

6.0 Agricultural, Natural and Cultural Resources Element

6.1 Existing Conditions

6.2 Existing Agricultural, Natural, and Cultural Programs

6.3 Summary of Existing Conditions

6.4 Goals, Objectives and Policies

Wis. Stats. 66.1001(2)(e)

(e) Agricultural, natural and cultural resources element. A compilation of objectives, policies, goals, maps and programs for the conservation, and promotion of the effective management, of natural resources such as groundwater, forests, productive agricultural areas, environmentally sensitive areas, threatened and endangered species, stream corridors, surface water, floodplains, wetlands, wildlife habitat, metallic and nonmetallic mineral resources consistent with zoning limitations under s. 295.20 (2), parks, open spaces, historical and cultural resources, community design, recreational resources and other natural resources.

Understanding the resource base of a community provides an important context for the development of goals, objectives, and policies for the conservation and management of agricultural, natural, and cultural resources. Within the following narrative, various components of the community resource base are examined at a broad level or “planning scale”. The purpose of this examination is to provide Chippewa County with the necessary information to make informed decisions and recommendations about future growth and preservation of these resources.

This element was completed with the contributions of many agencies and individuals. The Chippewa County Planning and Zoning and Land Records Department provided background information on the existing conditions. In addition, the West Central Regional Planning Commission provided background information and produced many of the maps throughout this element.

6.1 Existing Conditions

Over the past several decades, agriculture as a percentage of the economy has been in a declining trend. Manufacturing, retail, and professional employment opportunities, however, have risen in Chippewa Falls and the larger Eau Claire Metropolitan Statistical Area (MSA). Despite the agricultural industry decreasing, over half of the County’s land remains as productive agricultural land. Tourism and recreational uses of the County’s natural resources has also increased, offering both residents and visitors access to recreational trails, hunting lands, and surface waters for fishing, boating, and canoeing.

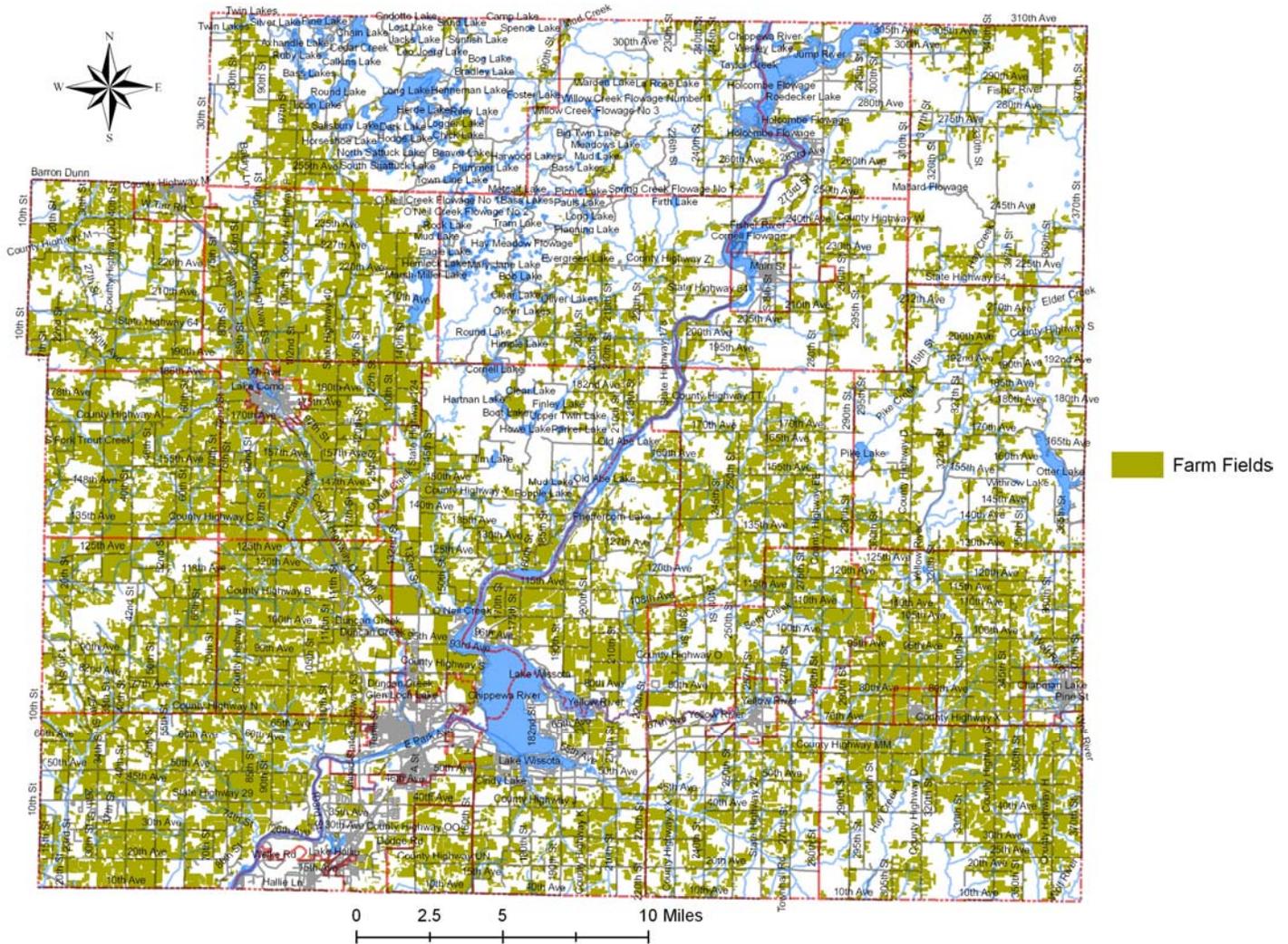
Recently, however, the agricultural and natural resource industries of Chippewa County have experienced a lift from both the increased interest and investment in local food and renewable energy.

Throughout Chippewa County, there are many unique historical structures and sites that are important to its past. Chippewa County’s natural and cultural resources aid in defining the local communities and provide the cornerstone for the quality of life for local residents. Cultural and historic resources are identified and preserved for their social and economic value.

Local Agricultural Industry Trends

Agriculture is an important economic force in Chippewa County. Figure 6-1 illustrates where the farm fields are located in Chippewa County.

**Figure 6-1
Farmland in Chippewa County**



Source: 2005 FSA, CLU

Produced by: West Central Wisconsin Regional Plan Commission

Changes in agriculture due to socio-economic conditions and the development pressures to convert agricultural land to other uses can have profound impacts in Chippewa County and surrounding communities. Chippewa County agriculture is diverse as the farming community produces a variety of products. Dairy, field crops, livestock and poultry are the main commodities, as shown in Table 6-1.

Table 6-1
Chippewa County's Top Commodities
(sales by dollar value, 2002)

Milk	\$65.6 million
Grain	\$15.0 million
Cattle & calves	\$13.0 million
Poultry & eggs	\$6.0 million
Hay & other crops	\$2.3 million

Source: University of Wisconsin-Extension

Table 6-2 indicates the changes that have occurred with average farm size and number of farms from 2002 to 2007 in Chippewa County, Wisconsin, and the U.S. In these five years, the number of farms in Chippewa County has decreased by nearly three percent, lagging behind the state trend of a nearly two percent increase. The average farm size has decreased by three percent which is slightly lower than the state and national trend that showed a nearly five percent decrease. The trend at the national level according to the 2007 Census of Agriculture shows a continuation in the trend towards more small and very large farms. The legal definition of a farm is any place from which \$1000 or more of agricultural products were, or normally would be, produced and sold during the Census year.

Table 6-2
Chippewa County Number of Farms and Average Farm Size

	2002		2007		Percent Change 2002 to 2007	
	Number of Farms	Average Farm Size (Acres)	Number of Farms	Average Farm Size (Acres)	Number of Farms	Average Farm Size (Acres)
Chippewa County	1,621	231	1,575	224	--2.8%	-3.0%
Wisconsin	77,131	204	78,463	194	1.7%	-4.9%
United States	2,128,982	441	2,204,792	418	3.6%	-5.2%

Source: U.S. Department of Agriculture

Farms in Chippewa County tend to be individual or family owned. A small portion is also owned by a partnership. This can be seen in Table 6-3.

Table 6-3
Number of Farms by Farm Ownership

Ownership	1987	1992	1997	2002
Individual/Family Farms	1,476	1,395	1,571	1,500
Partnership	138	131	109	84
Corporation – Family	30	41	47	33
Corporation – Other	1	2	1	3
Other (Co-op, Trust, etc.)	2	2	6	1

Source: U.S. Census

Table 6-4 shows that from 2002 to 2007, Chippewa County gained 615 parcels assessed as agricultural. But, the total acres assessed as agricultural decreased by roughly 4,500, which represents a 1.5% decrease. This table shows all the parcels that were determined to be active working farmlands during the time period that the County was assessed. For assessment purposes, to be distinguished as active farmlands the assessor must visually see evidence that the land is actively being farmed.

**Table 6-4
Change in Acres and Parcels of Farmland**

	Parcels of Farmland			Acres of Farmland			Percent Change
	2002	2007	Change	2002	2007	Change	
Towns							
Anson	459	451	-8	11,535	11,362	-173	-1.52%
Arthur	526	508	-18	12,786	12,223	-563	-4.61%
Auburn	496	527	31	13,117	12,531	-586	-4.68%
Birch Creek	194	194	0	4,205	4,249	44	1.04%
Bloomer	736	775	39	18,850	19,119	269	1.41%
Cleveland	371	657	286	7,405	6,135	-1,270	-20.70%
Colburn	660	670	10	15,598	16,106	508	3.15%
Cooks Valley	553	588	35	15,080	15,032	-48	-0.32%
Delmar	666	679	13	19,236	19,296	60	0.31%
Eagle Point	676	677	1	18,254	17,683	-571	-3.23%
Edson	776	798	22	23,016	23,530	514	2.18%
Estella	280	291	11	5,422	5,245	-177	-3.37%
Goetz	395	418	23	11,040	11,520	480	4.17%
Hallie	192	110	-82	4,256	2,630	-1,626	-61.83%
Howard	559	559	0	14,583	13,970	-613	-4.39%
Lafayette	398	412	14	10,506	10,226	-280	-2.74%
Lake Holcombe	126	129	3	2,631	2,609	-22	-0.84%
Ruby	373	375	2	10,104	9,601	-503	-5.24%
Sampson	352	358	6	9,240	8,748	-492	-5.62%
Sigel	440	487	47	10,302	10,343	41	0.40%
Tilden	613	629	16	16,157	16,111	-46	-0.29%
Wheaton	831	851	20	21,609	21,114	-495	-2.34%
Woodmohr	623	651	28	17,718	17,621	-97	-0.55%
Villages			0			0	
Boyd	34	34	0	822	819	-3	-0.37%
Cadott	33	29	-4	840	707	-133	-18.81%
Lake Hallie	n/a	148	148	n/a	1,331	1,331	100.00%
New Auburn	42	41	-1	986	894	-92	-10.29%
Cities			0			0	
Bloomer	27	30	3	117	111	-6	-5.41%
Chippewa Falls	4	6	2	99	102	3	2.94%
Cornell	16	14	-2	188	149	-39	-26.17%
Eau Claire	0	1	1	0	134	134	100.00%
Stanley	21	19	-2	342	296	-46	-15.54%
COUNTY TOTAL	11,472	12,116	644	296,044	291,547	-4,497	-1.54%

Source: Wisconsin Department of Revenue

Table 6-5 indicates the amount of Chippewa County agricultural land that was sold from 1996 to 2007. We can see that, for the most part, agricultural land being sold remains in agricultural use. From 2002 to 2007, an average of 46 transactions occurred per year for agricultural land continuing in agricultural use. This equates to approximately 69 acres per transaction for roughly \$1,845/acre. On the other hand, land which was converted from agricultural use to another use saw approximately 19 transactions per year there was approximately 42.50 acres per transaction for roughly \$2,688/acre.

