
BUFFALO COUNTY



FARMLAND PRESERVATION PLAN

2018

BUFFALO COUNTY FARMLAND PRESERVATION PLAN

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Introduction

Wisconsin's identity has largely been shaped by its agricultural heritage – an identity that is worth protecting and sustaining. Buffalo County is rural in character and agricultural land uses dominate the landscape. Competing land use demands have the potential to impact our local land and water resources, which are essential for a productive agricultural community. Efforts to preserve prime farmland is important for Buffalo County's economy, rural landscape, and social framework.

Despite its importance, agriculture faces many challenges. Farmland is being lost and once it is gone we cannot get it back. Agricultural land use in Buffalo County has remained relatively stable over the past 50 years when compared to other parts of the State and nation. Agriculture continues to be the predominant land use in Buffalo County and accounts for 69.7% of its total acreage, down slightly from 76.7% in 1974. As in most of Wisconsin, the number of farms has been steadily decreasing, while the average farm size increases. While the development and displacement of agricultural lands has been slower in Buffalo County than some other counties in the State, it is critical that the quality and quantity of acreage making up the remaining agricultural land-base is protected through initiatives like the Farmland Preservation Program. Recognizing the demand for multiple land uses, the importance of protecting water quality and conserving the soil that supports essential food production increases as does the need to preserve an adequate land base for future generations. Updating the County's Farmland Preservation Plan will preserve farmland that contributes to the economic and cultural importance of our County for current and future generations. The plan will be prepared per Wisconsin State Statute (Ch. 91, Wis. Stats.) pertaining to farmland preservation plans.

Buffalo County's Farmland Preservation Plan goal is to ensure the preservation and sustainability of the County's agricultural lands, waters, and undeveloped natural resource areas.

Purpose and Scope

The Farmland Preservation Program, established by the Wisconsin Legislature in 1977, aimed to preserve agricultural lands in the State by providing landowners with tax incentives in exchange for a contractual commitment not to develop their farmed acreage. Buffalo County recognized the value of the Farmland Preservation Program (FP Program) at the time it was introduced, and the first edition of Buffalo County's own Farmland Preservation Plan (FP Plan) was written in 1980 and approved in 1983. The original FP Plan has remained unchanged.

In 2009, the Wisconsin legislature adopted the Working Lands Initiative (Wisconsin Act 28), in order to address the loss of Wisconsin's most productive agricultural lands and to promote the economic development of agriculture. All Wisconsin counties were required to update their existing FP Programs in order to reflect current trends and development pressures and to ensure continued funding for the farmland preservation tax credit program. Due to lower development

pressures in Buffalo County, the county's farmland preservation plan was not required to be updated until December 31, 2015. An extension to certification deadline was granted by the Department of Agriculture, Trade, and Consumer Protection (DATCP) to allow farmland preservation planning effort coordination with county zoning ordinance revision and farmland preservation zoning ordinance planning in the county. This document will fulfill that requirement by identifying appropriate lands to be included in the FP Plan and ensure the future of agriculture in the County.

For the last decade as Farmland Preservation Agreements expired, many landowners were not interested in re-enrolling in the program and Buffalo County has seen a steady decline in program participation. In 2009 there were 135 agreements in effect, and currently, in 2017, 37 active agreements remain. In five years, only 23 agreements will remain in effect with the last agreement expiring in 2034.

Once the revised agricultural zoning districts become effective, those landowners with farmland included in Agricultural/Natural Resource – 40 (ANR-40) district will have the opportunity to claim tax credits under the Farmland Preservation Program, provided their land meets Wisconsin conservation compliance requirements. The establishment of the ANR-40 district was intended to promote the preservation of farmland, a goal established in the Buffalo County Comprehensive Land Use Plan. The purpose of the ANR-40 district is to protect and preserve the historic use of prime soils for agricultural production and raising livestock, with other soil types and steeper slopes protected for natural resource production and harvesting uses such as commercial logging and silviculture. The ANR-40 district establishes policies intended to ensure the long-term stability, productivity, and sustainability of agricultural and natural resource lands and land uses. The intent of the ANR-40 zoning district is to strictly limit the intrusion of non-agricultural uses and development which can conflict with traditional and contemporary farming operations and practices. Zoning district maps were created based on input from landowners and officials in all 17 Towns. Each Town created their own Town zoning district map and again had opportunity to review and make revisions. ANR-40, the exclusive agricultural zoning district was included within portions of twelve (12) Towns.

Overview of Planning Process

Buffalo County has long recognized the need to balance farmland preservation with development activities (residential uses, establishment of businesses, and other non-agricultural uses) as both contribute to the County's economic stability, while acknowledging that agriculture has remained the number one source of income in the county. This document is the culmination of planning efforts by the Buffalo County Land Conservation Department and the Buffalo County Zoning Department, as guided by all seventeen Towns, as well as input from residents and landowners; it is intended to fulfill the requirements set forth in Wisconsin Act 28. The update process included review and update of all agriculture statistical information, development and/or reaffirm farmland preservation goals, identification of farmland preservation areas, and meetings with Town Boards and applicable Buffalo County Committees to gather information on farmland preservation. Specifically, Mississippi River Regional Planning Commission, under contract with the County

Zoning Department, met with all 17 towns to draft, review, and finalize each town's zoning map, which includes the Farmland Preservation district. The adoption of the Farmland Preservation Plan will allow for reasonable non-agricultural development and protect local natural resources, while preserving the rural farming heritage that has long defined Buffalo County.

PART I – BACKGROUND INFORMATION

This section provides details regarding Buffalo County’s existing demographics and infrastructure that were taken into consideration in the drafting of this document. In addition, this section describes the physical characteristics and geography of Buffalo County and provides insight into the County’s historical origins and trajectory leading up to the present day. Much of the information in this section was taken from the recently updated 2013-2033 Buffalo County Comprehensive Land Use Plan, with updates from USDA Census of Agriculture, UW-Extension, County Outdoor Recreation Plan, and WI-DNR.

Geography

Buffalo County is located within the unglaciated, Driftless Area of Western Wisconsin. Three rivers form part of its boundaries: the Chippewa on the northwest, the Mississippi on the southwest, and the Trempealeau on the lower eastern border. All of Buffalo County drains into the Mississippi River. In addition, Pepin and Eau Claire Counties form the northern border of the county, while Trempealeau County forms the eastern border.

The relief of the county is characteristic of the Driftless area, with extremely varied topography consisting of steep bluffs, high ridges, long narrow valleys, and areas of steeply sloping land in between. This system of ridges and valleys with deeply dissected terrain are called coulees; some of the roughest terrain in the state is found in Buffalo County. Bluff prairies rise above the river bottoms by 500 feet in some areas. Only a small corridor along the Mississippi River was ever glaciated, where floodplain terraces have been formed from glacial meltwater deposits.

Agricultural farmland typically occurs in the valleys and on ridge tops with exposed Bluff Prairies located at either end of a ridge or at the corner of a valley side. Steep slopes are generally forested; dominating the remaining landscape. Prime farmland soils mainly reside in the valleys due to deposition of the sediment and nutrients.

Buffalo County Existing Land Uses

Buffalo County consists of 17 civil towns, 4 incorporated cities (Alma, Buffalo City, Fountain City, and Mondovi), and 2 incorporated villages (Cochrane and Nelson); Alma is the county seat. The land area of the county is 700.5 square miles, or 448,364 acres. Buffalo County has 42.5 Mississippi River miles and is 38.5 miles long. The county is 27 miles wide at its northern end, but in the southern part it tapers gradually to a point near the confluence of the Trempealeau and Mississippi Rivers.

Agricultural land use is the dominant land use in the County, with Agricultural Forest a distant second of the total land area in the County. Table 1 below shows the current acreage of each of the assessed land-use types in the unincorporated municipalities of the County. According to ch. 70.32, Wis. Stats., Agricultural Land is defined as “land, exclusive of buildings and improvements, that

is devoted primarily to agricultural use,” while Agricultural Forest Land is defined as “land that is producing or is capable of producing commercial forest products.”

Table 1: Buffalo County Land Use: By Acres Per Property Assessments- 2012

Use	Acres	% of County
Agricultural Acres	207,904.8	63.04
Agricultural Forest Acres	68,077.5	20.64
Undeveloped Land Acres	23,105.9	7.00
Productive Forest Lands Acres	20,937.1	6.35
Residential Acres	4,989.5	1.51
Manufacturing Acres	647.9	0.19
Commercial Acres	614.9	0.19
Other (Federal, state, or county lands, schools, and cemeteries)	3,546.6	1.08
Total Acres	329,824.2	100.00

*Property Assessment 2012 (unincorporated areas of the county only) – County Treasurer.

In general, Buffalo County is a rural community, with industrial and commercial land uses making up a small percentage, and residential uses representing the bulk of development. Historically this development trend has shaped the landscape of the County. The majority of the County is expected to remain primarily in agricultural land use in the foreseeable future.

Current and future land use maps of Buffalo County are provided as Appendices C and D, respectively. The Future Land Use Map reflects the agricultural land use trend continuing in the future with minimal residential or commercial development on lands that are currently being used for agriculture.

Natural Resources

Any planning process designed to preserve agricultural resources must begin with an assessment of a county’s natural resources. Buffalo County is inextricably linked to and dependent on its rich natural resources, including its fertile soils, high quality and quantity of ground and surface water, timber production, and recreational resources. This chapter evaluates the abundant natural resources throughout the county. Natural areas within active agricultural areas provide habitat and connectivity for wildlife and protects water quality through stream and wetland buffers. Conservation and natural resource protection are essential to a healthy ecological landscape and productive agricultural community in Buffalo County.

Soils of Buffalo County

The USDA Natural Resources Conservation Service (NRCS) provides Buffalo County Soil Survey soil data and ecological site information through the Web Soil Survey. Soils in the county are generally underlain by sedimentary bedrock consisting of Cambrian sandstones and

Prairie du Chien dolomite limestone. The limestone once covered most of the surface of the county, but with erosion much of the historic plain has been deeply dissected and eroded away; with only remnants capping the ridge tops and higher hills remaining. Thin surface soil layers are underlain by sandstone and, at lower levels, a sandy-shale or shaley-sandstone. Outcroppings of bedrock are common, including sheer bluff faces along the Mississippi River.

Loess, alluvium, and colluvium form the uppermost geologic deposits, and in addition to the bedrock, are the parent materials for many of the soils in the county. Soil types range from shallow silty clay loams on steep rocky land to deep silt loams on the valley bottoms, with smaller areas of sandy outwash soils. Aeolian silt deposits range from 0.5 feet to 16 feet deep, with decreasing depths from southwest to northeast.

The Buffalo County Soil Survey describes ten different general soil associations in the county. These soil associations are as follows:

1. *Dorerton-Seaton-Newglarus Association* - Silty soils of the rolling uplands and steep stony and rocky land (Dorerton-Elbaville). As the largest and most uniform association in the county, the principal upland soils are Newglarus and Seaton. Mt. Carroll soils are also extensive. These silt-loam soils are underlain by dolostone or materials weathered from dolomite and were formed under forest (Seaton and Newglarus) or prairie (Mt. Carroll). Because of its size and extent, at 32.7% of the soil in the county, this association is important for agriculture and has the largest acreage of soils under cultivation. The soils are potentially highly productive, but are susceptible to water erosion unless managed properly.
2. *Norden-Urne-Churchtown Association* - Silty soils of the rolling uplands and steep footslopes (Churchtown-Lindstrom). As the 2nd largest and most uniform association in the county, the principal upland soils are Norden and Urne. Garne soils are also extensive. These silt-loam soils are underlain by glauconitic sandstone or materials weathered from glauconitic sandstone and were formed under forest (Norden and Urne) or prairie (Garne and Lindstrom). Because of its size and extent, at 26.4% of the soil in the county, this association is important for agriculture and has the 2nd largest acreage of soils under cultivation. The soils are potentially highly productive, but are susceptible to water erosion unless managed properly.
3. *Gale-Hixton-Hesch Association* - Found mainly in the northeastern part of the county, this association consists of rolling and hilly upland soils underlain by sandstone. Both are forest soils; the Gale series formed in loess over sandstone, while the Hixton and Hesch soils formed in a mixture of loess and from materials weathered from sandstone. The soils of this association have lower moisture hold capacity and productivity than the Seaton-Newglarus soils and have a high chance of erosion due to steepness of slopes and soil capacities. This association accounts for 1.6% of the soil in the county.
4. *Boone-Elevasil-Gaphill Association* - Sandy soils of the rolling to hilly sandstone uplands. This association is found mainly on the sandstone uplands of northern Buffalo County and is formed of materials weathered from sandstone. The narrow stream bottoms

within the association are alluvial lands, which are too wet or subject to frequent flooding for cultivation. These sandy soils are low in moisture-holding capacity, low in fertility, and are subject to both wind and water erosion. This association accounts for 5.1% of the soil in the county.

5. *Tarr-Merit-Impact Association* - The soils in this association are nearly level to rolling soils formed in sand that was transported by inland streams. Most of these sandy soils are located on stream terraces throughout the central and eastern parts of the county and have rather steep, well-defined escarpments derived from sandstone bedrock. Soils of this association are generally droughty, low in productivity, and subject to severe wind erosion. Areas of narrow valleys with alluvial soils are subject to severe gullyng if not protected and may be wet or frequently flooded.
6. *Plumcreek-Finchford-Plainfield Association* - The soils in this association are nearly level to rolling soils formed in sand that was transported by streams. Most of these sandy soils are located on stream terraces throughout the western part of the county and have rather steep, well-defined escarpments. Soils of this association are generally droughty, low in productivity, and subject to severe wind erosion.
7. *Festina-Ella-Toddville Association* - This association consists of deep silty soils, mainly on nearly level to sloping benches or terraces along streams. The soils range from well to poorly drained. Most of the soils in this association are highly productive, occur in fairly large areas and generally have mild relief. Some soils on bottom lands require drainage or protection from flooding. Soils with the steepest slopes, along the edges of the high benches, are subject to water erosion or severe gullyng.
8. *Bilson-Richwood-Bertrand Association* - Soils of this association consist mainly of nearly level to sloping, loamy to silty terrace soils underlain by siliceous sand on stream terraces, located along inland rivers, including the Buffalo River. They vary from well drained to moderately-well drained. These soils are subject to water erosion, gullyng, and slumping, and as a result, a large amount of sediment has been deposited in the valleys and terraces below.
9. *Arenzville-Ettrick-Chaseburg Association* - These wet, organic and mineral (peat and muck) soils occur on flats, bottomlands, or in depressions along streams and are well to poorly drained. While they are subject to flooding, they are highly productive if drained and well managed.
10. *Alganssee-Kalmarville-Markey Association* - These soils are wet, organic and mineral soils that occur on overflow bottomlands, where they are frequently flooded. The soils have formed in alluvium recently deposited by streams. Due to frequent flooding, most soils can only be used for pasture, as woodland, or for wildlife.

Prime Farmland

Prime farmland, as defined by the USDA-NRCS is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and that is available for these uses. It has the combination of soil properties, growing season, and moisture supply needed to produce sustained high yields of crops in an economic manner if it is treated and managed according to acceptable farming methods. Prime farmland mainly exists in valleys and on slopes with a grade of less than 6% in Buffalo County. These soils are not excessively eroded, saturated with water for long periods of time, or frequently flooded during the growing season. In general, prime farmland has an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, an acceptable level of acidity or alkalinity, an acceptable content of salt or sodium, and few or no rocks. Its soils are permeable to water and air. The Buffalo County Prime Farmland Map (Appendix A) shows the distribution of prime farmland soils in the county. Buffalo County does not currently have any restrictions in place for development on prime farmland soils.

Climate

The climate of Buffalo County lies in the temperate continental zone, which is characterized by moderately long, cold winters and by short summers that are warm and humid. The winters are slightly colder and the summers slightly warmer than in most areas of the state. In spring and autumn, the temperature changes rapidly and sharp freezes occur, but extremes of temperature and maximum fluctuations in temperature are more frequent in spring than at other times. Average annual precipitation is 37.5 inches; the majority falls in the form of thunderstorms during the growing season (May-September). Water from the spring snowmelt accounts for less than one third of the precipitation and runs off from the ridges into high gradient drainage ways into large floodplains. The relatively high rates of precipitation from the mild, continental climate along with exceptional recharge ability of the sandstone aquifer helps ensure an abundant supply of groundwater for our future generations.

Groundwater

Wisconsin has four main aquifers that contain useable amounts of groundwater; these aquifers contribute water to wells, spring, lakes, and streams. Groundwater is simply water in the ground, where it fills and moves through pores and cracks in the aquifer. Buffalo County is located in the Cambrian-Ordovician aquifer, or sandstone and dolomite aquifer. The deep sandstone and dolomite aquifer is the primary source of groundwater for much of the state.

Buffalo County residents rely entirely on groundwater for drinking water. The rural population depends on shallower, less protected aquifers than the urban population served by public water supplies. Most groundwater in the state is consumed by residential users for such needs as drinking water, cleaning, and sanitary purposes. Industry is the second largest groundwater consumer, followed by irrigation. Buffalo County has five municipal water systems: Alma Waterworks, Nelson Water & Sewer Department, Mondovi Waterworks, Fountain City Waterworks, and Cochrane Waterworks. Municipal well water is tested monthly and the findings are reported to the Wisconsin DNR.

The potential for groundwater contamination occurs when improper land use management practices are used for specific physical locations (soil, type and thickness, presence of glacial sediments such as sand and gravel, depth to bedrock, depth to groundwater, and topography). Runoff caused by unsuitable land use practices has the potential to drain into local streams as well as infiltrate into the sandstone aquifers below. According to the Wisconsin DNR Drinking Water data, there is a correlation between the type of soil and bedrock and amount of contamination in the groundwater. In the northern half of Buffalo County, the soils are more sandy, allowing the contaminants to permeate into the ground with more ease than in the southern half where the carbonate rocks reside.

Groundwater is an important resource for the agriculture community to be able to supplement the water needs for crops and is also used for dairying and other farming operations. Buffalo County currently has 102 permitted high capacity wells drawing from groundwater sources, according to the WDNR. A high capacity well is a well that has the capacity to withdraw more than 100,000 gallons per day. High capacity wells are used in the county to serve mostly agricultural facilities, including: 49 agricultural irrigation, 32 agricultural farming, 9 public utility and schools, and 8 miscellaneous wells (golf courses and quarry operations).

Abandoned or unused wells pose a great threat to the safety and quality of underground drinking water supplies. An unused well provides a direct path for contaminants and pollutants to the underground aquifers that supply working wells. In order to protect our groundwater from contamination, unused wells should be properly abandoned and inspected by a licensed pump installer or well driller. Another layer of protection for public health and safety of our groundwater is through regular well testing. The Wisconsin Bureau of Drinking Water and Groundwater recommends testing private wells at least once a year for coliform bacteria contamination, and recommends periodic testing for other contaminants, like nitrate, arsenic, or lead. Landowners with private wells can collect water samples for testing through assistance from the Buffalo County Health and Human Services Department, or other certified laboratories. The services provided by the County lab have proven to be a cost effective way for residents to obtain the recommended testing and help to ensure the future safety of the county's drinking water supply.

Surface Water

Buffalo County is defined by water; the Mississippi, Chippewa, and Trempealeau Rivers define the county borders. Streams in the county provide habitat to a variety of macro-invertebrates, riparian dwelling reptiles, and fish. They also serve as a watering source for cattle and wildlife, and a recreational and aesthetic resource for Buffalo County.

There are 1,070 miles of intermittent and 640 miles of perennial streams in the county, which include 175 miles of trout water. Trout populations are maintained by stocking adult-sized fish, however natural reproduction does occur. Trout habitat and water quality in Buffalo County streams have greatly improved due to improved land use practices. In 2016, the WI-DNR reclassified streams, based on population surveys, and designated all or part of 34 streams, totaling 175 miles in the county as Trout Streams. This is an increase from 73 miles and 21 streams that were classified in 2011.

Lakes are not a common feature of the Driftless landscape; there are only twenty-two lakes in the county, totaling 358 acres. Mirror Lake in Mondovi is the largest lake at 44 acres. One-half of the lakes have maximum depths of less than five feet, and their shallow depths make them subject to winterkill conditions.

Buffalo County has limited open water wetlands, with approximately 10% of the total land cover being wetland, or 47,294 acres. These are primarily riparian wetlands, located along the Buffalo, Chippewa, Trempealeau, and Mississippi Rivers. The Mississippi River backwater complex contains diverse fish habitat and is a critical spawning, rearing, dwelling, and over-wintering area for fish and wildlife. These expansive wetland areas play an important role in the ecology of the Mississippi River system.

303(d) Impaired Streams

Every two years, the Wisconsin Department of Natural Resources (WDNR) publishes a list of waters considered impaired under Clean Water Act Section 303(d). Impaired waters are those that do not meet water quality standards and may not support fishing, swimming, recreation, or public health standards. In 2016, two previously listed 303(d) impaired streams in the Waumandee Watershed (Joos Valley and Eagle Creek) were delisted due to improvements in land use management practices implemented through the Waumandee Creek Priority Watershed project and recovery of the stream's habitat quality. The 2016 Impaired Waters list includes 17 streams or rivers in Buffalo County not meeting water quality standards, either due to excessive total suspended solids or total phosphorus.

Total Maximum Daily Loads (TMDL)

As required by the Clean Water Act section 303(d), Total Maximum Daily Loads (TMDL) are approved for each impaired waterbody. A TMDL is the maximum amount of pollutant load that a waterbody can receive and still meet water quality standards and addresses management actions that will restore the biological integrity of these streams. TMDLs for Buffalo County streams suggest that implementation of conservation practices would have a number of positive effects on water resources. Stabilizing streambanks would increase available cover for adult trout and reduce sedimentation of riffles and pools. Installation of fish habitat structures would also improve general habitat conditions in trout streams where cover is lacking. Reduced sedimentation and bank erosion would also result in narrower and deeper streams, providing cooler temperatures and improved cover for adult fish. Increasing bank stability would further reduce the sediment load and could be accomplished by reducing the intensity of streambank grazing or through an established vegetative buffer along the stream corridor to filter any cropland runoff.

Forestry

Total forest land in Buffalo County is 168,000 acres or 48% of the county, with a majority being privately owned. Rich hardwood forests, oak woodlands, and floodplain forests generally make up the forest ecosystems found in the county. There are no designated County Forests, State Forests, or National Forest lands located in Buffalo County. As private lands are split and sold, the productive forest lands decreases. Forest lands provide economic, environmental, and social benefits, and provide farm income and jobs to the rural areas in both forest products and tourism.

See the Buffalo County Forest Land Map (Appendix B) for more detail and distribution in the county.

