

6.0 Agricultural, Natural and Cultural Resources

The resource base of a community is an important consideration for development of goals and policies for the conservation and management of agricultural, natural and cultural resources.

The purpose of this chapter is to provide the Town of Tilden with the necessary information to make informed decisions and recommendations about future growth and management of these resources.

Existing Conditions

Agricultural resources of the Town of Tilden are important because of the economic contributions generated by agricultural businesses, and because of the Town's rural nature, there is a substantial portion of land that is used for farming.

Natural resources are significant in the Town of Tilden as they contribute to the health, welfare, recreation and economy, which significantly enhances the overall quality of life in the Town.

Cultural resources are important because of the history they hold. Cultural resources are often able to tell stories about past events and residents that are important to Tilden, as well as bringing the community together.

Local Agricultural Industry Trends

Agriculture is an important element of the social and economic characteristics of Tilden and Chippewa County. Changes in agriculture due to socioeconomic conditions and the development pressures to convert agricultural land to other uses can have impacts in Tilden and surrounding communities.

In 2002, there were 26 fewer farms in Chippewa County than in 1987, which is a 1.5 percent decrease. While the number of farms in Chippewa County has fluctuated significantly from 1987 to 2002, the average size of Chippewa County farms has consistently decreased throughout this same time period. In 1987, the average Chippewa County farm size was 248 acres. In 2002, that number had dropped to 231 acres, nearly a 7 percent decrease.

The State of Wisconsin as a whole saw even more dramatic fluctuations. In 1987, there were 75,131 farms in Wisconsin. By 1997, this number had dropped to 65,602, a 12.7 percent decrease. However, in 2002, it was reported that the number of farms had jumped back up to 77,131, a 17.5 percent increase.

Similar to Chippewa County, the average farm size in Wisconsin has been in steady decline. In 1987, the average farm size was 221 acres. As of 2002, the average farm size was down to 204 acres, over a 7 percent decrease.

As shown in Table 6-1 below, farms in Chippewa County are primarily owned by individuals or families.

Table 6-1
Number of Farms by Farm Ownership – 1987 – 1997 – Chippewa County

Ownership	1987	1992	1997	2002
Individual/Family Farm	1,476	1,395	1,321	1,500
Partnership	138	131	102	84
Corporation – Family	30	41	44	33
Corporation – Other	1	2	1	3
Other (Co-op, Trust, etc.)	2	2	3	1
Total	1,647	1,571	1,471	1,621

Source: U.S. Census

Table 6-2 indicates that approximately 20 percent of Tilden residents reside on a farm. This is above the County average of 9.8 percent.

Table 6-2
2000 Population Living on Farms – Chippewa County Towns

Town Name	Population	Population Living on Farms	
		Number	Percent
Town of Anson	1,881	95	5.1%
Town of Arthur	710	130	18.3%
Town of Auburn	580	91	15.7%
Town of Birch Creek	520	46	8.8%
Town of Bloomer	926	218	23.5%
Town of Cleveland	900	86	9.6%
Town of Colburn	727	216	29.7%
Town of Cooks Valley	632	174	27.5%
Town of Delmar	941	186	19.8%
Town of Eagle Point	3,049	213	7.0%
Town of Edson	966	408	42.2%
Town of Estella	469	39	8.3%
Town of Goetz	695	144	20.7%
Town of Hallie	4,703	40	0.9%
Town of Howard	648	87	13.4%
Town of Lafayette	5,199	64	1.2%
Town of Lake Holcombe	1,010	13	1.3%
Town of Ruby	446	81	18.2%
Town of Sampson	816	80	9.8%
Town of Sigel	825	64	7.8%
Town of Tilden	1,185	246	20.8%
Town of Wheaton	2,366	170	7.2%
Town of Woodmohr	883	146	16.5%
Chippewa County	31,077	3,037	9.8%

Source: Program on Agricultural Technology Studies – UW-Madison

Similarly, Table 6-3 indicates that nearly 19.1 percent of Tilden employed adults work on farms. This again is above the Chippewa County average of 9.1 percent. The percent of adults living and

working on farms is more than likely similar due to the significant amount of individual and family farms in the Town, as shown in Table 6-1.

**Table 6-3
2000 Farm Employment**

Municipality Name	Total Adults Employed	Employed Adults Working on Farms	
		Number	Percent
Town of Anson	1,032	77	7.5%
Town of Arthur	369	68	18.4%
Town of Auburn	314	52	16.6%
Town of Birch Creek	244	24	9.8%
Town of Bloomer	527	100	19.0%
Town of Cleveland	442	81	18.3%
Town of Colburn	336	88	26.2%
Town of Cooks Valley	370	65	17.6%
Town of Delmar	466	85	18.2%
Town of Eagle Point	1,476	101	6.8%
Town of Edson	457	174	38.1%
Town of Estella	229	15	6.6%
Town of Goetz	371	67	18.1%
Town of Hallie	2,561	35	1.4%
Town of Howard	366	41	11.2%
Town of Lafayette	2,897	30	1.0%
Town of Lake Holcombe	462	25	5.4%
Town of Ruby	177	32	18.1%
Town of Sampson	360	19	5.3%
Town of Sigel	368	28	7.6%
Town of Tilden	369	122	19.1%
Town of Wheaton	1,300	81	6.2%
Town of Woodmohr	433	62	14.3%
Chippewa County	16,196	1,472	9.1%

Source: Program on Agricultural Technology Studies – UW-Madison

Table 6-4 shows that the number of dairy farms in the Town of Tilden dropped by 48.2 percent from 1989 to 2002. Surprisingly, this is among the lower decreases in dairy operations in Towns throughout Chippewa County. County-wide, the number of dairy farms in Towns decreased by 46.6 percent.