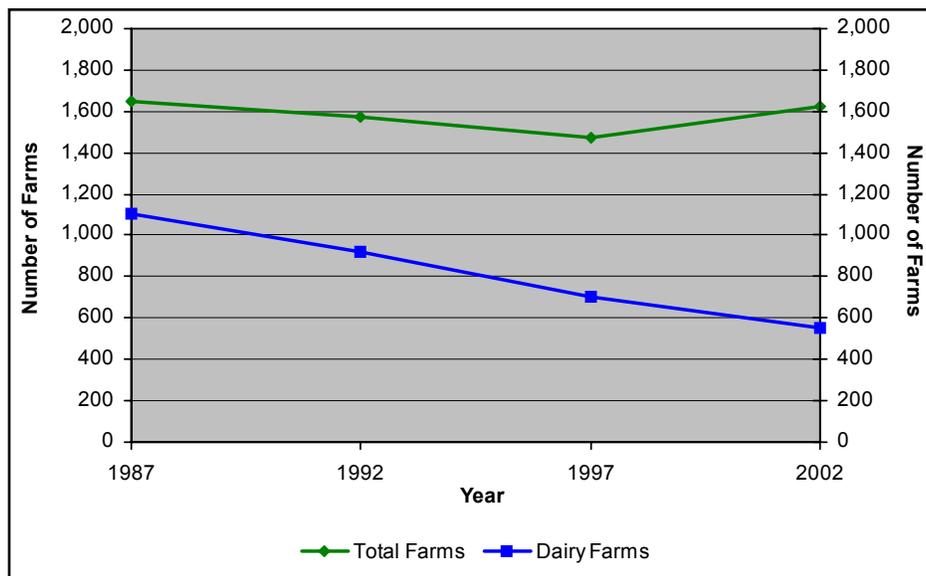
**Table 6-5
Farmland Sold and Converted to Non-Ag Uses**

Year	Total of all agricultural land			Agricultural land continuing in agricultural use			Agricultural land being diverted to other uses			The percent of agricultural land sold and converted to nonagricultural use
	No. of transactions	Acres sold	Dollars per acre	No. of transactions	Acres sold	Dollars per acre	No. of transactions	Acres sold	Dollars per acre	
1996	38	1503	480	29	1300	487	9	203	433	14%
1997	39	1893	599	30	1615	539	9	278	946	15%
1998	89	5877	1067	68	4826	1030	21	1051	1235	18%
1999	86	5010	1274	62	3893	1138	24	1117	1748	22%
2000	100	6050	1297	66	4638	1226	34	1412	1533	23%
2001	74	3727	1398	50	3046	1307	24	681	1807	18%
2002	86	4446	1732	52	2676	1627	34	1770	1889	40%
2003	84	5492	1598	56	4573	1460	28	919	2284	17%
2004	81	4961	1854	60	4386	1886	21	575	1610	12%
2005	52	2687	2464	35	1794	2178	17	893	3038	33%
2006	33	2573	1983	26	2149	1838	7	424	2718	16%
2007	51	3571	2150	48	3478	2084	3	93	4590	3%

*Information obtained from Wisconsin Agricultural Statistics (1996-2007).
Compiled by the Chippewa County Land Conservation Dept., 8/14/08*

Although the county's agriculture is quite diversified, dairy is prominent, ranking fifth in the state in number of dairy herds and tenth in the number of cows. However, dairy farms have been disappearing faster than non-dairy farms, as shown in Figure 6-2.

**Figure 6-2
Farm Decline 1987 to 2002**



Source: U.S. Department of Agriculture

In 1989, there were about 800 dairy farms. As of 2002, this number had decreased to 427 dairy farms, totaling about 35 percent of all Chippewa County farms. Dairy farms have decreased from 1989 to 2002 by nearly 50 percent.

Table 6-6
Trends Chippewa County Dairy Farms

Town Name	Area (Sq. Mile)	Dairy Farm Numbers			Dairy Farms per square Mile			Number Change		% Change	
		1989	1997	2002	1989	1997	2002	89-97	97-02	89-97	97-02
Anson	37.4	42	22	15	1.12	0.59	0.40	-20	-7	-48%	-32%
Arthur	42.9	64	49	33	1.49	1.14	0.77	-15	-16	-23%	-33%
Auburn	35.7	43	30	17	1.20	0.84	0.48	-13	-13	-30%	-43%
Birch Creek	44.6	18	17	11	0.40	0.38	0.25	-1	-6	-6%	-35%
Bloomer	47.1	55	48	32	1.17	1.02	0.68	-7	-16	-13%	-33%
Cleveland	54.1	49	26	23	0.91	0.48	0.42	-23	-3	-47%	-12%
Colburn	65.0	67	48	33	1.03	0.74	0.51	-19	-15	-28%	-31%
Cooks Valley	34.3	59	53	37	1.72	1.55	1.08	-6	-16	-10%	-30%
Delmar	43.5	102	78	58	2.35	1.79	1.33	-24	-20	-24%	-26%
Eagle Point	62.1	55	43	32	0.89	0.69	0.52	-12	-11	-22%	-26%
Edson	53.9	100	80	63	1.85	1.48	1.17	-20	-17	-20%	-21%
Estella	31.8	17	12	8	0.53	0.38	0.25	-5	-4	-29%	-33%
Goetz	29.9	53	45	34	1.77	1.50	1.14	-8	-11	-15%	-24%
Hallie	21.7	11	10	4	0.51	0.46	0.18	-1	-6	-9%	-60%
Howard	35.8	45	33	3	1.26	0.92	0.08	-12	-30	-27%	-91%
Lafayette	34.7	20	9	24	0.58	0.26	0.69	-11	15	-55%	167%
Lake Holcombe	26.9	9	4	6	0.33	0.15	0.22	-5	2	-56%	50%
Ruby	53.5	31	19	17	0.58	0.36	0.32	-12	-2	-39%	-11%
Sampson	62.5	21	10	2	0.34	0.16	0.03	-11	-8	-52%	-80%
Sigel	36.2	43	29	18	1.19	0.80	0.50	-14	-11	-33%	-38%
Tilden	36.0	83	59	43	2.31	1.64	1.20	-24	-16	-29%	-27%
Wheaton	54.9	51	42	28	0.93	0.77	0.51	-9	-14	-18%	-33%
Woodmohr	35.5	63	44	29	1.77	1.24	0.82	-19	-15	-30%	-34%
Chippewa County	674.5	800	603	427	1.19	0.89	0.63	-197	-176	-25%	-29%

Source: Wisconsin Agricultural Statistics Service

Table 6-7 shows the decrease in number of cows but a substantial jump in production from 2002 to 2007 in the dairy industry. Chippewa County had a large productivity gain (1,200 pounds per cow per year) during those five years.

Table 6-7
Chippewa County Dairy Trends – 2002-2007

Place	Number of Cows	Production (1,000 lbs)	Productivity (lbs/cow/year)	Average Herd Size
2002				
Chippewa County	33,700	522,350	15,500	59
Northwest District (includes Barron, Bayfield, Burnett, Chippewa, Douglas, Rusk, Polk, Sawyer, and Washburn Counties)	104,000	1,666,630	16,025	62
State	1,266,950	21,849,220	17,246	71
2007				
Chippewa County	32,500	542,750	16,700	70
Northwest District (includes Barron, Bayfield, Burnett, Chippewa, Douglas, Rusk, Polk, Sawyer, and Washburn Counties)	95,000	1,605,590	16,901	72
State	1,247,000	24,080,000	19,310	90
Net Change 2002-2007				
Chippewa County	-1,200	20,400	1,200	11
Northwest District (includes Barron, Bayfield, Burnett, Chippewa, Douglas, Rusk, Polk, Sawyer, and Washburn Counties)	-9,000	61,040	876	10
State	-19,950	2,230,780	2,046	19

Source: Wisconsin Agricultural Statistics Service

The county ranks in the top ten Wisconsin counties in forage and hay production, comprising 84,000 acres, and in the top 20 for corn grain and corn silage production, totaling about 65,000 acres. Chippewa County is also the home of the first large-scale production ethanol plant in Wisconsin.

There are several farms throughout the County growing organic produce, as well as taking part in self-marketing, or selling goods locally. To aid in this process, Chippewa Falls and Stanley have weekly farmer's markets during the harvest seasons.

Besides a source for produce, there is a large dependence on agriculture in Chippewa County. Shown in Table 6-8, agriculture pays approximately \$15 million each year in taxes to government agencies which provide services to residents.

Table 6-8
Taxes Paid by Agriculture

Corporate profit tax	\$0.5 million
Fees/charges/other	\$2.1 million
Income tax	\$1.9 million
Sales tax	\$4.7 million
Property tax	\$5.7 million

Source: University of Wisconsin-Extension

Additionally, agriculture provides a wealth of employment opportunities to Chippewa County residents. As of the 2000 Census, over 1,400 adults worked on farms, which equates to about nine percent of the County's Town population. About 10 percent of Chippewa County's Town population also lives on farms, as shown in the Table 6-9.

Table 6-9
Chippewa County Agriculture Dependence

Dependence on Agriculture - 2000					
Town Name	Town Population	Population Living On Farms:		Employed Adults Working on Farms:	
		Number	Percent	Number	Percent
Anson	1,881	95	5.1%	77	7.5%
Arthur	710	130	18.3%	68	18.4%
Auburn	580	91	15.7%	52	16.6%
Birch Creek	520	46	8.8%	24	9.8%
Bloomer	926	218	23.5%	100	19.0%
Cleveland	900	86	9.6%	81	18.3%
Colburn	727	216	29.7%	88	26.2%
Cooks Valley	632	174	27.5%	65	17.6%
Delmar	941	186	19.8%	85	18.2%
Eagle Point	3,049	213	7.0%	101	6.8%
Edson	966	408	42.2%	174	38.1%
Estella	469	39	8.3%	15	6.6%
Goetz	695	144	20.7%	67	18.1%
Hallie	4,703	40	0.9%	35	1.4%
Howard	648	87	13.4%	41	11.2%
Lafayette	5,199	64	1.2%	30	1.0%
Lake Holcombe	1,010	13	1.3%	25	5.4%
Ruby	446	81	18.2%	32	18.1%
Sampson	816	80	9.8%	19	5.3%
Sigel	825	64	7.8%	28	7.6%
Tilden	1,185	246	20.8%	122	19.1%
Wheaton	2,366	170	7.2%	81	6.2%
Woodmohr	883	146	16.5%	62	14.3%
Total	31,077	3,037	9.8%	1,472	9.1%

Source: US census and Wisconsin Agricultural Statistics Service

Agriculture stimulates economic activity in Chippewa County as agriculture generates almost \$382 million in economic activity, accounting for about 15 percent of Chippewa County's total economic activity. Every dollar of sales of agricultural products generates an additional \$0.33 of economic activity in other parts of the Chippewa County economy.

Agriculture products generate about \$287.2 million, which includes the sale of all farm products and value-added products. Purchases of agricultural needs and services, including fuel, fertilizer, feed, farm equipment, veterinary services, and crop consultants, create another \$75.5 million in economic activity. People who work in agriculture-related businesses then spend their earnings, resulting in an additional \$19.2 million of economic activity.

Topography

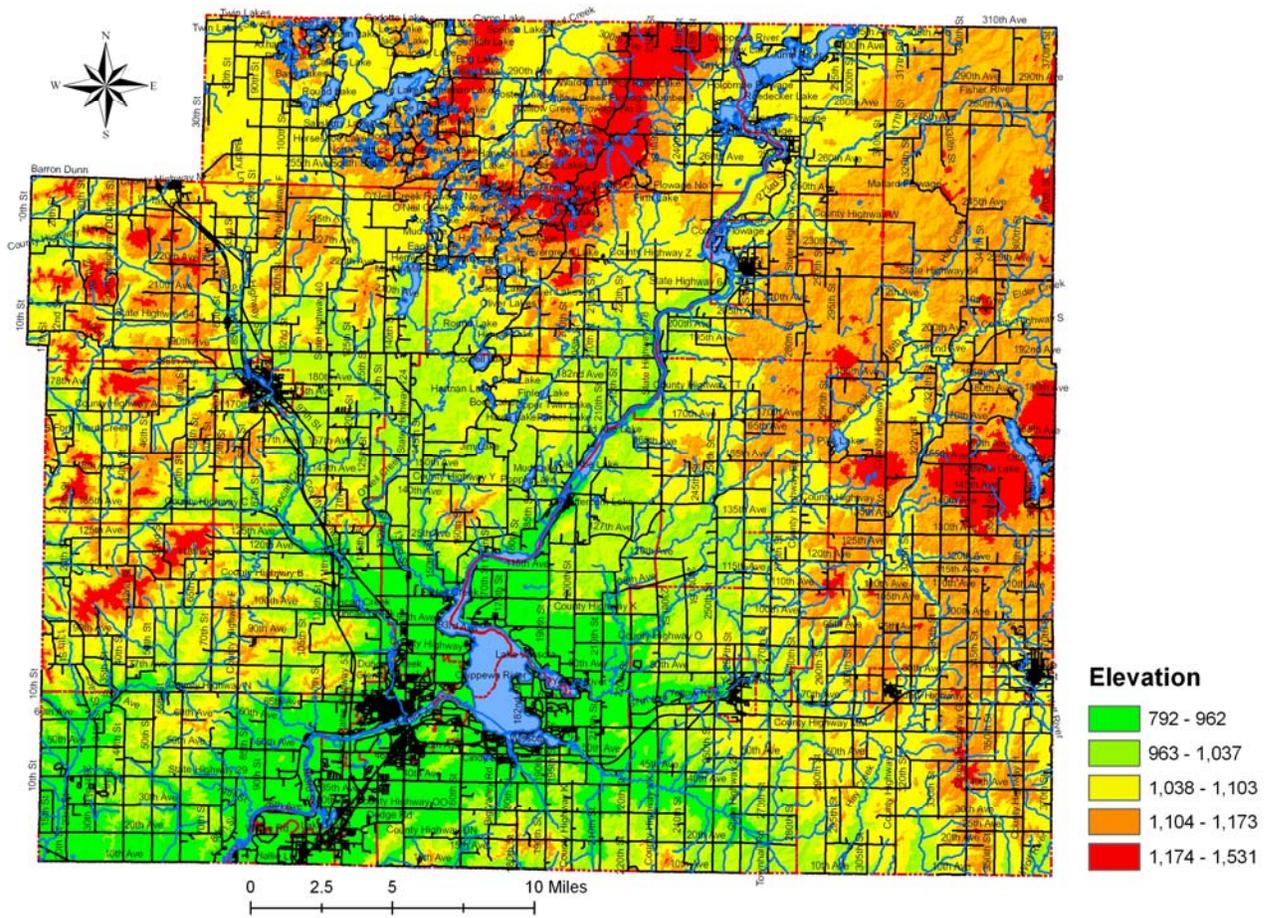
The topography of Chippewa County really has two distinct areas. A well-defined recessional moraine extends southeast from New Auburn, in the northwest corner of the County, to Jim Falls on the Chippewa River. From Jim Falls, glacial deposits extend further southeast to Cadott providing evidence of earlier glacial advances. Surface features of the moraines are characterized by hummocky topography, closed surface depressions and numerous kettle hole lakes, bogs, and wetlands.

