

7.0 AGRICULTURAL, NATURAL & CULTURAL RESOURCES

Introduction

This chapter provides an inventory of existing agricultural, natural, and cultural resources in the Town of Buffalo. In addition, issues associated with these resources are discussed and a vision, with supporting goals and objectives, is presented.



Farm field, Town of Buffalo, Marquette County, WI

In 1950, about 50% of all county land was farmed, 30% was forestland, 15% was wetland, and 2% was undeveloped (Wisconsin Conservation Department 1954). In 1999, it was estimated that Marquette County is about 1/3 wetland, 1/3 farmland and 1/3 woodland (Jim Kroschnabel, WDNR, County Forester, 1998). Many lands that were unsuited for farming such as wetlands, highly erodible and sandy soils were restored to prior conditions thus the reason for reduced farmland in the past 49 years. The popularity of federal conservation funding programs such as the Natural Resource Conservation Service (NRCS), Wetland Reserve Program (WRP) has restored thousand of acres of wetlands that were once drained with tile and ditches.

Agricultural, Natural & Cultural Resources Vision

In 2020, the Town of Buffalo has successfully maintained more than 90 percent of the farmland that existed in 2002. This achievement was the result of dedicated farmers, the actions of Town government, the consolidation of several small family farms, and the use of conservation subdivisions. Farming operations in the Town consist of a balance of family farming operations and rented cropland. Contiguous areas of woodlands, wetlands and other natural areas have also been permanently protected from development. Farmland and natural areas enhance the rural character of the Town by maintaining open vistas and providing buffers between residential areas to maintain the low, rural density of development desired by residents. Recreational opportunities, including fishing, hunting, biking along Town roads, camping, cross-country skiing and snowmobiling are abundant.

Agricultural Resources¹

The Town of Buffalo has a **strong farming history and tradition**. Together with the thick, beautiful forests of the town, farming operations define the community character and constitute most of the land cover. Throughout the planning process, the planning committee consistently identified farmland as an important part of the community landscape. Likewise, **the**



importance of farmland and natural areas is clearly reflected in the Value Statements and SWOT results as presented in the Introduction and Issues and Opportunities Chapters of this plan. Therefore, preservation of farming is an important consideration when planning for future development.

Like many counties in central Wisconsin, Marquette County's **farming community is changing**. Part of the changes reflect crop and livestock prices and retiring farmers. Most of the change in the agriculture economy is the movement of families from urban areas to Marquette County with the anticipation of establishing permanent retirement homes. These new residents are buying acreage that range in size from 1-40 acres. Much of the smaller acreage is for residences on lakes and river. Larger parcels include small hobby farms that normally consist of horses, beef cattle, with some individuals engaged in elk, bison, and emu or ostrich production.

The average **value of agricultural land in Marquette County has increased**, on average, 47% between 1995 and 2000. The increased agricultural land prices are a direct reflection of the increased demand for farmland for other land uses (i.e. residential development). In 1998, 31% of agricultural land sold in the county was diverted to other uses. **The number of farms is decreasing while the size of farms is increasing**. In Marquette County in 1940, 1,291 farms existed (peak number), by 1997 only 443 farms remained, representing a decrease of 66%. Likewise, total farm acreage decreased 50% from 247,779 acres to 124,804 acres. On the other hand, farms in 1997 were 282 acres in size compared to the average 197-acre farm that existed in 1940. This trend in land value and purchase is expected to continue in the future.

Obtaining land to hunt and fish on is becoming increasingly difficult due to the popularity of deer hunting. As a result, many **outdoor enthusiasts are purchasing or leasing farm acreage in the county**.

Fortunately, the Town of Buffalo has escaped, or seen only a hint of these trends, in recent years. However, these pressures will expand into the town. As a result, the town is seeking to develop this plan to preserve the character, history, and farming traditions of the town.

¹ Marquette County Land and Water Resource Management Plan, Marquette County Land Conservation Department, 1999.

AMISH COMMUNITY

As previously discussed, there is a large Amish population in the Town of Buffalo. These residents help to maintain the area's farming legacy through traditional farming practices and the sale of farm-based goods.

In many communities across Wisconsin, the primary issue with farmland preservation is that aging individual farmers own much of the remaining farmland. Faced with development pressures, retirement needs and a worsening farm economy, farmers see the sale of their land for development, as an attractive financial opportunity. As a result, communities are challenged to find ways to maintain farmland given the pressure to develop.

The sizable Amish community in the Town of Buffalo and neighboring towns provides a buffer against these development concerns. As a result, farming will remain an important part of the landscape for as long as it remains an integral part of the Amish culture.

Non-Amish farms in the Town of Buffalo will face the development pressures described above. In order to maintain open areas of farmland in the township beyond the Amish community creative development options must be explored (i.e. PDR, Conservation Subdivisions, and Land Trusts).



Farmland, Town of Buffalo, WI

PRODUCTIVE AGRICULTURAL AREAS

Soils support the physical base for development and agriculture within the town. Knowledge of their limitations and potential difficulties is important in evaluating crop production capabilities and other land use alternatives, such as residential development.

