total land value.

¹ Potential Prime Farmland in Wisconsin. U.S. Department of Agriculture, Natural Resources Conservation Service.

² 1997 Census of Agriculture. U.S. Department of Agriculture.

³ Statement of Assessments – 2002. Wisconsin Department of Revenue.



Natural Resources - Existing Conditions

General Setting

The City is located just to the north of the confluence of the Mississippi and Wisconsin rivers within the Western Coulee and Ridges Ecological Landscape as defined by the Department of Natural Resources⁴ (Exhibit H-1).

This ecological landscape is characterized by highly eroded, unglaciated topography. Steep-sided valleys are typically heavily forested and often managed for hardwood production. Agricultural activities, primarily dairy and beef farming, are generally confined to valley floors and ridge tops. Meandering rivers with broad floodplains are also characteristic of this landscape. They include the Mississippi, Wisconsin, Chippewa, Black, La Crosse, and Kickapoo. The floodplain forests associated with these riverine systems are among the largest in the Upper Midwest. Spring-fed, coldwater streams that support robust brown and brook trout

fisheries are common throughout the area.

Soils are typically silt loams (loess) and sandy loams in the uplands and alluvial or terrace deposits in the valley floors.

Confluence of the Wisconsin and Mississippi Rivers



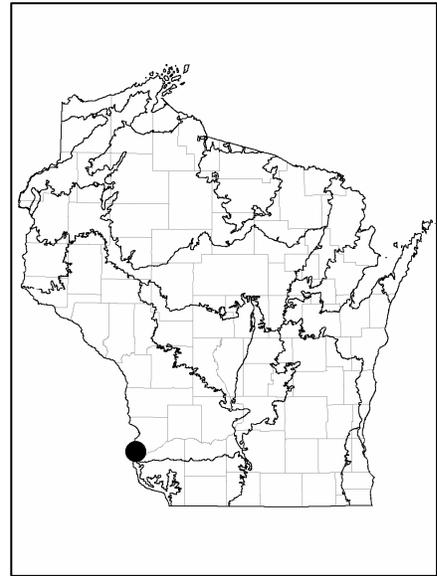
throughout the county. This, in combination with less resistant sandstone, results in steep escarpments and deep valleys. Areas of Crawford County near the Mississippi River also contain deep layers of windblown silt, or loess.

Steep slopes may hinder development or increase the cost of development. Map K-2 shows the locations of slopes in the planning area that may impact development.

Soils

The basic soil components are sand, gravel, silt, clay, and organic material. The different soil types are composed of various combinations of each component. The Soil Conservation Service has developed a County Soil Survey⁶ for each Wisconsin County. These surveys include soil association maps that delineate landscapes that have a distinctive proportional pattern of soils. The soil types in one association may occur in another, but in a different pattern. According to the Crawford County Soil Survey,

Exhibit H-1. Ecological Landscapes
In Wisconsin



Source: Wisconsin Department of Natural Resources

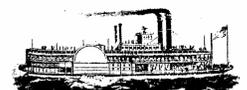
Geology

According to the Crawford County Soil Survey,⁵ the bedrock underlying the City is primarily sandstone and dolomitic limestone. Since Prairie du Chien is in the unglaciated part of the state, the bedrock is important in determining the relief and type of soils. Prairie du Chien dolomitic limestone, which is hard and resistant to erosion, underlies the long, narrow ridges

⁴ "Wisconsin Land Legacy Report: An inventory of places critical in meeting Wisconsin's future conservation and recreation needs." Wisconsin Department of Natural Resources, 2002.

⁵ Soil Survey of Crawford County, Wisconsin. U.S. Department of Agriculture, Soil Conservation Service.

⁶ Soil Survey of Crawford County, Wisconsin. U.S. Department of Agriculture, Soil Conservation Service.



the area near Prairie du Chien is made up of nearly level, sandy soils on terraces. The principal soils are those of the Dakota and Sparta series. Sand is the subsoil, but sandy silt loam is present over most of Prairie du Chien. Soils in this area are subject to wind erosion.