A gently rolling till plain, drained by the Fisher River and Yellow River watersheds, extends north and east of Cadott to the borders of Clark, Taylor, and Rusk County. Drainage patterns in these watersheds are poorly defined and reflect glacial processes. Many perched and groundwater contact wetlands are found in closed surface depressions and along drainage ways.

A broad, nearly level, outwash plain extends south from the recessional moraine to the Chippewa River. The area is drained by sub basins of the Duncan Creek, Fisher River, and Lower Yellow River watersheds. Drainage patterns are very poorly defined. Outwash deposits may extend 100 feet below the land surface and are underlain by Cambrian sandstone and Precambrian Granite.

Steeply rolling sandstone upland abuts the central outwash plain and extends west to the Dunn County border. The area is drained by the Red Cedar, Muddy Creek, and Duncan Creek Watersheds. Drainage patterns are very well defined with channelized intermittent streams often extending to the upper reaches of the landscape. Chippewa County elevation is shown in Figure 6-3.

Figure 6-3
Chippewa County Elevations



Produced by: West Central Wisconsin Regional Plan Commission

Bedrock Geology

Chippewa County is divided between two Wisconsin geomorphic provinces. The Northern Highland is an ancient peneplain of complexly folded and faulted igneous and metamorphic rocks of Precambrian age. The Central Plain is a mixed landscape of Upper Cambrian age. It overlaps the Precambrian rocks to the north and west. The bedrock is mostly sandstone but includes some siltstone and shale.

The main mineral resources in the county are outwash deposits of sand and gravel. Other mineral resources are peat, glacial clay, and crushed Precambrian igneous or metamorphic rocks, such as traprock and quartzite. Some Upper Cambrian sandstone can be used locally for roadfill. Metallic sulfides, particularly copper and iron are disseminated in the Precambrian rocks. Bodies of ore could be in the rocks.

Surface Geology

The surface geology of Chippewa County is primarily the result of glacial deposition over bedrock. The modern landscape was most strongly influenced by the glaciers that invaded the county from about 25,000 years ago, and by a glacier that moved into the county from the West about 12,000 years ago. Since the last period of glacial activity, the landscape has been further sculpted by naturally occurring and man-induced erosion and drainage activity.

Soils

There are 666,464 acres of soil in Chippewa County, or about 1,041 square miles. Approximately 63 percent of that soil is being used as farmland. Of that farmland there is 4,477.31 acres of Class I soil, 241,393.98 acres of Class II soil, 150,548.13 acres of Class III soil and 245,341.19 acres of Class IV-VIII soil. According to the soil survey completed by the USDA Class I soils produce the highest yield and Class IV-VIII soils are considered unsuitable for agricultural uses. Soil Classes are shown in Figure 6-4.

SOIL CLASSIFICATIONS

Class I soils have slight limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants or require special conservation practices.

Class IV soils have very severe limitations that restrict the choice of plants or require very careful management, or both.

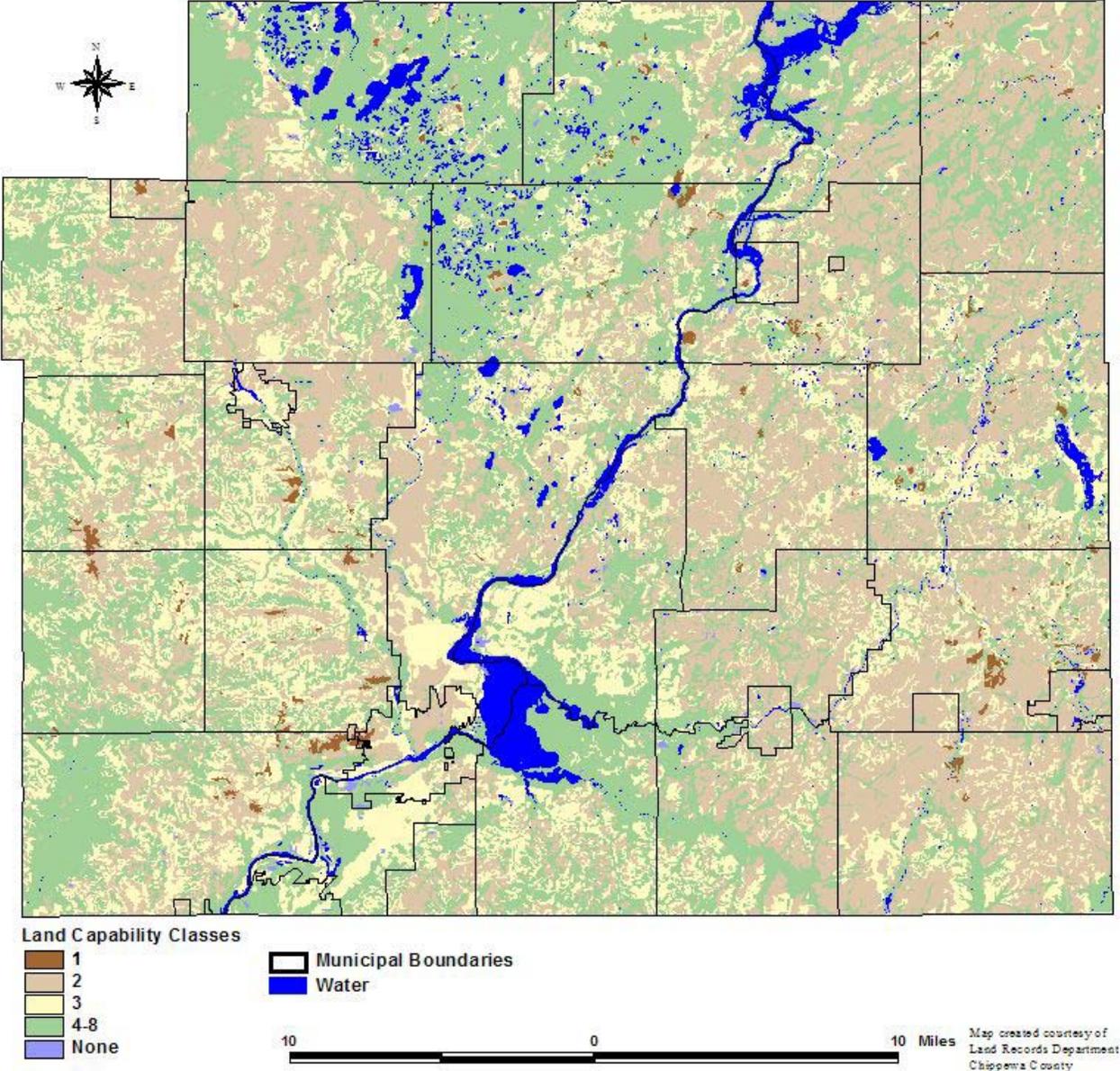
Class V soils are impractical to improve, limiting their use mainly to pasture, range, forestland, or wildlife food cover.

Class VI soils have severe limitations that make them unsuitable for cultivation.

Class VII soils have severe limitations that make them unsuitable for cultivation, and are mainly used for grazing, forestland, or wildlife.

Class VIII soils have limitations making them unsuitable for plant production. Uses are limited to recreation, wildlife, water supply, or aesthetic purposes.

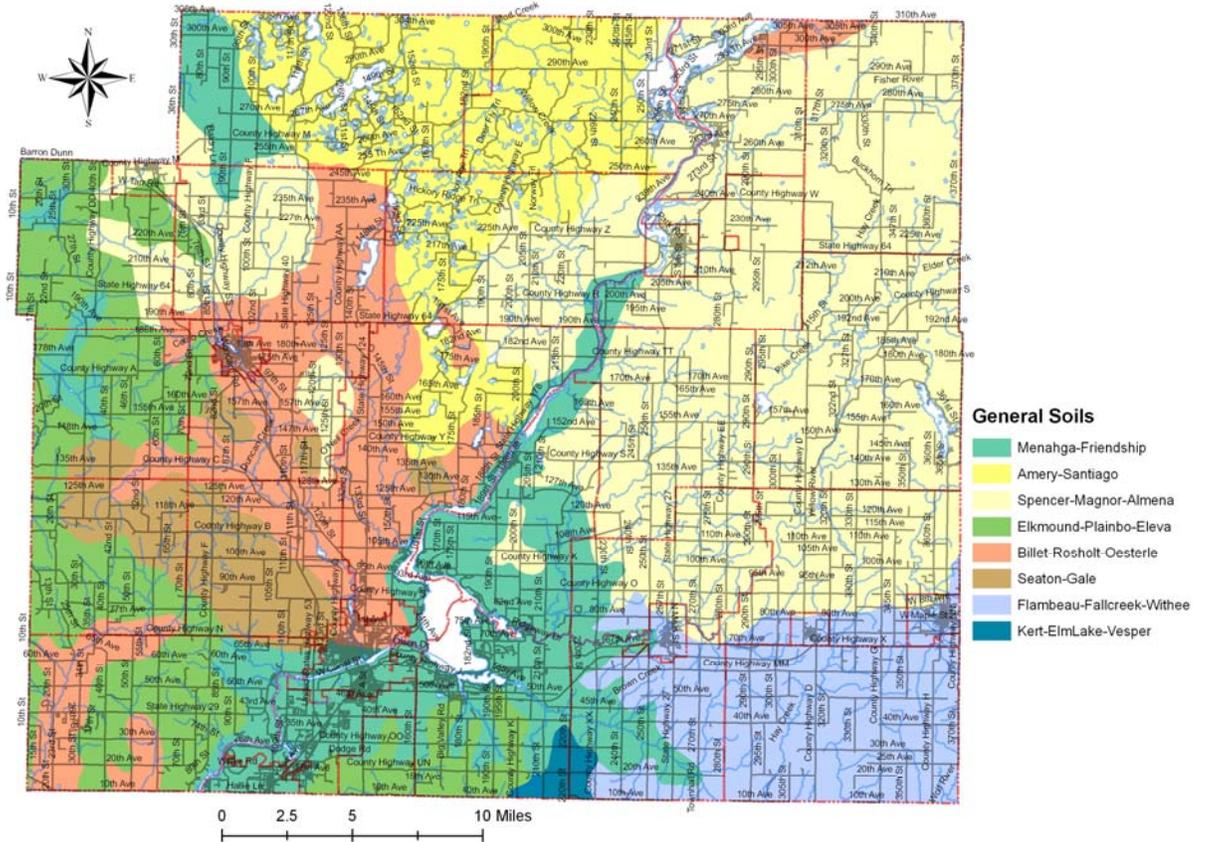
Figure 6-4
Soil Capability Classes



Produced by: Chippewa County Planning and Zoning

The Natural Resource Conservation Service (NRCS) has conducted mapping and grouped the soils of Chippewa County into eight different associations. Each association has a distinctive pattern of soils, relief and drainage. Each is a unique natural landscape. The following information regarding these soil types is derived from this initial mapping. The best use of lands is often dictated by the type of soils present. Figure 6-5 indicates the locations of Chippewa County Soil Associations.

Figure 6-5
Chippewa County Soil Associations



Source: NRCS Soil Survey

Produced by: West Central Wisconsin Regional Planning Commission

Menhaga-Friendship Association: Deep, nearly level to sloping, excessively drained and moderately well drained, sandy soils on outwash plains and stream terraces. These soils are in areas on outwash plains and stream terraces where small hills and depressions are dissected by streams and small drainage ways.

Amery-Santiago Association: Deep, gently sloping to very steep, well-drained, loamy and silty soils on moraines. These soils are on moraines characterized by many knolls, hills and depressions.