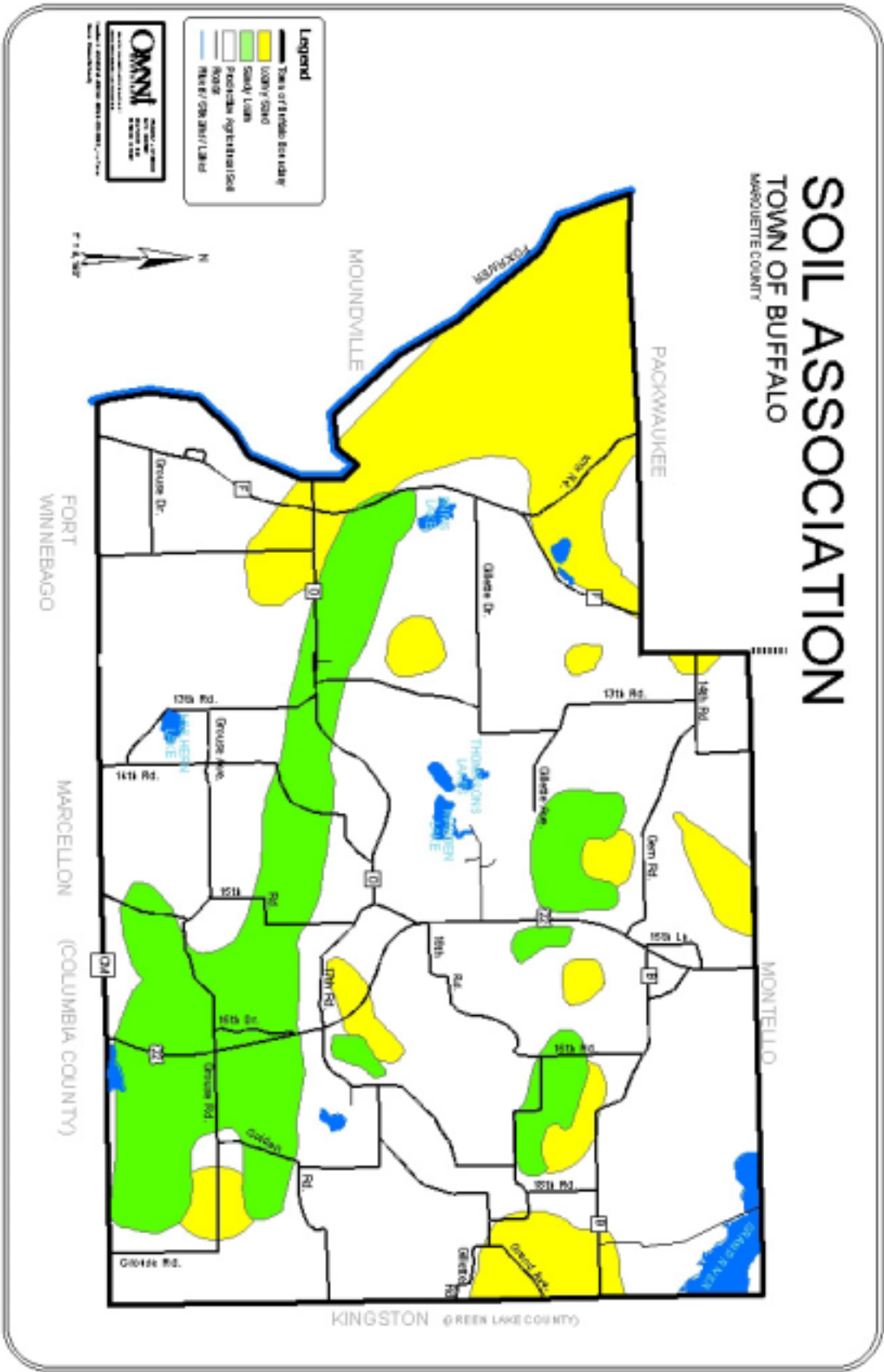
Prime farmlands (productive agricultural areas) **are determined by soil types** that are capable of producing high yields of crops under

a high level of management. Productive soils are considered to be those soils that are capable of producing an average of 4 tons per acre per year of grass-legume hay, or 100 bushels per acre of corn. The United States Department of Agriculture Soil Conservation Service considers a "high level of management" to include provisions for adequate drainage, appropriate tillage, planting and seeding with high yielding varieties, control of weeds, diseases, insects, optimum fertilizer application and timely, efficient harvesting techniques.

A map of soil types in the Town of Buffalo is provided on the following page. Sandy loam (50-70 percent sand content) and loamy sand (70-80 percent sand content) soils are clearly illustrated. Other areas are considered productive soils.

SOIL ASSOCIATION

TOWN OF BUFFALO
MARQUETTE COUNTY



THE RIGHT TO FARM

Wisconsin has a right-to-farm law **protecting farms from nuisance lawsuits** related to typical farm noise and odors. As residential development expands into farmland areas, it is inevitable that these issues develop. Often the issues relate to manure spreading and storage. People who move to rural areas near farmland are not aware of these and other potential nuisances. To minimize conflicts, education is strongly recommended. By educating new landowners about potential conflicts, “surprise” nuisances can be avoided.



CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFOs)

Concentrated Animal Feeding Operations (700+ cattle), or mega farms, are increasing in number in Wisconsin. In 1985, there was 1 such operation in the state. By 1990, 24 operations and by 2000 there were 77 mega farms in Wisconsin. Generally, **CAFOs locate in rural areas where conflicts with neighboring property owners can be minimized.** Should such a farm be proposed, the Wisconsin Department of Natural Resources has extensive permit requirements that must be met. However, the permit does not address issues such as noise, buffers, traffic and lighting. These types of issues would have to be addressed through a town or county zoning ordinance.

CAFOs often bring **advantages and disadvantages** to a community.

- From an economic standpoint, CAFOs generate jobs and taxes.
- Proponents also argue that animals in CAFOs are generally cleaner and better cared for than animals on smaller farms.
- Opponents site concerns related to manure management, odor, traffic, neighboring land value, and lighting issues as concerns which must be addressed to successfully locate a CAFO in a community.