Groundwater

Wisconsin is a state with an overall ample quantity of groundwater. There have not been any concerns about the availability of good quality groundwater in or near the City.

A Wisconsin Geological and Natural History Survey map delineates groundwater susceptibility to contamination based on five physical resource characteristics. These characteristics are the type of bedrock, depth to bedrock, depth to water table, soil characteristics, and surficial deposits. Based on these characteristics, the City is moderately susceptible to contamination.

The Department of Natural Resources maintains a Groundwater Retrieval Network database, which includes monitoring data from public and private water supply wells. A review of this database indicates that there has been a number of monitoring results over the past 10 years that exceed the preventative action limit (PAL) for nitrates. Water normally contains a very small amount of nitrates; elevated levels of nitrates indicate contamination. Some common sources of nitrate contamination include individual septic systems, sewage treatment plants, fertilizers, and animal waste. Although exceeding the PAL is not a violation of the groundwater rules, it does serve as a “trigger” for remedial actions to reduce the concentration of the substance below the PAL.

Forests

The Department of Natural Resources identifies 16 million acres of forestland (46 percent of Wisconsin’s total land area) and millions of urban trees that significantly contribute to the quality of life in Wisconsin. These forests are important for their beauty, recreational opportunities, wildlife habitat, air quality enhancement, water protection, biodiversity, products and a variety of other values. The DNR defines forest land as land that is at least 16.7 percent covered by forest trees, or was in the past, and is not currently developed for nonforest use.

Prairie du Chien is located near the boundary of two of the Department of Natural Resources Geographical Management Units (GMU), the Bad Axe/La Crosse and the Lower Wisconsin. The forest resources in both GMUs have increased slightly over the past 13 years. The most recent U.S. Forest Service survey indicated that forest land made up about 44 percent of the Bad Axe/La Crosse and 40 percent of the Lower Wisconsin GMU’s total land area. Oak-hickory is the most common forest type in both areas. More than 80 percent of the timberland in both areas is privately owned. There is a likelihood that the amount of forestland will increase as marginal agricultural land gives way to recreational uses.

The City’s urban forest is an important resource. The DNR defines an urban forest as all of the trees and other vegetation in and around a town, village, or city. This includes not only publicly owned trees such as those lining streets, in parks and utility rights-of-way, and riverbanks, but also includes privately owned trees in home and business landscapes, and any other trees within the community. Shrubs, vines, grass, groundcover, wildlife, pets, and people are all integral parts of the urban forest ecosystem.



Environmentally Sensitive Areas

The City is located in an area that includes steep slopes, wetlands, habitat for threatened or endangered species, surface water, and floodplains. Areas of these types are sensitive to development activity, and may be damaged by development that is too close or inappropriate for the individual location. The ecological services provided by these areas are important and may be difficult or costly to replicate.

Threatened or Endangered Species

Wisconsin's Natural Heritage Inventory (NHI)⁷ is responsible for maintaining data on the locations and status of rare species, natural communities, and natural features in Wisconsin. Based on its database, there are 36 known rare or endangered plant species and 87 known animal species in Crawford County. Several of these are known to exist in or near the City.

Surface Water

Prairie du Chien is located along the Mississippi River just north of the confluence of the Wisconsin River. The Wisconsin River is designated as an exceptional resource water, meaning that it has excellent water quality, high recreational and aesthetic value, and high quality fishing.



Prairie du Chien has a long history of interaction with the Mississippi River. In 1996, the City completed a stormwater master plan and to date many of its recommendations in the form of best management practices have been installed throughout the City. Of particular note is a unique greenway-grassed waterway, which channels and filters stormwater into an old non-metallic mine. As an open interceptor system, this greenway allows green space benefits to the community while also improving water quality through filtering and infiltration.

Floodplains

Prairie du Chien is a Mississippi River community. Parts of the City and surrounding areas have been designated by the Federal Emergency Management Agency as being within the 100-year floodplain⁸.