Spencer-Magnor-Almena Association: Deep, nearly level to sloping, moderately well drained and somewhat poorly drained, silty soils on moraines. These soils are on ground moraines and terminal moraines.

Elkmound-Plainbo-Eleva Association: Shallow and moderately deep, gently sloping to very steep, well drained to excessively drained, loamy and sandy soils on uplands, outwash plains, and stream terraces. These soils are on uplands underlain by sandstone and on outwash plains and stream terraces.

Billett-Rosholt-Oesterle Association: Deep, nearly level to sloping, well drained to somewhat poorly drained, loamy soils on outwash plains and stream terraces. These soils are in plane or slightly convex areas on outwash plains and stream terraces.

Seaton-Gale Association: Deep and moderately deep, nearly level to steep, moderately well drained and well drained, silty soils on uplands. These soils are on uplands underlain by sandstone and in areas of valley fill.

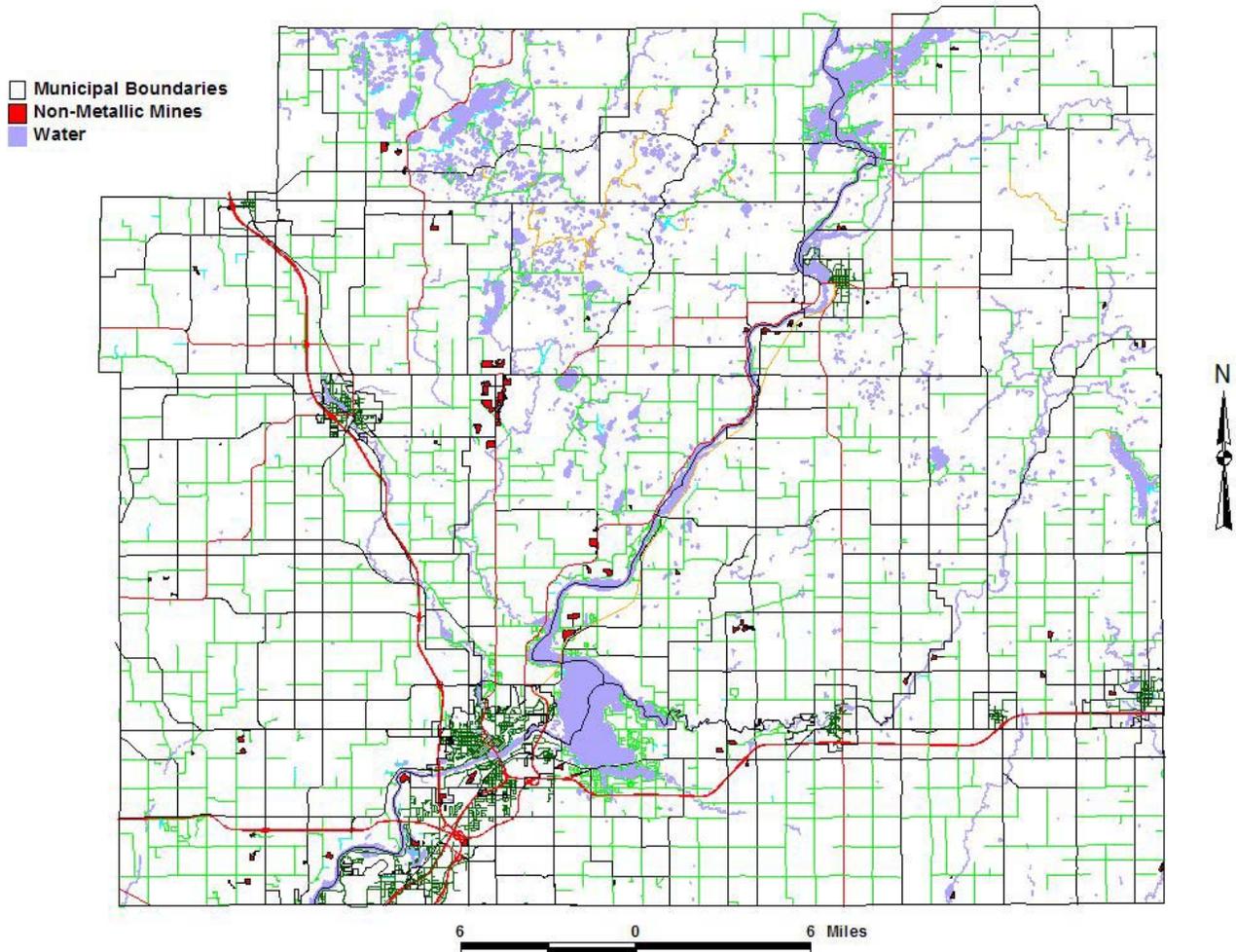
Flambeau-Fallcreek-Withee Association: Deep, nearly level to sloping, moderately well drained and somewhat poorly drained, loamy and silty soils on ground moraines. These soils are in plane or in slightly convex areas on ground moraines.

Kert-Elm Lake-Vesper Association: Deep and moderately deep, nearly level and gently sloping, somewhat poorly drained and poorly drained, silty and sandy soils on uplands. These soils are on uplands underlain by sandstone and shale.

Mineral Resources

There are no metallic mining operations in Chippewa County. Chippewa County does have approximately 85 operating non-metallic mining sites permitted under Chapter NR 135 of the Wisconsin Administrative Code. These sites are primarily for the extraction of sand and gravel for use in road construction, concrete mix, and construction fill. Figure 6-6 indicates the location of mining pits in Chippewa County.

Figure 6-6
Chippewa County Non-Metallic Mining Pits



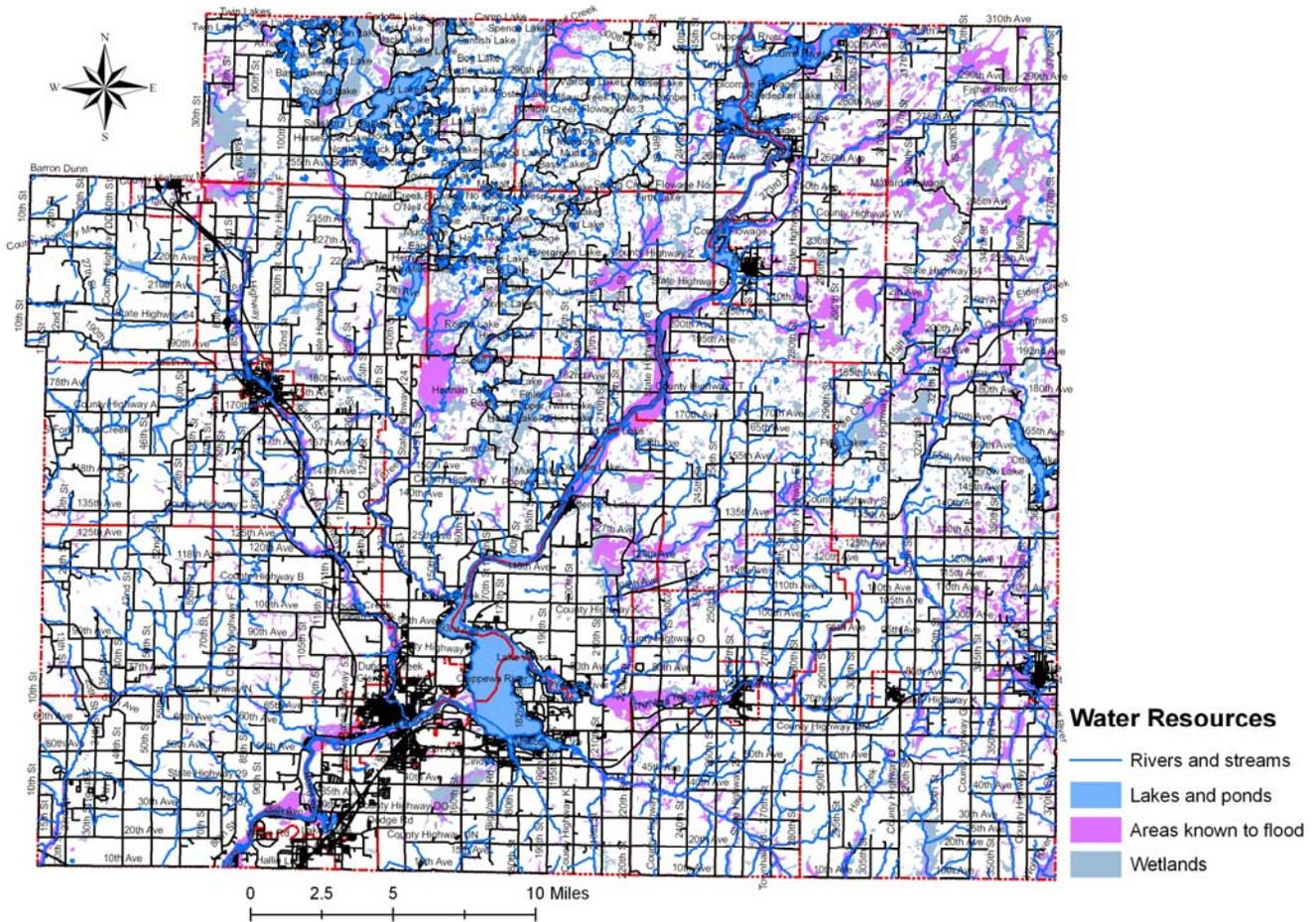
Source: Chippewa County Land Conservation

Watersheds and Surface Water

Lakes, ponds, rivers, streams, intermittent waterways and natural drainage ways make up the surface waters of Chippewa County. These resources are all water bodies, standing still or flowing, navigable and intermittent, including natural drainage ways that collect and channel overland rainwater or snowmelt runoff. Natural drainage ways are characterized by intermittent

streams, threads, rills, gullies and dry washes that periodically contribute water to first-order streams. There are also many artificial drainage ways where the natural drainage ways have been altered by human activity. All of these features have the ability to transport sediment and pollutants, and are affected by their watersheds, the land that surrounds them. Water resources are indicated in Figure 6-7.

Figure 6-7
Chippewa County Water Resources



Source: WisDNR

Chippewa County has a surface water area of over 21,000 acres. Most of this area (19,335 acres) is lakes, with rivers, streams, and trout streams comprising the other 1,700 acres.

Chippewa County lies within 12 watersheds, most of which are located in the Lower Chippewa River Basin. The Upper Chippewa River Basin contains the watersheds of Holcombe Flowage and Lower Jump River. Chippewa County watersheds are shown in Figure 6-8.

The surface water in Chippewa County is within the drainage system of the Chippewa River. This river crosses the county from northeast to southwest, falling from an elevation 993 feet above sea level at Cornell to 936 feet at Jim Falls and 839 feet at Chippewa Falls. Chippewa Falls is on the “Fall Line,” where the rivers of Northern Wisconsin leave the areas of resistant rocks of the Laurentian Shield and enter areas of softer sandstone. The Fall Line is an area of rapids or low cascades and is a good location for water-power dams. The Chippewa, Jump, Fisher, Yellow, and Wolf Rivers are the main streams draining the eastern part of the county. Sand, O’Neil, Duncan and Elk Creeks are the major streams draining the western part.