Tools to Protect Farmland

There are many methods to protect farmland. This section describes some of the common approaches used in Wisconsin.

LAND TRUSTS AND CONSERVATION EASEMENTS

An option available to landowners seeking to protect natural areas and farmland is through the activities of **land trusts**. Land trusts provide landowners with advice on protection strategies that best meet the landowner’s conservation and financial needs. Land trusts accept lands donated by landowners for conservation purposes. Land

What is a Conservation Easement?

A conservation easement is a *voluntary legal agreement between a landowner and a land trust or government agency that limits present and future development of a parcel.* The landowner retains ownership of the land (within the terms of the easement – i.e. only for farmland or natural space, not for development) and the land trust takes the responsibility for protecting the land’s conservation values. Donated conservation easements that meet federal tax code requirements can provide significant tax advantages to landowners because their land will be taxed as undevelopable land, which is a much lower rate than developable land.

trusts can also work with landowners to establish conservation easements. Land trusts can also work with landowners to establish conservation easements (see definition in box on previous page).

CONSERVATION SUBDIVISIONS

Another method to protect farmland, and permit some residential development, is the use of conservation subdivisions. Conservation subdivision designs encourage the preservation and protection of open space, natural areas and farmland resources. In a conservation subdivision, homes are “clustered” together on smaller lots so that a greater proportion of the land is protected from development.



Typically, a conservation subdivision will require at least 50% of a site be protected from further development.

How is a Conservation/Cluster Subdivision Created?

1. **Develop a Yield Plan.** This plan essentially shows how many homes could be developed if a traditional subdivision layout were used.
2. **Identify Primary And Secondary Conservation Areas.** Primary conservation areas include: poor soils, steep slope, wetlands, waterways and floodplains that are not conducive to development. Secondary conservation areas include other areas of local importance targeted for protection (i.e. farmland, woodlands, scenic views, etc.).
3. **Locate the Home Sites.**
4. **Include Roads, Sidewalks and Trails.**
5. **Draw the Lot Lines.** This is usually the first step in a traditional approach.

Protection and maintenance of the conserved area can be accomplished through a conservation easement with an appropriate conservation organization, land trust, neighborhood association or government body, or through deed covenants. The areas to be conserved must be protected in perpetuity. The land designated for protection should either be left as natural habitat, open space, or farmland. In conservation subdivisions, the development of walking and bicycle trails is encouraged, particularly to provide limited access to protected natural areas.

PURCHASE OF DEVELOPMENT RIGHTS (PDR)

Yet another way of protecting farmland is through the purchasing of development rights (PDR). PDR is a voluntary program, where a land trust, local government, or some other agency usually linked to local government, makes an offer to a landowner to buy the development rights on the parcel. The landowner is free to turn down the offer, or to try to negotiate a higher price.

When the development rights to a farm are sold, the farmer receives payment equal to the difference between the fair market value of the land a developer would pay if it could be developed and the price the land would command for agricultural use. In return for this payment, a conservation easement is recorded on the deed to the property. This easement stays with the land so it is binding not only on the current owner, but future owners of the property as well.

When the development rights to a farm are sold, the farm remains in private ownership. The private landowner still retains the right to occupy and make economic use of the land for agricultural purposes. The landowner gives up the right to develop the property for some other use in the future. Farmers are not compelled to sell their development rights. Participation in PDR programs is entirely voluntary.

Advantages and Disadvantage of PDR

Restrictions on land use, including zoning, have been used to protect agriculture for many years. One of the main benefits of PDR, is that it is completely voluntary. Under PDR, the landowner is not deprived of any of the value of the property. This is very important because many farmers rely on their property in order to fund their retirement. Simply depriving them of the opportunity to realize the full economic value of their property has important ethical, socioeconomic, and perhaps legal ramifications. Moreover, zoning regulations may be easily changed in the future.

The main advantage of PDR over other approaches to farmland preservation is that it offers a permanent, long-lasting solution. PDR virtually assures that land will remain forever in agriculture because it extinguishes the right to develop agricultural land for non-agricultural uses. Farmland preservation tax credits and use value assessment of agricultural land encourage farmers to keep their land in agricultural use somewhat longer than otherwise might be the case, but do not assure that land will remain in agricultural use.

Another major advantage of PDR is that it is perceived as an equitable, fair, and voluntary way to preserve agricultural land. A third advantage is that it provides a way to correct a major shortcoming of the current Farmland Preservation Program by targeting limited financial resources to preserve and protect agricultural land most worthy of preservation.

Another benefit of PDR is that it makes it much easier for a farmer to pass their farm on to an heir interested in farming the land. Once the development rights have been separated from the land, the value of the parcel typically declines to its agricultural value. This generally has an enormous effect on reducing the inheritance tax liability. If taxed at the full development value, many parcels are simply taxed out of agriculture, because the heirs are not able to pay the taxes without selling the land.

The main disadvantage of PDR is cost. Development rights can be expensive to purchase, and so funding for PDR needs to be selectively targeted to preserve and protect agricultural land that is most worthy of preservation. As a result, not every farmer who wants to sell his or her development rights will be able to do so.

PDR in the Town of Buffalo

In recent years, purchase and transfer of development right programs have been the topic of much discussion in the region. Most recently, Winnebago County considered implementing such a program.

How to Establish and Operate a PDR Program

The establishment of a local PDR program would begin with the Town of Buffalo. After this plan is adopted, the Town of Buffalo Plan Commission, would be responsible for the initiation and implementation of any PDR program. First, the town would need to raise the capital needed to purchase local development rights. This may mean asking residents to consider a tax increase specifically dedicated to this program, or perhaps seeking foundation or grant funds to initiate the program.