As of 2013, 75,707 acres of the County's woodlands were enrolled in the Managed Forest Law (MFL) Program. MFL is a state DNR landowner incentive program that encourages sustainable forestry on private woodlands in Wisconsin. MFL management places restrictions on development as well as agricultural production for the length of the MFL contract (25 to 50 years). Of the total MFL acres enrolled in the county, only 927 acres are open to the public for such activities as fishing, hunting, cross country skiing, and sightseeing.

Parks and Recreation

With the abundance of natural resources, the county has numerous recreational lands open to the public providing access to land and water resources. Table 2 below include public facility names and size (acres).

Table 2: Park and Recreation Facilities

	Name of Facility	Size (Acres)
<i>State Parks</i>	Merrick State Park	322
<i>State Natural Areas</i>	Big Swamp Tamarack Fen	354
	Lower Chippewa River	3,537
	Nelson-Trevino Bottoms	3,608
	Tiffany Bottoms	718
	Trempealeau River Meadow	443
	Whitman Bottoms Floodplain Forest	164
<i>State Wildlife Areas</i>	Big Swamp Wildlife Area	796
	Tiffany Wildlife Area	8,000
	Whitman Dam Wildlife Area	2,253
<i>Federal Wildlife Areas</i>	Upper Mississippi River Wildlife Refuge	240,000
	Trempealeau River National Wildlife Refuge	6,446
<i>The Nature Conservancy</i>	Twin Bluffs Natural Area	161
<i>Buffalo County</i>	Buffalo County Fairgrounds	10

Other Municipal Parks

Alma Beach and Recreational Park (Alma)
 Buena Vista Park (Alma)
 Buffalo City Park (Buffalo City)
 Foelsch Riverside Park (Buffalo City)
 Fountain City Park (Fountain City)
 Goose Lake Memorial Park (Cochrane)
 Harmonia Park (Waumandee)

Joseph Peterson Arboretum Park (Mondovi)
 Memorial Park (Mondovi)
 Mirror Lake (Mondovi)
 Rieck's Lake Park & Campground (Alma)
 Sharps Point Park (Mondovi)
 Thrive! Park (Nelson)
 Tourist Park (Mondovi)
 Veteran's Memorial Park (Buffalo City)

Non-Metallic Mining

Non-metallic mining in Buffalo County primarily consists of the excavation of sand, gravel, and stone. Traditionally extraction took place at rock quarries for road building materials and for field limestone. Recently the use of silica (frac) sand in the oil and gas industry and the demand created for the sand has impacted western Wisconsin, including Buffalo County. Industrial Sand Mining to extract silica sands became active in the area in 2011. There currently are four permitted Industrial Sand Mines in the County: one site under construction, two approved sites where construction never started, and one site currently producing a small amount of frac sand. A combination of the price of market sand, transportation, geology, ordinances, and agreements has resulted in no major Industrial Sand Mine operations within the county.

Currently there are 31 approved non-metallic mines in Buffalo County, mostly producing limestone quarry rock. Buffalo County recognizes the need for non-metallic mining operations as well as the importance of proper reclamation through an approved reclamation plan. Non-Metallic Mine reclamation is regulated by the Buffalo County Land Conservation Department.

Historical Land Use and Agricultural Development

The first permanent European settlement of Buffalo County was founded in 1839 at what is now Fountain City. The town was originally named "Holmes' Landing" after a family who traded with the Dakota and Ojibwe Indian Tribes that occupied the territory prior to the arrival of Europeans. Eventually German, Swiss, and Norwegian homesteaders settled the County, attracted by its lumber industry, rich soils, abundant water, and high-quality pastureland.

Twelve Mile Bluff (now known as the city of Alma) was established in 1848 at a time when the greater region was in the midst of a logging boom centered in the Chippewa Valley, an area containing over 10,000 square miles of dense hardwood and coniferous forest. While the County's own timber resources were limited at that time, logs harvested from the Chippewa Valley were floated down the Chippewa and Buffalo (formerly Beef) Rivers to be processed at sawmills that had sprung up all along the Mississippi River. Two of these sawmills, one built at Buffalo City in 1857 and another in Alma in 1865, created employment opportunities for local residents.

Agricultural development in the County began in the early 1850's, starting with the cultivation of the low valleys and the flatter, more open ridgetops. The land was relatively easy to break at the time due to the prevalence of natural prairies and oak openings. Poor roads and a lack of adequate

transportation, however, forced most farmers to settle near the shipping routes along the Mississippi River.

The first grain was grown in the county around 1852 in what would later become an extensive wheat-producing area. During the years from 1860 to 1870, wheat acreage soared from 5,608 to 41,703 acres. Through the 1880's, virtually all of the grain produced in the County was shipped out on Mississippi River steamboats; this export system was changed radically and permanently upon the completion of the Winona, Alma, and Northern Rail lines. The advent of the rail system revolutionized the transport of agricultural goods, and by 1890, the vast majority of the region's exported grain was being shipped by rail.

The Civil War increased the demand for grain and brought prosperity and wealth to those with large acreages in grain cultivation. After the war, Buffalo County was rapidly settled in a new flush of immigration to the area. These new immigrants cleared much of the County's timber and brush to convert it to agriculture. At the height of the wheat-growing era, 64,290 acres of the crop were being grown in the County.

Intensive agriculture eventually caused significant declines in soil fertility, compounded by the onset of soil erosion, plant disease, and crop damage by pests. Many settlers chose to move west rather than follow a program of crop rotations and fertilization. In time, with the fall of wheat prices and the emergence of the railway system, farm enterprises shifted to milk and cheese production, with local creameries appearing around the 1880's. This, in turn, was followed by the introduction and proliferation of purebred livestock, including dairy, beef and sheep.

Today, agriculture remains the leading source of income in the County, though it is more diversified than in the past. Agricultural mechanization, soil science, rotational cropping, and organic farming methods are continually being improved, resulting in increased crop yields and less runoff. Despite these scientific and technological improvements, the advancing sprawl of residential and commercial development by human populations poses an imminent threat to the preservation of our agricultural lands, including those lands containing our richest and most productive soils. According to the 2012 Census of Agriculture, more than one-third of Wisconsin's land (14.6 million acres) is used for crop production or raising livestock.

Socio-Economic Characteristics

Employment

According to the U.S. Census Bureau, 2007-2011 Survey, the majority of Buffalo County residents have occupations in the manufacturing, education/health/social services, and agriculture sectors. Buffalo County is also within commuting distance to manufacturing, education, and health care jobs offered in Arcadia, Eau Claire, La Crosse, Winona, Minnesota, and Rochester, Minnesota.

Buffalo County tends to have very low unemployment rates overall (Table 3) due to the wide variety of job opportunities in the region and the growth of industry in Arcadia (Ashley Furniture and Pilgrim's Pride (formerly Gold'n Plump Chicken)) and Mondovi (Marten Transport).

Table 3: Buffalo County Employment Statistics

Employment Status	Number	Percent
Population 16 years and older	11,050	100
Occupation		
Agriculture, Forestry, Fishing	712	10.2
Construction	659	9.4
Manufacturing	1,333	19.1
Wholesale Trade	232	3.3
Retail Trade	606	8.7
Transportation, Warehousing, and Utilities	549	7.9
Finance and insurance	409	5.9
Professional, management, etc.	311	4.5
Education, health care	1,328	19.0
Arts and entertainment	334	4.8
All others	507	7.2
Class of Worker		
Private wage and salary	5,356	76.7
Government workers	731	19.5
Self-employed	872	12.5
Unpaid family	21	0.3

US Census Data

Buffalo County Industries

Buffalo County has a very small manufacturing base. Only one manufacturing industry, La Crosse Milling (oat miller), is in the top ten employers in the County (Table 4). Most future employment opportunities will likely be located outside of Buffalo County.

Table 4: Buffalo County Top 10 Employers

Company	Service	Size
Marten Transport	Trucking	1,000+
Mondovi Public Schools	Education	100-249
CFC Public Schools	Education	100-249
County of Buffalo	Government	100-249
American Lutheran Homes	Nursing Care Provider	100-249
Dairyland Power	Electrical Power Generation	100-249
School District of Alma	Education	50-99
Midwest Dental	Dental Care	50-99
US Army Corp of Eng.	Engineering Service	50-99
La Crosse Milling	Oat Miller	50-99

Wisconsin Department of Workforce Development

Population, Housing, Municipal Growth, & Economics

Changes in population, housing availability, and economics are all factors that can affect land-use planning decisions and spur development. Given that the overwhelming majority of Buffalo County is rural and agricultural in its land use, it is anticipated that some of these areas may be targeted for future residential or business development.

Population

In the last 5 decades Buffalo County's population has fluctuated, but has remained relatively stagnant overall. According to the US Census Bureau and WI Department of Administration (DOA) statistics, the County saw a total population loss of 4.6% (615 persons) between 1960 (population: 14,202) and 2010 (population: 13,587), with an average population loss of 0.84% every 10 years.

Population & Housing Densities

As is true throughout the State, housing and the location of available housing are important to Buffalo County for emergency services response times, daily work commutes, its relation to traffic patterns, access to shopping and recreation centers, and travel. Population density in Buffalo County is 19.9 people per square mile and the housing density in the County is 9.36 houses per square mile. According to Table 5, Buffalo County has the lowest population density of all its neighboring Wisconsin and Minnesota counties. Jackson County's population density was only slightly higher, at 20.7 people per square mile, though their total population is over 38% larger than Buffalo County's.

Table 5: Comparison of Population Density

	Population Density	Population Total	Population Density	Population Total
	2000		2010	
Wisconsin	98.8	5,363,675	105.0	5,726,398
Buffalo County	20.2	13,804	19.9	13,587
Jackson County	19.3	19,100	20.7	20,449
Pepin County	31.1	7,213	32.2	7,469
Trempealeau County	36.8	27,010	39.3	28,816
Pierce County	69.3	36,804	71.5	41,019
Wabasha County, MN	41.2	21,610	41.4	21,664
Winona County, MN	79.8	49,985	82.2	51,461

2000 US Census Bureau

Population & Housing Forecasts

In the last five decades Buffalo County's population and housing has decreased and development is not expected to increase in the next 20 years. If future land area is needed to accommodate any future growth, land-use planning will become a critical component for development. In addition to the new housing to meet any increase in population, additional housing construction may be necessary to replace older housing structures as they deteriorate. Over 35% of the total housing units in the county will approach 100 years of age over the next 20 years. Accommodating an aging population will also be necessary in the near future, and may include the construction of assisted living centers, apartment complexes for the elderly, and other types of housing that are conducive to senior living.

Development Projections

Buffalo County expects limited development in the foreseeable future due to its rural composition, distance from major interstate routes, limited employment opportunities, and modest population projections. The majority of development within the County has historically been residential. In an effort to increase and preserve farmland and reduce the number of converted agricultural lands, the Buffalo County Comprehensive Plan recommends a number of goals, objectives, and actions to manage the location of future housing growth. The Zoning Committee uses the Comprehensive Plan and Zoning Ordinance as a guide to maintain a balance between regulation of current and potential property owners within the County, and development that does not conflict with other land uses. New development, including multi-family dwellings and elderly housing, will be directed to villages and cities rather than the rural areas, which will ensure easier access to the services provided in the incorporated areas of the county and will not displace agricultural lands.

Utilities, Infrastructure, & Community Facilities

The foundation of a successful community land-use plan should provide opportunities for adequate housing, along with utilities, infrastructure, and community facilities. Utilities, adequate infrastructure, and community facilities provide critical services and fundamental benefits to the residents of Buffalo County. Public infrastructure is available in several Cities, Villages, and Towns throughout the county, providing potential growth areas for future residential development. Concentrating residential development to these areas preserves agricultural land and is more sensitive to the environment.

Electrical & Natural Gas

As newer electrical devices continue to become more accessible, the demand for cheap renewable energy will continue to rise. As a state, we have seen our demand for energy grow by about 2 percent annually during the past decade, with residential energy usage increasing by 3 percent and commercial use growing by more than 5 percent. Buffalo County is serviced by two electric power generation sources, Xcel Energy and Dairyland Power Cooperative. These two organizations produce and transmit all of the County's electricity from their power generation facilities to their cooperative members via their transmission lines and Xcel's limited distribution grid. The new CapX2020 Transmission Line provides much needed upgrades to the electrical grid throughout Buffalo County. The roughly 140-mile, 345-Kilovolt (kV) transmission line runs from Hampton

Rochester, Minnesota to La Crosse, Wisconsin, with approximately 25.48 miles located in Buffalo County. The majority of the power delivered to the residents of Buffalo County comes from the Dairyland coal-powered plants located just outside the City of Alma.

Currently only Midwest Natural Gas, Inc. provides natural gas services within Buffalo County. Most of the 1,233 residents' serviced by Midwest Natural Gas, Inc. can be found around the City of Mondovi, with only a few exceptions on the border between Buffalo and Trempealeau counties. At this time, Midwest Natural Gas, Inc. has no plans to expand their distribution of natural gas any further into Buffalo County. Low population densities and long distances make any expansion an expensive undertaking for Midwest Natural Gas, Inc.

Water Supply

Buffalo County residents rely entirely on groundwater for drinking water. Roughly 61 percent of rural residents are served by private wells, while an estimated 39 percent of all Buffalo County residents are served through five municipal water supply systems. These systems are fed by 8 high-capacity municipal wells pumping anywhere from 34,000 gallons per day to 576,000 gallons per day. (Table 6).

Table 6: Municipal High Capacity Wells

Municipal Water Supply Name	Normal Well Pump Capacity Gallons Per Day (gpd)	Population Served by Facility	Well Depth (Feet)	Construction Year
Alma Waterworks	Well 1- 216,000	863	440	1910
	Well 2 – 128,000		488	1961
Cochrane Waterworks	49,000	450	100	1981
Fountain City Waterworks	34,000	983	305	1965
Mondovi Waterworks	Well 1 – 216,000	2,667	384	-----
	Well 2 – 324,000		373	1972
	Well 3 – 576,000		444	1995
Nelson Water & Sewer Department	180,000	375	90.5	1968

Wisconsin DNR Drinking Water System, Last Revised: 06/12/2013

Wastewater Management

Private on-site Wastewater Treatment Systems (POWTS) serve the majority of Buffalo County residents. All residents residing in the more rural regions of the County (an estimated 3,500 systems) are dependent on private POWTS. In addition, the City of Buffalo City residents are served by on-site POWT Systems (approximately 1,017 residents). Due to setback regulations and the need for private well systems, land use may not be maximized resulting in possible sprawl of the city. Soil capacity concerns, proximity to the Mississippi River, and the potential health effects of the high density of POWT Systems in Buffalo City and surrounding communities indicate the need to explore methods of creating a municipal sewer system. The cities of Fountain City,

Mondovi, Alma, and the Villages of Cochrane and Nelson, along with the Town of Waumandee all own and operate a municipal wastewater treatment facility (WWTF).

Solid Waste

All municipal landfills in Buffalo County were closed in the 1980s. The County is currently managing residential waste removal through an agreement with the City of La Crosse. There are currently no plans to establish any new municipal landfills.

Telecommunications Facilities

The hilly terrain and rural landscape of Buffalo County continue to cause inconsistent coverage throughout the County. This has resulted in gaps in both wireless phone and broadband internet coverage in some of the more rural portions of the County. As of 2017, Buffalo County was officially certified as a Broadband Forward Community with expansion grants being offered to improve high-speed Internet services countywide. In addition, advances in technologies and better tower siting practices are continuously improving coverage. Due to the increase of wireless communication for public safety, business, and personal use, Buffalo County has recently addressed the construction of telecommunication towers through the Buffalo County Zoning Mobile Tower Siting Ordinance. The chapter regulates siting to minimize adverse effects of mobile service facilities and support structures while ensuring the expansion of coverage and the implementation of newer technologies. Currently Buffalo County has 20 existing communication towers with 3 permitted and planned for future construction.

Other Government Facilities

Built in 1962, the Buffalo County Courthouse, in Alma, serves as the seat of county government. This facility houses all county offices as well as additional rental office space for federal and state agencies. The 1988 southern addition added approximately 12,320 square feet to the overall building footprint. No future expansions are anticipated at this time.

Buffalo County owns and maintains five highway shops located throughout the County. the Alma Highway Shop is located off State Road 37 and is the largest of the Buffalo County highway shops. Due to its close proximity to the County courthouse and its relative central location within the County, this facility has become the primary hub for equipment maintenance, administrative offices, and field operations.

Police and fire protection are available within the incorporated areas and are adequate to meet current and projected county-wide needs. Schools, libraries, and other community facilities are also generally located near incorporated areas and have adequate capacity to meet current and projected demand.

Transportation

Within Buffalo County the highway network currently receives the vast majority of public investment and holds the most importance for development and growth in the short term. Transportation of goods across the nation is delivered by road, water, and rail and generally follows the Mississippi River corridor along the western edge of Buffalo County.

Highway System

The highway system within Buffalo County is comprised of 1,042 total miles that fall under the jurisdiction of the Wisconsin Department of Transportation, the Buffalo County Highway Department, and the various Cities, Villages, and Towns within the County. While the regional transportation system is truly multi-modal, it is the highway network of Buffalo County that moves people and goods throughout the County. The highway network receives a substantial level of public investment in order to maintain the system. Budget restraints will continue to pose a challenge for road maintenance across all jurisdictions.

Interstate Bridges

A unique reliance on two interstate bridges at Wabasha, MN and Winona, MN exists for most of the residents of Buffalo County. Because of the rural nature of the county and the distance to major Wisconsin urban areas like Eau Claire and La Crosse, a majority of Buffalo County residents depend on access provided by these two Mississippi River bridge crossings. This reliance ranges in importance from emergency medical services and job access to commerce and entertainment.

Air

Regional air service is available outside of the county at La Crosse Municipal Airport and Chippewa Valley Airport. Two private light aircraft airports operate in Buffalo County: one in the Town of Maxville (Durand Airport) and one in the Town of Naples (Log Cabin Airport).

Rail

The Burlington Northern & Santa Fe (BNSF) Railway Company operates along the western portion of Buffalo County. This track is currently used as a major east-west national route with this portion connecting Chicago to the east and Minneapolis/St. Paul to the west. Local sidings are infrequently used at Dairyland Power Cooperative in Alma and La Crosse Milling Company in Cochrane. Additionally, existing maintenance sidings are found in Nelson, Alma, and Bluff Siding. Canadian National Railway Company owns an existing infrequently used feeder rail line from Marshland to Arcadia on the southern tip of Buffalo County.

Water

The Upper Mississippi River forms the western border of Buffalo County. This waterway connects Minneapolis- St. Paul and the Upper Midwest ports to world markets via commercial barge traffic. The US Army Corps of Engineers is responsible for operating the Mississippi River locks and dams and by maintaining the Nine-Foot Navigation Channel. The Corps supports navigation, maintenance, and emergency response locally at the Support & Service Base in Fountain City. Except for the coal dock at Dairyland Power Cooperative in Alma, there are no commercial barge loading facilities located within Buffalo County. The port of Winona, MN is the closest location to Buffalo County.

Recreational Trail Facilities

Buffalo County currently has one existing recreational trail and two proposed recreational trails that will increase recreational opportunities in Buffalo County. The Buffalo River State Trail is an existing All-Terrain Vehicle trail which terminates in Mondovi and runs east into Trempealeau County. This ATV trail is part of the Wisconsin DNR Trail System. The proposed Winona-

Connector Trail will connect the Great River State Trail (which presently terminates at the Buffalo/Trempealeau County line) to the City of Winona, MN. This connector will link Minnesota and Wisconsin bicycle trail systems and promote regional recreation facilities for Buffalo County. The proposed Flyway Trail is a multi-use paved trail that will be located between Nelson, WI and Winona, MN along the Mississippi River. In addition, a network of snowmobile trails are maintained on mostly private lands by local snowmobile clubs using DNR snowmobile registration funds.

PART 2 – LAND-USE, AGRICULTURE, & FARMLAND PRESERVATION PLANNING

Buffalo County has abundant agricultural resources as well as quality land and water resources, and our lives depend on and will affect these resources. The continued viability and sustainability of our agricultural lands is critical to the future of farming in Buffalo County and its contribution to the local economy.

Fortunately Buffalo County's agricultural lands have not been lost to development when compared to other parts of the state and there is little reason to expect a significant increase in development pressure in the near future. Agriculture land use has changed, and fewer farms exist due to farm consolidations and movement away from dairy operations, rather the result of development encroachment. More changes are on the way, due to changing demands of resources, land ownership of absentee landowners, and economics. The Farmland Preservation Program will continue to provide farmers with conservation based tax credit opportunities and ensure the preservation of the County's agricultural lands and other natural resources.

Agricultural Land Use

Agriculture has historically been, and continues to be the predominant land use throughout the county and is projected to remain so in the foreseeable future. As of 2017, there has been little pressure to significantly expand its residential and commercial districts at the expense of encroachment on agricultural lands. Trends in agricultural resources and agricultural land were evaluated for Buffalo County over the last ten years.

Table 7 illustrates changes in number of farms, average size of farms, and land in farms in Buffalo County from 1979 through 2012. Since 1979, Buffalo County has seen a loss of 81,698 acres of land in farms or a 21% decrease in farmland. The trend also shows that the number of farms has decreased by 19% since 1979. Though farmland and the number of farms decreased, the size of farms (acreage) has remained somewhat consistent within the past 10 years, and is above average as compared to the 2013 statewide average farm size of 194 acres per farm.

Table 7: Change in Farm Size (Acres) From 1979 to 2012

Year	Number of Farms	Average Size of Farms (Acres)	Land in Farms (Acres)
1979	1,310	295	387,000
1989	1,120	338	378,000
1998	1,170	291	341,000
2002	1,128	280	316,132
2007	1,229	250	307,035
2012	1,061	288	305,302

At one time, dairy production was the prevailing agricultural practice across Buffalo County; however, there has been a steady, long-term shift away from dairying in favor of cash-cropping due to reduced milk prices and other economic factors. The advancement of equipment and seed

technologies, for example, in combination with ever-increasing domestic and global demand for grain has made cash-cropping a much more profitable and reliable option for many farmers. This shift has resulted in a reduction in pastureland acres, with cropland land use acres increasing.

Table 8 below enumerates the current acreage of each of the assessed land-use types in the unincorporated municipalities of the County. Agricultural and Agricultural Forest make up the dominate land uses in the County. Only 3% of the county is assessed as residential, commercial, or manufacturing. The table also shows the value of land devoted to each land use in 2012. The majority of the county is expected to remain primarily in agricultural land-use in the foreseeable future, with land values expected to increase. The increase in per-acre land prices sold in Buffalo County can be attributed to the increased demand for recreational land, often used seasonally for whitetail deer hunting.