Water Quality

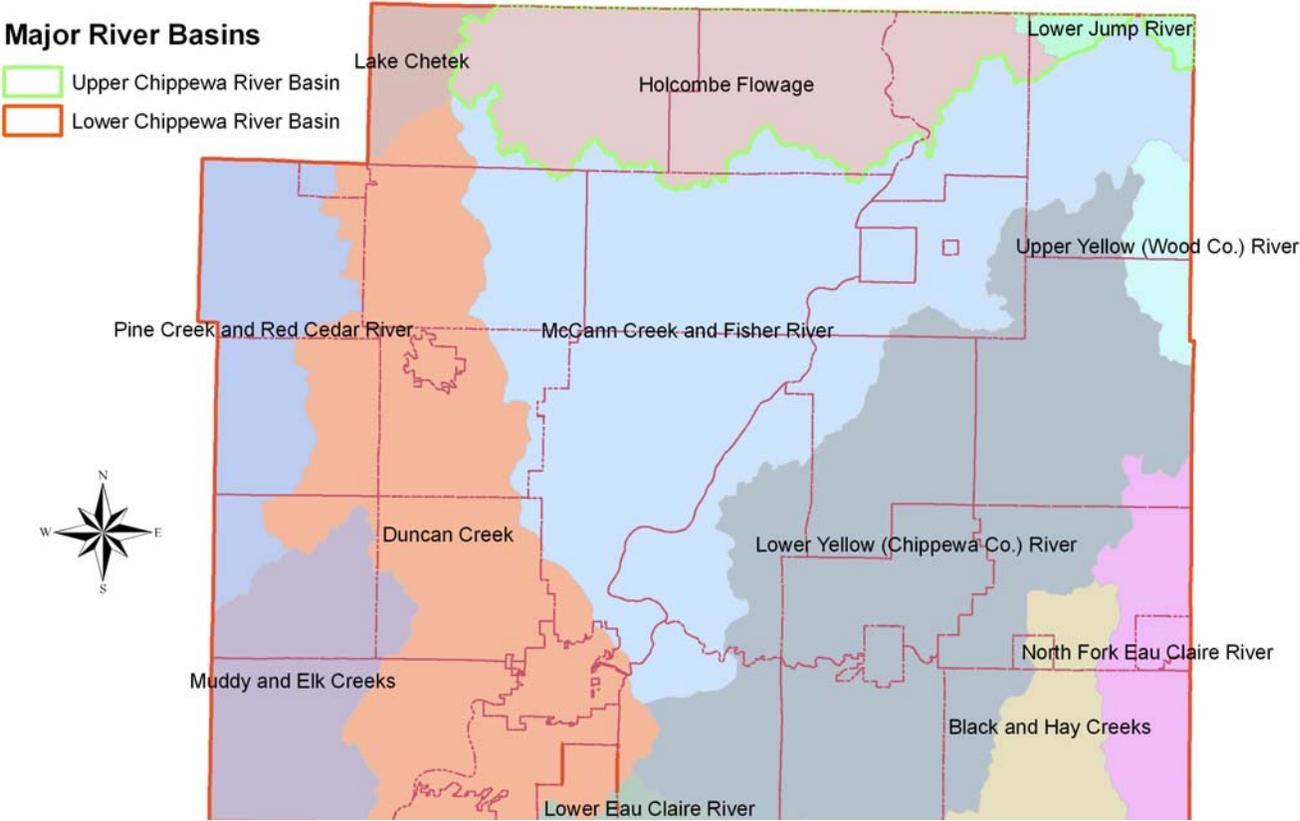
In general, the water quality in the Lower Chippewa River basin is a concern. The major concern is from added nutrients and sediment from run-off. Surface and ground water quality can be affected by a wide variety of point and non-point sources, including agricultural run-off, stormwater from parking lots and roads, soil erosion, and spills of hazardous materials. The risk of water contamination increases as development occurs.

Groundwater

Similar to surrounding counties, the source of nearly all potable water is groundwater. However, surface water can be a major source of groundwater recharge, and in the case of Chippewa County, a major factor in maintaining the county’s natural and recreational values. Consequently, there is also significant concern for understanding the impacts of development on the surface water resources in the County.

Aquifers throughout the county provide water to wells and springs and replenish the streams and lakes through seepage and spring discharge. The ground water supply is likely to meet the domestic, agricultural, municipal and industrial needs in the county. The ground water is generally soft. Minor water-use problems are caused by locally high concentrations of iron.

Figure 6-8
Chippewa County Watersheds



Source: WisDNR
Produced by: West Central Wisconsin Regional Planning Commission

Probable well yields from the bedrock aquifers are 0 to 10 gallons per minute in the Precambrian crystalline rocks in the northeastern parts of the county and 10 to 100 gallons per minute in the Cambrian sandstone in the southwestern part. Well yields from glacial deposits are estimated at 0 to 10 gallons per minute in the southwestern part of the county, 10 to 100 gallons per minute in the northeastern part and 100 to 500 gallons per minute on the outwash plains in the central part.

Impaired Waters

Chippewa County contains several waterbodies that the Wisconsin Department of Natural Resources (DNR) has classified as impaired due to water quality concerns. The following is a list of impaired surface waters, and the reason for their impaired status.

- Chippewa River (various locations) – polychlorobiphenyls
- Chippewa River Holcombe Flowage embay – mercury, polychlorobiphenyls, and sedimentation
- Chippewa River Holcombe downstream to Dells Dam at Eau Claire – mercury and polychlorobiphenyls
- Finley Lake – phosphorus and sedimentation
- Lake Hallie – phosphorus and sedimentation
- Lake Wissota, Moon Bay embayment, Little Lake Wissota – phosphorus and sedimentation
- Otter Lake – phosphorus
- Popple Lake – phosphorus
- Wolf River – phosphorus and sedimentation
- Hemlock Lake, Horseshoe Lake, Howe Lake, N. Shattuck Lake, Riley Lake, Round Lake, Sand Lake, and Two Island Lake – mercury

Outstanding and Exceptional Resource Waters

Through its Wisconsin's Outstanding and Exceptional Resource Waters Program, the WDNR is working to maintain the water quality in Wisconsin's cleanest waters. These waters have been classified into outstanding and exceptional waters. Outstanding resource water is defined as a lake or stream which has excellent water quality, high recreational and aesthetic value, and high quality fishing and is free from point source or nonpoint source pollution. Exceptional resource water is defined as a stream which exhibits the same high quality resource values as outstanding waters, but which may be impacted by point source pollution or has the potential for future discharge from a small sewer community.

Chippewa County has three outstanding waters: Duncan Creek above Lake Como, Elk Creek, and McCann Creek.

Chippewa County also has 17 exceptional waters. There are Big Elk Creek, Como Creek, Eighteen Mile Creek, Jump River from Rusk County to Holcombe Flowage, Sand Creek, Spring Brook, Swim Creek, Trout Creek, and nine smaller creeks that are unnamed.

Point Source Discharges

Private and public sewer systems and wastewater discharges are two potential sources of water pollutants. There are nine municipal and sanitary district wastewater treatment plants that discharge to either surface or ground water in Chippewa County, six stormwater permits, and six industrial discharges, as shown in Table 6-10.

**Table 6-10
Chippewa County Point-Source Discharges**

Duncan Creek	Bloomer	Municipal WWTP
Groundwater	Boyd	Municipal WWTP
Yellow River	Cadott	Municipal WWTP
Chippewa River	Chippewa Falls	Municipal WWTP
Chippewa River	Cornell	Municipal WWTP
Chippewa River	Eau Claire	YMCA
Chippewa River/Lake Holcombe/Ground Water	Holcombe	Municipal WWTP
Groundwater	New Auburn	Municipal WWTP
Wolf River	Stanley	Municipal WWTP
Chippewa River and Duncan Creek	Chippewa Falls	Stormwater permit
Chippewa River and Lake Hallie	Lake Hallie	Stormwater permit
Lake Wissota	Town of Lafayette	Stormwater permit
Duncan Creek	Town of Eagle Point	Stormwater permit
Chippewa River and Duncan Creek	Chippewa County	Stormwater permit
Chippewa River	Eau Claire	Stormwater permit
Chippewa River	AMPI Jim Falls Division	Industrial
Chatman Lake/Wolf River	Archer Daniels Midland Company	Industrial
Duncan Creek	Jacob Leinenkugel Brewing Company	Industrial
Chippewa River	Jim Falls Sanitary District	Industrial
Chippewa River	Mule Hide Manufacturing Company	Industrial
Unnamed tributary to Chippewa River	Northern Wisconsin Center for Developmentally Disabled	Industrial

Source: Wisconsin Department of Natural Resources

Shore Lands

Shorelands provide valuable habitat for both aquatic and terrestrial animals and vegetation, and also act as buffers and thus serve to protect water quality. However, shorelands are also considered prime residential building areas because of their scenic beauty.

Recognizing this conflict, and in order to maintain the environmental, recreational, and economical quality of our water resources, the State of Wisconsin requires counties to adopt and enforce a shoreland ordinance.

As required by the State, shorelands are defined as:

- all land within 1,000 feet of the ordinary high water mark of a lake, pond or flowage; or
- all land within 300 feet of the ordinary high water mark of a river or stream or to the landward side of the floodplain, whichever is greater.

Each County must meet or exceed the minimum state standards for shoreland protection. The identified shoreland areas are based on the standards as defined in the Chippewa County Shoreland Zoning Ordinance.

Floodplains

“According to the Wisconsin Emergency Management Division, Wisconsin communities experienced significant flooding each year from 1990-2001, except 1994. A Federal Disaster Declaration was granted for nine of those years. Total damages to public and private property (including agricultural damages) during that time period totaled more than one billion dollars” (Ohm, Brian. Planning for Natural Resources. P. 28, 2002.)

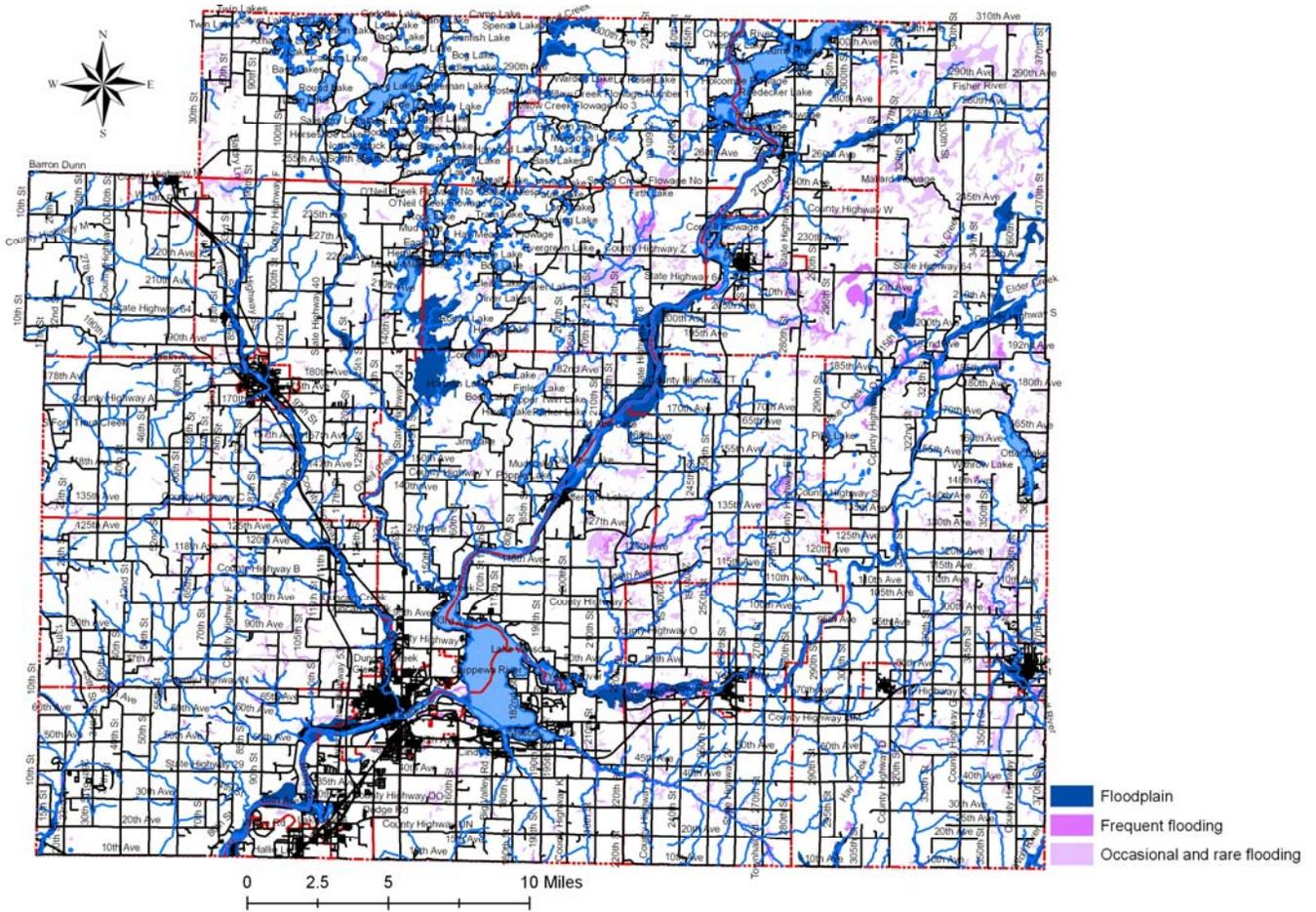
One sensitive land feature that most residents are aware of is the floodplain, the flood-prone lands adjacent to water bodies. Floodplains can be desirable development areas due to the proximity to lakes, rivers and streams, but pose additional problems by possibly putting residents and property at risk. Development in floodplains can also affect the environmental quality of the waterway.

There are some areas of known floodplains in Chippewa County. These are shown in Figure 6-9 on the following page.

Development within the floodplain is usually assessed through the use of the Flood Insurance Rate Maps (FIRM) developed by the Federal Emergency Management Agency (FEMA).

It is important to remember that these maps are no substitute for site specific analysis. Natural and man-made changes in the landscape, and the age and accuracy of flood insurance maps have in some cases limited their reliability for the identification and designation of floodplains.