Once a pool of funds has been established, the Plan Commission would review applications of landowners who wish to sell development rights. This process would require obtaining appraisals, prioritizing parcels, negotiating agreements, and ensuring that deed restrictions are enforced.

Natural Resources and Environmental Concerns²

Residents of the Town of Buffalo take great pride in the beautiful natural areas of the community. The rolling wooded hillsides, Fox and Grand Rivers, ponds and wetlands provide important habitat for wildlife in the area. Several large areas of the town are owned and protected by the Wisconsin Department of Natural Resources.

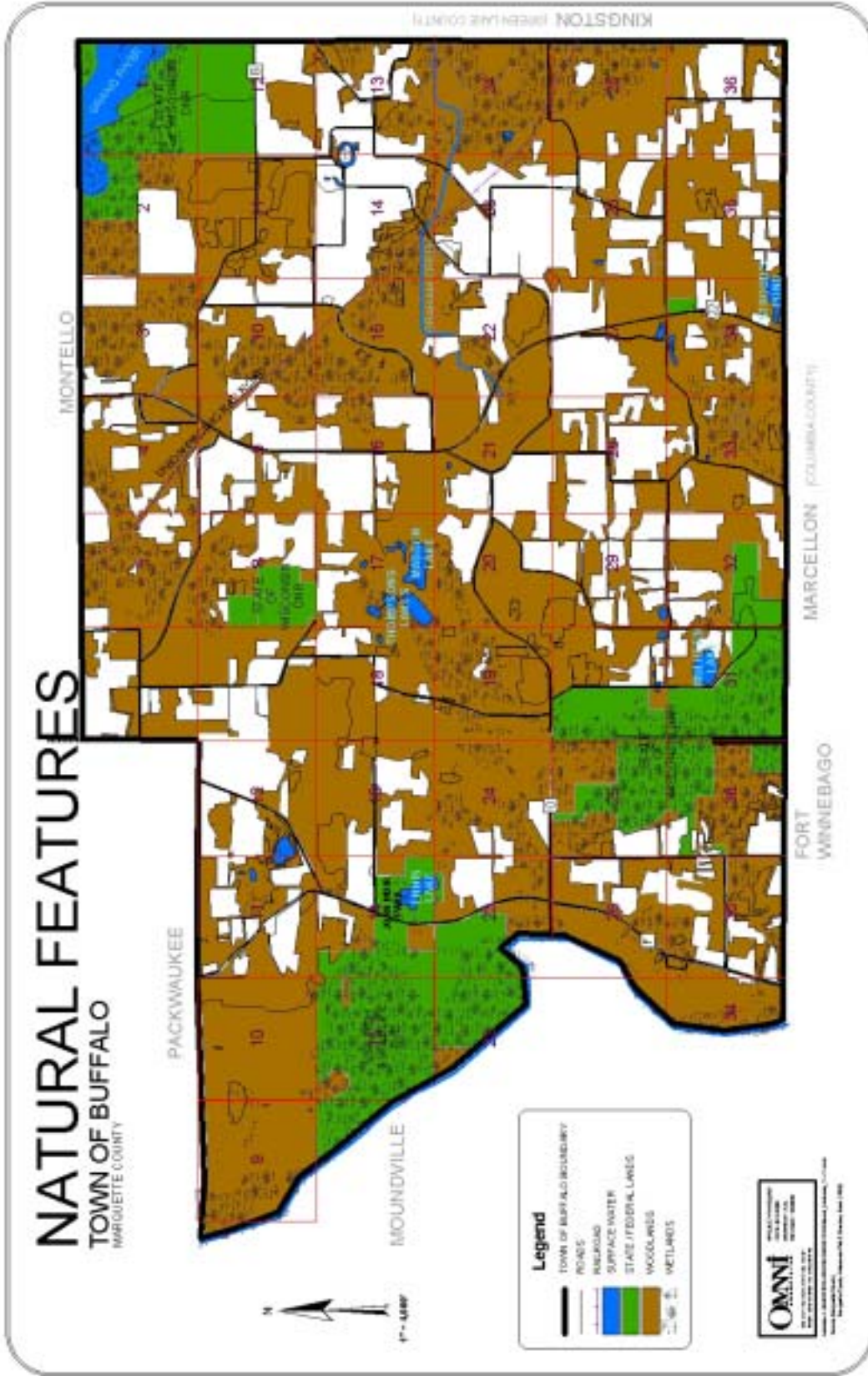


Ennis Lake, Town of Buffalo, WI

Natural resources help to determine the potential for land development. Likewise, environmental characteristics indicate the ability of the land to support various types of development. Geology, topography, drainage patterns, floodplains and wetlands are among the natural and environmental features, which determine if an area is physically suitable for specific types of development.

Preservation of natural resources (wetlands, surface and ground water, woodlands, shorelines) is an important priority for the town. These resources provide recreation opportunities and enhance the quality of life for residents.

² Information used to develop this section was obtained from:
Soil Survey of Marquette County, United States Department of Agriculture Soil Conservation Service
Marquette County Land & Water Resource Management Plan, Marquette County Land Conservation Department, 1999.



GEOLOGY AND TOPOGRAPHY

The entire landscape of Marquette County reflects the influences of glacial activity. The most recent glacier to cover the county occurred about 10,000 years ago and left a variety of glacial features. In the western portion of the county, where the Town of Buffalo is located, is covered by a thick mantle of glacial till referred to as **the terminal moraine** cover. Within the moraine, old glacial lakebeds exist, now reflected in marshland and scattered areas of red clay.