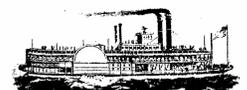


Additional parts of the City lie within the 500-year floodplain. Map K-3 shows the locations of floodplains that limit development potential in the planning area.

Localized flooding has been a major issue for the City since its inception. Specifically, the corridor along Main Street has experienced dramatic localized flooding of homes that are within, and just outside of, the floodplain. In addition to the issue of these properties, is the issue that Main Street serves as one of the City's major arterials. When localized flooding occurs, this major transportation route becomes cut off, choking the City's remaining collectors and arterials with additional traffic loading.

⁷ The Natural Heritage Inventory was established in 1985 by the Wisconsin Legislature and is maintained by the Wisconsin Department of Natural Resources, Bureau of Endangered Resources, in conjunction with the Nature Conservancy, an international non-profit organization.

⁸ The 100-year floodplain is land that would be covered by floodwater during the 100-year flood, also described as the flood level that has a 1 percent chance of occurring in any given year.



Development in the floodplain reduces the floodplain's storage capacity, causing the next flood of equal intensity to crest even higher than the last.

Wetlands

Wisconsin's wetlands provide a variety of critical functions. They provide habitat for wildlife, store water to prevent flooding, and protect water quality. However, the wetlands have continued to be destroyed and degraded as they are drained and filled for agriculture, development, and roads, and impacted by pollutants.

According to the Wisconsin Wetlands Inventory, Crawford County contains 27,331 acres of wetland, comprising 7.5 percent of the county's total land area, and 0.5 percent of the state's wetlands. This data is based on aerial photography and includes only wetlands larger than five acres for this county. As a result, the wetland acreage numbers are likely to undercount the existing wetland area.

Wetlands in the planning area are mainly found adjacent to the Mississippi and Wisconsin Rivers. Map K-2 shows the locations of wetlands that limit development potential in the planning area.

Wildlife Habitat

Prairie du Chien is in an area of the state that is dominated by bluffs, rock outcroppings, and steep slopes. These striking natural features not only provide scenic views but, according to the UW Extension Service and DNR, also represent some of the largest areas of undisturbed wildlife habitat. They serve as migratory corridors and ensure large enough range to foster the long term viability of wildlife populations.

Many areas in southern Wisconsin, prior to European settlement, were characterized by grassland ecosystems. These areas are important habitat for grassland birds which, according to the UW Extension Service and DNR, have been declining significantly in recent decades.

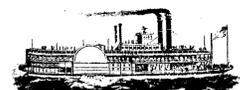
Wetlands found in and around the City are also important habitat for a number of amphibian and bird species.

As Wisconsin's land ownership becomes increasingly fragmented, the Department of Natural Resources believes that its habitat also tends to become more fragmented. This is particularly relevant to species that require a large range or contiguous habitat. Fragmented ownership negatively impacts species by causing inconsistencies in habitat management, making it more difficult and expensive for the DNR or private organizations to acquire land for preservation.

Large tracts of high quality natural areas in Crawford County include five State Natural Areas, one of which (Limery Ridge Savanna) is located within one mile of Prairie du Chien, north of Cliffwood Drive. State Natural Areas are designated by the Department of Natural Resources to protect outstanding examples of native natural communities, significant geological formations, and archaeological sites. State Natural Areas also provide the last refuges in Wisconsin for rare plants and animals.

Metallic/Nonmetallic Mineral Resources

Presently there are no metallic mines operating in Wisconsin. Nonmetallic mining is a widespread activity in Wisconsin. NR 135 of the Wisconsin Administrative Code establishes a statewide program regulating nonmetallic mine reclamation. As of



September 2001, nonmetallic mines may not operate without a reclamation permit. The program is administered at the local level. According to Crawford County, the majority of mines in the county recover sand or limestone for road gravel. There are currently four sand mining pits in or near the City and a large limestone quarry along the bluffs in the eastern part of the City. These mines are required by law to develop a reclamation plan that will designate an approved land use once mining operations have ceased.