**Table 6-4
Changes in Dairy Farm Numbers**

Town Name	Number of Dairy Farms				Percent Change 1989-2002
	1989	1997	2002	Change 1989-2002	
Anson	42	22	15	-27	64.3%
Arthur	64	49	33	-31	48.4%
Auburn	43	30	17	-26	60.5%
Birch Creek	18	17	11	-7	38.9%
Bloomer	55	48	32	-23	41.8%
Cleveland	49	26	23	-26	53.1%
Colburn	67	48	33	-34	50.7%
Cooks Valley	59	53	37	-22	37.3%
Delmar	102	78	58	-44	43.1%
Eagle Point	55	43	32	-23	41.8%
Edson	100	80	63	-37	37.0%
Estella	17	12	8	-9	52.9%
Goetz	53	45	34	-19	35.8%
Hallie	11	10	4	-7	63.6%
Howard	45	33	3	-42	93.3%
Lafayette	20	9	24	4	20.0%
Lake Holcombe	9	4	6	-3	33.3%
Ruby	31	19	17	-14	45.2%
Sampson	21	10	2	-19	90.5%
Sigel	43	29	18	-25	58.1%
Tilden	83	59	43	-40	48.2%
Wheaton	51	42	28	-23	45.1%
Woodmohr	63	44	29	-34	54.0%
Chippewa County	1101	810	570	-531	46.6%

Source: Program on Agricultural Technology Studies – UW-Madison

The number of dairy farms per square mile, as shown in Table 6.5, helps to reinforce the fact that dairy farms are decreasing. From 1989 to 2002, the number of dairy farms per square mile in the Town of Tilden dropped from 2.31 to 1.2. In all of the towns in Chippewa County, the number of dairy farms per square mile decreased nearly in half from 1989 to 2002, decreasing from 1.2 to .63.

There has been a trend in Wisconsin and Chippewa County of decreasing average farm size. However, between 1997 and 2002, there was a big rebound both at the state and county levels in the number of farms. When we look at the numbers above in Table 6-4 and see that Chippewa County has lost 531 dairy farms from 1989 to 2002, the leveling out, and even slight gain in total farm numbers, must be coming from non-dairy farms.

Table 6-5
Dairy Farms per Square Mile – 1989-2002

Town Name	Dairy Farms per Square Mile		
	1989	1997	2002
Anson	1.122	0.588	0.401
Arthur	1.491	1.142	0.769
Auburn	1.204	0.840	0.476
Birch Creek	0.404	0.381	0.247
Bloomer	1.169	1.020	0.680
Cleveland	0.905	0.480	0.425
Colburn	1.030	0.738	0.507
Cooks Valley	1.721	1.546	1.079
Delmar	2.346	1.794	1.334
Eagle Point	0.886	0.693	0.515
Edson	1.854	1.483	1.168
Estella	0.534	0.377	0.251
Goetz	1.771	1.504	1.136
Hallie	0.508	0.462	0.185
Howard	1.257	0.922	0.084
Lafayette	0.576	0.259	0.691
Lake Holcombe	0.334	0.149	0.223
Ruby	0.580	0.355	0.318
Sampson	0.336	0.160	0.032
Sigel	1.188	0.801	0.497
Tilden	2.307	1.640	1.195
Wheaton	0.929	0.765	0.510
Woodmohr	1.773	1.238	0.816
Chippewa County	1.186	0.894	0.633

Source: Program on Agricultural Technology Studies – UW-Madison

A key factor in these changes has been farmland values. According to the Program on Agricultural Technology Studies (PATs), at the University of Wisconsin-Madison, from 1990 to 2002, Chippewa County had significant sales of farmland (6,050 acres), high prices paid for farmland (\$1,476 per acre), and a high rate of conversion of that land when sold to non-agricultural uses (21 percent average from 1990 to 2002).

When comparing the data of Chippewa County to the rest of the Northwest Wisconsin District, which includes Barron, Bayfield, Burnett, Chippewa, Douglas, Rusk, Polk, Sawyer, and Washburn Counties, the percent of land converted to non-agricultural uses in Chippewa County has been consistently five to six percentage points less than the entire district, as shown in Tables 6-6 and 6-7. When compared to Wisconsin as a whole, Chippewa County land conversion rates have also been lower. Additionally, the premium that buyers pay for farmland when converting it to non-agricultural uses in Chippewa County, shown in Tables 6-8 and 6-9, has been higher than the Northwest District premium, but lower than the State of Wisconsin premium.