Table 8: 2012 Values (unincorporated areas only) – County Treasurer, 2012 Real Estate Valuation (in thousands of dollars)

	Property Assessments (Acres)	% of Total Land	Real Estate Valuation (\$1000 Dollars)
Residential	4,989	1.50	267,385
Commercial	615	0.18	13,339
Manufacturing	648	0.20	3,881
Agricultural	207,905	63.04	27,059
Undeveloped Land	23,106	7.00	14,454
Agricultural Forest	68,077	20.64	94,806
Productive Forest Lands	20,937	6.35	56,696
Other*	3,546	1.08	148,052

*Other is defined as the area in a parcel (improvements and land) not devoted primarily for agricultural use, such as house, barn, silo, right-of-way, and lawn around the house.

Table 9: Agricultural Land Sales

Year	Agricultural land continuing in agricultural use			Agricultural land being diverted to other uses			Total of all agricultural land		
	Number of transactions	Acres Sold	Dollars per acre	Number of transactions	Acres Sold	Dollars per acre	Number of transactions	Acres Sold	Dollars per acre
1998	30	2,288	1,052	37	1,676	1,124	67	3,964	1,083
2000	29	2,651	1,201	34	1,595	1,306	63	4,246	1,240
2005	27	2,080	2,177	15	612	2,978	42	2,692	2,359
2010	17	1,141	2,941	8	260	2,965	25	1,401	2,945
2012	26	2,035	4,116	7	186	4,161	33	2,221	4,120

USDA, NASS Statistics Service.

Table 9 illustrates whether agricultural land sold remained in agriculture or was diverted to another use. Within Buffalo County most agricultural lands sold are remaining in agriculture, with 30% going to other uses. Given the steep topography of the county, there is little opportunity for the remaining forest land to be converted to crop production to make up for the agricultural land that has been lost or converted to other uses.

Significant portions of Buffalo County's land-base have been purchased as prime hunting recreational land use in recent years due to the County's reputation as a premier whitetail deer hunting destination. Often, these are "absentee" land purchases; in fact, 41% of Buffalo County landowners do not have a primary address within Buffalo County. Recreational land purchases do not appear to pose an immediate threat to the County's existing agricultural lands in terms of net acreage loss, as these landowners usually rent their cropped acreage to neighboring farmers and allow continued cultivation. Absentee land-ownership in Buffalo County is beginning to draw attention due to the land-use changes that have resulted from these land acquisitions; in fact, absentee recreational land purchases and subsequent conversion to Managed Forest Land (MFL) may be of greater concern to agricultural land displacement than the threat of future development. Among other concerns, absentee landowners may not understand agriculture, the need for best management farming practices, or the value of preserving the County's agricultural land base.

Agricultural Operations and Economic Growth

Agriculture remains vital to Buffalo County's economic well-being. Agriculture provides economic growth, jobs, and opportunities for business development. Agriculture provides 2,716 jobs for Buffalo County residents and \$724 million in economic activity. Defining the economic and business impacts of agriculture on the county will help in determining the best ways to secure the future of agriculture through farmland preservation planning.

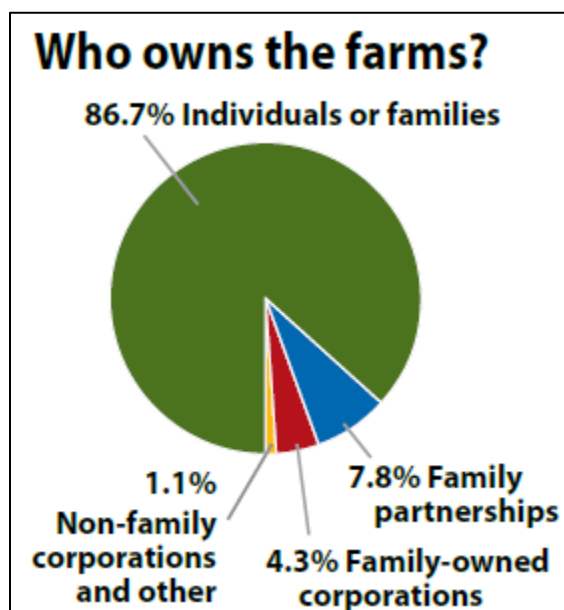
Table 10 illustrate how farm ownership is organized. Over the period of 2002-2012 the number of family or individual owned farms has decreased by 76 farms and 24,259 acres total. Over the same time period the number of Corporation: family held farms has increased by 9 farms with 9,954 acres. However, the vast majority (86.7%) of farms in the county are still family or individually owned (920 farms).

TABLE 10: Type of Farm Organization

Buffalo County	No. of Farms	No. of Acres	No. of Farms	No. of Acres	No. of Farms	No. of Acres
	2002		2007		2012	
Family or Individual	996	242,005	1,068	218,438	920	217,746
Partnership	88	36,609	101	45,783	83	46,792
Corporation: family held	37	28,396	49	40,282	46	38,350
Corporation: other than family held	5	1,238	1	-	2	-
Other-cooperative, estate or trust, institutional, etc.	2	-	10	-	10	-
Total Farms	1,128	316,132	1,229	307,035	1,061	305,302

Source: <http://www.agcensus.usda.gov/Publications/index.php>, USDA Census of Agriculture

Buffalo County farmers own and manage 305,302 acres, or 71% of the county's land. This includes cropland, rangeland, pasture, tree farms, and forests. As stewards of the land, farmers are responsible for applying good conservation practice management to protect natural resources and soil health. Buffalo County agriculture supports natural resource protection and embraces tourism through cabin and house rentals for whitetail deer hunters and trout fishing visitors.



Source: UW Extension – Buffalo County Agriculture: Value & Economic Impact

NR243 – Concentrated Animal Feeding Operations

Under Chapter NR 243, WDNR regulates livestock operations with 1,000 or more animal units. These CAFOs (Concentrated Animal Feeding Operations) require a Wisconsin Pollution Discharge Elimination System (WPDES) permit. Currently there are five (one swine and four dairy production) CAFO farms in Buffalo County, located in the towns of Gilmanton, Naples, Nelson, and Waumandee. The largest operation has 1962 animal units.

Table 11 indicates the number of farms by livestock, poultry, and crops in the County. The information illustrates the changes in farming as the number of farms with milk cows in the county dropped by 45.4% from 2002-2012 but the number of milk cows only dropped by 11.0%. Hogs and pigs saw a decline in both number of animals (-40%) and number of farms (-78.8% or 5,776 farms) over the 10-year period. The number of layers increased (102,306 animals or 46.7% increase) from 2002-2012, as well as the number of layer farms (27 farms). Poultry operations have recently shown an increase in numbers due to the demand from a local poultry processing company in Arcadia (Pilgrim's Pride, formerly Gold N' Plump). Buffalo County Zoning has approved 9 new poultry buildings in 2017, with an expectation of 60 to 70 new poultry barns in Buffalo and Trempealeau Counties in the next 4 to 5 years.

Table 11: Livestock and Poultry

Buffalo County	No. of Farms	No. of Animals	No. of Farms	No. of Animals	No. of Farms	No. of Animals
	2002		2007		2012	
Cattle & calves inventory	629	63,562	586	63,296	475	64,622
Beef cattle	269	6,120	302	7,760	243	6,574
Milk cows	262	20,686	197	18,573	143	18,401
Cattle & calves sold	558	26,014	504	26,916	403	25,905
Hogs & pigs inventory	40	7,324	35	2,886	24	1,548
Hogs & pigs sold	48	9,832	42	4,350	16	2,073
Sheep & lamb inventory	22	1,971	30	1,896	32	1,172
Layers inventory	52	116,642	76	184,651	79	218,948
Broilers & other meat-type chickens sold	28	12,187,100	53	19,760,965	56	20,890,781

Agricultural activities in Buffalo County has seen a recent shift from dairy operations to cash-cropping (primarily corn and soybeans) due to the decline of milk prices and other factors. Corn is the largest crop by acreage grown in the County in 2012 with 67,741 acres. (See Table 12, next page) Forage land used for hay, grass silage & green chop is second at 44,360 acres followed by soybeans at 25,478 acres. Interesting to note that corn for grain increased 16.6% and soybeans for beans increased 22.6% from 2007 to 2012, while acreage for wheat for grain decreased 64.6%. In addition, Buffalo County is home to a number of specialty crop and agricultural product operations, including grape vineyards, berry farms, apple orchards, and one composted cow manure production facility.

Specialty Crops, Specialty Farm Production, Etc.

Specialty crop farming and specialty animal production may provide additional agricultural production opportunities within developing commercial and residential areas where large tracts of agricultural lands are not available. Unlike traditional row crops such as corn or soybeans, the profitability of farming nontraditional crops is not closely tied to large acreage requirements. Specialty crops can provide substantial revenues to the County's economy while diversifying and stabilizing the agricultural industry in the face of increased development pressures. They can provide supplemental income opportunities for traditional farm operations as well as opportunities for hobby farms and recreational landowners. A local market to support specialty crops is critical for growth. Buffalo County has numerous small scale specialty crops and productions, including: honeybee production, milk goats, wool production, fruit orchards, organic vegetables, and organic grain for milling.

Table 12: Buffalo County Crops

Buffalo County	No. of Farms	No. of Acres	No. of Bushels/tons	No. of Farms	No. of Acres	No. of Bushels/tons
	2007			2012		
Corn for grain	567	56,516	7,259,697	568	67,741	9,673,413
Corn for silage or greenchop	256	10,474	194,182	207	10,334	197,986
Wheat for grain	8	288	15,571	4	102	4,613
Oats for grain	142	2,816	160,402	95	2,089	113,006
Barley for grain	17	433	24,680	10	289	12,890
Soybeans for beans	230	19,650	690,559	270	25,478	1,091,842
Forageland for hay, haylage, grass silage, & greenchop	652	51,177	172,476	555	44,360	160,853
Vegetables harvested for sale	15	177	NA	14	146	NA
Land in orchards	7	21	NA	8	29	NA

Organic Farming

Wisconsin has experienced increased growth in organic agriculture since the National Organic Program was enacted in 2002. The number of organic farms in Wisconsin grew 157% from 2002 to 2007, with 1,137 farms certified organic in 2012. Within Buffalo County, there were 27 farms used for organic production in 2012. The following table taken from the Census of Agriculture shows the number and acreage of organic farms in both Wisconsin and Buffalo County. Unfortunately, the Census of Agriculture did not report organic farm acreage in the 2012 report.

Table 13: Organic Agriculture

	Wisconsin		Buffalo County	
	2007	2012	2007	2012
Total farm acres used for organic production (farms)	1,443	1,137	28	27
Total acres used for organic production (acres)	147,120	-	5,170	-
Farm acres being converted to organic production (farms)	759	240	13	2
Acres being converted to organic production (acres)	33,896	-	666	-

Table 14 identifies Buffalo County farm operations by North American Industrial Classification System (NAIC) classification. Grain farming, crop farming, dairy, and beef cattle farming are the dominant farming operation types in Buffalo County. The category with the largest increase in

number of farms between the years 2002-2012 was grain farming which grew by 182 farms, or 96.8%. The category with the largest decrease for that same time period was cattle feedlots which decreased by 64 farms or 87.7%.

Table 14: Farms by North American Industrial Classification System (NAIC)

Buffalo County	NAIC #	2002 (# farms)	2007 (# farms)	2012 (# farms)	% Change 2002-2012
Total farms		1,128	1,229	1,061	-5.9
Oilseed and grain farming	1111	188	250	370	96.8
Vegetable and melon farming	1112	2	10	4	100
Fruit and tree nut farming	1113	1	6	7	600
Greenhouse, nursery & floriculture	1114	9	13	10	11.1
Other crop farming	1119	281	333	226	-19.5
Beef ranching and farming	112111	195	203	153	-21.5
Cattle feedlots	112112	73	61	9	-87.7
Dairy cattle and milk production	11212	251	185	128	-49
Hog and pig farming	1122	6	9	-	-
Poultry and egg production	1123	41	71	67	63
Sheep and goat farming	1124	10	18	20	100
Other animal production	1129	71	70	67	-5.6

Source: <http://www.agcensus.usda.gov/Publications/index.php>, USDA Census of Agriculture

Market value of agricultural products sold on Buffalo County farms and the average sales per farm has been increasing. The market value of livestock, dairy, and poultry products and the average sales per farm increased from 2002 to 2012 in Buffalo County. The increase was led by poultry which went from a value of \$25,647 in 2002 to a value of \$59,408 in 2012 for a \$33,761 (131.6%) rise. Milk and other dairy products also showed a large increase in market value in 2002-2012, up 62%. During this same time period, farm production expenses increased and farm-related income grew at a consistent percent increase.

Table 15: Total Market Value of Agricultural Products Sold (1000's) – 2002, 2007, 2012

Buffalo County	2002		2007		2012	
	# farms	Amount (\$1,000)	# farms	Amount (\$1,000)	# farms	Amount (\$1,000)
Total livestock, poultry, & their products	639	82,764	635	132,794	506	153,304
Poultry and eggs	62	25,647	118	48,661	104	59,408
Cattle and calves	558	13,724	504	19,843	403	24,203
Milk & other dairy products from cows	269	42,363	-	-	144	68,920
Hogs and pigs	48	700	42	484	16	333
Sheep, goats, & their products	22	-	-	-	36	166

Agri-Tourism is another opportunity that can benefit small and medium-sized farms and enhance the local economy. Agri-tourism through economic development can provide support to local businesses by creating demand for new services and providing supplemental income to agricultural operations. Sales made directly at a farm often results in greater returns to the grower than if agricultural commodities are sold at wholesale prices. The economic impact of agri-tourism is more immediate and provides a direct connection between the locally owned and operated producer and the consumer. Table 16 indicates that Buffalo County had 40 farms providing this service in 2014 generating \$160,000 annually to the county economy.

Table 16: Agri-tourism and Recreational Services – 2002, 2007, 2014

Buffalo County	2007		2012		2014	
	# of farms	Amount	# of farms	Amount	# of farms	Amount
Agri-tourism & recreational services	27	\$132,000	32	\$185,000	40	\$160,000

Source: USDA Census of Agriculture and UW Extension- Buffalo County

Agricultures Economic Impact on Buffalo County

Agriculture works hard for Buffalo County every day. Family-owned farms, food processors, and agriculture-related businesses generate thousands of jobs and millions of dollars of economic activity while contributing to local income and tax revenues. The economic contribution of agriculture through producers purchases of seed, feed, fertilizer, fuel, agricultural chemicals, and equipment from suppliers, and the commodities produced that are subsequently sold at market are significant. A diversity of agricultural businesses are located within the County such as meat and food processing, equipment dealers, specialty crop sales, seed dealers, farm chemical dealers, greenhouses and nurseries, roadside stands, and grain elevators that contribute to the County's economy through property taxes, sales tax, and employment. Agricultural processing makes up the largest share of Buffalo County agriculture. Processors contribute \$414.8 million to the county economy. Agricultural processing accounts for 876 jobs and \$98.5 million of Buffalo County income.

Agriculture is the number one source of income, with dairy, poultry, beef, and cash grain the leading enterprises. Buffalo County agriculture provides 2,716 jobs or 31.1% of the county's workforce. The diverse county agriculture includes two flour mills – with one offering exclusively organic products – a growing grape and wine industry, small fruit production, and a host of other crops. Farmers continue to explore ways to balance commercial agriculture with preservation of natural resources. Agriculture accounts for \$724 million in economic activity and contributes \$211 million to the county's total income.

Maintaining the agricultural base and preserving farmland is vital to the county economy. Economic activity associated with Buffalo County farms and agriculture-related businesses generates \$10.1 million in local and state taxes. (Table 17) This figure does not include all property taxes paid to support local schools. If it did, the number would increase dramatically.

Table 17: Taxes paid by agriculture

Taxes	Amount
Sales tax	\$2.3 million
Income tax	\$2.8 million
Property tax	\$3.0 million
Other	\$2.0 million
Total	\$10.1 million

Source: UW Extension – Buffalo County Agriculture: Value & Economic Impact, 2014

PART 3 – GOALS, OBJECTIVES, & POLICIES: FOR THE PRESERVATION OF FARMLAND AND ECONOMIC DEVELOPMENT OF AGRICULTURE

Goals and Objectives

The Buffalo County Farmland Preservation Plan is intended to provide a focused, local strategy to guide development, preserve prime farmland, promote local agricultural economies, and protect our natural resources.

The overall goal is to ensure the preservation and sustainability of the County's agricultural lands, waters, and undeveloped natural resource areas.

The following objectives were developed to meet that goal:

- Preserve prime farmland and important agricultural land by focusing development.
- Reduce the conversion of productive agricultural lands and undeveloped natural resource lands to non-agricultural development.
- Implement land-use planning that recognizes and actively seeks to prevent land-use conflicts that could negatively impact the agricultural land base and other natural resource areas; encourage Towns to incorporate similar strategies in their land-use planning.
- Protect and preserve natural resources and the rural landscape, including: soil, groundwater, streams, wetlands, woodlands, and bluff prairies.

Farmland Preservation Plan Goals, Objectives, & Policies

Identified below are the specific Farmland Preservation Plan goals with objectives and policies to be used in guiding farmland preservation within Buffalo County. People increasingly choose to live in Buffalo County for reasons related to its natural beauty, small town atmosphere, and agricultural base. Economic development must be balanced with the lifestyle preferences of Buffalo County residents.

Goal: Preserve agriculture, the environment, and the rural landscape.

- Minimize development on land defined as prime agricultural, wetland, or floodplain.
- Support land uses which preserves open spaces, while discouraging the conversion of productive agricultural land to non-agricultural land.
- Support agricultural conservation programs that require ATCP 50 and NR151 agricultural performance standard compliance. Encourage development of Agriculture Enterprise Areas (AEA) and Farmland Preservation Zoning Districts.
- Support land use practices that reduce potential conflicts between agriculture and other non-agriculture land uses.

Goal: Maintain the productivity and sustainability of the county's agricultural areas for current and future generations.

- Buffalo County farmers have transitioned away from animal agriculture to a row crop base. This shift has been driven by economics and by lifestyle changes. With fewer acres in long term hay rotations, soil erosion has increased. Controlling runoff and erosion through conservation is imperative, without it significant economic implications due to productivity loss, water quality restoration costs, and the costs of soil amendments would be monumental on a county-wide scale.
- Promote conservation programs and best management practices that reduce topsoil losses and protect surface and groundwater quality.

Goal: Promote agriculture and farming Value-Added Production and Products so that farming remains economically viable

- Maintain, support, and enhance agriculture as a strong component of the county's economy through promotion of diverse agriculture ventures. Buffalo County has tremendously productive soils with the potential to produce many different crops, though many of these soils lie on steep slopes. Sustainable production should be a key factor for deciding appropriate locations, as well as maintaining consistencies with Town and County comprehensive plans.
- Support businesses that utilize local agricultural products, support infrastructure development in these rural areas, and encourage a diverse agriculture land use at appropriate locations. Examples of existing value-added businesses that provide diverse local agricultural products include:
 - Direct honey sales
 - Goat milk products
 - Wineries
 - Wool and fiber products
 - Organic flour milling
 - Vegetable CSA's
 - Small fruit production and sales
 - Compost

Goal: Support and promote forestry industries within the rural parts of the county.

- Encourage value-added forest and wood products and quality timber stand improvement.
- Support sustainable forestry management practices. Valuable timber continues to be sold as a commodity or as a raw material. Encourage conservation best management practices on logging and skidding roads and all wooded steep slopes.
- Inform and educate the public about the importance of forested lands in the county.

Goal: Guide growth and development of residential, industrial, and commercial uses and locations.

- Promote land uses that create or preserve diverse communities that are consistent with Buffalo County's Comprehensive Zoning ordinance.

- Encourage industrial development uses to be located in industrial areas and approve development at a pace that does not exceed capacity of utilities, roads, and community facilities. Understand the limitations of growth due to lack of an interstate highway system in the county.
- Support housing and residential developments in non-farmland preservation areas that are respectful of the county's rural character and environment as well as protective of local natural resources and sensitive areas of the land.
- Discourage development on prime agricultural farmland or any disturbance to slopes greater than 30%.

Goal: Promote economic development while maintaining the county's rural character.

- Promote economic development of tourism as an industry, especially along the designated- scenic Great River Road.
- Environmental tourism may have the largest potential for growth in the County, including: Hunting, Fishing, Birding, and silent sports (canoeing, kayaking, bicycling, hiking, horseback riding).
- Promote development of Agriculture Tourism opportunities

Goal: Protect surface and groundwater quality and quantity.

- Protect water quality by reducing sediment and nutrient deposition into streams and wetlands from upland land-use practices. Promote sustainable agricultural practices that protects soil and provides water quality protection.
- Support stream bank erosion protection projects to stabilize streambanks and improve streambank habitat. Encourage the reduction of streambank erosion through minimizing stream channelization, extensive livestock grazing along streambanks, and cropping to the edges of streams.
- Provide information and education to all farmers that spread nutrients about the potential significant water quality problems associated with the land-spreading of manure and nutrients on steep slopes, frozen ground, on land in floodplains, or areas with shallow depth to groundwater.
- Protect surface water, wetlands, and ground water through requiring vegetated buffers and appropriate stormwater controls in development. Promoting rainwater infiltration will reduce stormwater runoff and flooding of surface waters. Less runoff decreases sedimentation of streambeds, stream temperature fluctuations, and degradation of steam habitat.

Goal: Protect natural areas and promote good stewardship of natural resources.

- Prohibit development in natural areas and maintain/enhance recreational opportunities in the county.
- Preserve and maintain the county's valuable soil resources.
- Provide information and education to citizens about natural resource protection, including: groundwater quality and quantity, invasive species, bluffland protection, and streambank protection programs.

PART 4 – AGRICULTURE CHALLENGES/TRENDS

Agriculture has defined Buffalo County's landscape, communities, and its people. Buffalo County is rural in character and agriculture has a significant role in the county's economy. Preserving farmland and abundant natural resources is a priority for the county. Agriculture faces many challenges and many new trends in agriculture are emerging that will bring future challenges to the county.

Land-Use Issues Affecting Farmland Preservation

Farmland preservation faces several land-use challenges in Buffalo County; some of these challenges are similar to those facing many other counties across Wisconsin.

- Urban sprawl is a conceivable future concern that is affecting more developed parts of the state. Although Buffalo County's population has remained somewhat stagnant over time, consideration is given to future growth and potential conflicts with agricultural land-uses.
- The maximization of crop acreage in years of high crop prices, usually corn, is concerning. Expanding existing cropped acreage is often difficult in Buffalo County due its steep, rolling topography, yet some farmers continue to expand into ever-steeper and more erodible areas in an effort to maximize profits. Aside from the very real risk of tipping equipment on such steep slopes, increased soil loss is an inevitable result. Vegetative buffers and CRP/CREP fields along waterways and wetlands also tend to shrink in high corn price years, resulting in increased nutrient runoff.
- The declining number of landowners that farm their own land and increasing rentership of farmland is concerning due to the impacts to natural resources that result. The trend towards larger farming equipment, an increase in field size, more corn and soybeans, less hay and grass, and reduction in grassed waterways and other conservation practices has been shown with some renters.