The topography in the town can best be described as **gently rolling**. Not surprisingly, the lowest areas of the town are found along the Lower Fox River and Grand River shorelines. The highest elevations are found near Observatory Hill in the central portion of the town.

SURFACE WATER (NAVIGABLE WATERS)³

In addition to many small inland lakes and ponds, there are two major water features in the Town of Buffalo: the Fox River and Grand River. (Ennis Lake is also considered a major water feature. It is described in the Utilities and Community Facilities Element.)

The **Grand River** flows through the northeast corner of the Town of Buffalo. Excessive Carp populations have a negative impact on aquatic vegetation and water clarity. Sedimentation is a problem due to the non-point source pollution in the upper areas of the Grand River.

The **Lower Fox River** (south of Buffalo Lake) forms western boundary of the Town of Buffalo. This river is severely degraded due to non-point source pollution, including: cropland erosion, stream bank erosion and animal waste run-off. Ditching and draining systems for muck farms are abundant. These ditched areas and cropping techniques increase sediment delivery to surface waters. Fortunately, several large muck farms along the river have enrolled in the Wetland Reserve Program (WRP). This federal program restores the ditched areas to the original hydrology of the area.



Fox River, Town of Buffalo, WI

The **Marquette County Land and Water Conservation Department and the Wisconsin Department of Natural Resources** work cooperatively to protect the quality of surface water in the county.

³ Marquette County Land and Water Resource Management Plan, Marquette County Land Conservation Department, August 1999

GROUNDWATER & AQUIFERS

Groundwater is the source of water for the residents of the Town of Buffalo. The main water supply aquifer in the area is in the **Cambrian Sandstone**. Lesser quantities of groundwater may be found in the overlying glacial till, which consists of lake clays and silts, but may contain pockets of sand and gravel.

The depth to the Cambrian Sandstone Aquifer varies in the town. A long time ago, an ancient river flowed approximately where the present Grand River is today. This river cut a deep valley into the Cambrian Sandstone, which was later filled in by glacial till. As a result, the northeastern half of the Town of Buffalo has over 200 feet of glacial till overlying the ancient valley of Cambrian Sandstone, while in the southwestern half of the Town, further up the side of the valley, the depth is over 100 feet.

Recharge to the sandstone aquifer percolates through the glacial drift from above, and also enters the sandstone from areas northwest of the town, since the sandstone dips to the southeast.

The overall quality of groundwater in the Town of Buffalo is generally considered to be of good quality, but hard.

Contamination risks from land use practices are the main threat to groundwater resources. Potential contaminant sources include old, unregulated dumps, nitrates from failed septic systems or farm runoff, pesticides, leaking underground storage tanks, and road salt. All of these sources are presently regulated or are being addressed through ordinances or technical assistance services by various county and state agencies.

Over-pumping of the aquifer may be an issue, due to nearby population centers in Portage and Montello. As their water usage increases, the additional pumping will cause the groundwater cones of influence from these villages to extend further into the Town of Buffalo.

WATERSHEDS ⁴

The Town of Buffalo is included in two watersheds. What follows is a profile of each watershed. The locations of the watersheds are depicted on the *Natural Resources Map* provided in this chapter.

The **Lower Grand River Watershed** covers a total of 120 square miles, with 31.4 square miles in Marquette County. This watershed also extends into Columbia, Dodge and Green Lake Counties. Wetland and agriculture are the major land uses in the watershed.

In the Town of Buffalo, the Grand River Wildlife Area is the predominate features of this watershed. A dam on the Grand River just upstream of the Fox River, creates this

⁴ Source: Marquette County Land and Water Resource Management Plan, 1999

impoundment area known as the Grand River Wildlife Area. This state owned area is public and is managed primarily for waterfowl production and resting during migration.

The **Buffalo/Puckaway Watershed** encompasses a total of 135.1 square miles that span over Marquette, Columbia and Green Lake Counties. Village/cities included in this area are: Endeavor, Packwaukee and a portion of the City of Montello. Agriculture is the dominant land use in the watershed along with forestland and wetlands.

Additional information about the care, management, and plans for the watershed is available from the Marquette County Land Conservation Department. The department has adopted a *Land and Water Resource Management Plan* to address habitat, water quality, and other issues in these watersheds.

SHORELINES

Residents of the Town enjoy Lower Fox River and Grand River shorelines as well as shorelines of several inland lakes. Shoreline areas provide critical wildlife habitat and are important to the overall quality of life in the town by contributing significantly to the character of the community. The town has **approximately 4.5 miles of Fox River shoreline and 1.5 mile of Grand River shoreline.**



Ennis Lake, Town of Buffalo, WI

The ShoreLand/Wetland Ordinance adopted by Marquette County regulates shoreland uses and development within 1,000 feet from the ordinary high water mark of a lake, pond or flowage, and within 300 feet from the ordinary high water mark of a river or stream. The Wisconsin Department of Natural Resources (WDNR) regulates the stabilization and fill of shorelines in the town. The WDNR has a strong history of working well with residents on these issues.

As development pressures increase in the town, lakes that were previously undeveloped will experience development pressure. As land prices increase, owners of large tracks will seek to sell lakeshore lots that net high prices, but also impact critical lakeshore habitat.