**Table 6-6
Farmland Sale Data**

	Land Kept in Farming			Land Converted to Non-Ag. Uses		
	(Annual Average)			(Annual Average)		
	1990-1994	1995-1999	2000-2002	1990-1994	1995-1999	2000-2002
Chippewa County	6,274	4,744	4,638	1,545	1,105	1,412
Norwest District (includes Barron, Bayfield, Burnett, Chippewa, Douglas, Rusk, Polk, Sawyer, and Washburn Counties)	29,889	21,840	15,921	9,976	7,186	6,610
Wisconsin Total	323,828	203,452	137,916	76,560	66,206	59,981

Source: Program on Agricultural Technology Studies – UW Madison

**Table 6-7
Farmland Sale Data**

	Total Farmland Sold			Percent of Land Converted		
	(Annual Average)			(Annual Average)		
	1990-1994	1995-1999	2000-2002	1990-1994	1995-1999	2000-2002
Chippewa County	7,819	5,849	6,050	20%	19%	23%
Norwest District (includes Barron, Bayfield, Burnett, Chippewa, Douglas, Rusk, Polk, Sawyer, and Washburn Counties)	39,865	29,026	22,531	25%	25%	29%
Wisconsin Total	400,388	269,657	210,430	19%	25%	29%

Source: Program on Agricultural Technology Studies – UW Madison

**Table 6-8
Land Prices**

	Land Kept in Farming			Land Sold for Non-Ag. Uses		
	(Annual Average)			(Annual Average)		
	1990-1994	1995-1999	2000-2002	1990-1994	1995-1999	2000-2002
Chippewa County	\$561	\$865	\$1,387	\$1,538	\$1,122	\$1,743
Norwest District (includes Barron, Bayfield, Burnett, Chippewa, Douglas, Rusk, Polk, Sawyer, and Washburn Counties)	\$497	\$783	\$1,353	\$567	\$913	\$1,556
Wisconsin Total	\$850	\$1,254	\$2,038	\$1,993	\$1,993	\$3,312

Source: Program on Agricultural Technology Studies – UW Madison

**Table 6-9
Farmland Prices**

	Total Farmland Sold			Premium Paid for Non-Ag. Uses		
	(Annual Average)			(Annual Average)		
	1990-1994	1995-1999	2000-2002	1990-1994	1995-1999	2000-2002
Chippewa County	\$558	\$918	\$1,476	274%	130%	126%
Norwest District (includes Barron, Bayfield, Burnett, Chippewa, Douglas, Rusk, Polk, Sawyer, and Washburn Counties)	\$514	\$816	\$1,411	114%	117%	115%
Wisconsin Total	\$1,350	\$1,350	\$2,509	149%	159%	163%

Source: Program on Agricultural Technology Studies – UW Madison

Natural Resources

Natural resources often define the features of a community of which the local residents are proud. In the Town of Tilden there are productive soils, wooded hillsides, pure and ample groundwater, and abundant wildlife.

Everyone depends on natural resources in many ways. Soil, water and air are the primary resources which sustain all life. Fish, forestry, and wildlife are other resources that increase the quality of life and the economy.

Resource professionals were asked how they would define certain resources and what made them environmentally significant or sensitive. The following is a list of the significant resources and their definitions:

Topography

Tilden landscape is characterized by rolling hills, wooded ridges, and fertile valleys. Several small streams ramble through the Town, with Duncan Creek being the largest. (See Figure 1, page 47.)

Important Farmland:

This land is necessary for the continuation of the production of food or fiber. This was defined strictly on the productivity of soils. It did not reflect whether it is currently being cropped or has a history of cropping. Three factors were considered:

- Whether it is considered to be prime farmland by the USDA-Natural Resource Conservation Service.
- Its Capability Class. Soils that were in Class I thru IV were considered as tillable. Class V thru VIII are wet or steep and stony.
- Productivity for corn in relationship to the most productive soil in the county.

Soils that could be irrigated were also included since they can be highly productive if they have adequate water.

(See Figure 2, page 48.)

Steep Slopes

These areas are subject of severe erosion from tillage, road construction, and home development unless precautions are taken. Areas with slopes of greater than 20% slope (20 feet of vertical elevation change for every 100 feet of horizontal distance) are considered as environmentally sensitive. This percent slope was chosen because according to soil scientists, slopes of this steepness make the soils much more unstable and difficult to engineer.

(See Figure 3, page 49.)

Wetlands

Wetlands are a valuable resource because they store flood waters, filter sediment and nutrients, and serve as groundwater recharge areas. These are areas that have hydric soils (Water at or near the surface through most of the growing season) and support hydrophytic vegetation (plants that thrive in wet conditions).

Floodplains:

Floodplains are lands that are generally adjacent to creeks, rivers, lakes and wetlands that are susceptible to flood flow (floodway) or areas of slack ware (flood fringe). For purposes of this plan, based on soils, it includes areas which are subject to occasional or frequent flooding. (See Figure 4, page 50.)

Woodlands:

Two different sizes of woodlands had special significance when preparing this plan. The first was woodlands that are ten acres or greater in size. Ten acres is the minimum acreage that can be enrolled in the State's Managed Forest Program and loggers generally don't like to harvest acreages less than this unless it is exceptionally high quality timber. The second significant acreage was 400 contiguous acres of woodland. This acreage has significant importance as a renewable resource and is of value to some types of wildlife. (See Figure 5, page 51.)