Additional Trends/Challenges

Buffalo County faces many challenges and opportunities in future agriculture practices. A number of trends and challenges point to the need for farmland preservation.

Changing Nature of Agriculture

- The drop in dairy cow numbers reflects the sharp downturn in milk prices, with potential for this trend to continue in the future. With a loss of dairy cows and dairy farms, hay acres has decreased, while row cropland increased.
- Soil conservation is a huge challenge as we lose dairy farms and add corn and soybean field acres. Contour strip cropping and contour buffer strips are being lost with the high grain prices and larger equipment. Loss of waterways in concentrated flow areas and heavy rain events has resulted in gully erosion and major soil loss.

- The scale of farming has changed and modern farms require substantial economic investments with financial uncertainties.
- Larger farms are consolidating or expanding in concentrated areas around the county in order to remain profitable. CAFO farm numbers have increased in Buffalo County over the past two years. Future challenges may exist with potential over-application of dairy waste and nutrients in concentrated areas.
- An increased demand for new poultry barn construction has resulted in a change in the agricultural landscape and with farming operations. The poultry litter produced requires additional cropland for spreading nutrients.
- Traditional farming operations are no longer economically sustainable and these changes will change the landscape of future farming. Farmers are looking at diversifying their operations to include vineyards, pizza farms, or poultry barns.
- Conversion and parceling of farmland in areas has resulted in non-contiguous agricultural land. A farmer whose adjacent land uses are no longer agricultural is more likely to abandon farming or alter agricultural practices, since they may not be eligible for AEA tax credits, for example.

Changing Demographics

- Non-farmers or hobby farmers looking for rural land in Buffalo County are purchasing agricultural land for permanent or temporary residence.
- Whitetail deer hunters have created a demand for rural land, including woodland and agricultural land in Buffalo County. Conversion of agricultural land to woodland is a concerning trend.
- Increased Managed Forest Law (MFL) woodland is also a concerning trend with land-use conversion and rentership issues. A direct correlation has been shown between the increase in land enrollment in MFL and the increase in absentee landowners. As agricultural lands are converted to MFL management, agricultural land use practices diminish.

Infrastructure

- Utility and infrastructure improvements are needed which could impact agricultural lands, including telecommunication towers, high capacity wells for irrigation, or other development.

Other Trends

- Rainfall Erosion Models predict an increase in future erosion rates in Wisconsin due to heavier predicted rainfall events.

PART 5 – FARMLAND PRESERVATION PLANNING

The Farmland Preservation Plan must address certain elements as specified in Chapter 91, Wis. State Statutes, in order to make farmland preservation benefits available to eligible landowners. The planning process needed to take into account existing and future agricultural conditions, existing and future growth trends, the local economy, and current and future participation in the FP program and coordinate all of this with other agencies who work with these same landowners as well as offer the public the opportunity to have input into the planning process. Adoption of this Plan by the Buffalo County Board of Supervisors and subsequent certification of the Plan by the Wisconsin DATPC will allow all Buffalo County farmers with land in preservation plan areas eligible for farmland preservation tax credits.

The agricultural lands preservation planning process was initiated in April 2015 as preparation of developing an updated County Farmland Preservation Plan. At that time, Land Conservation staff presented FP Plan goals, timelines, and information at a number of meetings to agencies, township officials, county committees, and other interested citizens in order to obtain valuable input and gain consensus. By July 2015, portions of the FP Plan had been drafted and FP plan area maps had been created. The planning process was then postponed and an extension to the plan certification expiration date was granted by DATCP.

In conjunction with UW-Extension and Buffalo County Zoning Departments, a survey was distributed to county landowners using local Farm Bureau and Farmers Union mailing lists to gauge interest in the farmland preservation program and farmland preservation zoning. Survey results and the meetings with town board representatives proved constructive to the future of Farmland Preservation in the County. At that time, County Zoning moved forward with a comprehensive zoning ordinance revision and revisions were made to this Farmland Preservation Plan.

The residents of Buffalo County strongly believe that agriculture improves quality of life and identified the following factors for consideration when planning for economic development:

- Preserve the natural beauty of Buffalo County
- Preserve prime farmland in Buffalo County
- Preserve the rural character of Buffalo County

Buffalo County's land use goals prioritize the preservation of agricultural lands, which are the basis of this county plan. Farmland preservation planning coordination has coincided with Buffalo County Zoning ordinance revision efforts. The establishment of the Agricultural/Natural Resource – 40 (ANR-40) District was intended to promote the preservation of farmland, a goal established in the Buffalo County Comprehensive Land Use Plan. The resource base for agriculture and future development needs were reviewed on a Town by Town basis, examined in light of preservation goals and policies, and used to determine agricultural lands to be preserved. Zoning district maps were created based on participation from landowners and officials in all 17 Towns. Each Town created their own zoning district map and again had opportunity to review any revisions. Land use

planning at the Town level allows the community to provide input into local land uses, define natural resource protection, and promote the agricultural culture.

Modifications have been made to this farmland preservation plan narrative, program framework, and revisions to the maps were made to reflect the new agricultural zoning districts chosen by each Town, so that this plan is consistent with the zoning ordinance. This plan will preserve and protect Buffalo County's valuable economic and natural resources for future generations.

PART 6 – FARMLAND PRESERVATION MAPPING

Farmland Preservation Areas & Map Creation

Farmland Preservation areas were determined based on citizen and local elected officials input (town boards, county board, and committees), review of existing farmland preservation lands (lands under existing farmland preservation contracts), historical farmland preservation areas (1980 Farmland Preservation Plan), and land use designations derived from the County's Comprehensive Planning process (County Land Use Map).

Through the Buffalo County Zoning ordinance revision process, each Town had the opportunity to draft, review, and finalize a zoning district map, which includes farmland preservation areas. The Town maps were then consolidated by the Buffalo County GIS Coordinator to create the Farmland Preservation Program Maps (Appendix F) which depicts the Farmland Preservation Area within each Township.

The criteria for farmland preservation areas as well as those areas not eligible for farmland preservation tax credits were identified through the planning process. The Farmland Preservation Plan Areas include all Agricultural Zoning Districts, all forest land, and lands in the Conservation Zoning District. Any land expected to convert to non-agricultural development within 15 years was excluded from the FP area. Any land that does not meet the criteria set would not be eligible for tax credits under this plan, unless adjustments to the plan and map were made to allow the ineligible land to become eligible.

Criteria for Determination of Eligible Farmland Preservation Areas

- Land in any Agriculture/Natural Resource Zoning District (ANRT-5, ANR-5, ANR-10, ANR-20, or ANR-40)
 - Lands designated in a Conservation Zoning District (CONS)
 - Lands depicted as agriculture or forestry/woodland on any future land use maps in a Town or County Comprehensive Land Use Plan
 - Lands that have historically been in agricultural, forestry, or other agricultural related use, including existing farm residences
-

Criteria for Determination of Non-Farmland Preservation Areas

- Land in Commercial (C) or Industrial Zoning District (I)
 - Land planned for development within the next 15 years
 - Existing land uses that are in conflict with farmland preservation
 - Any parcels that are tax exempt, such as churches, cemeteries, nonprofit entities, government-owned lands, utilities, and railroads
 - All incorporated (villages, cities) areas in the County
-

PART 7 – FARMLAND PRESERVATION PLAN IMPLEMENTATION

The culmination of the agricultural lands preservation planning process is the adoption and certification of this Plan. Once adopted, it will guide future decision making so that the agricultural lands preservation goals can be achieved. Successful implementation of this Plan can only be achieved through the cooperative efforts of all levels of government and property owners. It is important that the basic recommendations of the plan are reviewed and decisions and recommendations are made based upon it.

This section looks at those tools available to help decision making bodies in their work. It should be noted that Buffalo County's farmland preservation plan can be implemented using existing tools and regulations. An essential tool in protecting farmland is to increase awareness and education about the economic benefits of farming and costs associated with conversion of agricultural lands. Specific tools that have proven effective in helping ensure the economic viability of agriculture are listed below.

Farmland Preservation Implementation Tools

Farmland Preservation Planning

There are currently 37 Buffalo County landowners that have Farmland Preservation agreements with the County. In the past two (2) years, over 20 agreements have expired, with the last agreements slated to expire in 2034. Historically, the Buffalo County Land Conservation Department has promoted the Farmland Preservation Program to landowners, who voluntarily entered into Farmland Preservation agreements. Beginning in 2009, landowners were no longer able to enter into new agreements or renew existing agreements without either a designated Farmland Preservation zoning district or through development of an Agricultural Enterprise Area (AEA). Landowners in Buffalo County with recently expired agreements have expressed interest in continuing their agreements, although at this point no AEA's have been formed in Buffalo County. With the designation of ANR-40, the Farmland Preservation Zoning district, many landowners will have the opportunity to participate in the Farmland Preservation Program. After County Zoning district maps have been adopted, the Land Conservation Department (LCD) plans on promoting development of AEA's within ANR-40 districts. Recently LCD staff have been taking an active leadership role in promotion of nutrient management (NM) plan development; many landowners with outdated plans or those that never had NM plans, are now working on developing or updating their plans. Through the encouragement of NM plan development, landowners with land covered by a certified Farmland Preservation Zoning District and meeting conservation compliance standards will be able to claim income tax credits.

Farmland Preservation Zoning

The establishment of a Farmland Preservation Zoning district is currently being adopted through Buffalo County Zoning's ordinance revision. The Farmland Preservation district has been designated as the Agriculture/Natural Resource – 40 (ANR-40) district. The purpose of the ANR-40 district is to protect and preserve the historic use of prime soils for agricultural production and raising livestock, with other soil types and steeper slopes protected for natural resource production

and harvesting uses such as commercial logging and silviculture. The ANR-40 district establishes policies intended to ensure the long-term stability, productivity, and sustainability of agricultural and natural resource lands and land uses. The intent of the ANR-40 zoning district is to strictly limit the intrusion of non-agricultural uses and development which can conflict with traditional and contemporary farming operations and practices. Agricultural protection zoning ordinances allow some residential development but restricts density, in the case of ANR-40 to the density of one dwelling per 40 acres. Jurisdictions can use this zoning to conserve a critical mass of agricultural land, to keep individual farms from becoming isolated among residential neighborhoods, and also ensure there will be enough farms to support local agricultural service businesses.

Agricultural Enterprise Areas (AEA)

Eligible farmers in an Agricultural Enterprise Area (AEA) can receive income tax credits for land covered by an FP agreement with DATCP. The designation of an agricultural enterprise area (AEA) identifies the area as valuable for current and future agricultural use. Eligible agricultural land must be contiguous land within a farmland preservation area with at least five landowners participating. Benefits of the AEA designation are that the land is identified as important for agricultural preservation. This designation provides reassurance about future farmland use and may encourage investment in agriculture. Eligible landowners that meet conservation compliance standards can enter into a voluntary FP agreement that allows them to claim a tax credit in exchange for keeping land in agricultural use for 15 years.

Agricultural Conservation Easements (PACE)

Agricultural Conservation Easements are deed restrictions that landowners voluntarily place on their properties to protect productive agricultural land. They sell a conservation easement to a government agency or private conservation organization. Landowners retain full ownership and continue to pay property taxes, and manage and operate the farm. Conservation easements are tailored to each property: purchasers and landowners decide which activities, such as residential development, should be restricted or limited. When the landowner eventually sells the farmland, the development restrictions are passed on to the new owner.

Purchase of Development Rights (PDR)

In a similar program, Purchase of Development Rights (PDR), government agencies buy up the development rights to a property. The program does not give the government agency the right to develop the agricultural land (such rights may be eligible for use by the purchaser in a Transfer of Development Rights program). It simply permits it to extinguish those rights in return for appropriate compensation.

Transfer of Development Rights (TDR)

TDR programs allow landowners to transfer the right to develop one parcel of land to a different parcel of land. The programs are usually established by local zoning ordinances, and they are used to shift development from agricultural areas to designated growth zones closer to municipal services. The parcel of land where the rights originate is called the “sending” parcel. Once the development rights are transferred from a sending parcel, the land is restricted with a permanent conservation easement. The rights are transferred to a “receiving” parcel, which allows an owner

purchasing the rights to build at a higher density than ordinarily permitted by the base zoning. Most TDR transactions are between private landowners and developers. Local governments approve transactions and monitor easements. Some jurisdictions have created “TDR banks” that buy development rights with public funds and sell them to developers and other private landowners. TDR programs can prevent non-agricultural development of farmland, reduce the market value (and tax burdens) of protected farms and provide farmland owners with liquid capital that can be used to enhance farm viability.

Comprehensive Land-Use Planning

Buffalo County and all municipalities can use their comprehensive plans as the basis for farmland preservation zoning ordinances that identify areas to protect for agricultural use and areas where growth will be encouraged. There are seventeen (17) Towns in Buffalo County. Most of the Town Land Use Plans have indicated prime farmland soil preservation as a priority. In addition, these plans call for the following actions: promote agricultural practices that implement proper soil erosion and runoff control methods, create incentives that will encourage young people to enter the farming industry, and encourage the Buffalo County Board of Supervisors to maintain soil conservation staff, and secure grant funding to incentivize county landowners that maintain sound agricultural practices. The Buffalo County Comprehensive Land Use Plan was evaluated to ensure consistency with the farmland preservation planning efforts. Any inconsistencies with the Buffalo County Comprehensive Land Use Plan are minor and this Farmland Preservation Plan supersedes the Comprehensive Land Use Plan for the purpose of Farmland Preservation tax credits and applications.

Other Resources to Assist in the Preservation of Agriculture & Natural Resources Land

Buffalo County Floodplain Ordinance

The County Floodplain Ordinance applies to all unincorporated areas of Buffalo County that would be covered by the regional flood or base flood. The purpose of the floodplain ordinance is to protect life, health, and property, minimize business interruptions, minimize damage to public facilities, minimize the occurrence of future flood blight areas, discourage the victimization of unwary land and home buyers, and prevent development that may have an impact on increasing the regional flood from occurring.

Stormwater Management

Stormwater management in Buffalo County is regulated by various departments and agencies. The Buffalo County Zoning Department administers the Shoreland Ordinance, which regulates land use practices within 300’ of navigable waterways. Any land use within the Shoreland Zone requires permitting and erosion and sediment control best management practice implementation. The WDNR requires State Stormwater Permits for mine sites and construction projects that disturb more than one acre of land. The Buffalo County Highway Department engages in stormwater management projects along highway right of ways to control runoff and sedimentation into waterways. County conservation staff also works closely with landowners to control runoff and prevent soil erosion through conservation practice cost-sharing programs and by offering technical advice for implementing runoff management practices.

Buffalo County Erosion Control Plan

The Buffalo County Land Conservation Department completed the Buffalo County Erosion Control Plan in 1986 as a response to an agricultural land use issue (excessive “T”, or tolerable soil loss) that has been identified. This plan identifies the extent, location, and severity of cropland erosion throughout the County by presenting the results of a physical erosion inventory within Buffalo County’s six major watersheds. Specific plans to resolve these issues were addressed.

Buffalo County Land and Water Resources Management (LWRM) Plan

In 2000, Buffalo County adopted their first LWRM Plan in accordance with Wisconsin Statutes (Wisconsin Act 27, Chapter 92.10). In 2012, a revised LWRM Plan was adopted as a 10-year Plan. Approval was granted by the Land and Water Conservation Board in 2016 for a 5-year Extension to the Land and Water Resources Management Plan. The primary intent of the plan is to identify a vision for natural resource management in Buffalo County and outline strategies to protect the quality and quantity of soil and water resources. The Buffalo County Land Conservation Department currently uses the LWRM Plan to guide annual conservation activity implementation. Annual reports and work plans are developed each year outlining conservation accomplishments and goals.

Mississippi River Overlay Zoning District

The purpose of this overlay district is to guide development and land use along the Mississippi River corridor in Buffalo County by regulations that will: (a) Preserve the scenic nature of the Mississippi River area; (b) preserve the natural and economic amenities that support and maintain the jobs and businesses in the tourism and recreation industries located there which are dependent upon the many visitors and tourists who travel along the Mississippi River and in the Mississippi River Area; and (c) preserve and protect the public, health, safety and general welfare of the citizens as represented in the physical and economic amenities of the Mississippi River. The “Overlay District” will be highly influential in the future development of Buffalo County in the vicinity of the Mississippi River and Highway 35 corridor. It will serve to limit commercial industrial development in these areas in order to preserve natural features and scenic beauty along the “Great River Road.” In turn, the Overlay District is intended to have the long-term effect of enhancing recreation and tourism in Buffalo County.

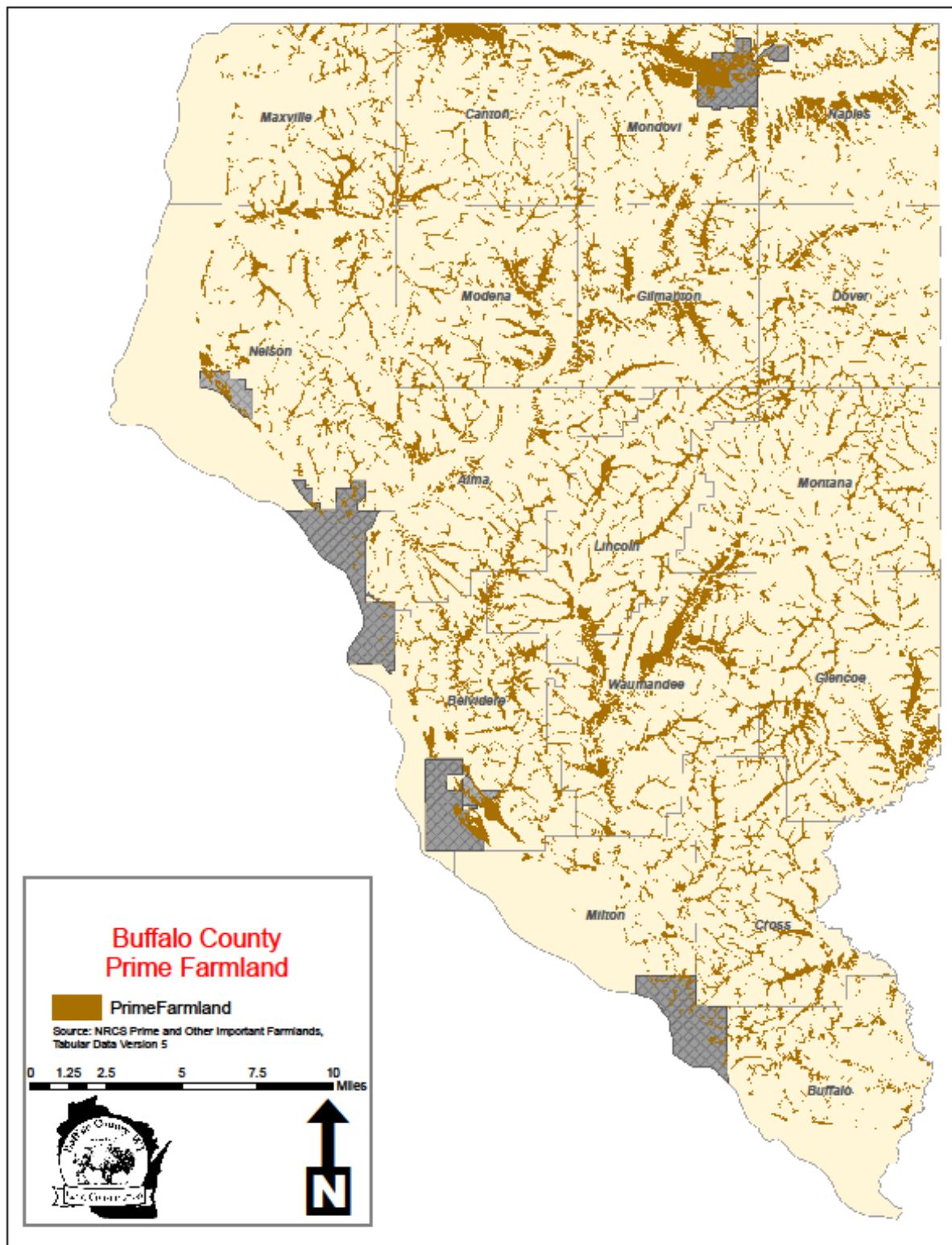
Buffalo County Manure Storage Ordinance

The County ordinance is administered by the Land Conservation Department and protects groundwater and surface water resources. This ordinance addresses permitting of new and substantially altered manure storage facilities and closure of a facility no longer in use or one that poses an imminent threat to public health, fish and aquatic life or are causing a violation of groundwater standards. Noncompliant manure storage facilities built prior to October 1, 2002 and those constructed after that date are required to comply with manure management provisions in NR151. Compliance regulations are set in place to help protect the county’s surface and ground water.