WETLANDS & FLOODPLAINS

About **1/3 of the land area in Marquette County consists of hydric or wetland soils.** *A wetland is generally defined as having a predominance of hydric soils and is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support hydrophytic vegetation.*

Wetlands act as a natural filtering system for sediment and nutrients such as phosphorus and nitrates. They also serve as a natural buffer, protecting shorelines and stream banks from erosion. Wetlands are essential in providing wildlife habitat, flood control, and

groundwater recharge. Due to these benefits, county and state regulations place limitations on the development and use of wetlands and shorelands. Wetlands in the town are shown on the *Town of Buffalo Natural Features Map*. **The most significant areas of wetlands are found along the Lower Fox River, Grand River, south of CTH 0, near Thompsons and Madden Lakes and along the town's eastern boundary.**

For almost three decades, the U.S. Army Corps of Engineers has had the authority over the placement of fill materials in virtually all wetlands of five (5) acres or greater. However, on January 9, 2001, the U.S. Supreme Court limited federal jurisdiction over isolated wetlands under the Clean Water Act of 1972. This Court decision now limits the jurisdiction of the U.S. Army Corps of Engineers to cover only wetlands that are directly associated with navigable waterways-lakes, streams and rivers. Since the State of Wisconsin's jurisdiction over wetlands is tied to federal statutes, as many as 4 million acres of wetland were affected by this decision, including some wetland areas in the Town of Buffalo.

In response to this U.S. Supreme Court Decision the State of Wisconsin recently passed legislation giving the Wisconsin Department of Natural Resources (WDNR) authority to regulate those wetlands that were formerly tied to federal legislation. As in the past, anyone interested in filling a wetland is required to obtain a permit.

There is an opportunity to restore many more acres of wetlands in Marquette County and the Town of Buffalo. Interest in the USDA-NRCS Wetlands Reserve Program has generated a large workload. The US-FWS private Lands Program has also been active in restoring wetlands. The DNR Priority Watershed Program has made financial and technical assistance available to landowners to restore and enhance wetlands to local Land Conservation Departments. Interest has been from traditional farms, non-traditional landowners and private organizations (i.e. Ducks Unlimited). Marquette County has also seen an increase in landowners interested in recreational uses that include wetland wildlife habitat restoration.

Floodplains serve many important functions related to flood and erosion control, water quality, groundwater recharge and fish and wildlife habitats. Generally, areas susceptible to flooding are considered unsuitable for development due to potential health risks and property damage. Therefore, the *Future Land Use Maps* discourage development in these areas.

WOODLANDS

Marquette County has about 95,000 acres of forestland. Nearly half of the Town of Buffalo is covered with woodlands. The wooded areas consist primarily of Oak, Pine and Central Hardwoods. The majority of woodlands consist of poor quality "scrub oak" that has low value as timber. Converting these areas to an oak-pine ix would increase the quality of the woodlands for wildlife habitat and as a timber resource.

Forest management is difficult in Marquette County and the Town of Buffalo. Insects and disease continually take their toll, however, **the largest resource concern for the forests of the County is the fragmentation of remaining woodlots.** Current plans and ordinances do not properly protect woodlots when it comes to developments. Subdivisions and housing developments, large and small, are put in without concern for the resource.



Tree-Lined CTH F, Town of Buffalo, WI

The *Town of Buffalo Natural Features Map* delineates the location of woodlands in the town. Because woodlands are an important natural feature to town residents, the remaining woodland areas should be protected from future encroachment through the use of easements, state programs, conservation subdivisions and other preservation techniques. Part of this protection effort should include education for private landowners and developers about the importance of woodlands.

The WDNR Managed Forest Law provides opportunities for conservation of contiguous woodland environments for wildlife and plants inhabiting these areas. For more information visit: www.dnr.state.wi.us/org/land/forestry/publications/.

WILDLIFE HABITATS

Unfortunately there is not a source of comprehensive habitat information for the Town of Buffalo. To protect these areas from encroachment, detailed habitat information collected by the WDNR is not available to the public. Resident observation is the best available local resource about wildlife habitat areas. **Primary wildlife habitat areas correspond to the forested areas, wetland areas and shorelines shown on the *Natural Resources Map*.** These areas provide food and cover for deer, raccoons, skunk and other small creatures common in the area. Farm fields also serve as a food source for deer in the area. The remaining areas of the town (i.e. residential areas, road corridors, and other areas) are not classified as primary wildlife habitat areas - though certainly animals do wander into these areas. The **Fox River and Grand River** are also major waterfowl, fish spawning, reptile and amphibian habitat areas. Moreover, the inland lakes also support a variety of aquatic plant and animal species.



Increased development in the town has caused some large parcels of land to become more fragmented. Fragmentation of land has a negative impact on wildlife habitat and can impact the scenic beauty of the town. The new development is often scattered on large parcels of land taking unnecessarily large amounts of acreage out of productive agricultural use and impacts natural resources such as lakes, streams and woodlands.

EXOTIC AND INVASIVE SPECIES

Non-native, or exotic, plant and animal species have been recognized in recent years as a major threat to the integrity of native habitats and species, as well as a potential economic threat (damage to crops, tourist economy, etc). The WDNR requires that any person seeking to bring a non-native fish or wild animal for introduction in Wisconsin obtain a permit. The town can help combat exotic species by educating residents about non-native species and encouraging residents to use native plants in landscaping.

THREATENED AND ENDANGERED SPECIES

There are many threatened and endangered plant and animal species in Marquette County. Unfortunately, there is not a specific list available for the Town of Buffalo. The WDNR is attempting to identify and catalog endangered plant and animal species across the state. For a complete, up-to-date list of endangered plant and animal species in the county, refer to www.dnr.state.wi.us.

METALLIC AND NON-METALLIC MINING RESOURCES

There is one non-metallic mining operation in the Town of Buffalo located east of STH 22. There are no metallic mining operations in the town. There are no plans to expand or establish additional operations in the future.