Hydrology:

Hydrologic cycle is a continuous process by which water is purified by evaporation and transported from the earth's surface (including the oceans) to the atmosphere and back to the land and oceans. People tap the water cycle for their own uses. Water is diverted temporarily from one part of the cycle by pumping it from the ground or drawing it from a river or lake. It is used for a variety of activities such as households, businesses and industries, for irrigation of farms and parklands, and for production of electric power. After use, water is returned to another part of the cycle; perhaps discharged downstream or allowed to soak into the ground. Used water normally is lower in quality, even after treatment, which often poses a problem for downstream users. It is important to protect our water supply and top soil.

Fish

Chippewa County has 449 lakes totaling 20,027 acres and ranging from 1 to 6,300 acres. Most lakes are small, unnamed potholes located in the scenic moraine area in the northern part of the county. Many smaller lakes do not support a substantial fishery but offer solitude and serenity for those wanting to get away from the crowds. Duncan Creek upstream of Lake Como is a Class I brook trout stream and one of the best brook trout streams in the area. Public access to the stream is available along 7.8 miles of its 8.5 mile length through state-owned lands and fishery easements. Trout habitat improvements

downstream of State Highway 64 have increased the number of trout over 9 inches. Trout populations have good to excellent reproduction, thus limited stocking is conducted in the stream.

Wildlife

The landscape of Chippewa County varies greatly from the rolling hills of the Chippewa Moraine in the north to the flat farmlands in the south. This landscape variety provides for a diversity of forest types, plant cover, water bodies and wildlife populations. Chippewa County is blessed with a wide variety of hunting opportunities, including: whitetail deer, bear, turkeys, pheasants, ruffed grouse, geese, ducks, rabbits, and squirrels. Pheasants are stocked annually in the Tom Lawin Wildlife Area and at scattered locations in the county by sportsman's clubs. Chippewa County has over 46,000 acres of lands open to the public for hunting. The largest tract of public lands, approximately 32,000 acres, is contained in the Chippewa County Forest. Other properties with lands open to public hunting include the Chippewa Moraine Unit, the Tom Lawin Wildlife Area, scattered state fishery area lands along trout streams, and private lands enrolled in either the Forest Crop Law or Managed Forest Law. In addition to the state-owned lands in the Tom Lawin Wildlife Area, additional acres are leased from adjacent landowners for hunting. A smaller number of landowners allow public hunting for a number of reasons. Regardless of the reason, it is impossible to manage and control wildlife populations without access to private property. If wildlife populations aren't properly managed, natural forces such as starvation, predation, and destruction of habitat or disease become the limiting factor. It often takes years before populations recover from natural thinning.

Other Resources or Resource Issues

Groundwater

Groundwater is water that saturates the tiny spaces between alluvial material (sand, gravel, silt, clay) or the crevices in rock. It is vital for all of us. We depend on its good quality and quantity for drinking, recreation, use in industry, and growing crops. It is also vital to sustaining the natural systems on and under the earth's surface. Ground water is a hidden resource. At one time, its purity and availability were taken for granted. Now, contamination and availability are a serious issue. Although maps are available at the town or county level showing groundwater, it is known that groundwater tends to be localized, often following the same watershed boundaries as surface water. This is critical because what is done virtually in the "backyard" either keeps groundwater pure or contaminates it. Most groundwater contamination is first identified by nitrate tests since they are inexpensive and are a good indicator of other contaminants.

(See Figure 6, page 52.)

