



Adams County, Wisconsin Comprehensive Plan 2018



Adams County, Wisconsin

County Board

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Chapter One

Demographics

Background

Adams County is located in central Wisconsin. The county is bounded by the Wisconsin River to the west and Marquette and Waushara Counties to the east. There are seventeen towns, one city and one village in the county. See [Map 1 –Location](#).

Demographics are an important consideration for planning. The review of the socio-economic trends throughout the county are critical to understanding what has occurred and what is likely to occur in the future. Below we look at total population, age distribution, households, educational levels, employment and income levels. All of these will be examined in some detail.

Data Sources

Data from the U.S. Census and the American Community Survey (ACS), in addition to other sources such as the Wisconsin Department of Administration's population projections and the Bureau of Labor Statistics inflation calculator is used throughout this report.

The U.S. Census and the American Community Survey are both produced by the U.S. Census Bureau; however the census is a count of the American population and housing units conducted every ten years while the American Community Survey is an estimate of the population and housing released on a yearly basis. Data is included from 1990, 2000, 2010, and 2015 and trends

are generally analyzed for the fifteen year time frame from 2000 to 2015 in this report. The American Community Survey evolved from the “long form” that a random subset of the population used to receive with the census. In 2010, the U.S. Census Bureau started releasing American Community Survey data for all populations on a yearly basis. The availability of these surveys means that communities do not need to wait ten years for the census to assess current trends.

However, small populations, such as many of the communities in Adams County are often difficult to survey while the census is count of the population is never completely correct. This can produce data is not always completely accurate or consistent. Furthermore, Census and ACS data is self-reported which can produce its own accuracy issues. However there are few substitutes, if any, for most of the demographic data provided by these sources.

Population

Population growth has slowed at both the state and the county levels when compared to previous decades. In the 1980s, the county grew 16.5 percent while state grew 4.0 percent. In the 1990s, the county grew 27.0 percent while the state grew 9.6 percent. Over the past fifteen years, population growth has been much slower, even declining in Adams County in recent years.

In 2010 total population peaked at 20,875. By 2016, 20,730 persons resided in the county according to the estimate of the Wisconsin Department of Administration (WDOA), which was 0.7 percent less than the 2010 census county. From 2000 to 2010, the county had experienced growth, at 4.8 percent. This was equivalent 810 people. At the same time, the state grew 6.0 percent and increased 1.5 percent from 2010 to 2016.

However, Adams County and Wisconsin differ in the components of population change, natural population change and net migration. From 2010 to 2015, Wisconsin continued to grow as the natural increase from births outpaced deaths and negative net migration from the state. In contrast, Adams County's population experienced positive net migration but declined in population because there were more deaths than births.

Table 1-1 displays total population for each local unit (minor civil division), the county and the state. Four out of the 17 towns in Adams County lost population from 2000 to 2016, including the Town of Easton which declined 6.4 percent. New Chester saw the largest net decrease, losing 132 people. At the same time, the Town of Colburn

experienced the largest percentage increase, at 27.1 percent, adding 49 people. The Town of Dell Prairie had the largest net increase, adding 211 people. The Village of Friendship saw a percentage decrease of 7.4 percent after a 7.2 percentage increase in the 1990s. Its population has largely remained unchanged since at least the 1980s. The City of Adams increased 6.1 percent from 2000 to 2016, and has seen a slight population decrease since 2010.

The Wisconsin Department of Administration calculates population projections for the county and each local government unit. The latest population projections were published in 2013 and project population sizes from 2015 to 2040. The WDOA estimated that the county would hit peak population in 2030, at 23,830 people before declining roughly 500 people by 2040. From 2015 to 2025 the population was projected to increase by 8.0 percent and 2.8 percent from 2025 to 2035.

However, there are signs that the county is growing slower than the current projections. The population project for the county was 21,410 people for 2015, or 680 more people than the WDOA population estimate in 2016.