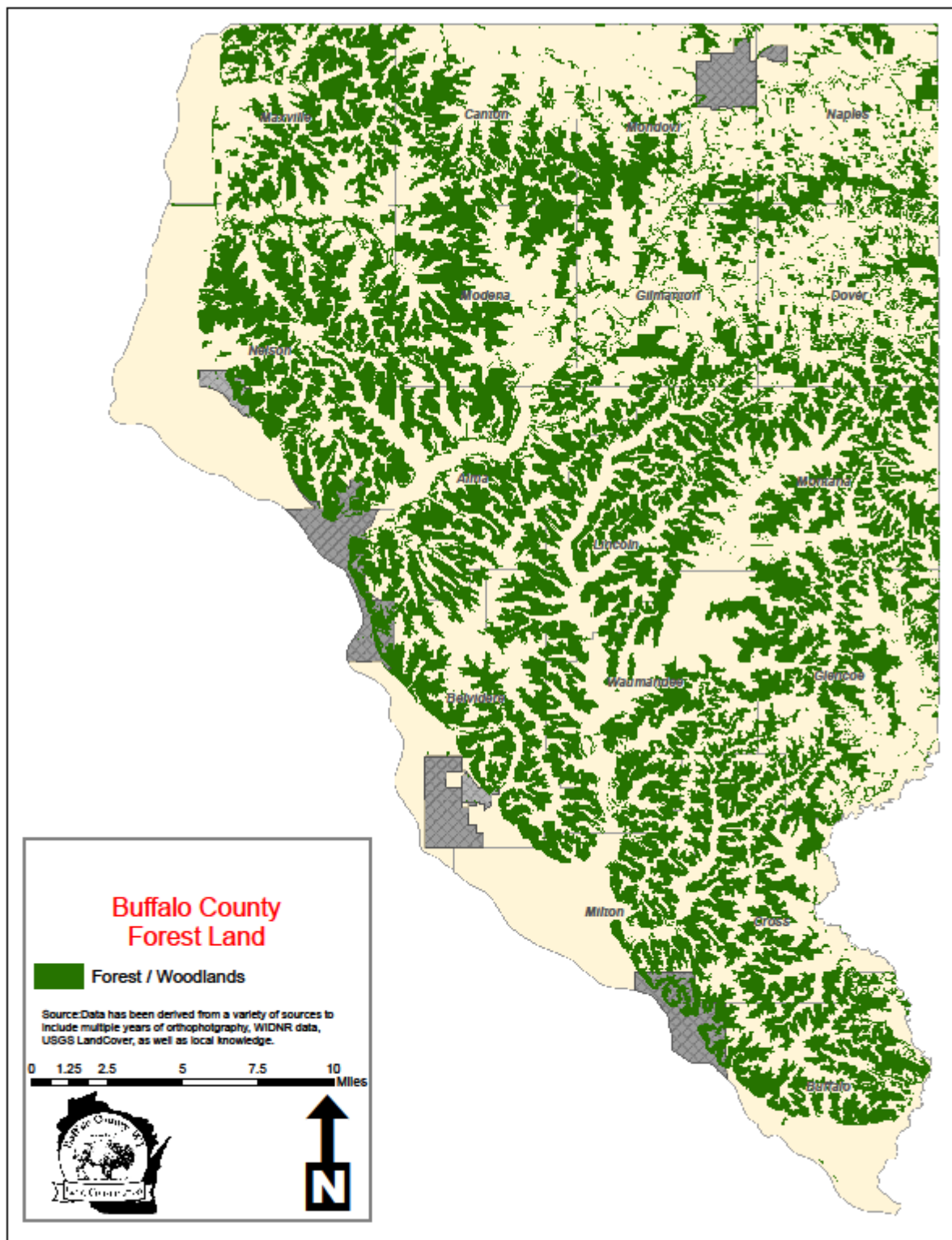
Buffalo County Farmland Preservation Program Soil and Water Conservation Policy

This policy was developed and adopted by the Buffalo County Land Conservation Committee (LCC) pursuant to s. 92.105, Wis. Stats., and ATCP 50, 16, Wis. Adm. Code, and related guidelines adopted by the Wisconsin Land and Water Conservation Board under s. 92.105(2). It provides for soil and water conservation standards to be met and procedures to be followed by participants in the Wisconsin Farmland Preservation Program. Landowners are required to conform to these standards and procedures to establish and maintain eligibility for farmland preservation tax credits under Subchapter IX of Chapter 71, and ss. 92.104 and 92.105 Wis. Stats.

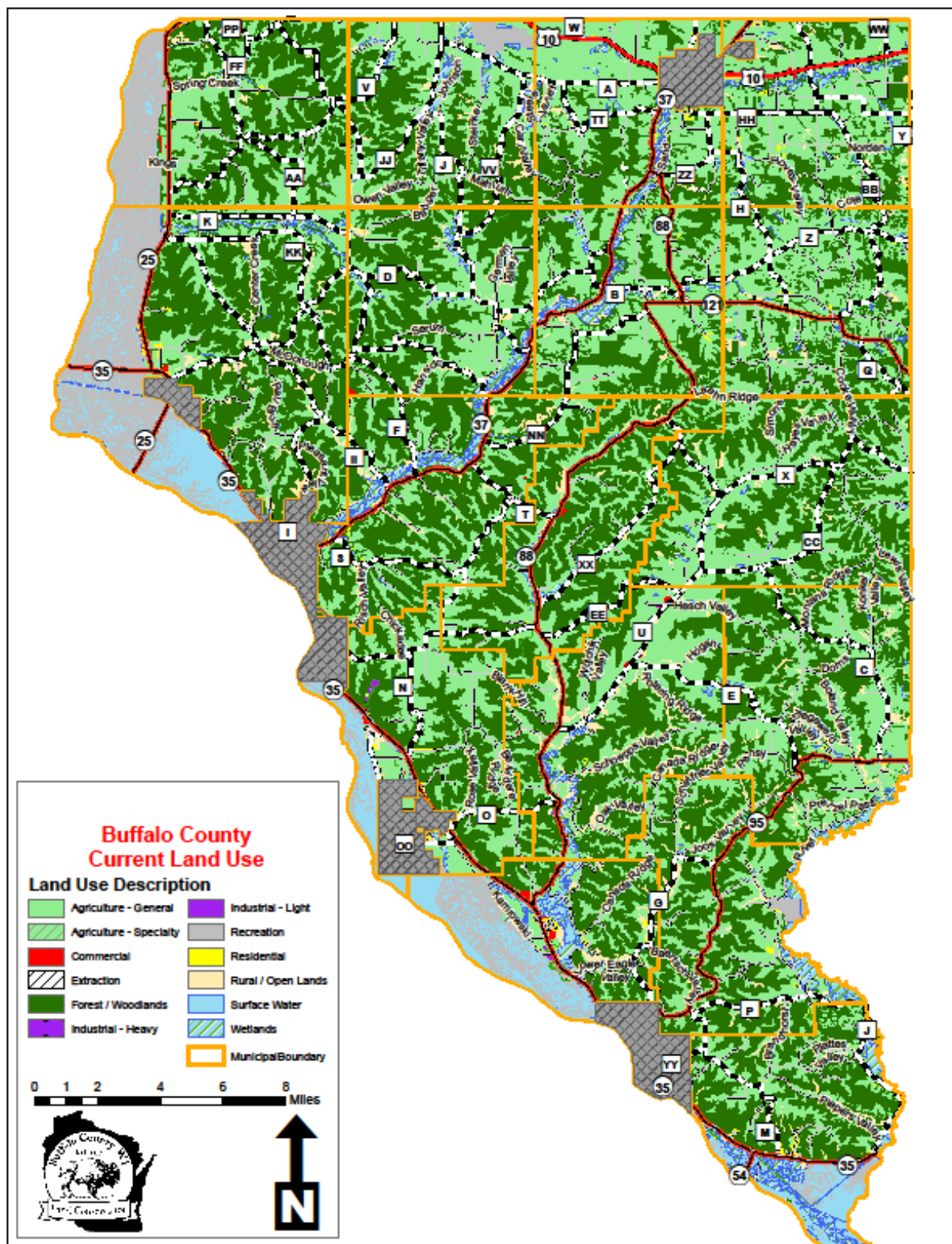
Appendix A: Prime Farmland Map



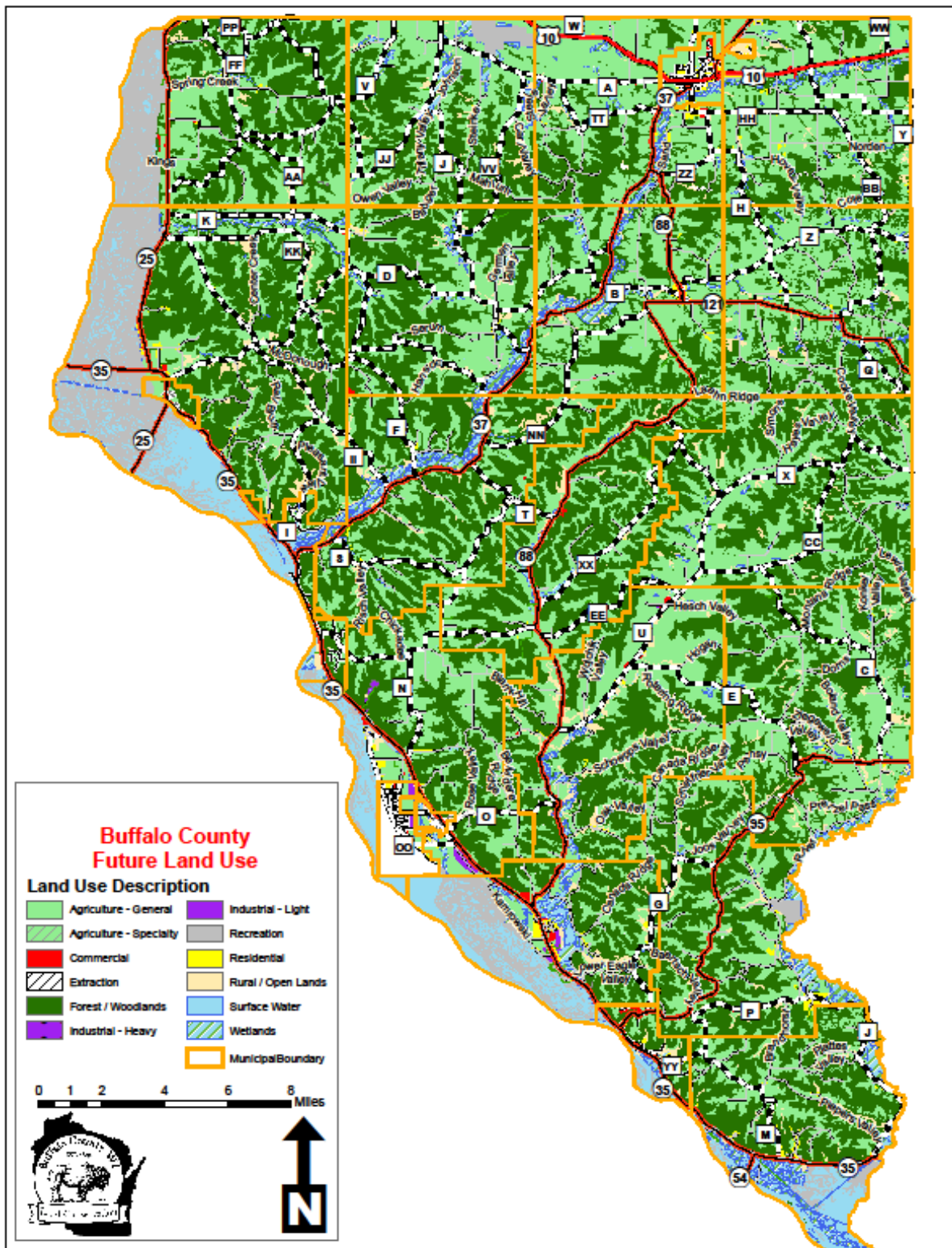
Appendix B: Forest Land Map



Appendix C: Current Land Use Map

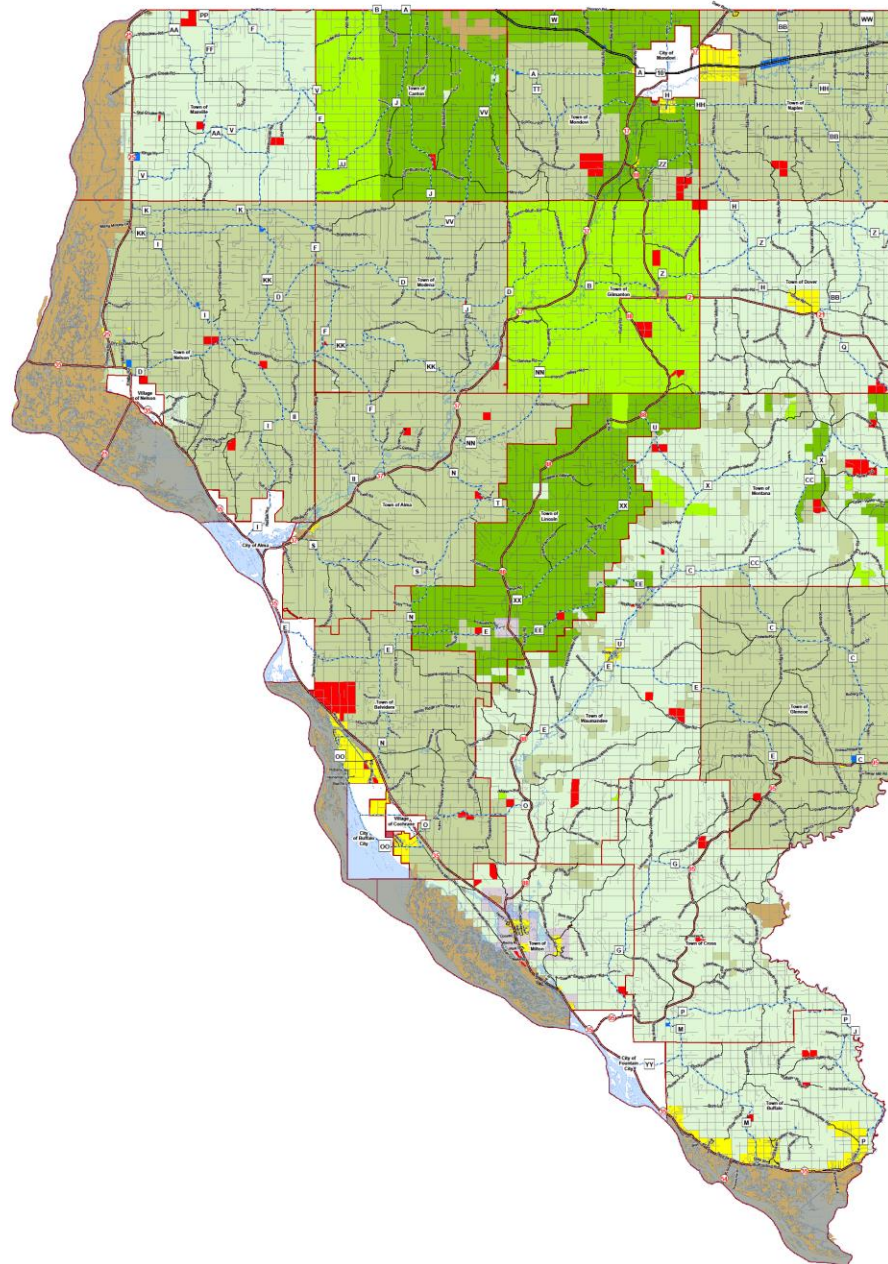


Appendix D: Future Land Use Map



Appendix E: Zoning Districts Map

BUFFALO COUNTY ZONING DISTRICTS MAP v6



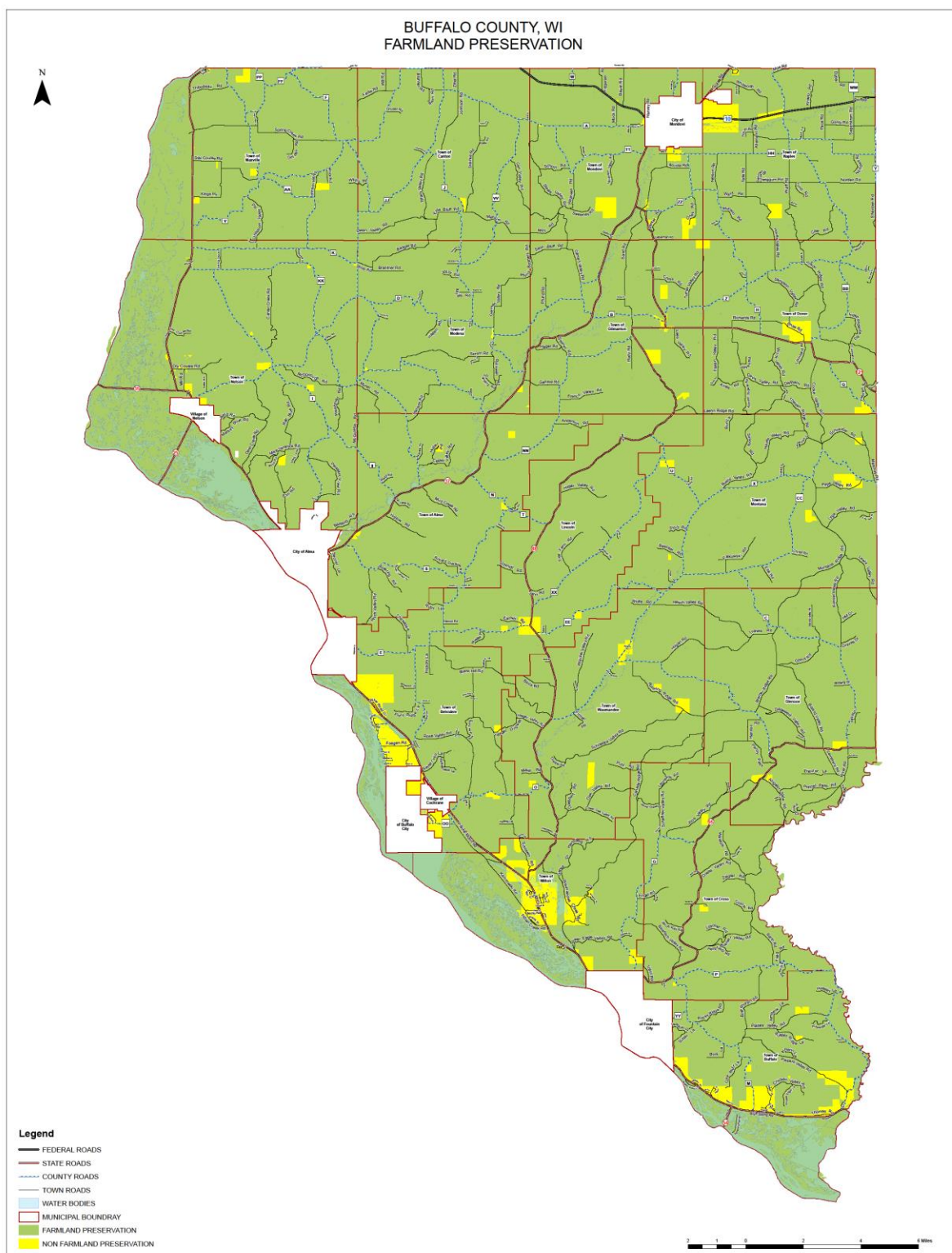
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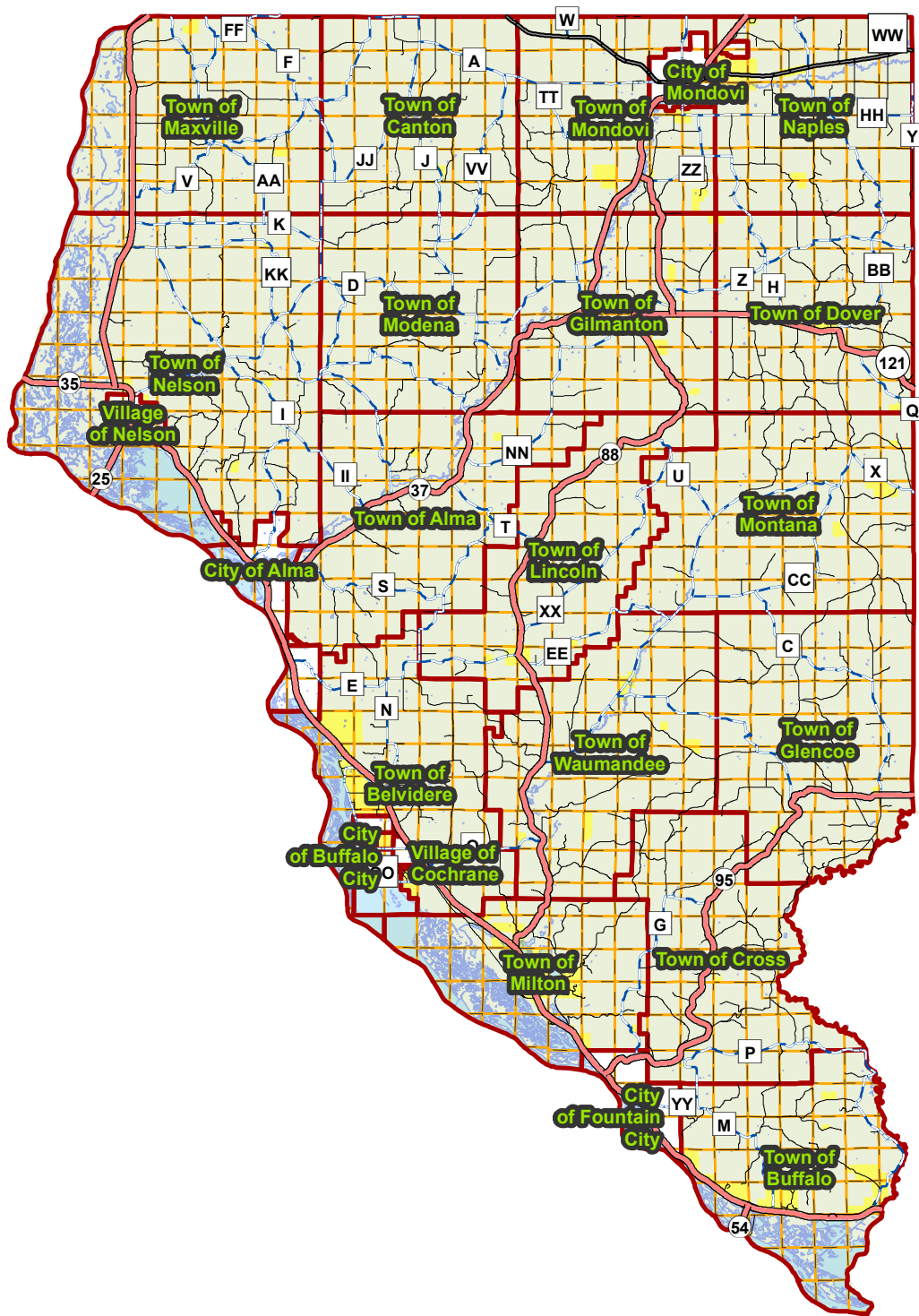
	Federal Roads
	State Roads
	County Roads
	Town Roads
	Water Bodies
	County Boundary
	ANR 40
	ANR 20
	ANR 10
	ANR 5
	ANR 15
	Residential
	Commercial
	Construction
	Industrial