As part of NR 135, Wisconsin Administrative Code, adopted in December 2000, any community in Wisconsin could adopt an ordinance to establish requirements for reclamation of non-metallic mines, such as gravel pits and rock quarries. If a town decided not to develop its own ordinance, a county could develop which would also regulate operations in the town. Likewise, regional planning agencies could develop ordinances for counties within their region. The ordinances must establish reclamation requirements to prevent owners and operators of quarries and gravel pits from abandoning their operations without proper reclamation of the mines. Marquette County is responsible for establishing these requirements for quarry operations in the Town of Buffalo.

New applications for non-metallic mining operations are subject to the requirements of NR 135, chapter 6. The law defines a “marketable non-metallic deposit” as one that can be or is reasonably anticipated to become commercially feasible to mine and has significant demonstrated (geologically or by other means) economic value.

Under the law, any landowner of a demonstrated “marketable non-metallic deposit” may register the site for mining. Local zoning authority can object to the application if the zoning does not permit it. Registration expires after a 10-year period and may be extended for a single 10-year period if it is demonstrated that commercially feasible quantities continue to exist at the property.

Towns (on their own and through the use of county zoning) rezoning property in a manner consistent with a Comprehensive Plan are not required to permit non-metallic mining operations that are inconsistent with the plan.

AIR QUALITY

The following information is from the Wisconsin Department of Natural Resources:

“A few common air pollutants are found all over the United States. These pollutants can injure health, harm the environment and cause property damage. 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. One set of limits (**primary standard**) protects health; another set of limits (**secondary standard**) is intended to prevent environmental and property damage. 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 **nonattainment areas**.”

Marquette County is an attainment area located in the Northeast Wisconsin Region. This situation is not expected to change in the future. County, state and federal air quality protection standards are in place to maintain and improve the local air quality.

Historical and Cultural Resources

Cultural resources, like natural resources, are valuable assets, which should be preserved. The town supports efforts of state agencies, Marquette County and private organizations to support these resources.



Buffalo Community Church

CHURCHES

There are several local churches in the Town of Buffalo. Many residents also choose to frequent churches located in Montello, Packwaukee and other nearby communities. Specifically, the following churches are located in Buffalo:

- **Buffalo UP Church**, northwest corner of CTH 0 and 13th Road (Listed in the State of Wisconsin Architecture and History Inventory – Constructed in 1865)
- **Buffalo Community Church**, on 14th Road near CTH F
- **Greenwood Presbyterian Church**, on CTH B and 18th Road



Buffalo UP Church

- **St. Andrews Catholic Church**, Off STH 22 in southern portion of the Town



Greenwood Presbyterian Church

MUSEUMS/HISTORIC RESOURCES

There are no museums located in the Town of Buffalo. However, several museums are available in nearby larger cities accessible via STH 22.

Residents of the town are welcome to visit these facilities and enjoy the exhibits and other amenities they have to offer. While the town would welcome a local museum and encourage residents who want to establish a historic or special district, there are currently no plans to do so.

There are two important historical sites in the Town of Buffalo, the childhood residence of John Muir and the Emanuel Dannon monument.

John Muir, (1838-1914), was an American naturalist, explorer, and writer. He was an influential conservationist, who worked to preserve wilderness areas and wildlife from commercial exploitation and destruction. His efforts helped to establish Yosemite National Park and Sequoia National Park and founded the Sierra Club. John Muir spent his youth in the Town of Buffalo Wisconsin from 1849-1863—from age 11 until he was 25. Today, much of this area has been preserved in the Ennis Lake- John Muir Park

The **Emanuel Dannon** (1843-1851) Monument is also located in the Town of Buffalo in the Greenwood Cemetery. The monument reads: ““The boy who would not tell a lie.” The story of Emanuel Dannon is as follows:

Emmanuel was born in Devonshire, England and came to America with his parents when he was two years old. Within three years both of his parents had died. An uncle retrieved him from the Poorhouse, but he, too died within a few months. Emmanuel was placed with foster parents, Mr. and Mrs. Samuel Norton from Illinois. Sam Norton's character was questionable. Around 1850, an itinerant peddler disappeared. His horse was found on the Norton farm--legend holds that the Norton's killed the man, and that Emmanuel witnessed the crime. To cover up the crime, the Norton's insisted that Emmanuel lie about the incident in their favor.

Repeatedly, Emmanuel told them, "I will not tell a lie." For this he was cruelly beaten. On November 30, 1851, his wrists were tied together, the rope thrown over a crossbeam in the barn, and the boy strung up. Then Emmanuel was whipped for two hours with thick willow switches until he died. The Norton's stood trial and were found guilty of first-degree manslaughter. They returned to Illinois after serving seven years in jail. Emmanuel's present, permanent monument was dedicated May 2, 1954.

Current Policies/Trends

SHORELAND/FLOODPLAIN ZONING

Shorelands and floodplains are often viewed as valuable recreational and environmental resources. These areas provide for storm water retention and habitat for various type of wildlife. Development that is permitted to take place in these areas may have an adverse effect on water quality, wildlife habitat and stormwater drainage. In addition, it may also result in increased development and maintenance costs when providing for protection from the occurrence of flooding and high water, increased flood insurance premiums, extensive site preparation, and maintenance and repairs of roads.

As a result, the State of Wisconsin requires every county adopt a shoreland/floodplain zoning ordinance to address the problem associated with development in these areas. Development in shoreland areas is generally permitted, but specific design techniques must be considered. Development in floodplain areas is strictly regulated and in some instances, not permitted. The authority to enact and enforce these types of zoning provisions is set forth in Ch 59.97 Wis. Stats. and Wisconsin Administrative Codes NR115.116 and 117, and is established in the Marquette County Zoning Ordinance.