Air Quality

To protect public health and the environment, the U.S. Environmental Protection Agency⁹ has established National Ambient Air Quality Standards (NAAQS) for suspended particulate matter, carbon monoxide, ozone, oxides of nitrogen, oxides of sulfur, and lead. Some counties in southeastern Wisconsin have been designated as nonattainment areas for one or more NAAQS (Exhibit H-2). Crawford County is considered an attainment area for all of the pollutants subject to NAAQS.

Parks/Open Space

See Utilities and Community Facilities Element for a complete discussion of parks and open spaces in the City.

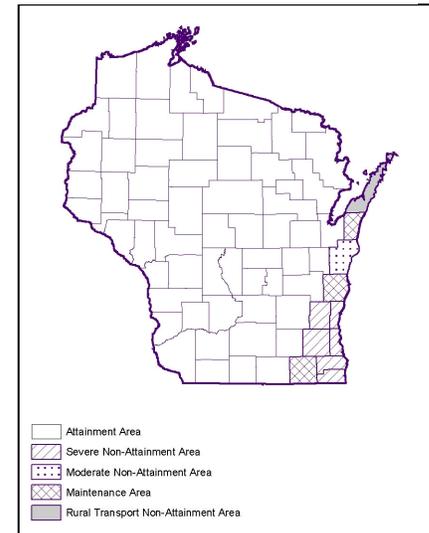
The Land Legacy Report identifies 228 Legacy Places that are considered some of the most critical places in meeting Wisconsin's conservation and recreation needs. Some Legacy Places near Prairie du Chien may be impacted by actions within the City. These legacy places include:

- ◆ *Wyalusing State Park*, at the confluence of the Wisconsin and Mississippi Rivers. It is one of the state's oldest and most popular state parks. Visitors come to camp, hike, bike, cross-country ski, fish, and enjoy nature education programs. The area is also a haven for bird watchers. The park's 2,000 acres contain the longest series of prehistoric mounds found in Wisconsin. The dolomite and sandstone cliffs, steep ravines, and bottomlands support rich deciduous woodlands.
- ◆ *North Prairie du Chien Savanna*, running several miles back from the bluffs overlooking the Mississippi River. This area contains many high quality remnants of oak savanna and oak woodland within a working agricultural landscape. Given the quality of the existing remnants and the potential to restore some additional lands, this area represents one of the state's better opportunities to establish a large oak savanna and oak woodland complex. Maintaining working farms will be an important component of protecting functioning savannas here.

In 1924, Congress created the 78,000-acre McGregor District of the Upper Mississippi National Wildlife & Fish Refuge along the Mississippi River. The refuge includes Pools 9, 10, and 11 and stretches 97 miles along the Mississippi in Minnesota, Wisconsin, and Iowa. The U.S. Fish & Wildlife Service operates the refuge and maintains a visitor center in McGregor, Iowa. Refuge objectives include the following:

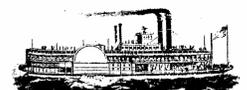
- ◆ Protect and enhance the river floodplain for the benefit of fish, wildlife, and people.
- ◆ Provide habitat for migratory birds, fish, plants, and resident wildlife.
- ◆ Protect and enhance habitat for endangered species.

Exhibit H-2. Air Quality in Wisconsin



Source: Wisconsin Department of Natural Resources

⁹ Section 109 of the Clean Air Act



- ◆ Provide interpretation, environmental education, and wildlife-dependent recreational public use opportunities.

Pikes Peak State Park is located south of McGregor and Marquette, Iowa. This park offers hiking, picnicking and camping opportunities. Other amenities include a playground, picnic shelters, and an overlook.

Cultural Resources – Existing Conditions

Historical/Cultural Resources

Old buildings have a special relevance to our lives today, bringing a “sense of place” to our lives and our communities. They also tell the social, cultural, economic, and political history of people in a way that no printed word or photograph can. Thus, telling the story of Wisconsin’s historic architecture is a way of documenting the diverse experiences of Wisconsin people and places.