Figure 6-9
Chippewa County Flood Areas



Sources: FIRM/ FEMA and NRCS Soil Survey

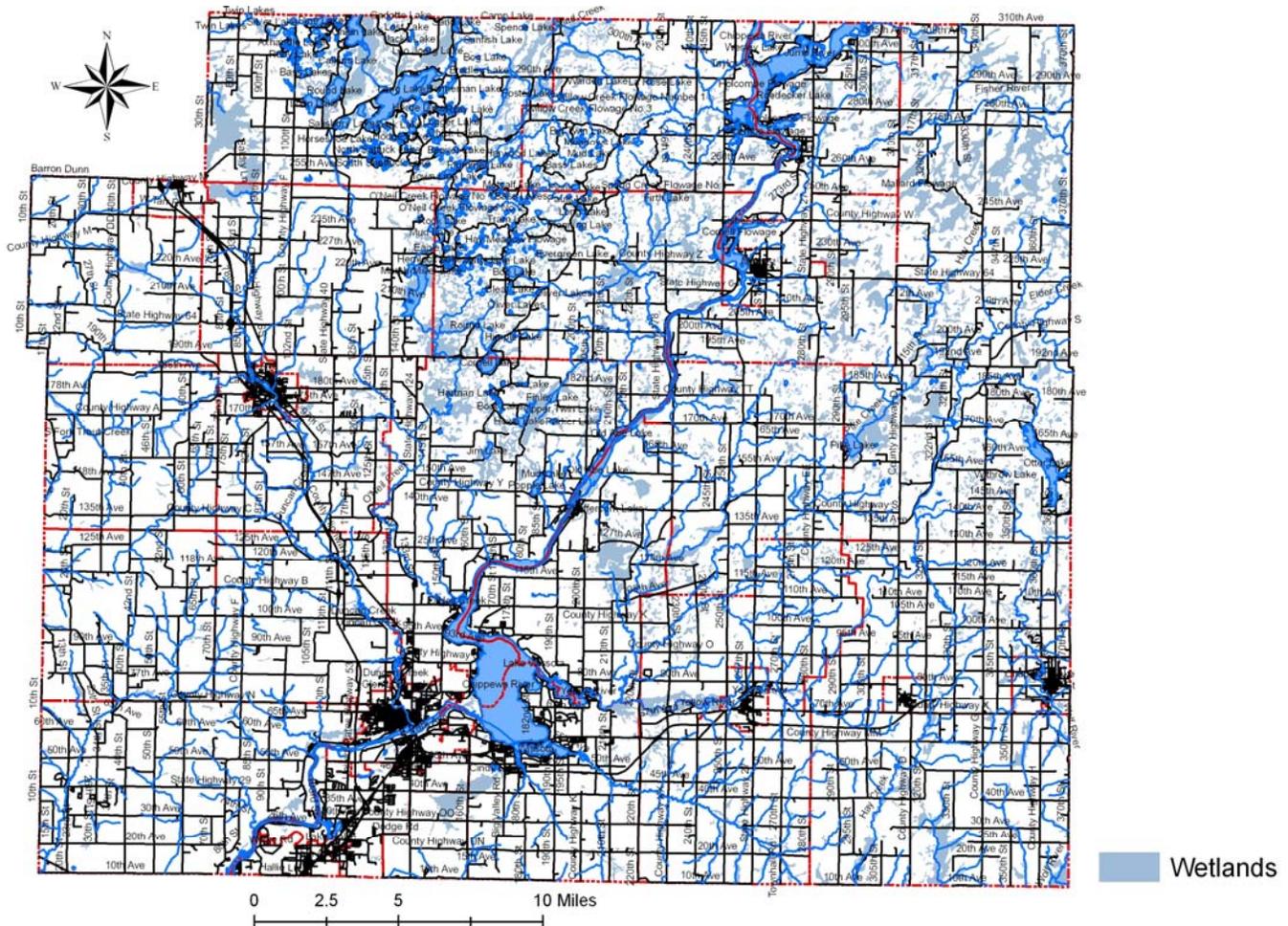
Produced by: West Central Wisconsin Regional Planning Commission

Wetlands

“...wetlands serve a vital role in nature, are part of the balance of nature and are essential to the purity of the water in our lakes and streams. Swamps and wetlands are a necessary part of the ecological creation and now, even to the uninitiated, possess their own beauty in nature.” (The Wisconsin Supreme Court in Just v. Marinette County (1972).

There are a number of wetland areas within the watersheds that can affect water levels of rivers and creeks flowing through Chippewa County. Figure 6-10 indicates the location of Chippewa County wetlands. Wetlands are defined by the State Statute as “an area where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic (water-loving) vegetation and which has soils indicative of wet conditions.” Wetlands may be seasonal or permanent and are commonly referred to as swamps, marshes, or bogs. Wetland plants and soils have the capacity to store and filter pollutants, replenish groundwater supplies, store floodwaters and maintain stream flows.

Figure 6-10
Chippewa County Wetlands



Steep Slopes

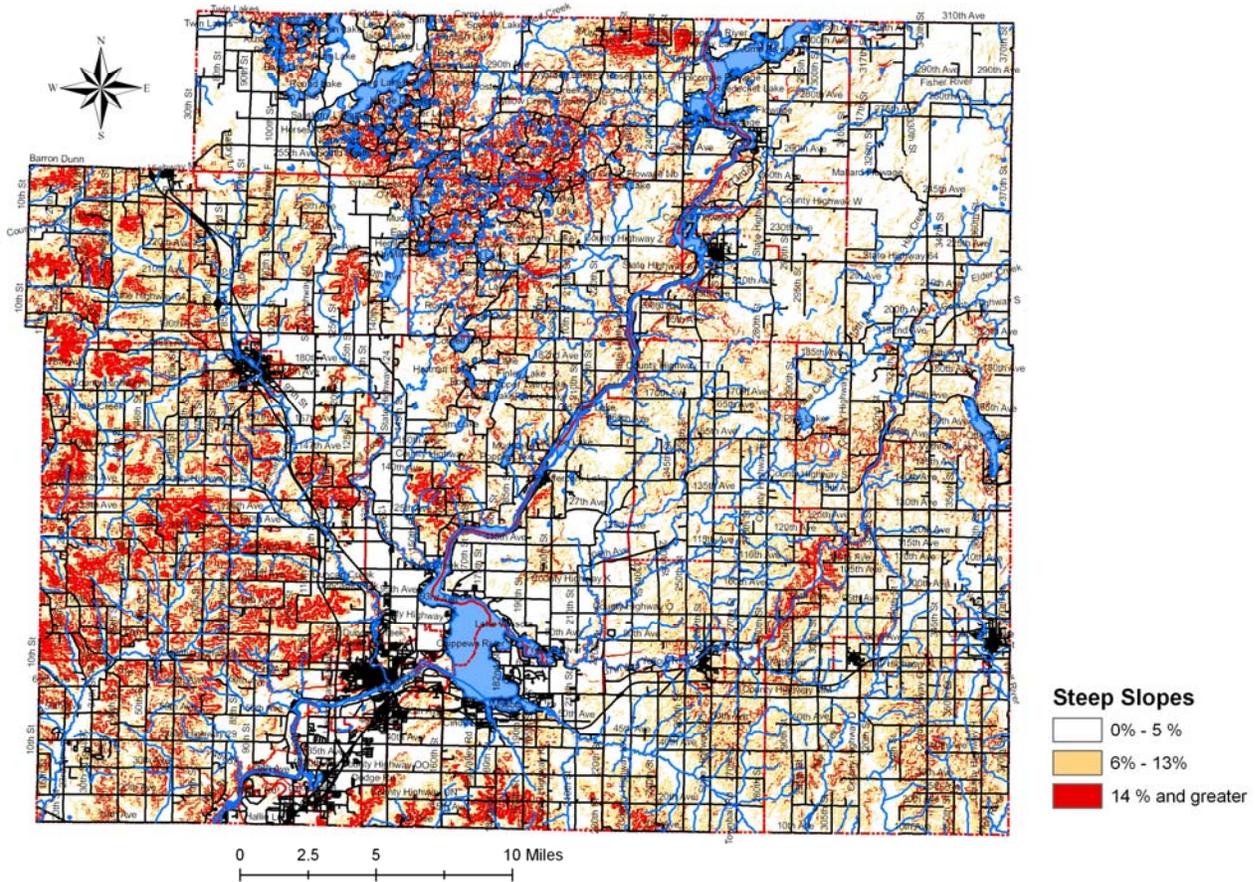
It is generally more desirable, both environmentally and economically, to avoid steep slopes and disrupting natural drainage ways with construction and land development. Problems with erosion and runoff pollution can occur with development on steep slopes, and flooding and wet basements can occur with drainage way disruptions.

Steep slopes are areas with 13 percent or more grade (each percent of slope is measured as one unit in elevation for every 100 horizontal units). Areas having steep slopes can be categorized into three levels, 13 percent to 20 percent slope, 21 percent to 24 percent, and 25 percent and greater.

Development on slopes of 13 to 20 percent should consider direct runoff into lakes, rivers, or streams. In order to minimize the negative effects, construction should also follow state approved construction site erosion control standards, and institute best management practices to control on-site runoff and pollution. Land with slopes of 21 percent or greater represent a definite limiting environmental condition. Development on these slopes results in high construction costs and severe erosion often resulting in negative impacts to surface and ground waters. Development on slopes of 21 percent or greater is highly discouraged.

The Chippewa County Soil Survey indicates that there are approximately 78,000 acres that potentially have a slope of 13 percent or greater, which is about 11.7 percent of the total land base. About 12,500 acres, or 1.9 percent, have slopes of 21 percent or greater, and .2 percent has a slope of over 25 percent. Most of the steepest slopes are located in the northern and western portions of the county. Figure 6-11 indicates Chippewa County's slopes.

Figure 6-11
Chippewa County Slopes



Source: USGS

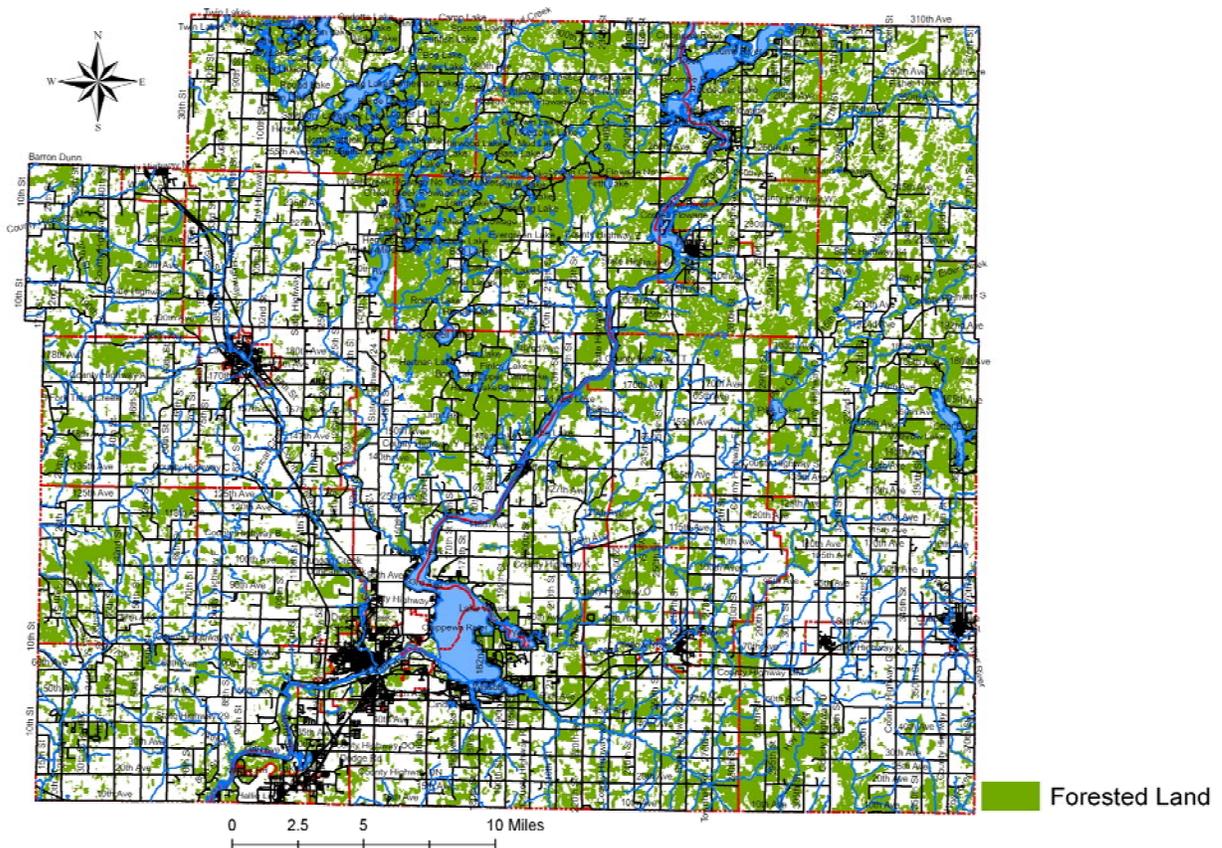
Produced by: West Central Wisconsin Regional Planning Commission

Forest and Woodlands

Woodlands are an important feature of Chippewa County. In fact, the forests of Chippewa County are the second most extensive land use and land cover in the county, after agriculture. The largest concentrations of woodlands occur in the northern portions of the county. Other large woodland areas are scattered throughout the county.