Figure 1

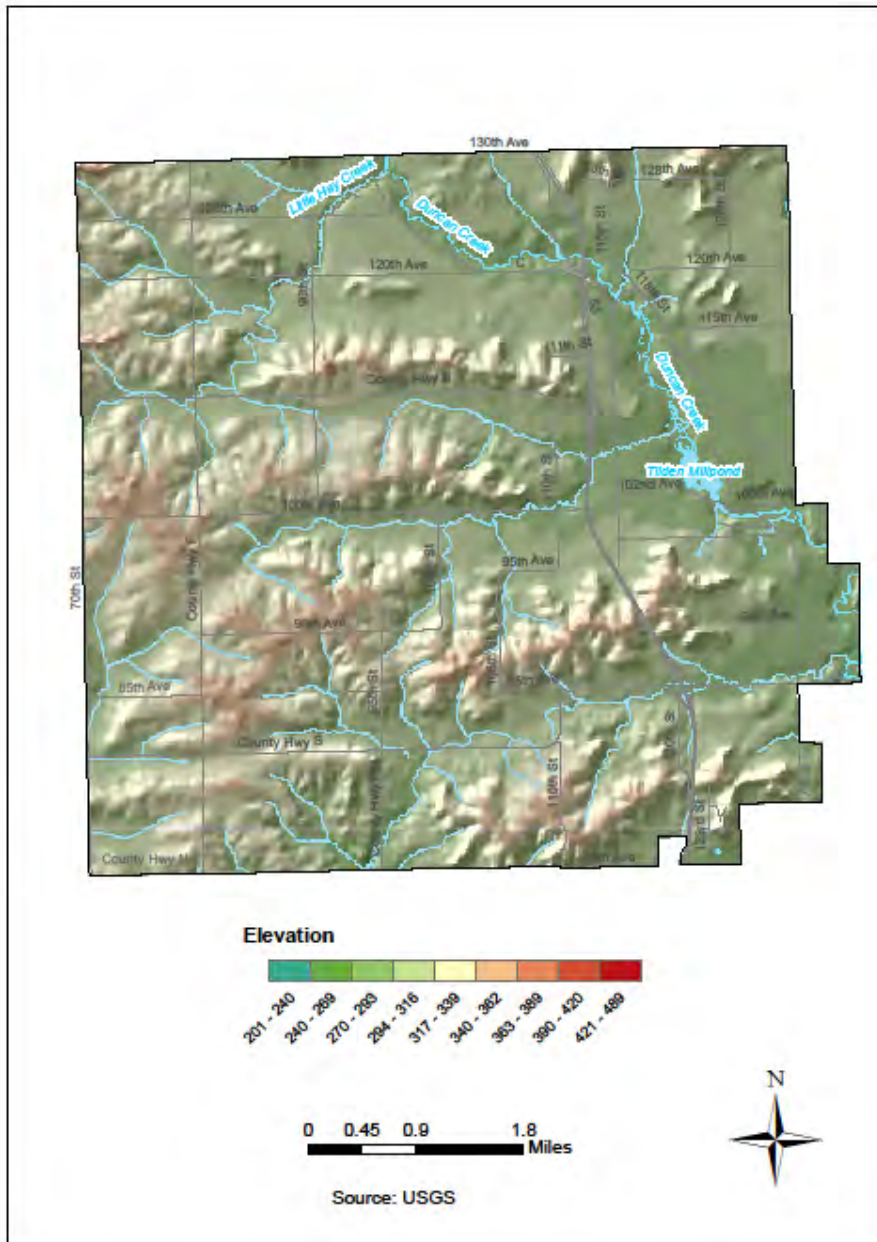
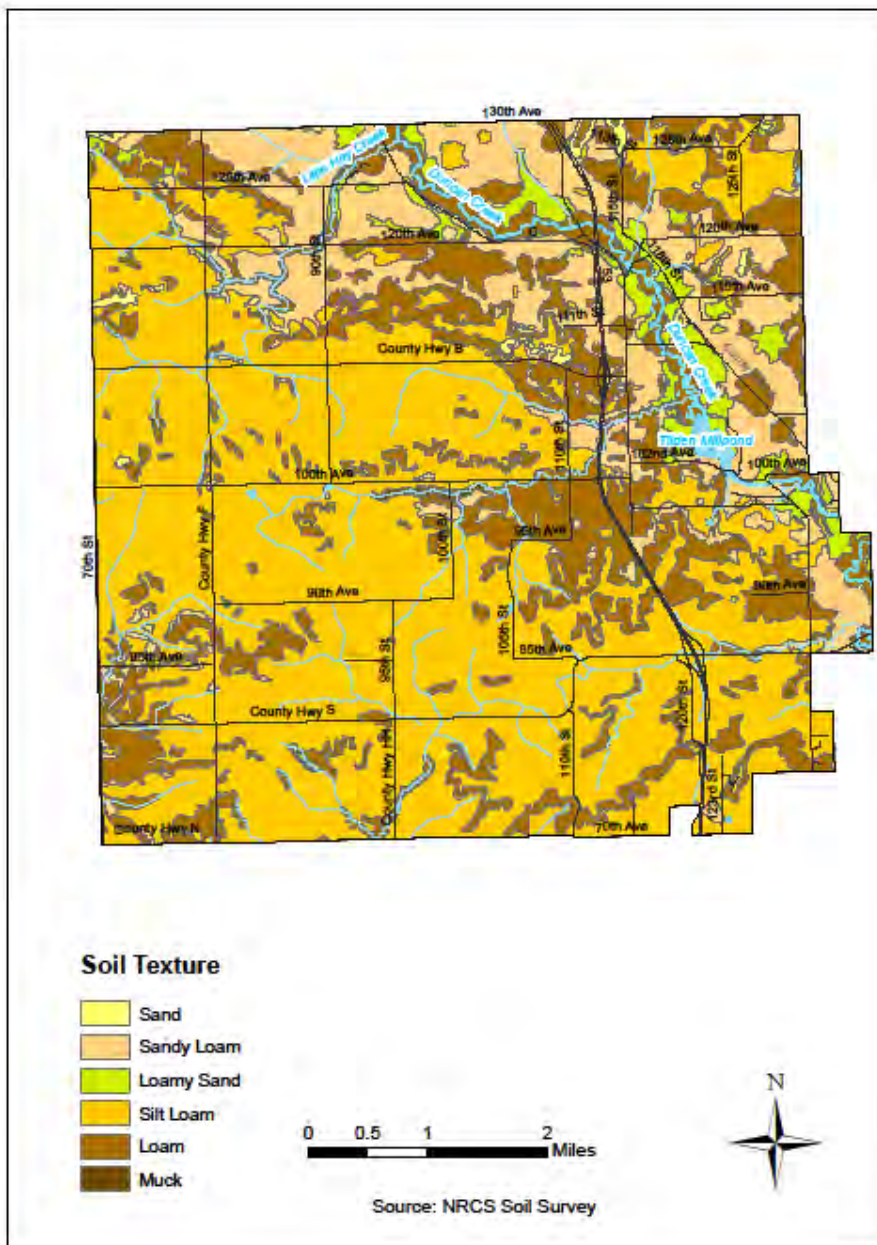