0 1.75 3.5 7 Miles

Appendix F: Farmland Preservation Plan Area Maps

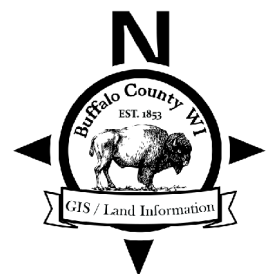


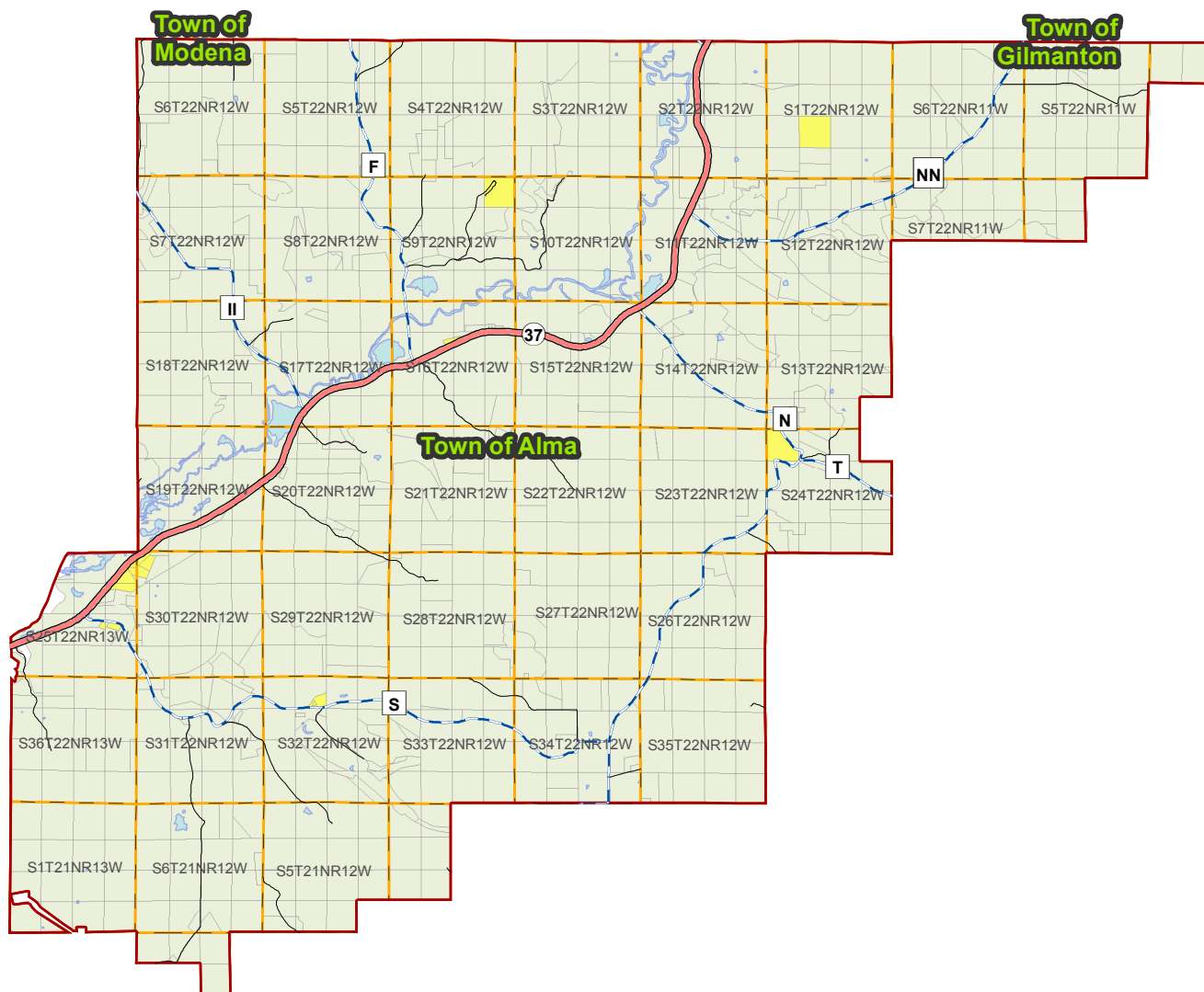


Legend

- | | | |
|--|--|---|
|  Political boundaries |  County Roads |  FP Plan area |
|  Section lines |  Town Roads |  Non-FP Plan area(s) |
|  Federal Roads |  Water | |
|  State Roads | | |

Buffalo County Farmland Preservation Plan Map
Town of Belvidere



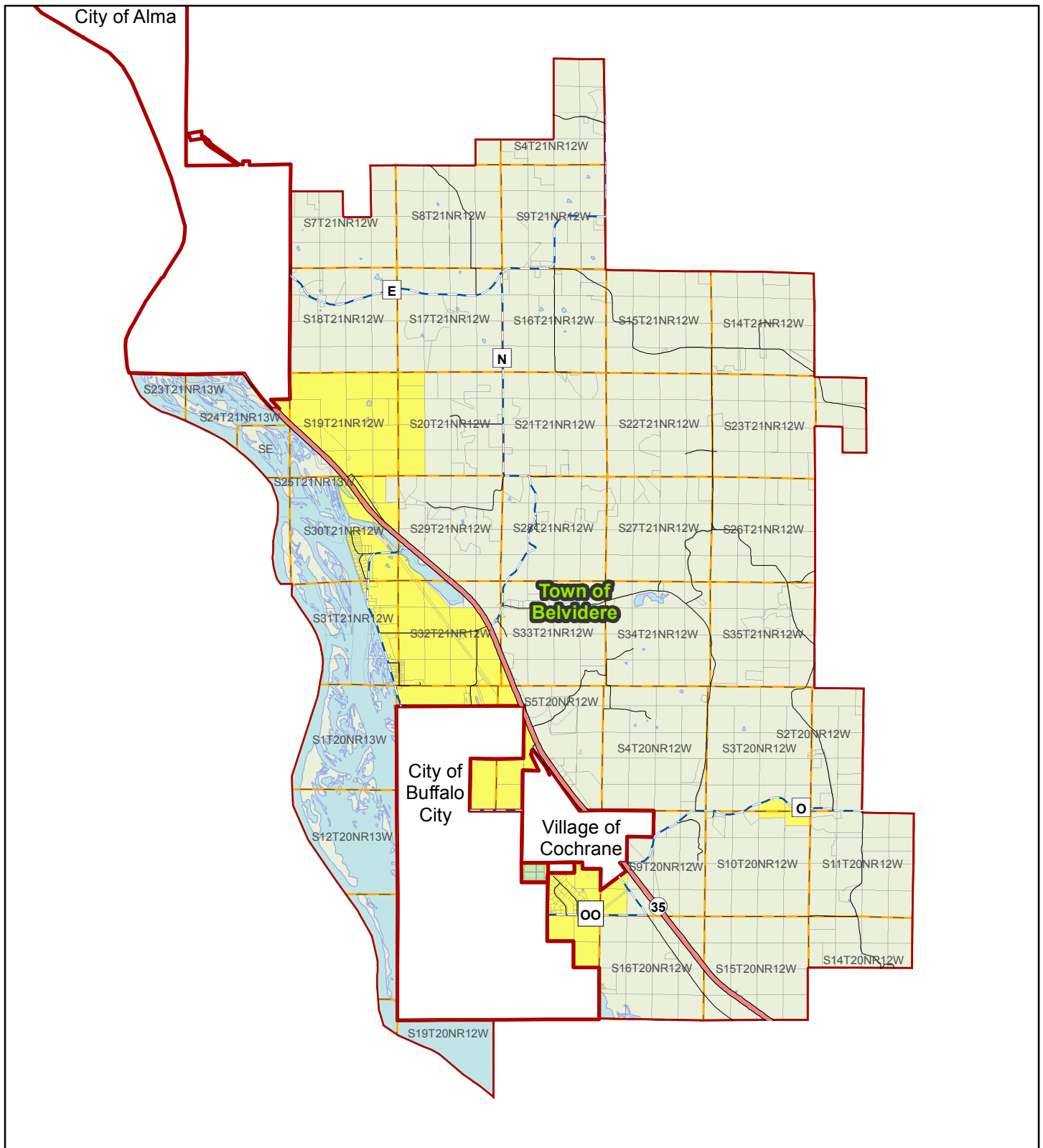


Legend

Buffalo County Farmland Preservation Plan Map Town of Alma

- | | | |
|----------------------|--------------|---------------------|
| Political boundaries | County Roads | FP Plan area |
| Section lines | Town Roads | Non-FP Plan area(s) |
| Federal Roads | Parcel lines | |
| State Roads | Water | |



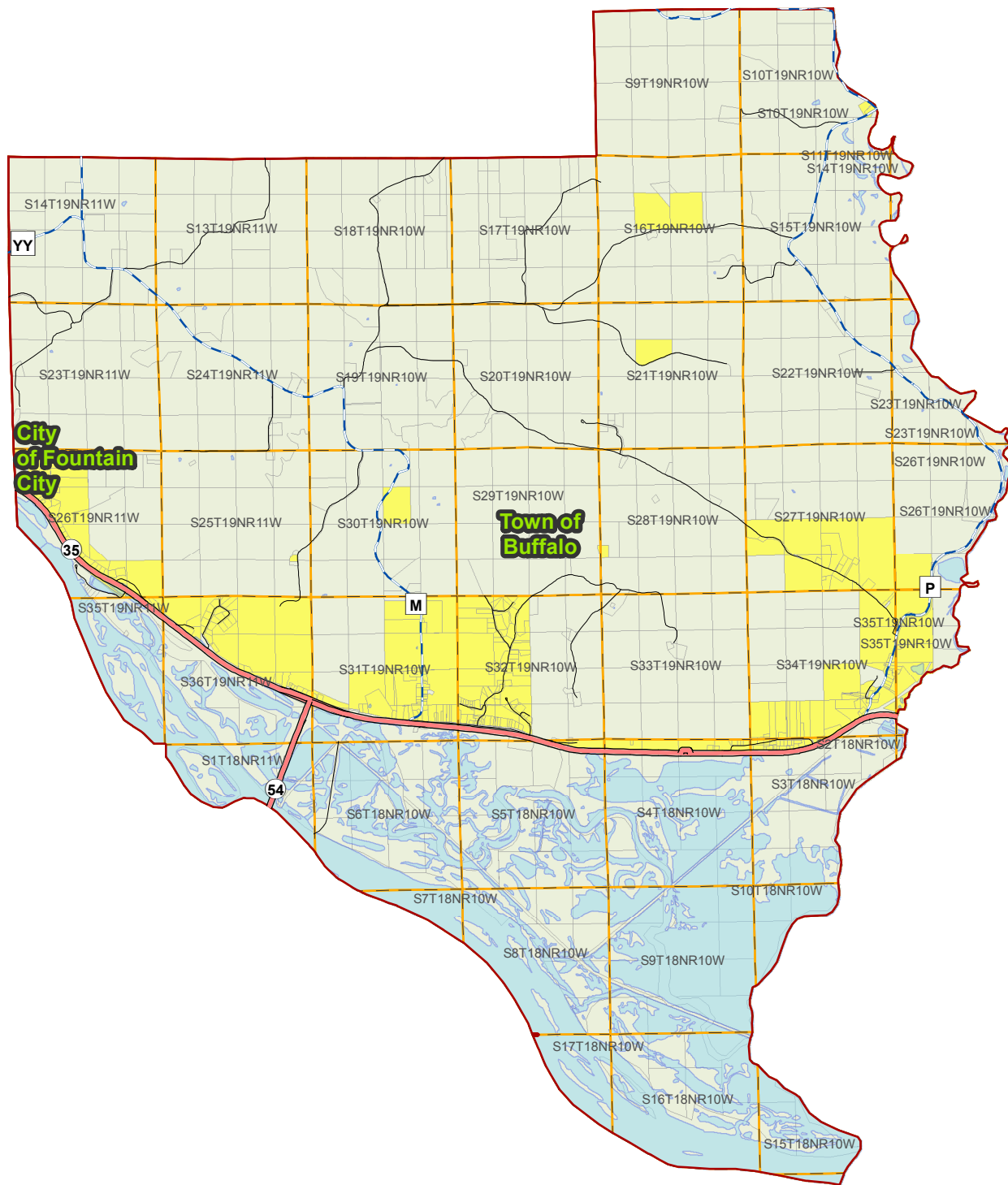


Legend

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|--|--|---|
|  Political boundaries |  County Roads |  FP Plan area |
|  Section lines |  Town Roads |  Non-FP Plan area(s) |
|  Federal Roads |  Parcel lines | |
|  State Roads |  Water | |

Buffalo County Farmland Preservation Plan Map
Town of Belvidere

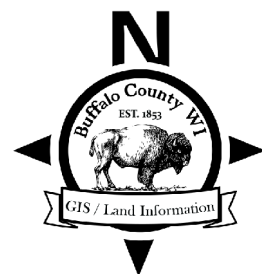


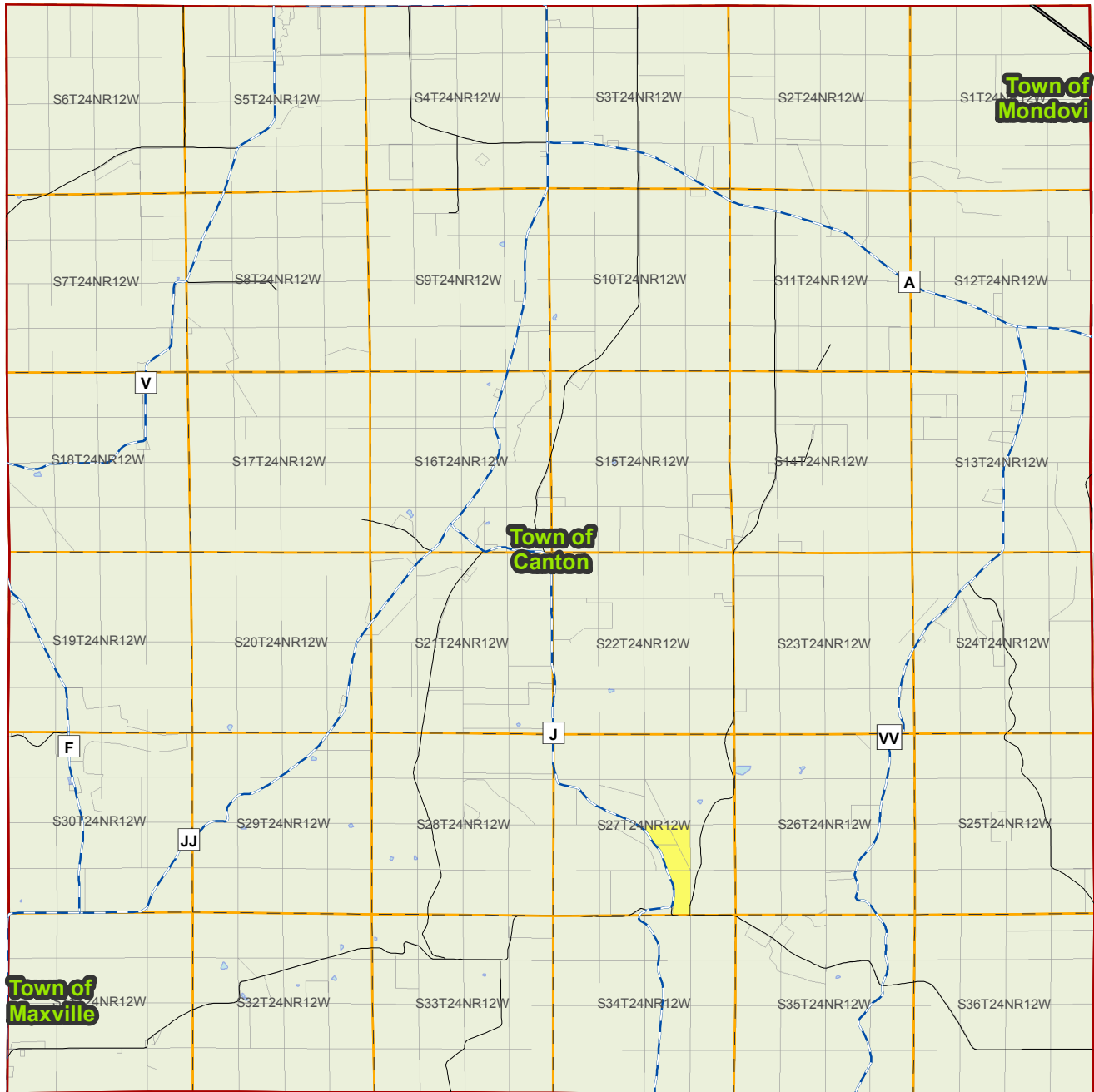


Legend

Buffalo County Farmland Preservation Plan Map Town of Buffalo

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|  Political boundaries |  County Roads |  FP Plan area |
|  Section lines |  Town Roads |  Non-FP Plan area(s) |
|  Federal Roads |  Parcel lines | |
|  State Roads |  Water | |

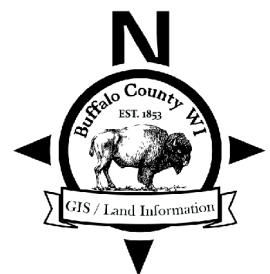




Legend

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|  Political boundaries |  County Roads |  FP Plan area |
|  Section lines |  Town Roads |  Non-FP Plan area(s) |
|  Federal Roads |  Parcel lines | |
|  State Roads |  Water | |

Buffalo County Farmland Preservation Plan Map
Town of Canton



**Town of
Waumandee**

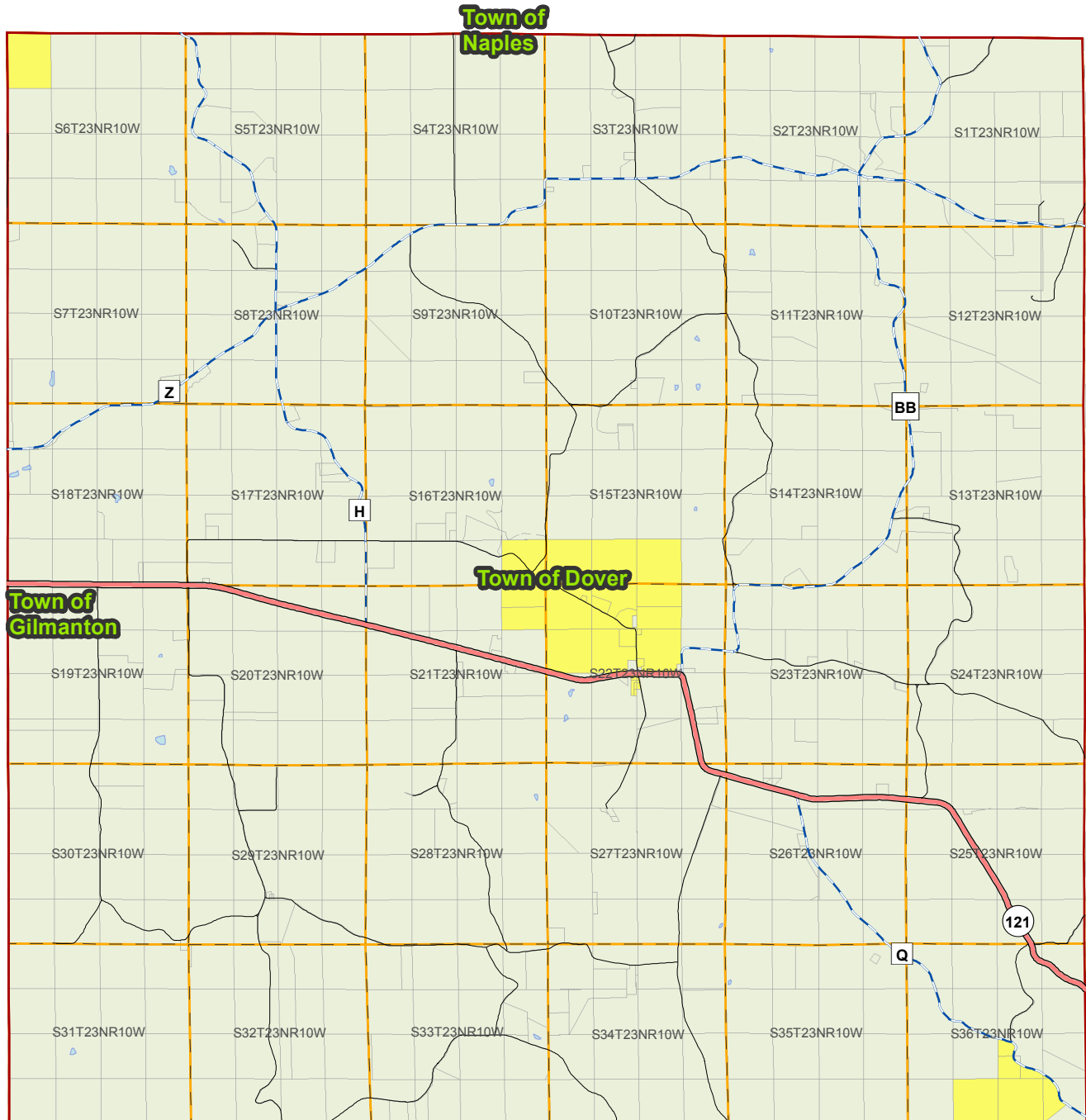
Town of Cross

Legend

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|---|----------------------|---|--------------|---|---------------------|
|  | Political boundaries |  | County Roads |  | FP Plan area |
|  | Section lines |  | Town Roads |  | Non-FP Plan area(s) |
|  | Federal Roads |  | Parcel lines | | |
|  | State Roads |  | Water | | |