In 2007, there were 155,500 acres in Chippewa County classified as forests/woodlands, which represents about 23 percent of total County acreage. Please see Figure 6-12. However, this has decreased nearly 30,000 acres between 1990 and 2007, representing almost a 10 percent decrease.

Figure 6-12
Chippewa County Forested Land



Source: WISCLAND

Produced by: West Central Wisconsin Regional Planning Commission

Woodlands provide habitat for wildlife, natural resource base for wood-based industries, resources for the agricultural communities, areas for recreational

activities, and scenic beauty, as well as a rural character. Without managed development in these areas, woodlands will become fragmented, which will diminish their ability to provide the resources and activities residents are accustomed to.

Chippewa County Forest

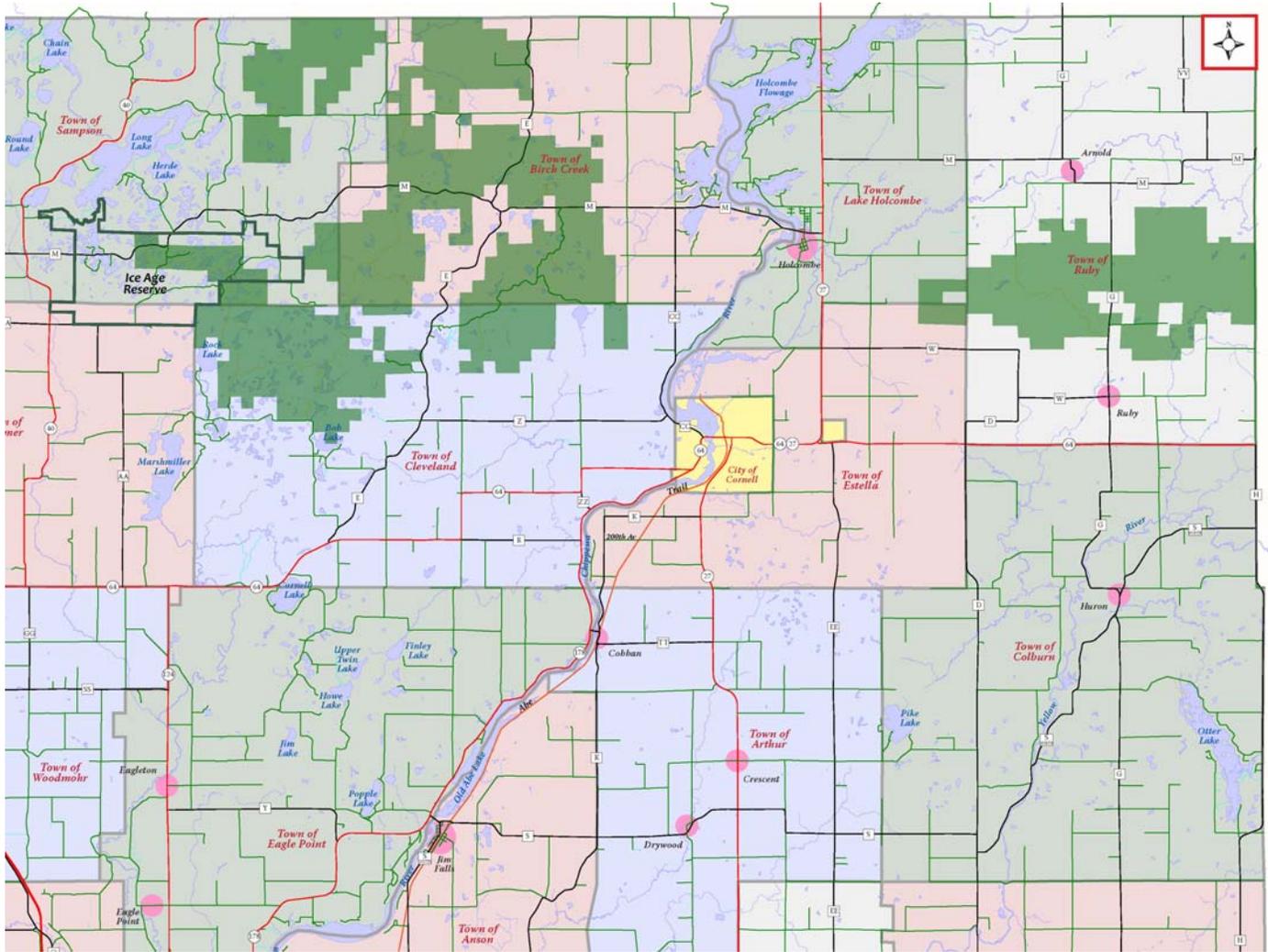
As of 2005, the Chippewa County Forest contained just over 33,000 acres. This land is located near Highway 27 in the Towns of Birch Creek and Ruby. To guide the growth and management of this area, Chippewa County has a 2020 Forest Comprehensive Land Use Plan. This was developed to complement the Comprehensive Plan. About 80 percent of the County forest land base is covered with hardwood, including aspen, oak, red pine, and white pine.

In order to protect forest land, Chippewa County is committed to using techniques to provide for wildlife, forest products, recreation, water quality, aesthetics and ecosystem maintenance. The County will use sustainable forestry practices to conserve air and water quality, soil, ecosystem diversity, wildlife, recreation, and aesthetics to ensure forests will be able to meet future needs. The County employs economically, environmentally, and socially responsible forestry practices, and encourages private landowners to do the same. The County works extensively with the DNR to protect forests from pests, diseases, wildfire, and other damage. The County is also committed to managing and preserving areas of unique geographical, historical, biological, and cultural significance.

Chippewa County has broken the forest lands that they own into zones for aesthetic management. These zones have permitted uses based on the recreational value of the area, and the amount of public traffic seen on the land. Another land classification is high conservation value forests (HCVF). These areas possess unique qualities that the County focuses on protecting, and are shown in Figure 6-13, along with the County Forest boundaries.

Recently, there has been an increase in demand for all-terrain vehicles trails through forested land. There is also a potential for conflict when forest lands are being harvested with residential units nearby. Managing these potential land-use conflicts is important to protecting and keeping forest land viable. For more specific information on Chippewa County Forest land-use and management techniques, see the Chippewa County Forest Comprehensive Land Use Plan 2006-2020.

Figure 6-13
Chippewa County Forest



Source: Chippewa County Land Records Department

Wildlife, Wildlife Habitat and Open Space

Scattered throughout Chippewa County are various federal, state and local wildlife, fishery, natural and scientific areas, including private conservancy areas. These often encompass one or more of the sensitive land areas discussed previously (e.g., wetlands, forests, shorelands, prairies). These areas are managed as open space to provide important feeding, breeding, nesting, cover and other habitat values to a wide variety of plant and animal species.

Rare and Endangered Species and Natural Communities

According to the WDNR Natural History Inventory, Chippewa County is home to 39 animal species, 27 plant species, and 19 natural communities which can be considered rare or endangered (WDNR Natural Heritage Inventory Program). The Natural History Inventory is a statewide inventory of known locations of rare and endangered species and communities. Two species found within Chippewa County also have federal protection status, as designated by the U.S. Fish and Wildlife Service: Karner Blue Butterfly (Endangered Species) and Spectaclecase (mussel) (Candidate). The Wisconsin DNR has categorized the following seven species as endangered:

- Dwarf Huckleberry (Plant/Berry)
- Extra-striped Snaketail (Dragonfly)
- Loggerhead Shrike (Bird)
- Purple Wartyback (Mussel)
- Rainbow Shell (Mussel)
- Regal Fritillary (Butterfly)
- Spectaclecase (Mussel)

Invasive plant and animal species pose threats to some of these endangered species. Chippewa County has 28 listed invasive species.

Parks and Recreational Resources

Visitors and residents of Chippewa County have many opportunities to utilize the natural resources that exist in the area. In addition to utilizing the many lakes, rivers, and streams throughout the County for recreational activities, the County also has many parks, trails, and roughly 33,107 acres of County Forest. Chippewa County has nearly 450 lakes that cover over 20,000 acres. Many lakes, particularly in the northern portion of the County, are small, unnamed, and are not navigable. In addition, some of these smaller lakes are not able to support fish. Public access and fishing opportunities do exist at 23 of the County's lakes, along with over 80 miles of streams, much of them suitable for Trout fishing.

Chippewa County manages four parks as well as swimming areas, forests, snowmobile and ATV trails, and other non-motorized trails for skiing,

snowshoeing, and biking use. Trails include the Old Abe State Trail, Hay Meadow Horse Trail, River Road Cross-Country Ski Trail, Deer Fly Trail Area, Moon Ridge Trail Area, and the Chippewa County portion of the Ice Age Trail.

Three State Parks lie in Chippewa County. Brunet Island State Park, Chippewa Moraine State Park, and Lake Wissota State Park are operated by the Wisconsin Department of Natural Resources (DNR). The DNR also manages the Tom Lawin Wildlife Area.

Table 6-11
Chippewa County and State Park Facilities

Resource	Size	Location	Notes
County			
Morris-Erickson Park	six acres	Long Lake	28 camping sites
Otter Lake Park	18 acres	Otter Lake	22 camping sites
Round Lake Park	six acres	Town of Sampson	Beach, boat launch, fishing
Pine Point Park	24 acres	Lake Holcombe	48 camping sites
State			
Brunet Island State Park	1,200 acres	Cornell	24 campsites with electricity
Chippewa Moraine Rec. Area	3,063 acres	New Auburn	Hiking, naturalist program
Lake Wissota State Park	7,362 acres	Chippewa Falls	Camping, hiking, beach

Individual communities also manage their own parks and recreational facilities. There are also several private campgrounds, resorts, and recreational amenities throughout the County that residents and visitors can enjoy. More information on recreational amenities throughout the County is provided in the Utilities and Communities Facilities element.

State Natural Areas

Chippewa County contains one State Natural Area, which is Plagge Woods. This is an old-growth northern mesic forest perched on top of a monadock, which is an isolated rock of conglomerate and quartzite rising 300-400 feet above the countryside. The forest is dominated by sugar maple, basswood, and red and white oak, which covers both the north and south slopes of a ridge on the southeastern edge of the Flambeau Ridge. Plagge Woods is owned by the Wisconsin Department of Natural Resources.

Wisconsin's Land Legacy Report

The Wisconsin Department of Natural Resources has completed a draft study that identifies unique places that are critical to meeting Wisconsin's future conservation and recreation needs for the next 50 years. A range of criteria were used in determining these places, including: high quality ecosystems, outstanding scenic beauty, accessibility, recreational opportunities, size of the resource, networks between resources, and water quality protection. The following locations in Chippewa County were identified as important legacy places: Chippewa Glacial Lakes, Upper Chippewa River, and Yellow (Chippewa) River.

Cultural Resources Existing Conditions

Chippewa County has a long history, with many significant sites. These sites include Native American encampments, fur trading outposts, lumbering camps and historic buildings. Historic structures, sites, and districts are often targeted for hazard mitigation strategies due to their unique social value. Such historic resources can also be responsible for defining much of a community's identity.

According to the National Register of Historic Places, Chippewa County has eleven historic properties and one historic district that have received federal historic landmark designation.

Table 6-12
Chippewa County National Register of Historic Places

Historic Site	Location	Municipality	Listed
Bridge Street Commercial District	Bridge St. - Columbia to Spring	Chippewa Falls	1994
Chippewa Shoe Manufacturing Comp.	28 W. River St	Chippewa Falls	1994
Cook-Rutledge House	505 W. Grand Ave.	Chippewa Falls	1974
Cornell Pulpwood Stacker	Cornell Mill Yard Park	Cornell	1993
Hotel Chippewa	16 - 18 N. Bay St.	Chippewa Falls	1994
Marsh Rainbow Arch Bridge	Spring St.	Chippewa Falls	1982
McDonnell High School	3 S. High St.	Chippewa Falls	1982
Moon, D.R., Memorial Library	E. Fourth Ave	Stanley	1985
Notre Dame Church and Goldsmith Memorial Chapel	117 Allen St.	Chippewa Falls	1983
Roe, L.I., House	410 N. Franklin St.	Stanley	1980
Sheeley House	236 W. River St.	Chippewa Falls	1985
Z.C.B.J. Hall	WI 27	7 miles N of Cadott	1992

Source: National Register of Historical Places

Additional older structures and homes within Chippewa County also likely qualify for the National Register of Historic Places. For instance, the Wisconsin Historical Society maintains the Wisconsin Architecture and History Inventory (AHI). This is a database of approximately 120,000 buildings, structures, and objects that illustrate Wisconsin's unique history. The AHI documents a wide range of historic properties that create Wisconsin's distinct cultural landscape.

In Chippewa County, a total of 1,333 historic places and objects have been identified as having historic value and are on the AHI (see Table 6-13). The majority of these places are privately owned homes.