Figure 2



For an explanation of the Soil Texture visit the following websites. Web Soil Survey <http://websoilsurvey.nrcs.usda.gov/app> and Soil data mart <http://soildatamart.nrcs.usda.gov>

Figure 3

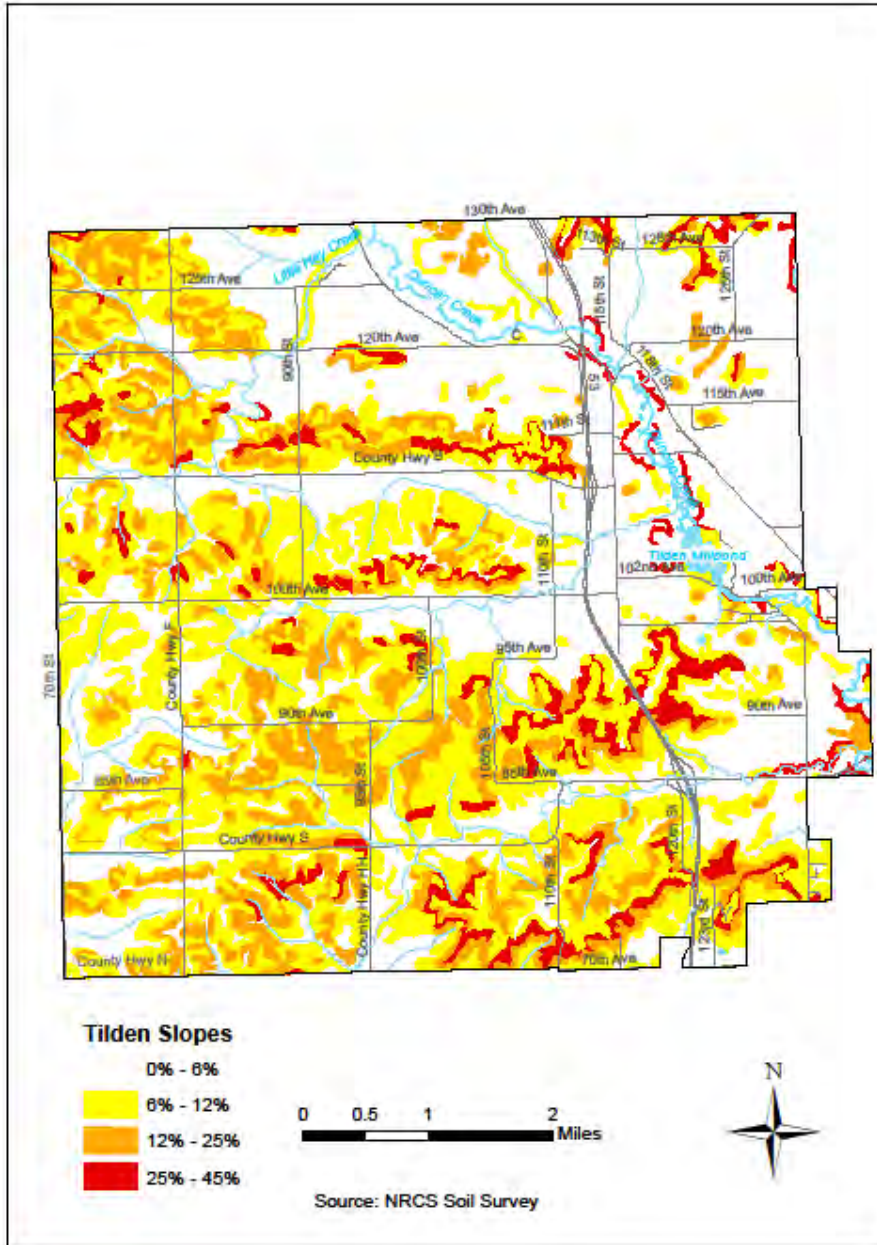


Figure 5

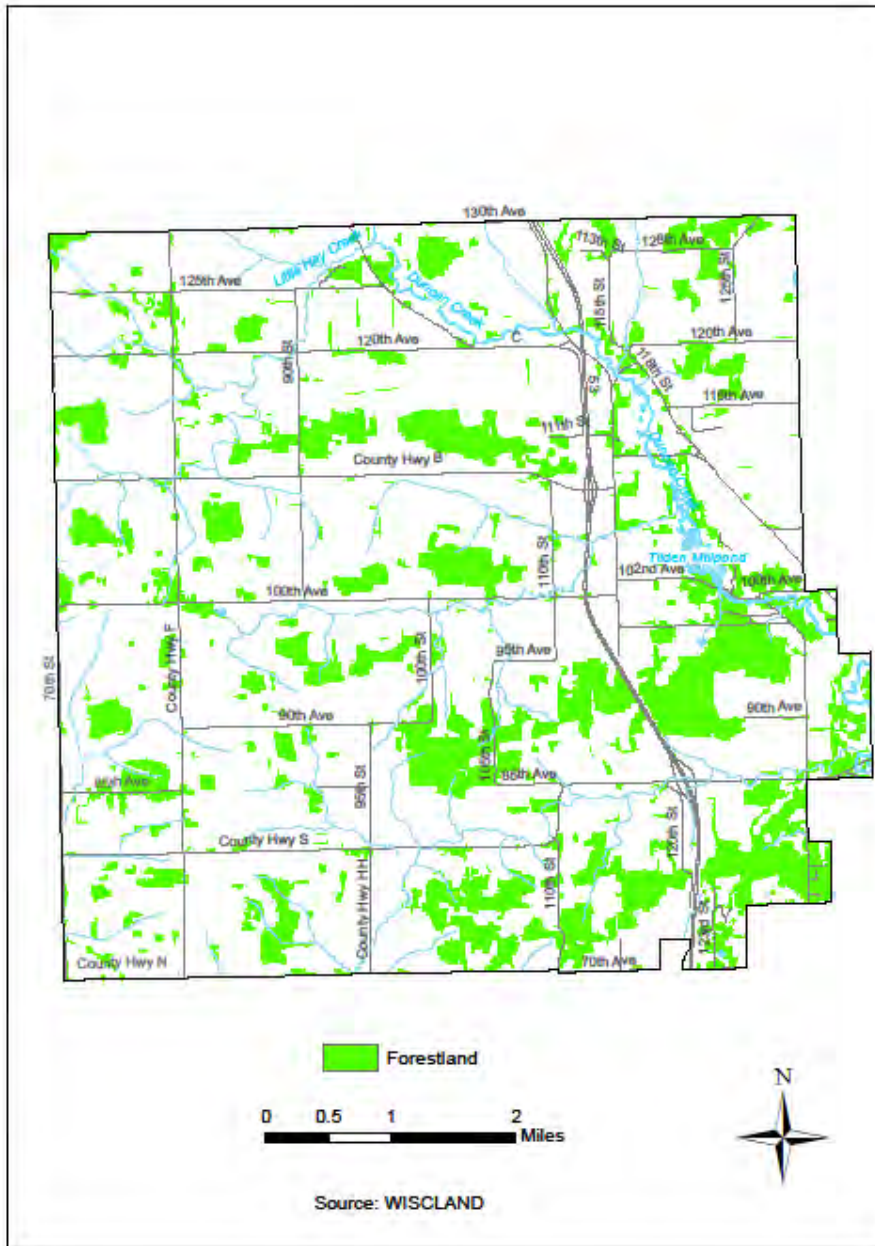
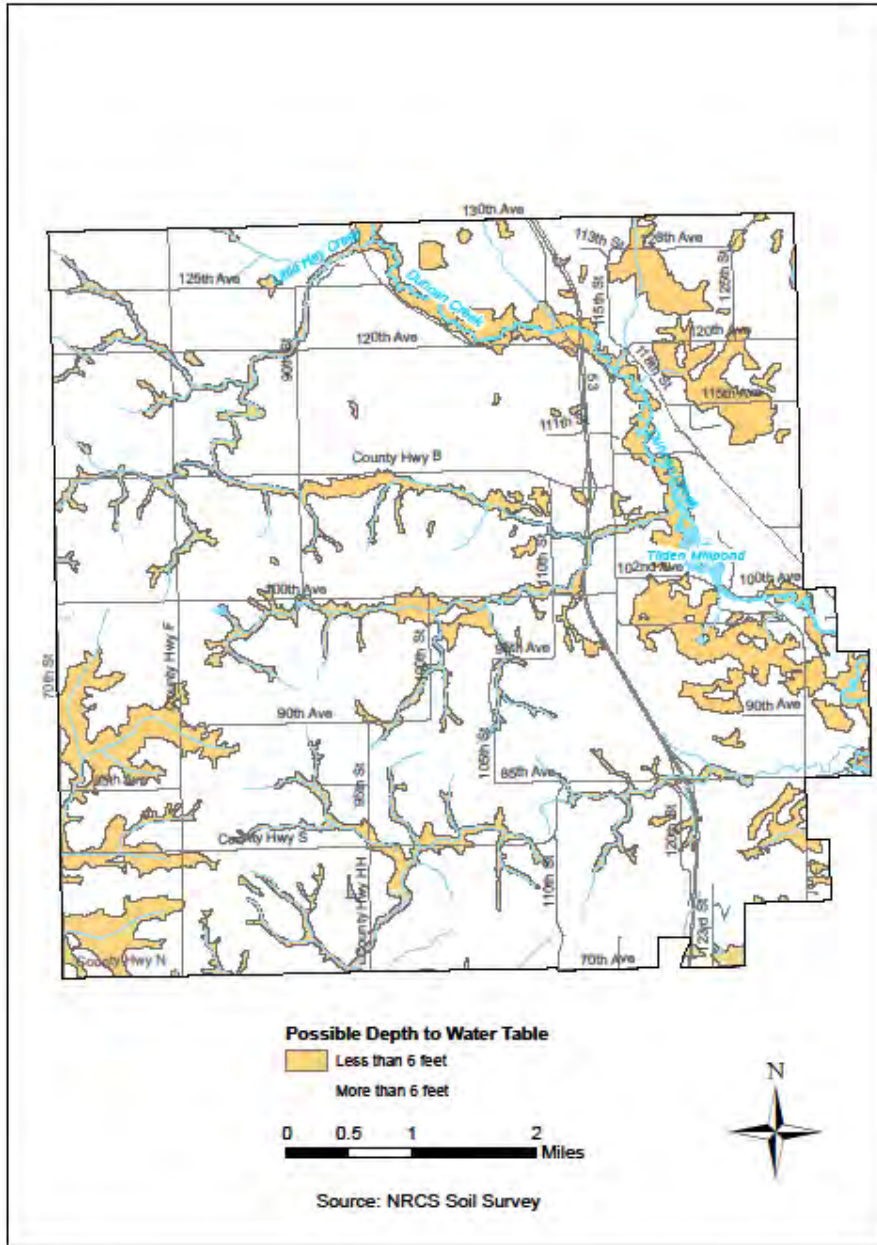
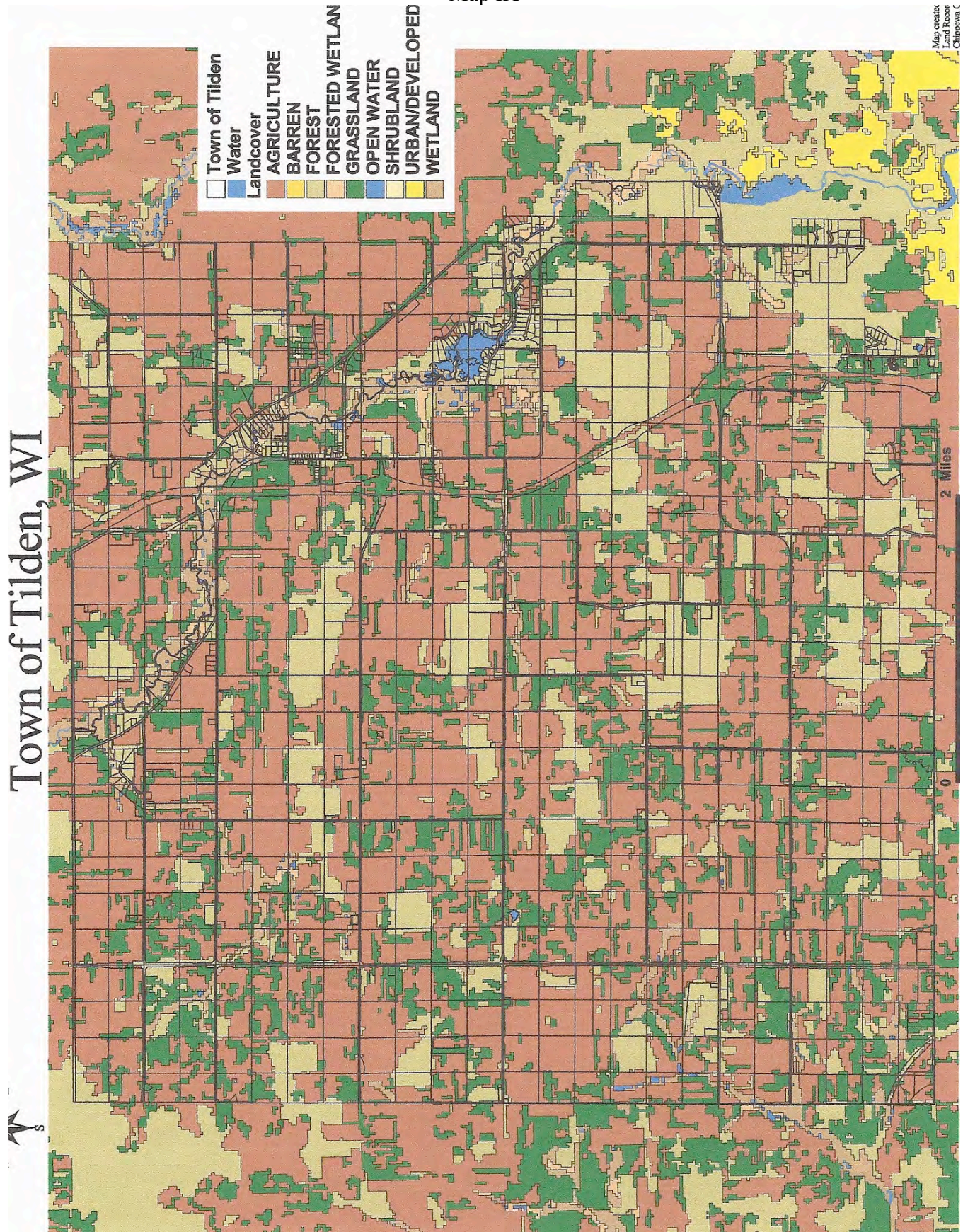


Figure 6



Town of Tilden, WI

Map IX



Cultural Resources

Tilden Wisconsin, Chippewa County Historic and Architecture Landmarks

<u>Name</u>	<u>Location</u>
Fairview School	NE corner of 90 th Street and 120 th Avenue (Quarry Road)
St. Peter's Church-1860, School- And Cemetery	County Highway Q, West Side
Tilden Creamery	County Highway Q, East Side - across from St. Peter's
Walter Brothers Hydro Plant	Off County Highway Q on 102 nd Ave
Tilden Lutheran Cemetery	South Side of County Highway C
Tilden Emmanuel Cemetery	Off County Highway C on 125 th Avenue
Old Tilden Emmanuel Evangelical Cemetery	East side of County Highway Q
Bresina's Bar, Dance Hall, and Ball Field	County Highway B
First farm in Chippewa County	100 th Avenue South side