Table 1-1: Population

Minor Civil Division	1990	2000	2010	2016*	1990-00 % Change	2000-10 % Change	2000-16 % Change	2000-16 Net Change
Adams	1,170	1,267	1,345	1,364	8.3%	6.2%	7.7%	97
Big Flats	731	946	1,018	1,034	29.4%	7.6%	9.3%	88
Colburn	154	181	223	230	17.5%	23.2%	27.1%	49
Dell Prairie	1,063	1,415	1,590	1,626	33.1%	12.4%	14.9%	211
Easton	824	1,194	1,130	1,117	44.9%	-5.4%	-6.4%	- 77
Jackson	641	926	1,003	1,006	44.5%	8.3%	8.6%	80
Leola	217	265	308	306	22.1%	16.2%	15.5%	41
Lincoln	318	311	296	297	-2.2%	-4.8%	-4.5%	- 14
Monroe	305	363	398	404	19.0%	9.6%	11.3%	41
New Chester	1,675	2,141	2,254	2,009	27.8%	5.3%	-6.2%	- 132

New Haven	511	657	655	659	28.6%	-0.3%	0.3%	2
Preston	1,057	1,360	1,393	1,398	28.7%	2.4%	2.8%	38
Quincy	927	1,181	1,163	1,173	27.4%	-1.5%	-0.7%	-8
Richfield	159	144	158	158	-9.4%	9.7%	9.7%	14
Rome	1,674	2,656	2,720	2,748	58.7%	2.4%	3.5%	92
Springville	785	1,167	1,318	1,317	48.7%	12.9%	12.9%	150
Strongs Prairie	1,028	1,115	1,150	1,159	8.5%	3.1%	3.9%	44
Village of Friendship	728	781	725	723	7.3%	-7.2%	-7.4%	-58
City of Adams	1,715	1,831	1,967	1,942	6.8%	7.4%	6.1%	111
City of Wi. Dells (pt.)		19	61	60		221.1%	215.8%	41
Adams County								
Adams County	15,682	19,920	20,875	20,730	27.0%	4.8%	4.1%	810
State	4,891,769	5,363,675	5,686,986	5,775,120	9.6%	6.0%	7.7%	411,445

Source: U.S. Census and WI DOA

Note: The Town of New Chester includes a Federal Correctional Institution with about 1,200 persons.

Age Distribution

Population distribution is important to the planning process. In particular, two groups are examined here. They are the 17 years of age and younger, and the 65 and older population groups. These are often referred to as dependent populations and have different needs. The younger group requires schools, and the older group is retiring. Comparing these groups over time and to the state, demographic changes in the county are identified.

During the last fifteen years the population of the 17 and younger group declined from

19.5% percent of the total population in 2000 to about 15.4% percent of the total county population in 2015, as displayed in Table 1-2. This was a net decrease of 734. Meanwhile the state population of children 17 years and younger decreased from 25.5 percent of the population in 2000 to 22.8 percent in 2015, decreasing by 59,553.

Six of the towns did experience net gains in this demographic group from 2000 to 2015, including the Town of Adams which has the highest percentage total of children 17 years and younger in its population. The rest of the towns, as well as the village and the city, experienced net declines.

Table 1-2: Persons 17 Years of Age and Younger

Minor Civil Division	1990	2000	2010	2015	1990 % of Total	2000 % of Total	2010 % of Total	2015 % of Total	2000-15 Net Change
Adams	286	267	258	326	24.4%	21.1%	19.2%	22.7%	59
Big Flats	176	203	151	88	24.1%	21.5%	14.8%	10.3%	-115
Colburn	36	26	18	39	23.4%	14.4%	8.1%	13.7%	13
Dell Prairie	260	321	329	336	24.5%	22.7%	20.7%	20.8%	15
Easton	201	318	245	141	24.4%	26.6%	21.7%	14.2%	-177
Jackson	135	184	135	155	21.1%	19.9%	13.5%	13.0%	-29
Leola	54	52	52	65	24.9%	19.6%	16.9%	20.1%	13
Lincoln	77	58	47	57	24.2%	18.6%	15.9%	15.7%	-1
Monroe	63	52	33	32	20.7%	14.3%	8.3%	7.4%	-20