**Table 6-13
Chippewa County Wisconsin Architecture and History Inventory**

Municipality		# of AHI Records
Towns		
	Anson	19
	Arthur	3
	Auburn	1
	Birch Creek	0
	Bloomer	5
	Cleveland	0
	Colburn	2
	Cooks Valley	2
	Delmar	0
	Eagle Point	56
	Edson	4
	Estella	10
	Goetz	0
	Hallie	15
	Howard	1
	Lafayette	15
	Lake Holcombe	5
	Ruby	0
	Sampson	1
	Sigel	0
	Tilden	10
	Wheaton	13
	Woodmohr	8
Villages		
	Boyd	0
	Cadott	1
	New Auburn	0
Cities		
	Bloomer	38
	Chippewa Falls	1080
	Cornell	2
	Eau Claire	28
	Stanley	14

Source: Wisconsin Historical Society

Any development should be reviewed, pursuant to Wisconsin Statute 44.40 (1989), against the historic resource list to determine whether historic properties within the area will be affected. The Wisconsin Historical Society should be contacted for a determination of possible impacts on these resources from development. The Historical Society also strongly recommends that all proposed developments be surveyed by a qualified archeologist to identify any sites.

The Wisconsin Historical Society has grant funding available to help local communities undertake a historical survey, with additional grant funds for a variety of historic preservation activities. In addition, historic commercial structures on the National Register, or historic commercial structures located in a historic district, may also qualify for tax credits. Owner-occupied homes that are eligible for listing in the National Register do not have to be formally

listed in the National Register to be eligible for historic preservation tax credits for rehabilitation projects.

Cultural Resources also include community events that take place on a regular basis to celebrate the areas history and heritage. Chippewa County and communities have several of these events every year. In May, Chippewa Falls hosts “The Past Passed Here” festival, which highlights the historic sights and sounds of Chippewa Falls. FATFAR (Frenchtown Annual Tube Float and Regatta) occurs every June, in which residents and visitors float the Chippewa River in masses. The Northern Wisconsin State Fair takes place in Chippewa Falls every year. New Auburn hosts Jamboree days in July, and Bloomer holds a Community Fair in August. Pure Water Days takes place in August, along with Heritage Fun Fest. The Chippewa River Rendezvous has displays from the 1600’s. Oktoberfest occurs in September, but features a weekends full of German activities, food, and fun.

6.2 Existing Agricultural, Natural, and Cultural Programs

Numerous Federal, State, Regional, Local, and Private plans and programs exist which contribute to preservation, conservation, or management of agricultural, natural, and cultural resources in Chippewa County. No such list can be exhaustive.

- Farmland Use Value Assessment

This program allows farmland to be assessed based on the lands ability to produce income from agricultural uses, rather than its potential market value to developers.

- Wisconsin Farmland Preservation Program

In Wisconsin counties with a farmland preservation plan, eligible farm owners receive a state income tax credit.

- Forrester Land Tax Programs

These programs are run by the Wisconsin DNR and encourage sustainable forestry on private lands by offering tax incentives to landowners.

- Wisconsin Pollutant Discharge Elimination System Permits (WPDES)

This DNR operated program regulates municipal and industrial operations discharging wastewater to surface or groundwater.

- Wisconsin Historical Society

The Historical Society was founded in 1846 and helps people to connect with the past by maintaining and collecting stories and items.

- Chippewa County Land And Water Resource Management Plan, 2004

Each Wisconsin county is required by State law to develop a County Land and Water Plan. It is meant to serve as a guide for local conservation efforts that are administered by various regulatory organizations.

- Chippewa County Forest Comprehensive Land Use Plan 2006-2020

This plan guides the management and use of the County Forest through the year 2020.

- Chippewa County Ordinances – Zoning, Land Divisions, Shoreland, Sanitation and Community Wellhead Protection

These ordinances have been adopted to aid in the effort of conserving resources and protecting landowner rights, land values, and the public health and safety

- Chippewa County Agricultural Ad-Hoc Committee Report (2008)

This report gives 5 recommendations in regards to preserving agricultural land. They are as follows:

Recommendation # 1:

The County should actively advocate for farming as an industry and for the voluntary preservation of agricultural land. The committee recommends the County create a budget utilizing local, state, and federal resources to develop any or all of the following recommendations.

Recommendation # 2:

The County should actively inform and educate the public of:

- The importance of agriculture to the County's economy.
- The importance of preserving blocks of agricultural land for sustainable/future production.
- The direct and indirect costs of developing agricultural lands. In addition, the county should systematically evaluate, measure, and communicate those costs on a basis as development occurs.

Recommendation # 3:

The County should support the efforts of those landowners and agricultural producers that have expressed interest in preserving the farms that they own and manage. Public resources (money, technical services, etc) should be allocated for individual or groups of contiguous landowners who are ready, willing, and able to voluntarily preserve their farms through the use of conservation easements and low density production agricultural zoning.

Recommendation # 4:

The County should seek to assure that the full costs of dividing land, reviewing development proposals, and developing the public road infrastructure in agricultural production areas is assigned to those initiating the development. While we agreed that the current structure for

development already included all these provisions, it is important to see if any unrelated costs are associated with developing land within a city or village, and if it is different from developing land within a town.

Recommendation # 5:

The County should allocate resources and technical review to the idea of a Voluntary Incentive Preservation (VIP) program. The VIP program would be set up for farm preservation with an appointed board oversight. The board chosen would be in charge of development and oversight of a voluntary farmland preservation program.

6.3 Summary of Existing Conditions

This Plan provides an important foundation and vision of Chippewa County's land-use planning and decisions. In addition, numerous programs at the State and County level are available to assist in the planning efforts and in the protection of local agricultural, natural, and cultural resources. Protection of such resources needs to be balanced with, and can be complementary to, other community goals as discussed in the Issues & Opportunities, Land Use, and Economic Development existing conditions elements.

Agricultural Resources Existing Conditions Summary

- Agriculture is the predominant land use in the Towns of Chippewa County. The 2007 assessed agricultural acreage in the County was 291,547, or about 44 percent of total land acreage.
- Working farm lands have increased over the last 5 years. From 2002 to 2007, Chippewa County has seen an increase from 11,472 to 12,116 parcels assessed as farmland.
- The average farm size in Chippewa County has remained fairly stable, but the number of farms has decreased by 26 from 1987 to 2002. The legal definition of a farm is any place from which \$1000 or more of agricultural products were, or normally would be, produced and sold during the Census year.
- Nearly 60 percent of the soils in Chippewa County are classified as Class I, II, or III, which are deemed to be productive agriculture areas.

Natural Resources – Physical Features Existing Conditions Summary

- Generally, the topography in Chippewa County is lower in the south-central areas of the county, and rises in elevation along the county's western edge.
- In general, the surface and groundwater quality of Chippewa County is good.

- Chippewa County has over 21,000 acres of surface waters. These are primarily lakes, but rivers, streams, and trout streams contribute to this total as well. These water bodies provide for recreational opportunities to area residents and visitors.

Natural Resources – Sensitive Lands Existing Conditions Summary

- Over 11 percent of Chippewa County has steep slopes of 13 percent or greater, on which development should be limited or discouraged.
- Chippewa County is home to 39 animal species, 27 plant species, and 19 natural communities that are considered rare or endangered. Two species – Karner Blue Butterfly and Spectaclecase- have federal protection status.
- Sensitive habitats need to be protected from invasive plant and animal species, which have had an increasing presence in the County in recent years.
- Chippewa County has three Wisconsin Land Legacy Places identified in the draft State plan: Chippewa Glacial Lakes, Upper Chippewa River, and Yellow River.

Cultural Resources – Existing Conditions Summary

- There are 12 locations in Chippewa County on the National Register of Historic Places. Eight of the 12 are in Chippewa Falls.
- 1,333 places and objects in Chippewa County have been identified as having historic value, and are on the Wisconsin Architecture and History Inventory.

6.4 Goals, Objectives and Policies

Agriculture Resource Goals

Goal 1 - Maintain the physical condition, biodiversity, ecology, and environmental functions of the landscape, including its capacity for flood storage, groundwater recharge, water filtration, plant growth, ecological diversity, wildlife habitat, and carbon sequestration.

Goal 2 - Maintain the capacity of the land to support productive forests and agricultural working lands to sustain food, fiber, and renewable energy production.

Objectives:

- 1) Manage soil quality to maintain the land’s capacity to support sustained production.
- 2) Measure and monitor soil quality using soil organic matter, carbon content, moisture holding capacity, fertility, and current erosion rates.

Objective:

- 1) Identify and preserve designated blocks of working lands in a voluntary program in cooperation with private land-owners, which will help to maintain an adequate landmass to support agricultural and forestry operations that are production-oriented and that contribute to the County's economy.

Objectives:

- 1) Limit the fragmentation and urban development of productive forests and agricultural working lands.
- 2) Manage the extent of fragmentation and urban development through the adoption and use of rural density standards and land division ordinances, as established by towns in cooperation with the County.
 - a) Manage the type and location of new development in unincorporated areas through the adoption and use of:
 - a. voluntary land conservation agreements developed with interested landowners.
 - b. zoning districts as established by towns in cooperation with the County.
 - b) As a priority, seek to protect those productive forest and agricultural lands identified as prime agricultural land, land capability classes I-III through voluntary programs.

Goal 3 - Encourage future urban development to occur within incorporated municipalities; or in designated urban service areas where development and associated public services have been planned by a responsible municipality (Note: altered from Chippewa County Farmland Preservation Plan, 1983).

Objective:

- 1) Identify the location, size, and boundaries of urban service areas through the use of public planning processes initiated by the towns, cities, or villages.

Goal 4 - Restore the condition, environmental functions, and productive capacity of abandoned or degraded lands.

Objective:

- 1) Reclaim and revegetate abandoned farmland, surface mined lands, and brownfields to:
 - a) Produce biomass for energy production.
 - b) Reestablish native plant communities through planting or natural progression.

Natural Resource Goals

Wetland Management Objectives

Objective 1 - Seek to achieve a net gain of wetland acres through wetland restoration and creation, as measured through program tracking and wetland inventory monitoring.

Objective 2 - Avoid the destruction of existing wetlands, and maintain the environmental functions that these sites provide by seeking development alternatives that will not impact the wetland site.

Surface Water Management Objectives

Objective 1 – Manage storm runoff to limit flood peaks and maintain current stream base-flow conditions and lake elevations.

- 1) Accelerate the use of best management practices (BMP's) to increase soil moisture holding capacity, landscape depressional storage, and groundwater infiltration and recharge.

Objective 2 - Reduce sediment and nutrient loading to surface waters from nonpoint sources to levels necessary to meet:

- 1) The potential use classification for the waterbody, as designated in the Wisconsin Surface Water Classification System, or
- 2) The planned water resource management objective, or the prescribed Total Maximum Daily Load Limits (TMDLs), as developed through a formal watershed planning process, or
- 3) Instream water quality standards as established for individual lakes, streams or stream reaches.

Objective 3 - Maintain, improve, and restore the natural condition of the shoreland corridor, littoral zone, and instream habitat of streams and lakes.

Groundwater Management Objectives

Objective 1 - Maintain historic groundwater levels and limit impacts to surface waters, wetlands, and well water supplies by managing the depletion of groundwater resources from high and low volume consumptive uses.

- 1) Monitor the groundwater elevations in aquifers that are used to support municipal water supplies, as measured by the extent of permanent drawdown in wellhead protection zones.

- 2) Monitor the groundwater elevations in rural subdivisions and high density developments as measured by the extent of drawdown in the affected private wells.
- 3) Institute urban and rural water conservation programs to conserve groundwater supplies.

Objective 2 - Manage concentrations of contaminants in groundwater aquifers to pursue-Preventative Action Limits (PAL), as established in Wis. Admin. Code NR140.

Objective 3 - Manage concentrations of groundwater contaminants in the zone of influence of municipal water supplies, to within prescribed standards for public and municipal water supplies as defined in NR140.10 and NR140.12.

County Forest & Park System

Goal: Encourage land owners and private woodlot owners to utilize professional foresters to achieve proper management of their timber stand and utilize Basic Management Practices (BMP's) for water quality.

Objectives:

- 1) Increase awareness of services provided by the Wisconsin Department of Natural Resources.
- 2) Provide information about the benefits both short-term and long-term of proper management of private woodlots.
- 3) Provide a publicly available list of private foresters and licensed consultants.
 - a. Create link for WiDNR on Forest & Parks website.
 - b. Create link to the WiDNR list of professional foresters on Forest & Parks website.
 - c. Place Ad in Plat Book detailing possible advantages of proper management and give contact resources.

Goal: Preserve and maintain the County Park's current attractive condition while still providing for users evolving needs.

Objectives:

- 1) Provide updated electric to meet the needs of the current camping vehicles.
- 2) Maintain and improve boat access in County Parks and Forests.

Cultural Resources Goals

At this time Chippewa County has no defined goals or objectives concerning cultural resources. If, in the future, a goal or objective is created it will be incorporated in this section.

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