Buffalo County Farmland Preservation Plan Map Town of Cross

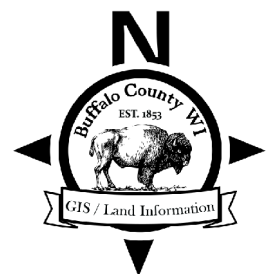


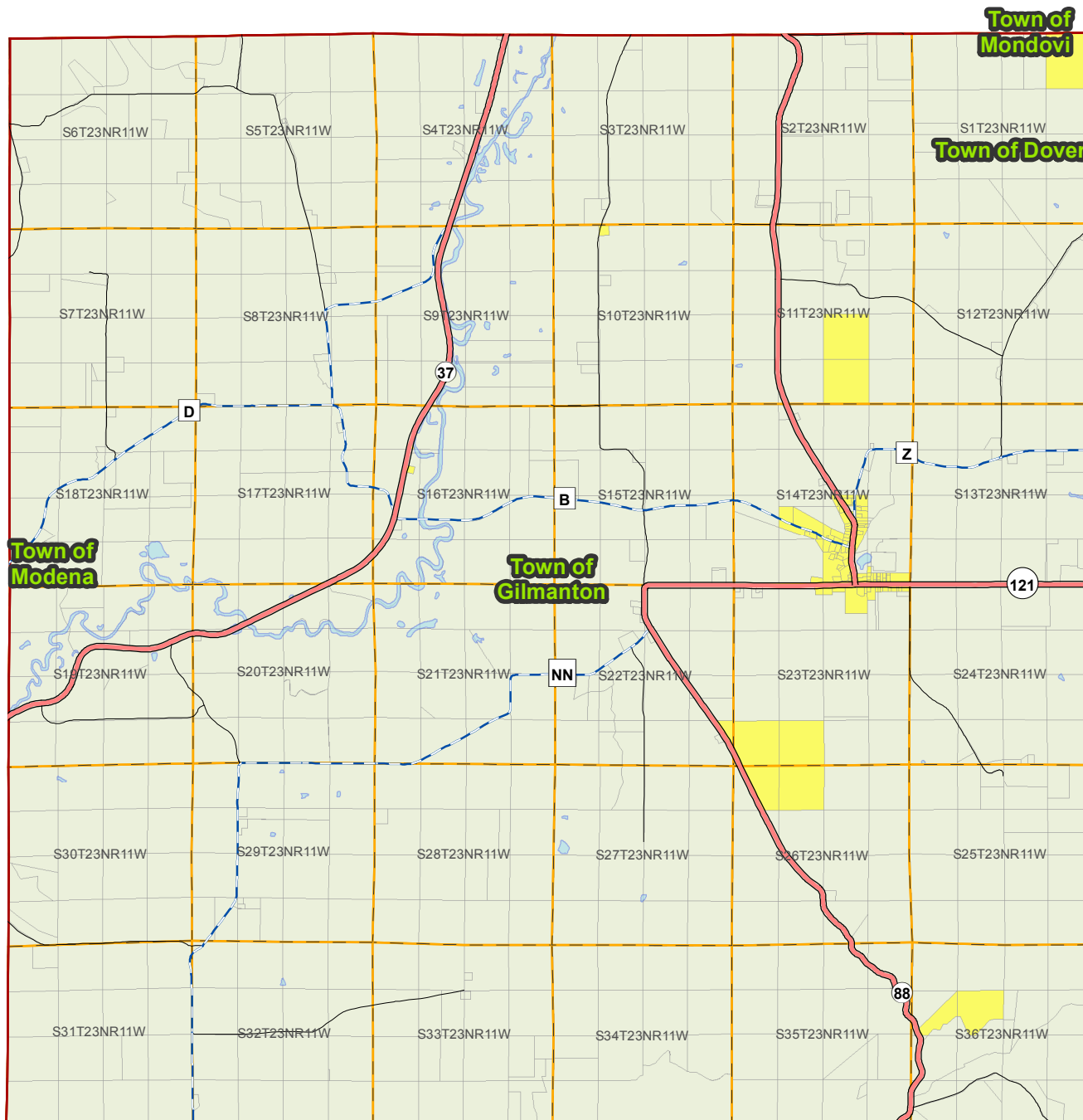


Legend

Buffalo County Farmland Preservation Plan Map Town of Dover

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|  Political boundaries |  County Roads |  FP Plan area |
|  Section lines |  Town Roads |  Non-FP Plan area(s) |
|  Federal Roads |  Parcel lines | |
|  State Roads |  Water | |

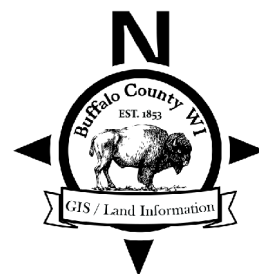


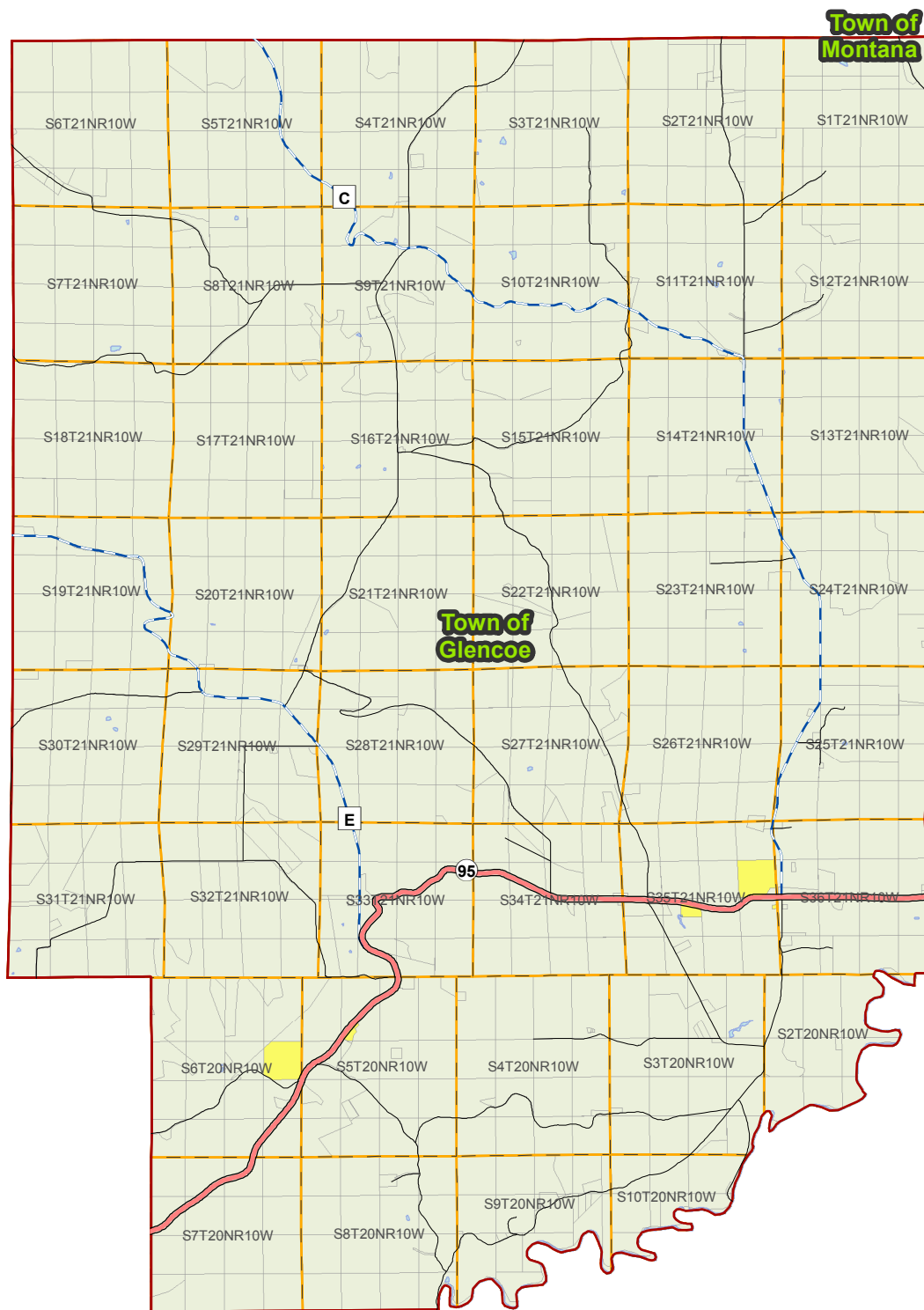


Legend

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| Political boundaries | County Roads | FP Plan area |
| Section lines | Town Roads | Non-FP Plan area(s) |
| Federal Roads | Parcel lines | |
| State Roads | Water | |

Buffalo County Farmland Preservation Plan Map
Town of Gilmanton

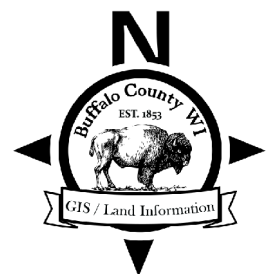


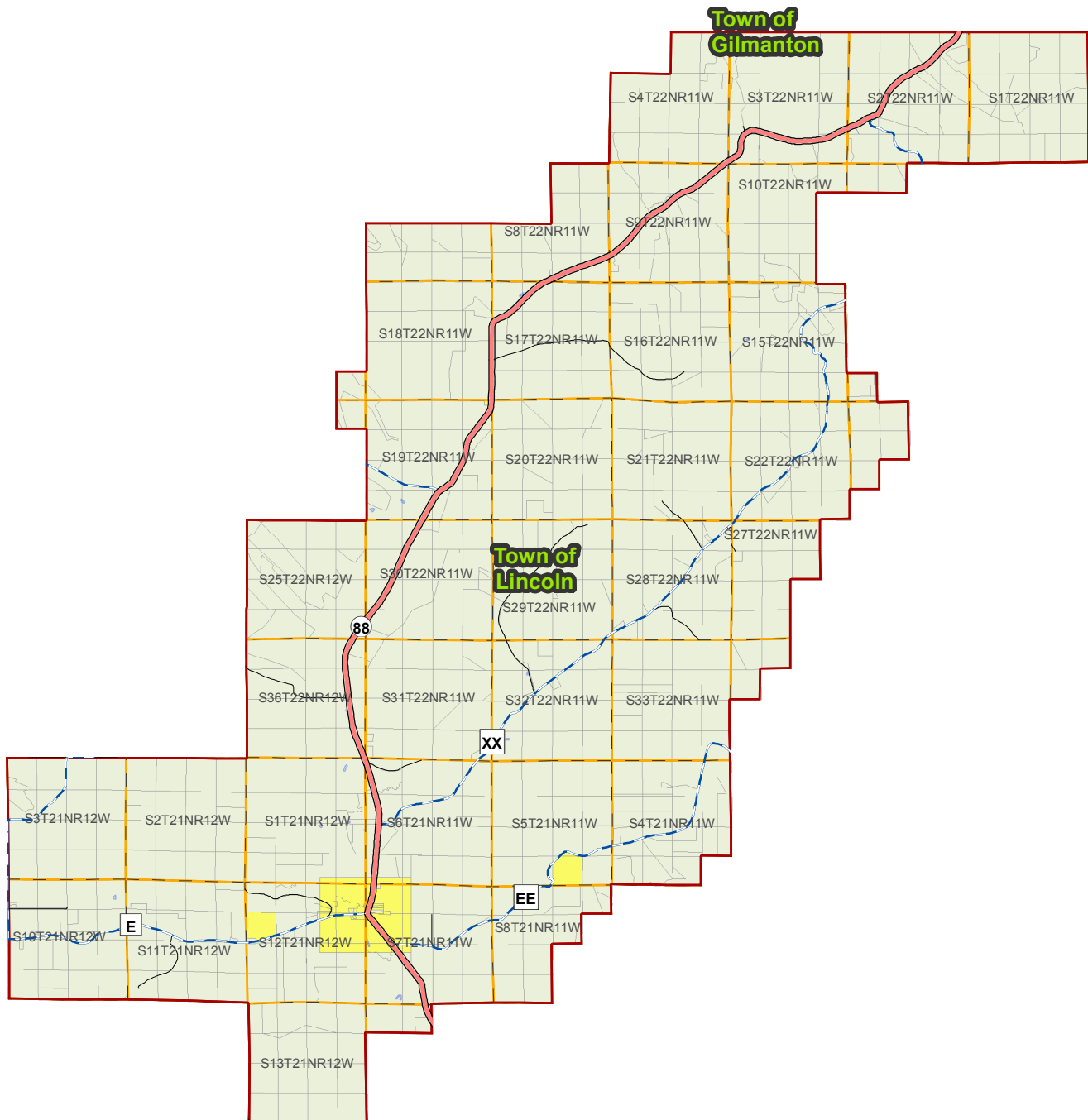


Legend

Buffalo County Farmland Preservation Plan Map Town of Glencoe

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|  Political boundaries |  County Roads |  FP Plan area |
|  Section lines |  Town Roads |  Non-FP Plan area(s) |
|  Federal Roads |  Parcel lines | |
|  State Roads |  Water | |

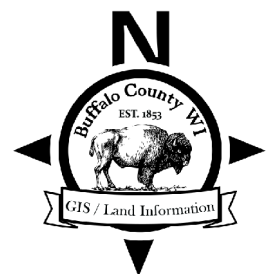


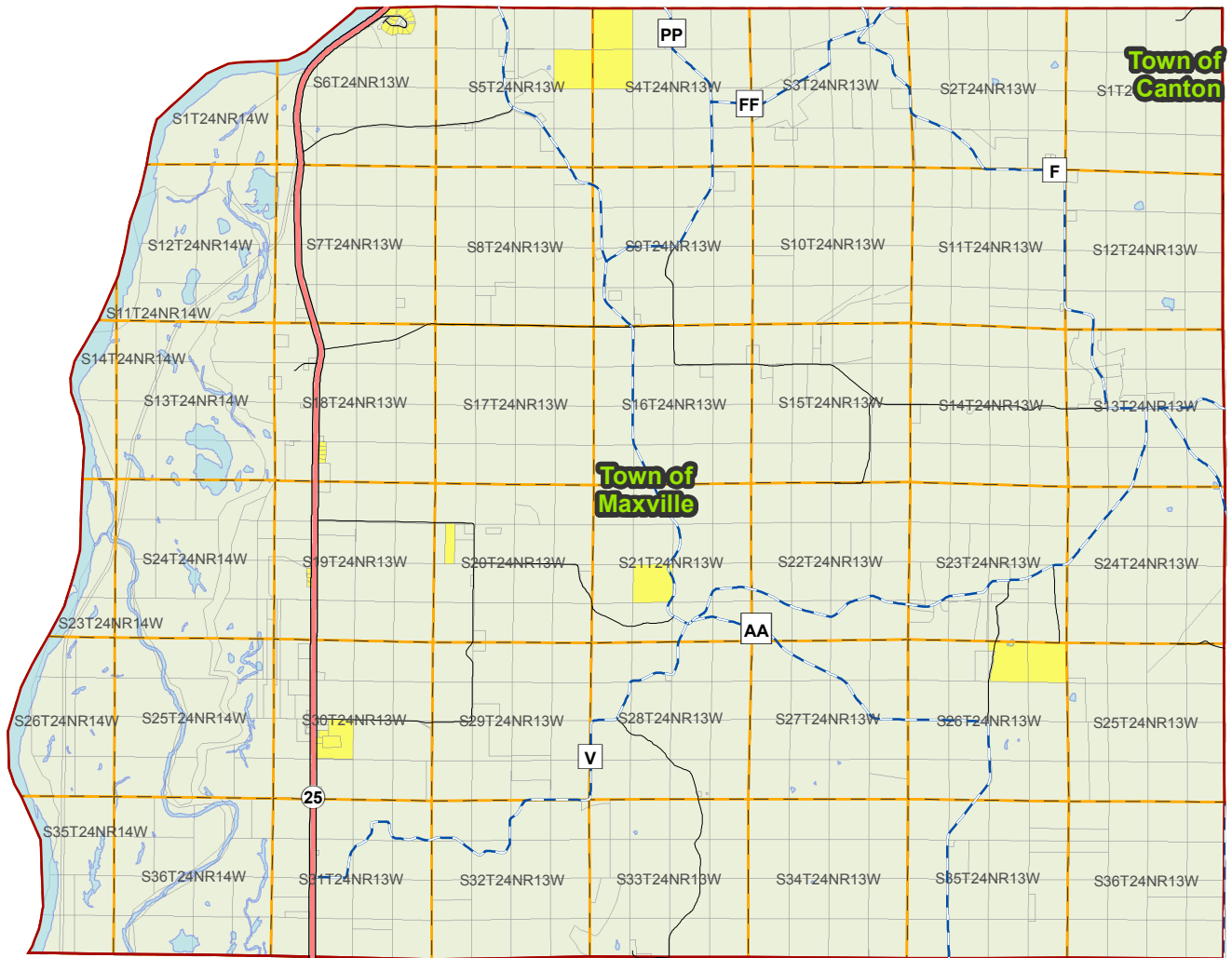


Legend

Buffalo County Farmland Preservation Plan Map Town of Lincoln

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|  Political boundaries |  County Roads |  FP Plan area |
|  Section lines |  Town Roads |  Non-FP Plan area(s) |
|  Federal Roads |  Parcel lines | |
|  State Roads |  Water | |

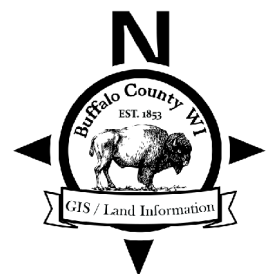


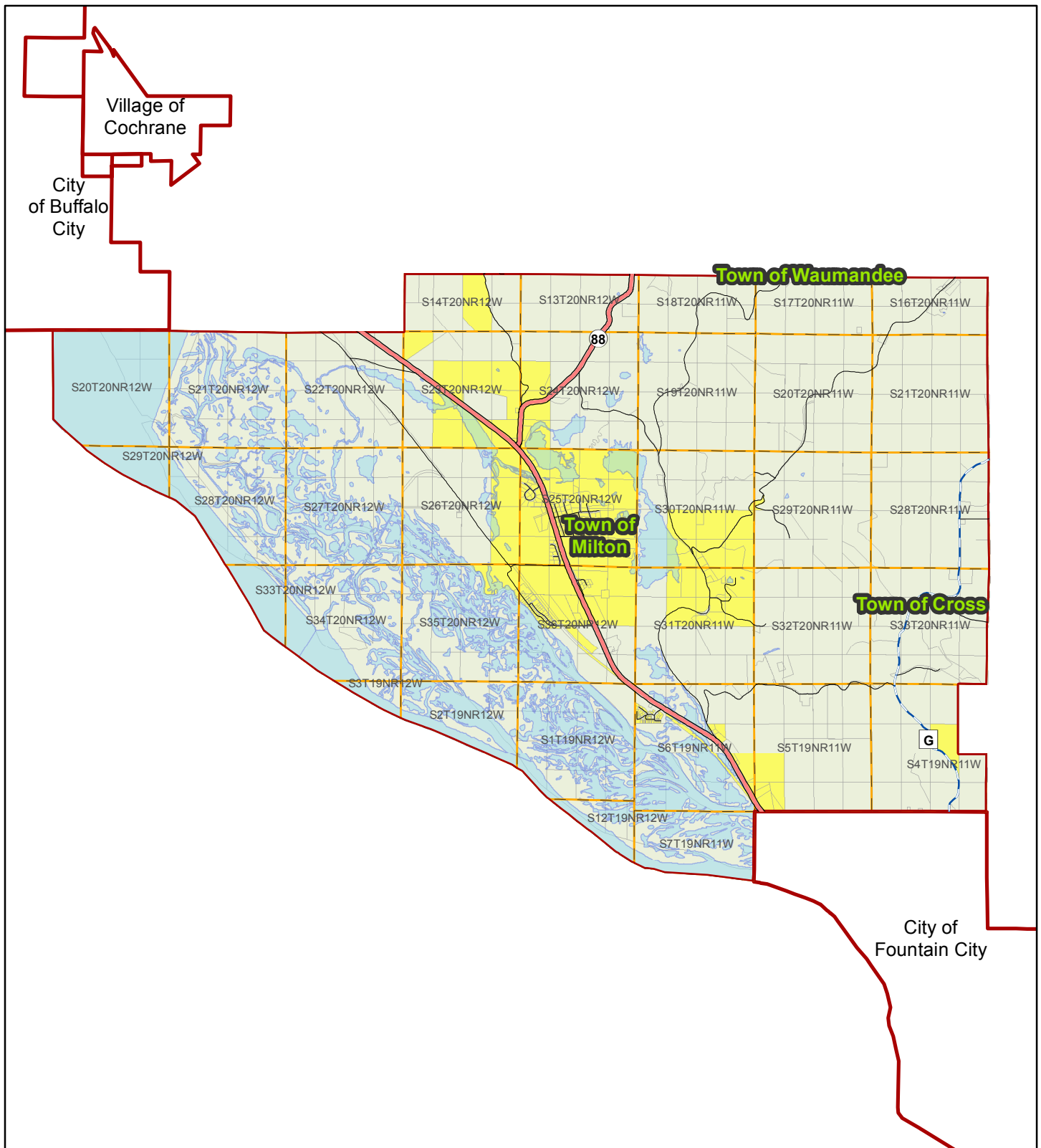


Legend

Buffalo County Farmland Preservation Plan Map Town of Maxville

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| Political boundaries | County Roads | FP Plan area |
| Section lines | Town Roads | Non-FP Plan area(s) |
| Federal Roads | Parcel lines | |
| State Roads | Water | |

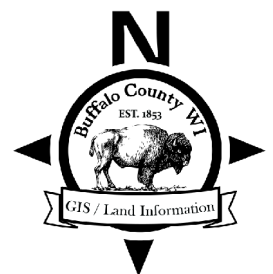


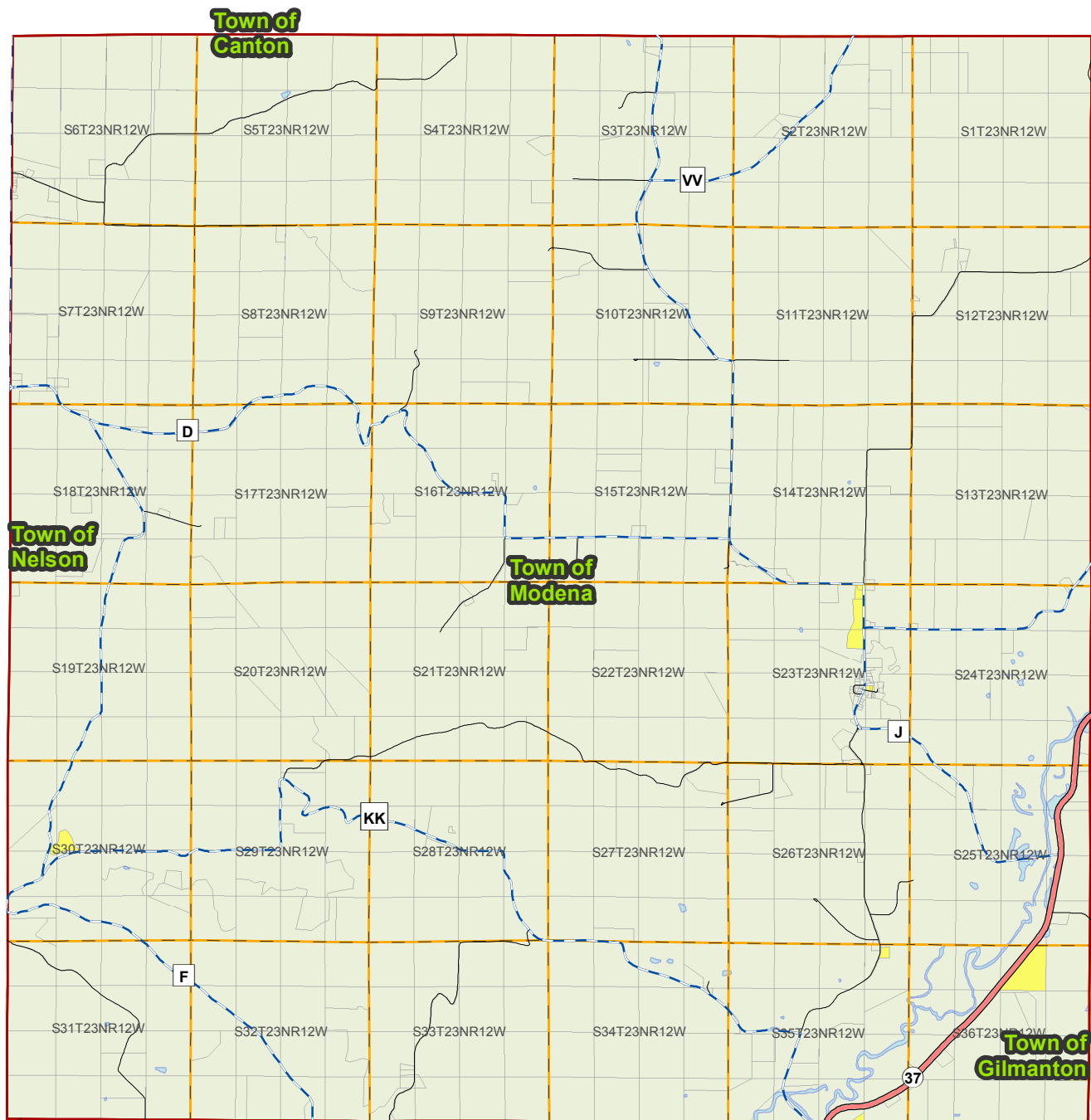


Legend

Buffalo County Farmland Preservation Plan Map Town of Milton

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| Political boundaries | County Roads | FP Plan area |
| Section lines | Town Roads | Non-FP Plan area(s) |
| Federal Roads | Parcel lines | |
| State Roads | Water | |