New Chester	187	187	194	217	11.2%	8.7%	8.6%	10.8%	30
New Haven	100	138	138	143	19.6%	21.0%	21.1%	20.7%	5
Preston	251	311	236	225	23.7%	22.9%	16.9%	15.4%	-86
Quincy	137	166	149	163	14.8%	14.1%	12.8%	13.3%	-3
Richfield	43	27	23	24	27.0%	18.8%	14.6%	16.4%	-3
Rome	298	458	341	282	17.8%	17.2%	12.5%	10.4%	-176
Springville	156	247	259	215	19.9%	21.2%	19.7%	17.4%	-32
Strongs Prairie	225	196	187	169	21.9%	17.6%	16.3%	15.2%	-27
Village of Friendship	162	168	134	83	22.3%	21.5%	18.5%	11.9%	-85
City of Adams	457	500	473	374	13.8%	27.3%	24.0%	22.5%	-127
City of Wi. Dells (pt.)		4	11	6	n/a		18.0%	50.0%	2
Adams County									
Adams County	3,304	3,883	3,421	3,149	21.1%	19.5%	16.4%	15.4%	-734
State	1,288,982	1,368,756	1,339,492	1,309,203	26.4%	25.5%	23.6%	22.8%	-59,553

Source: U.S. Census and ACS

During the same period, the 65 and older group increased as a percentage of total population from 19.6% percent to 26.2% percent, as shown in Table 1-3. Every local unit in Adams County experienced increases.

This is mainly due to the aging of the Baby Boomers, the largest generation in American history, and retirees moving into the county. The oldest Baby Boomer will be 72 in 2017 while the youngest Baby Boomer will be 54 years old. Based on increases in life expectancy and advances in medicine, the 65 and older group can expect to grow in absolute numbers and as a percentage of total population.

However, the increase is also due a lower fertility rate that is shifting the age profile. According the Centers for Disease Control and Prevention, in 1957, the fertility rate was 3.7 births per woman in the United States. In 2014, the average was 1.93 which is lower than the 2.1 replacement rate needed to keep a population steady.

The rural Wisconsin counties, including Adams County, are aging much faster than the state and the nation as a whole. In 2010, the median age in Adams County was 47.7 years, compared to 37.0 for the state. Furthermore, in 2015, the percentage of the population that was 65 and older was 26.2 percent, compared to 14.8 percent of the state.

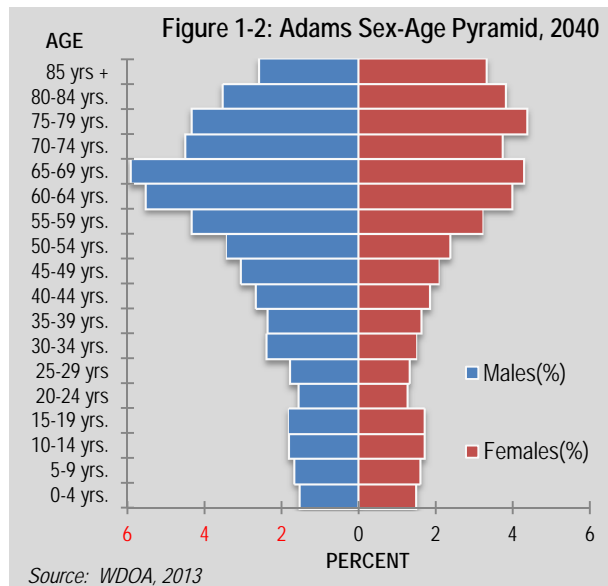
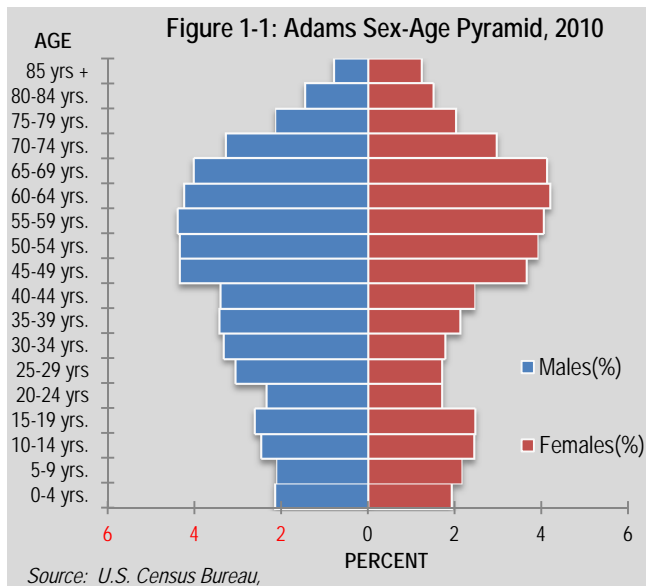