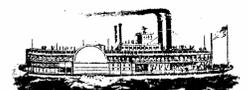
The National and State Register of Historic Places gives honorary recognition to places that retain their historic character and are important to understanding state history. These are official listings of properties that are worthy of preservation or significant to Wisconsin’s heritage. There are 13 sites located in Prairie du Chien that are listed in the National Register of Historic Places and/or State Register of Historic Places. Five of these are also listed as National Historic Landmarks because of their national significance: Astor Fur Warehouse, Michael Brisbois House, Dousman Hotel, Fort Crawford Military Hospital, and Villa Louis. It should be noted that the first such designation in Wisconsin occurred in Prairie du Chien.

The Wisconsin Architecture & History Inventory (AHI)¹⁰ is a collection of information on historic buildings, structures, sites, objects, and historic districts that illustrate Wisconsin’s unique history. The database is maintained by the Wisconsin Historical Society, and is comprised of written text and photographs of each property, which document the property’s architecture and history. Most properties become part of the inventory as a result of a systematic architectural and historical survey. Inclusion in this inventory conveys no special status, rights or benefits to owners of these properties. AHI contains records of 99 locations of historical significance within the City.

Prairie du Chien is also one of 33 towns in Wisconsin located along the Great River Road National Scenic Byway. The byway parallels the Mississippi River and extends 250 miles along the state’s western border, from Prescott to the Wisconsin/Illinois border. The corridor passes by 33 archaeological sites listed in the National Register of Historic Places, and a number of State Historical Markers.

The Prairie du Chien Historical Society, a non-profit organization, owns and operates the Fort Crawford Museum. The grounds host three buildings from Fort Crawford. The museum is open May through October and is located on the northwest corner of Beaumont Road and Rice Street. Fort Crawford Military Cemetery has 64 burials from 1829 through 1850. It is located to the north of Fort Crawford Museum off of Beaumont Road.

¹⁰ <http://www.wisconsinhistory.org/ahi/index.asp>



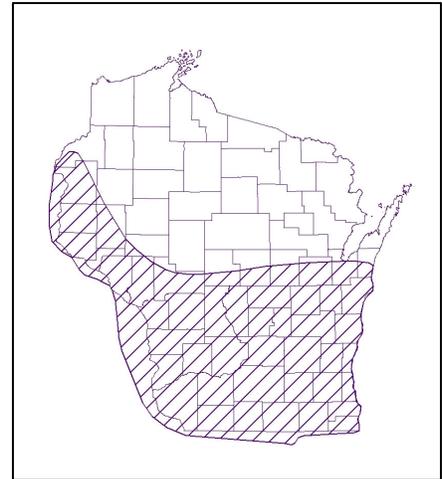
Archaeological Sites

Archaeological evidence indicates that people have lived in what is now Wisconsin for over 12,000 years. It is estimated that nearly 80 percent of the archaeological sites that once existed in the state have been destroyed or severely damaged, primarily by modern land practices such as development and farming. Some of the remaining evidence includes Native American effigy mounds, often constructed in the shapes of turtles, birds, bears, and other animals. The City is located in a part of the state where effigy mounds are most common along with Native American villages (Exhibit H-3).

Archaeological digs within the planning area have found a variety of artifacts including prehistoric Native American items. Items found indicate the location of Native American villages, burial sites, and other historically sensitive resources.

Effigy Mounds National Monument, located across the river in Iowa, just north of Prairie du Chien illustrates a significant phase of the mound building culture of ancient Native Americans. The Monument represents a variety of forms, including animal effigy, bird effigy, conical, and linear types. As a National Park unit, the Monument preserves examples of an American Indian culture that was primarily located in present day Wisconsin.

Exhibit H-3. Distribution of Effigy Mounds in Wisconsin



Source: Rowe, C. 1956. The Effigy Mound Culture of Wisconsin. Publications in Anthropology No. 3, Milwaukee Public Museum.