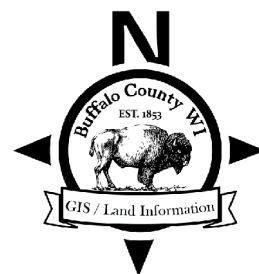


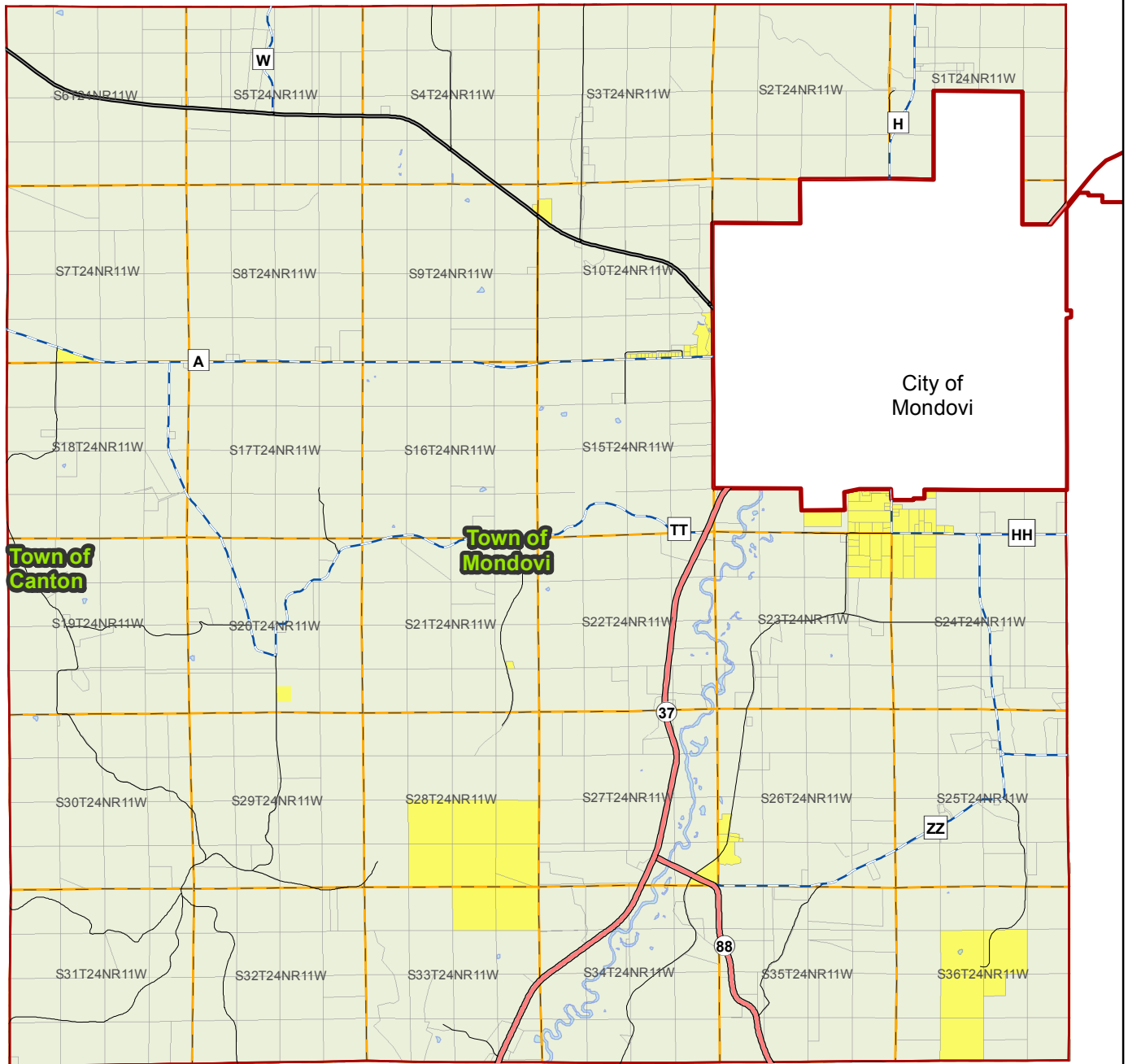


Legend

Buffalo County Farmland Preservation Plan Map Town of Modena

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| Political boundaries | County Roads | FP Plan area |
| Section lines | Town Roads | Non-FP Plan area(s) |
| Federal Roads | Parcel lines | |
| State Roads | Water | |

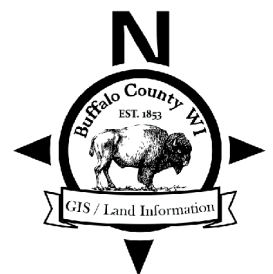


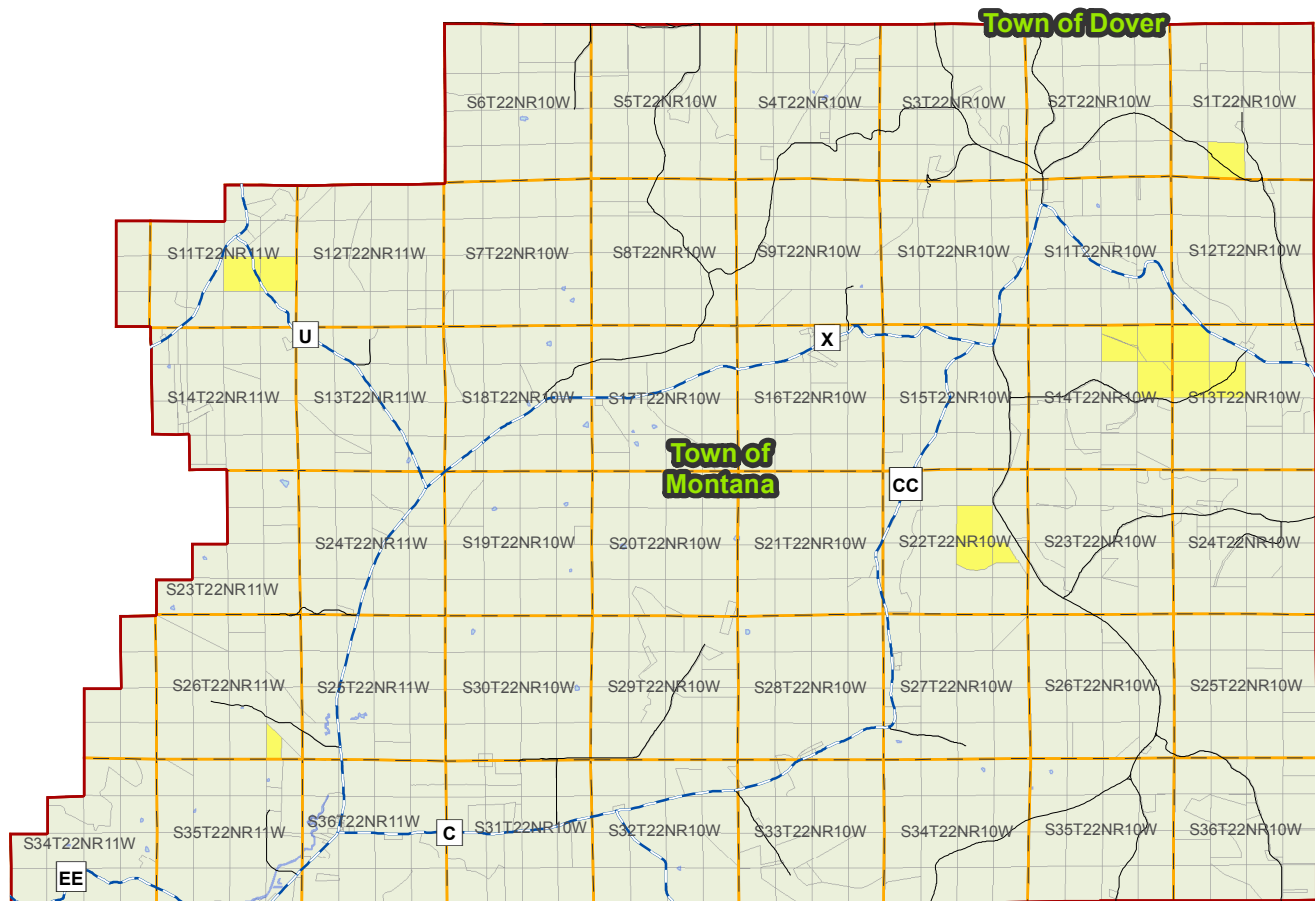


Legend

Buffalo County Farmland Preservation Plan Map Town of Mondovi

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| Political boundaries | County Roads | FP Plan area |
| Section lines | Town Roads | Non-FP Plan area(s) |
| Federal Roads | Parcel lines | |
| State Roads | Water | |

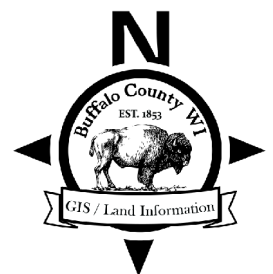


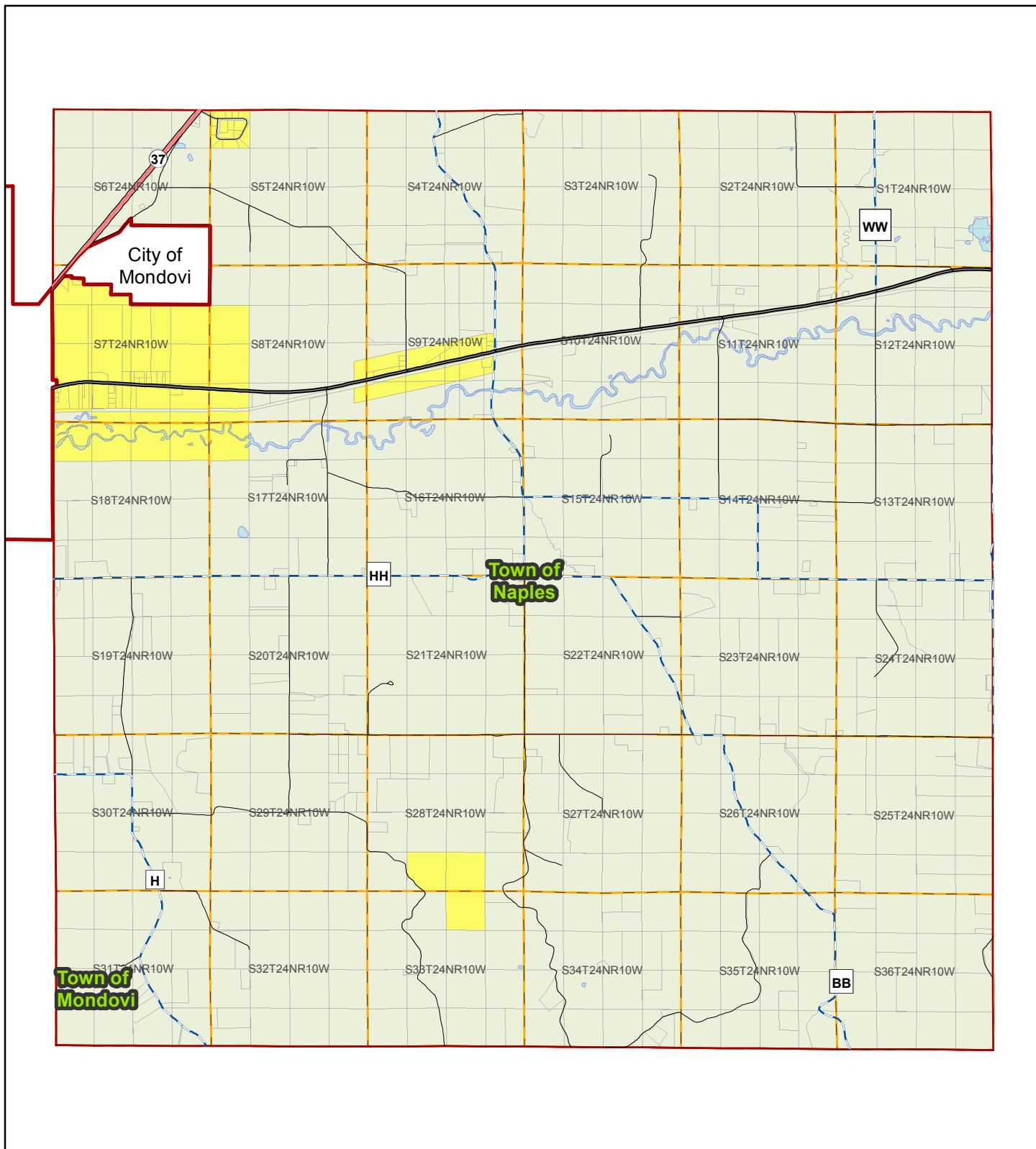


Legend

Buffalo County Farmland Preservation Plan Map Town of Montana

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|  Political boundaries |  County Roads |  FP Plan area |
|  Section lines |  Town Roads |  Non-FP Plan area(s) |
|  Federal Roads |  Parcel lines | |
|  State Roads |  Water | |



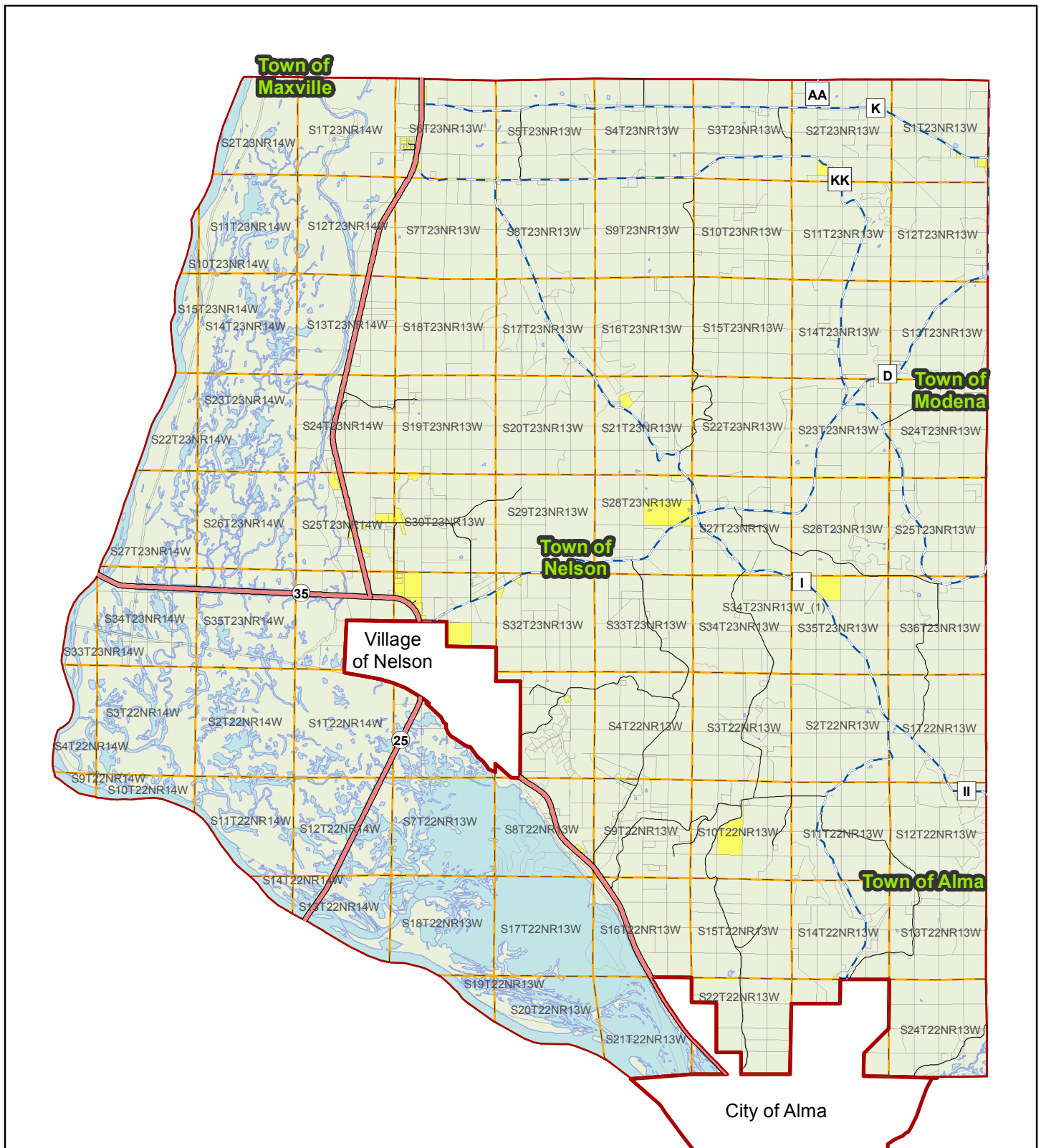


Legend

Buffalo County Farmland Preservation Plan Map Town of Naples

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|----------------------|--------------|---------------------|
| Political boundaries | County Roads | FP Plan area |
| Section lines | Town Roads | Non-FP Plan area(s) |
| Federal Roads | Parcel lines | |
| State Roads | Water | |

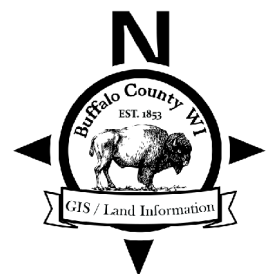


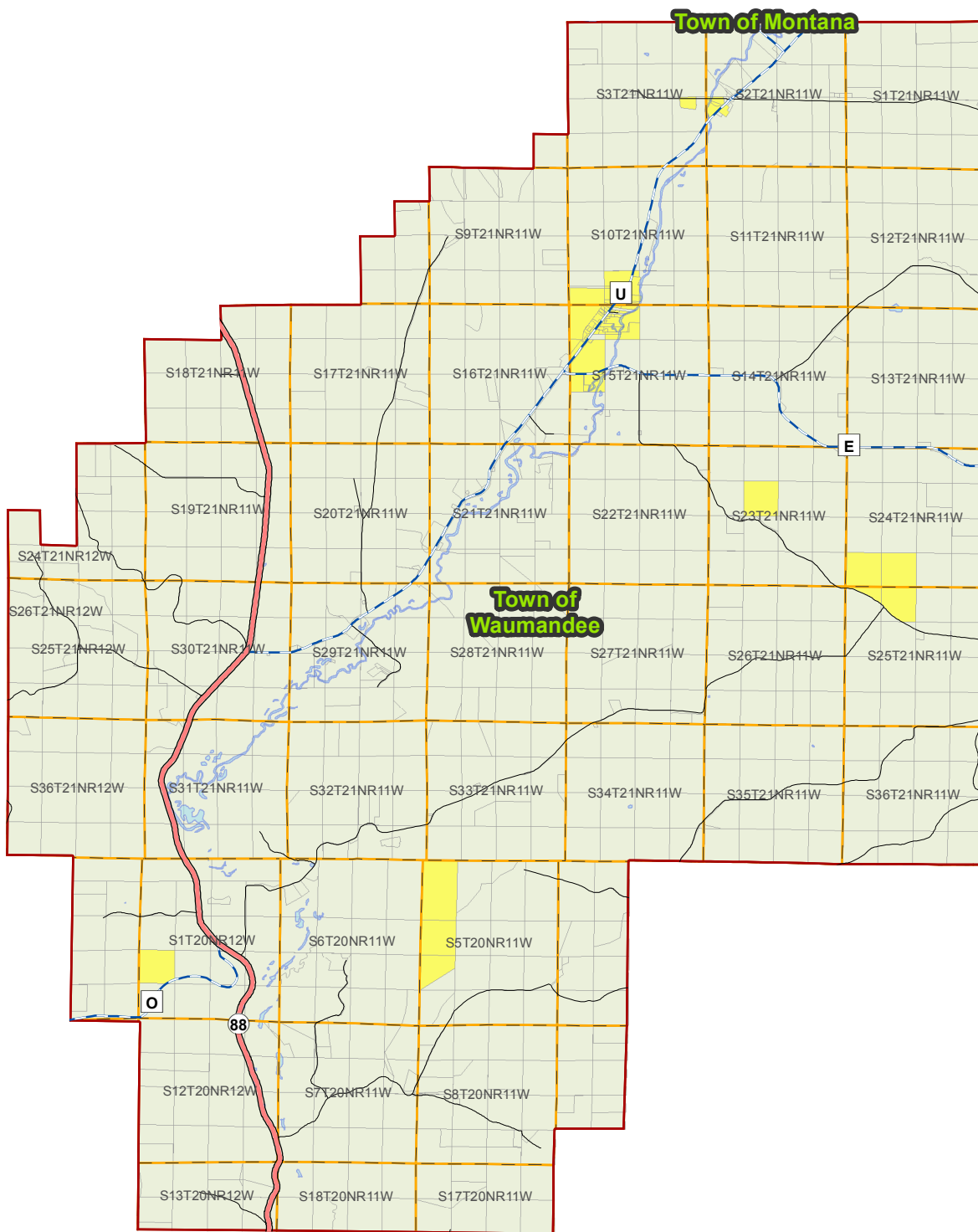


Legend

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|----------------------|--------------|---------------------|
| Political boundaries | County Roads | FP Plan area |
| Section lines | Town Roads | Non-FP Plan area(s) |
| Federal Roads | Parcel lines | |
| State Roads | Water | |

Buffalo County Farmland Preservation Plan Map
Town of Nelson





Legend

Buffalo County Farmland Preservation Plan Map Town of Waumandee

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|--|--|---|
|  Political boundaries |  County Roads |  FP Plan area |
|  Section lines |  Town Roads |  Non-FP Plan area(s) |
|  Federal Roads |  Parcel lines | |
|  State Roads |  Water | |