Figure 1-1 and Figure 1-2 above show the population pyramid for Adams County in 2010 and for the projections for 2040. However, the term “pyramid” has already become misnomer in Adams County’s case. Until recently, most communities’ population “bases” were larger than the tops. Today in the North Central Wisconsin region, many communities’ population age-sex distributions resemble columns rather than pyramids, as is the case in Adams County. In 2010, 23.5 percent of the population was 65 years and older and had jumped to 26.2 percent by 2015.

By 2040, 40.4 percent of the population is expected to be 65 years or older, a net increase of 4,511 senior citizens. To put that in perspective, the country of Japan became the world’s first “Hyper-Aged” society in 2007 when more than 21 percent of its society was estimated to be aged 65 or older. According to the latest projections out of Japan, the percentage of Japan’s population that is 65 and older is not expected to reach 40 percent until 2060.

The decrease in the percentage of 17 and younger persons and the increase in the 65 and older persons will have an impact on the labor force, school system and health care industry in the county. As the growth in population slows, so will the workforce and ultimately job growth. It will also be difficult to fund public services if employment and tax revenues are not growing, as there is a lower percentage of the population working from which to collect state income taxes and more income coming from Social Security. At the same time, the economy is expected to shift as older adults drive the economy. Healthcare is expected to continue to grow as well as other service providers.

There are a number of actions a community can take to not only address these challenges but to capitalize on the benefits of this age group. Not only do older adults have years of valuable experiences and wisdom, many of the entrepreneurs, and therefore job creators, are at or near retirement age. As Adams County imports older adults looking to retire in the area, this demographic brings a great amount of spending power in the local economy.

Table 1-3: Persons 65 Years of Age and Older

Minor Civil Division	1990	2000	2010	2015	1990 % of Total	2000 % of Total	2010 % of Total	2015 % of Total	2000-15 Net Change
Adams	182	216	279	303	15.6%	17.0%	20.9%	21.1%	40.5%
Big Flats	113	193	184	261	15.5%	20.4%	20.9%	30.6%	35.2%
Colburn	28	37	67	71	18.2%	20.4%	32.8%	24.9%	91.8%
Dell Prairie	145	198	251	264	13.6%	14.0%	16.4%	16.3%	33.1%
Easton	172	192	201	240	20.9%	16.1%	20.9%	24.2%	25.2%
Jackson	150	206	277	340	23.4%	22.2%	27.4%	28.6%	65.1%
Leola	32	49	33	53	14.7%	18.5%	8.4%	16.4%	8.4%
Lincoln	54	58	94	105	17.0%	18.6%	24.0%	29.0%	81.0%
Monroe	62	87	134	153	20.3%	24.0%	28.0%	35.5%	75.9%
New Chester	139	153	228	213	8.3%	7.1%	9.9%	10.6%	39.3%
New Haven	112	132	132	139	21.9%	20.1%	22.0%	20.1%	5.4%
Preston	220	273	323	345	20.8%	20.1%	21.4%	23.6%	26.2%
Quincy	282	373	389	407	30.4%	31.6%	30.4%	33.1%	9.1%
Richfield	20	31	25	43	12.6%	21.5%	19.1%	29.5%	38.9%
Rome	323	641	847	1139	19.3%	24.1%	30.8%	42.0%	77.7%
Springville	161	213	231	295	20.5%	18.3%	17.4%	23.9%	38.4%
Strongs Prairie	236	251	318	375	23.0%	22.5%	22.9%	33.8%	49.3%
Village of Friendship	240	156	259	188	33.0%	20.0%	33.8%	27.0%	20.5%
City of Adams	363	443	442	428	21.2%	24.2%	24.8%	25.8%	-3.3%
City of Wi. Dells (pt.)		1	0	0			0.0%	0.0%	-100.0%
Adams County	3,034	3,903	4,714	5,358	19.3%	19.6%	22.4%	26.2%	37.3%
State	651,221	702,553	755,485	849,833	13.3%	13.1%	13.4%	14.8%	21.0%