Marquette County is currently administering its Shoreland/Floodplain Ordinance in unincorporated areas of the county. The ordinance regulates shoreland and navigable waters of the county that are 1,000 feet from the normal high water elevation of a lake, pond, or flowage; and 300 feet from the normal high water elevation of a river or stream, or to the landward side of a 100 year floodplain boundary.

FARMLAND PRESERVATION PLAN/EXCLUSIVE AGRICULTURAL ZONING

Maintaining productive land for agricultural uses has been a long-time goal of Wisconsin. To achieve this goal, the state has enacted several types of legislation that provide monetary incentives to eligible landowners to keep their land in a productive state.

Marquette County has adopted a Farmland Preservation Plan so that local farmers are eligible for tax credits through the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) Farmland Preservation Program and provide for exclusive agricultural zoning.

Marquette County does have an exclusive agricultural zoning classification to delineate agricultural lands, but zoning is not in effect in the Town of Buffalo.

MARQUETTE COUNTY LAND AND WATER RESOURCE PLAN

The Marquette County Land and Water Resource Plan was developed in 1999 in accordance with Chapter 92.10 Wis. Stats. The plan:

- Serves as a guide for resource management planning and decision making

- Assesses land and water resource conditions
- Identifies problems and priorities

Copies of the plan are available from the Marquette County Land Conservation Department. The plan was a valuable resource used by the Town of Buffalo in preparing this plan. The Town of Buffalo supports the planning activities of the Marquette Land and Water Conservation Department to protect area natural resources.

Coordination with Other Comprehensive Plan Elements

The development of the Agricultural, Natural and Cultural Resources Element required coordination with all of the required plan elements. For example, when considering economic development strategies, the future role of agricultural operations in the town, as well as the importance of natural resources, was important to consider. Below is a description of the critical issues addressed with respect to the Land Use and Housing Elements. These elements are profiled because their coordination with the Agricultural, Natural and Cultural Resources Element is critical to the success of the plan.

LAND USE

Residents of the town have clearly indicated at public meetings that the preservation of agricultural operations and the protection of natural resources is a priority. As a result, when the *Future Land Use Maps* were developed special consideration was given to these two priorities. Likewise, the implementation element will help to ensure that through the enforcement of desired planning and zoning requirements, natural resources and farming operations are protected in the Town of Buffalo.

HOUSING

Housing, if not carefully located and planned for can have a severe impact on natural resources and farming operations. Housing development can fragment farming operations and wildlife habitat areas. If not carefully planned, additional traffic, people, and services associated with housing development can quickly destroy rural character. The Town of Buffalo desires a rural development pattern that protects natural resources and farmlands, while still accommodating some residential development. To achieve this, the use of conservation subdivisions and other non-traditional techniques should be encouraged in the town. This strategy for housing development is reflected in the *Future Land Use Maps*.

Goals and Objectives

It is the vision of the Town of Buffalo that the community will retain its rural character by continuing to enjoy a mix of scenic, open, natural, undeveloped areas and farming operations through 2020. Natural resources will be protected and serve as an environmental, recreational, and economic asset to the town. Residential and limited

commercial development will be in harmony with the town’s natural environment. The Town of Buffalo will support the continued efforts of neighboring communities, school districts, Marquette County, and the State of Wisconsin, to provide cultural and historic resources that can be used by town residents. The town will also work, in accordance with the Intergovernmental Coordination Element of the Wisconsin “Smart Growth” Law, with neighboring communities, Marquette County, the East Central Wisconsin Regional Planning Commission and the State of Wisconsin to ensure that natural resources are adequately protected for future generations.

GOALS

1. Preserve agricultural operations and natural areas in the Town of Buffalo to maintain the town’s rural character.
2. Enhance recreational opportunities in the Town of Buffalo.
3. Protect stream banks, wetlands and floodplains from harmful uses.

OBJECTIVES

1. Identify and protect areas of prime agricultural land in the town through appropriate land use controls, cluster developments and conservation subdivision designs. Coordinate these efforts through Marquette County and, as necessary, develop local subdivision regulations to further the town’s vision.
2. Seek to identify land trusts in the area that may be interested in protecting farmland and other natural areas. Provide contact information to local farmers who desire this information.
3. Explore the potential for establishing a PDR Program. This effort may be coordinated with neighboring towns and Marquette County.
4. Educate local farmers and builders about the potential for conservation subdivisions, cluster development and mixed-use development in the Town of Buffalo.
5. Continue to support the local use of effective county and state farmland and woodland preservation programs (i.e. Managed Forest Law).
6. Support the efforts of Marquette County to enforce stream and lake setback requirements and policies established in the *Marquette County Land and Water Resource Management Plan*.
7. Educate developers and landowners about the “right-to-farm.” Coordinate with local realtors and builders associations to disseminate information. Possibly develop a brochure. If, in the future, the town decides to develop a web page or town newsletter include information there as well.

8. Create, maintain and enhance natural buffers along stream banks and the lakeshores. Work with Marquette County and the Wisconsin DNR and DATCP to promote and help fund buffer strips along streams and the lakeshores.
9. Participate in the planning efforts of Marquette County to ensure that the county comprehensive plan represents the interests, visions, and expectations of the Town of Buffalo.
10. To protect wildlife habitat areas in the town, beyond regulated wetlands, floodplains and shorelands, identify natural areas in the town. Using this information:
 - a. Seek grant-funding sources available through the WDNR and other agencies to help protect wildlife habitat areas for future generations to enjoy.
 - b. Build partnerships with local habitat conservation organizations (ducks unlimited, trout unlimited, etc.) to help with wildlife protection and education.
 - c. Seek to prevent fragmentation of these habitats by encouraging cluster and conservation-based development.