Source: U.S. Census

Households

In 2010, there were 8,666 households in Adams County following at least three decades in household growth as displayed in Table 1-4. The 1980s saw a 23.4 percent increase in the number of households. In the 1990s, the number of households grew 32.3 percent and 9.7 percent from 2000 to 2010. Generally the number of households across the country has been increasing as more people decide to live alone and more couples having fewer children or no children at all

for several decades. The number of households has increased faster than the population as a whole. However, the 2015 American Community Survey indicates that the number of households has actually decreased from 2000 to 2015, a decline of 114 households. The number of people per household is up slightly as well, from 2.41 in 2010 to 2.47 in 2015. In 2000 the average number of people per household was 2.33. Likely the decrease in the number of households is a combination of larger household sizes and increase of the number

of vacant housing units (3,401 units) compared to a housing unit increase of 3,287.

The number of households is independent of population increase. This is best illustrated

by the fact that in the local units with that grew over the past fifteen years, such as the City of Adams, actually lost households. The Town of Springville which had a population growth of 12.9 percent saw a 1.2 percent decrease in the number of households.

Table 1-4: Households

Minor Civil Division	1990	2000	2010	2015	1990-00 % Change	2000-10 % Change	2000-15 % Change
Adams	454	547	580	546	20.5%	6.0%	-0.2%
Big Flats	294	402	444	376	36.7%	10.4%	-6.5%
Colburn	60	83	109	118	38.3%	31.3%	42.2%
Dell Prairie	402	553	649	594	37.6%	17.4%	7.4%
Easton	326	486	864	380	49.1%	77.8%	-21.8%
Jackson	271	397	465	467	46.5%	17.1%	17.6%
Leola	85	107	127	112	25.9%	18.7%	4.7%
Lincoln	124	129	129	134	4.0%	0.0%	3.9%
Monroe	132	168	201	202	27.3%	19.6%	20.2%
New Chester	267	371	428	372	39.0%	15.4%	0.3%
New Haven	199	260	264	256	30.7%	1.5%	-1.5%
Preston	420	561	619	548	33.6%	10.3%	-2.3%
Quincy	428	569	573	520	32.9%	0.7%	-8.6%
Richfield	58	62	78	66	6.9%	25.8%	6.5%
Rome	711	1,181	1,282	1,229	66.1%	8.6%	4.1%
Springville	342	487	538	481	42.4%	10.5%	-1.2%
Strongs Prairie	411	502	530	478	22.1%	5.6%	-4.8%
Village of Friendship	251	257	256	203	2.4%	-0.4%	-21.0%
City of Adams	737	769	886	701	4.3%	15.2%	-8.8%
City of Wi. Dells (pt.)		9	31	3		244.4%	-66.7%
Adams County	5,972	7,900	8,666	7,786	32.3%	9.7%	-1.4%
State	1,822,118	2,084,544	2,279,768	2,299,107	14.4%	9.4%	10.3%

Source: Census

Education Levels

Educational attainment improved significantly over the past fifteen years. Over the period, the number of persons who graduated from high school as a percentage

of those over 25, increased from 76.8 percent in 2000 to 87.2 percent in 2015. The county increase was reflected in every local unit between 2000 and 2015. The gap between the county and the state has decreased significantly, decreasing from 8.3 percent in

2000 to 3.8 percent in 2015. This is displayed in Table 1-5.

Table 1-5: Persons 25 and Over Who Have Completed Four Years of High School or More

Minor Civil Division	1990	2000	2010	2015	1990 % of Total	2000 % of Total	2010 % of Total	2015 % of Total	2000-15 Net Change
Adams	537	669	702	843	67.4%	71.2%	81.5%	83.3%	26.0%
Big Flats	289	490	452	579	57.7%	71.8%	75.6%	78.1%	18.1%
Colburn	48	105	140	177	43.2%	70.5%	78.4%	79.0%	68.5%
Dell Prairie	554	793	968	1062	75.1%	80.2%	85.0%	91.2%	33.9%
Easton	360	621	599	693	63.9%	77.3%	84.6%	86.4%	11.6%
Jackson	339	591	773	878	72.6%	78.8%	88.1%	88.0%	48.6%
Leola	84	162	161	193	56.8%	78.3%	85.3%	83.5%	19.1%
Lincoln	144	139	178	219	64.3%	66.8%	78.6%	81.4%	57.5%
Monroe	157	281	304	343	70.4%	87.8%	74.9%	88.6%	22.0%
New Chester	896	446	1,270	1,463	66.1%	73.7%	80.2%	86.8%	228.1%
New Haven	270	364	440	480	74.0%	76.0%	89.0%	91.6%	31.9%
Preston	493	771	803	958	66.0%	76.0%	85.1%	83.8%	24.2%
Quincy	431	657	655	800	58.1%	68.6%	87.3%	81.9%	21.8%
Richfield	61	82	96	107	55.5%	78.8%	82.1%	89.9%	30.5%
Rome	1068	1,857	2,161	2261	82.3%	89.1%	92.3%	95.6%	21.8%
Springville	356	607	716	813	61.4%	70.1%	84.5%	88.1%	34.0%
Strongs Prairie	459	635	719	787	61.5%	76.5%	89.5%	91.3%	23.9%
Village of Friendship	340	358	375	447	64.8%	71.7%	75.1%	83.9%	24.9%
City of Adams	735	884	819	990	65.4%	72.2%	73.9%	82.7%	12.0%
City of Wi. Dells (pt.)		16	0	6			100.0%	100.0%	-62.5%
Adams County	7,621	10,528	13,597	14,094	67.0%	76.8%	84.0%	87.2%	33.9%
State	2,432,154	2,957,461	3,342,883	3,524,538	81.3%	85.1%	89.4%	91.0%	19.2%

Source: U.S. Census

The rate of persons 25 and older with four or more years of college is slowly increasing within the county, but at a much slower rate than the state, as shown in Table 1-6. In 2015, 12.8 percent of the county, aged 25 years and older, had obtained a bachelor's degree or higher. This was a 2.8 percentage increase over 2000. However, the state's percentage of the population 25 and older with a bachelor's degree or higher increased 5.4 percentage points. Furthermore, the

state was 15.0 percentage points higher in this category compared to the county.

As the county has been closing the gap with the state in the percentage of residents who have graduated from high school, the gap in the percentage of residents with a college degree between the county and the state has been widening. According to the Bureau of Labor Statistics, 27 percent of jobs in the United States require a college education. However, other experts believe the

percentage to be much higher. Nonetheless, today 37.8 percent of the workforce has an associate's degree or higher. In Adams County only 21.3 percent of the population

has an associate's degree or higher. This could affect job growth if local employers cannot find skilled workers in the area.

Table 1-6: Persons 25 and Older Who Have Completed Four or More Years of College

Minor Civil Division	1990	2000	2010	2015	1990 % of Total	2000 % of Total	2010 % of Total	2015 % of Total	2000-2015 Net Change
Adams	42	57	80	129	5.3%	6.1%	7.9%	12.7%	125.5%
Big Flats	7	56	42	38	1.4%	8.2%	6.3%	5.1%	-32.5%
Colburn	0	7	6	17	0.0%	4.7%	3.2%	7.6%	143.2%
Dell Prairie	99	143	193	189	13.4%	14.5%	17.5%	16.2%	31.9%
Easton	22	41	60	87	3.9%	5.1%	8.1%	10.8%	111.3%
Jackson	33	70	96	158	7.1%	9.3%	11.3%	15.8%	125.3%
Leola	0	21	33	25	0.0%	10.1%	13.1%	10.8%	18.8%
Lincoln	8	14	41	29	3.6%	6.7%	14.1%	10.8%	107.5%
Monroe	19	42	27	42	8.5%	13.1%	7.7%	10.9%	0.4%
New Chester	93	43	113	76	6.9%	7.1%	5.9%	4.5%	76.4%
New Haven	34	39	32	55	9.3%	8.1%	6.9%	10.5%	41.1%
Preston	57	81	115	136	7.6%	8.0%	9.9%	11.9%	67.9%
Quincy	35	43	83	86	4.7%	4.5%	8.1%	8.8%	99.9%
Richfield	0	6	6	16	0.0%	5.8%	5.4%	13.4%	165.8%
Rome	192	361	507	594	14.8%	17.3%	21.9%	25.1%	64.4%
Springville	31	51	69	83	5.3%	5.9%	7.4%	9.0%	62.9%
Strongs Prairie	36	73	111	83	4.8%	8.8%	10.6%	9.6%	13.4%
Village of Friendship	31	36	33	65	5.9%	7.2%	5.7%	12.2%	80.6%
City of Adams	103	179	97	163	9.2%	14.6%	8.2%	13.6%	-9.1%
City of Wi. Dells (pt.)		6	0	3			0.0%	50.0%	-50.0%
Adams County	842	1,369	1,748	2,069	7.4%	10.0%	10.8%	12.8%	51.1%
State	547,678	779,273	964,725	1,076,727	18.3%	22.4%	25.8%	27.8%	38.2%

Source: U.S. Census

Employment

In 2015, there were 7,461 residents employed. (Note that these are persons employed and many of them work outside the county.) This reflected a 4.9 percent decrease in the county's employment since 2010, compared

to 5.4 percent growth for the state. Only four towns, Colburn, Jackson, Leola, and Lincoln, experienced increases in the number of their residents working as shown in Table 1-7. The decrease in the number of workers in Adams County is likely tied to the aging population. The median age in the

county is 47.7, which is much older than the state median age. When an individual reaches the age of 55 and older, their

probability of participating in the labor force drops significantly.

Table 1-7: Total Employed Persons (16 and over)

Minor Civil Division	1990	2000	2010	2015	1990-00 % Change	2000-10 % Change	2010-15 % Change
Adams	500	632	673	576	26.4%	6.5%	-8.8%
Big Flats	254	370	382	282	45.7%	3.3%	-23.7%
Colburn	32	93	67	93	190.6%	-27.9%	0.0%
Dell Prairie	505	670	798	791	32.7%	19.2%	18.1%
Easton	319	481	415	405	50.8%	-13.8%	-15.8%
Jackson	222	408	491	506	83.8%	20.4%	24.0%
Leola	86	122	144	148	41.9%	18.0%	21.3%
Lincoln	110	119	131	147	8.2%	10.1%	23.5%
Monroe	108	162	167	155	50.0%	3.2%	-4.4%
New Chester	262	377	409	356	43.9%	8.5%	-5.6%
New Haven	249	317	301	301	27.3%	-5.0%	-5.0%
Preston	372	572	549	550	53.8%	-3.9%	-3.9%
Quincy	316	434	526	380	37.3%	21.1%	-12.4%
Richfield	66	74	56	58	12.1%	-24.4%	-21.6%
Rome	695	1,096	1105	956	57.7%	0.8%	-12.8%
Springville	282	524	631	516	85.8%	20.5%	-1.5%
Strongs Prairie	336	479	583	447	42.6%	21.8%	-6.8%
Village of Friendship	258	226	241	211	-12.4%	6.5%	-6.7%
City of Adams	668	691	667	574	3.4%	-3.5%	-17.0%
Wisconsin Dells (Pt.)			16	6			
Adams County	5,640	7,847	8,359	7,461	39.1%	6.5%	-4.9%
State	2,517,238	2,734,925	2,871,201	2,883,293	8.6%	5.0%	5.4%

Source: U.S. Census

Income Levels

Per capita income and median income are displayed in Table 1-8 and Table 1-9. The county median household income rose about 31 percent over the fifteen year period, compared to a state increase of 22 percent. Meanwhile, the county per capita income

also increased by 28.2 percent, compared to the state increase of 33.2 percent. Note that these changes have not been adjusted for inflation.

During the past fifteen years, the county's median household income grew faster than the state rate while the per capita income

grew more slowly than the state. Overall, the total county median income and per

capita income are less than the state levels.

Table 1-8: Median Household Income

Minor Civil Division	1990	2000	2010	2015	1990-00 % Change	2000-10 % Change	2000-15 % Change
Adams	\$ 20,994	\$ 34,286	\$38,821	\$ 40,682	63.3%	13.2%	18.7%
Big Flats	\$ 18,289	\$ 27,800	\$36,472	\$ 33,125	52.0%	31.2%	19.2%
Colburn	\$ 12,143	\$ 35,250	\$40,536	\$ 43,750	190.3%	15.0%	24.1%
Dell Prairie	\$ 24,688	\$ 43,750	\$55,057	\$ 57,600	77.2%	25.8%	31.7%
Easton	\$ 19,559	\$ 30,469	\$36,667	\$ 44,167	55.8%	20.3%	45.0%
Jackson	\$ 19,844	\$ 39,338	\$41,008	\$ 49,063	98.2%	4.2%	24.7%
Leola	\$ 23,125	\$ 36,607	\$40,179	\$ 47,857	58.3%	9.8%	30.7%
Lincoln	\$ 21,000	\$ 29,107	\$32,054	\$ 46,818	38.6%	10.1%	60.8%
Monroe	\$ 24,583	\$ 34,500	\$34,464	\$ 49,375	40.3%	-0.1%	43.1%
New Chester	\$ 19,821	\$ 28,750	\$38,939	\$ 44,000	45.0%	35.4%	53.0%
New Haven	\$ 28,173	\$ 35,536	\$50,714	\$ 45,313	26.1%	42.7%	27.5%
Preston	\$ 22,417	\$ 33,491	\$41,372	\$ 41,528	49.4%	23.5%	24.0%
Quincy	\$ 17,540	\$ 26,533	\$41,726	\$ 32,045	51.3%	57.3%	20.8%
Richfield	\$ 27,917	\$ 34,792	\$28,750	\$ 33,750	24.6%	-17.4%	-3.0%
Rome	\$ 30,652	\$ 44,000	\$51,982	\$ 54,828	43.5%	18.1%	24.6%
Springville	\$ 19,400	\$ 34,531	\$39,107	\$ 41,208	78.0%	13.3%	19.3%
Strongs Prairie	\$ 21,447	\$ 30,048	\$45,900	\$ 40,900	40.1%	52.8%	36.1%
Village of Friendship	\$ 21,058	\$ 24,615	\$39,643	\$ 44,732	16.9%	61.1%	81.7%
City of Adams	\$ 19,263	\$ 26,250	\$26,097	\$ 28,341	36.3%	-0.6%	8.0%
City of Wisconsin Dells (pt.)	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Adams County	\$ 21,548	\$ 33,408	\$39,885	\$ 43,640	55.0%	19.4%	30.6%
State	\$ 29,442	\$ 43,791	\$51,598	\$ 53,357	48.7%	17.8%	21.8%

Source: U.S. Census (Not adjusted for inflation)

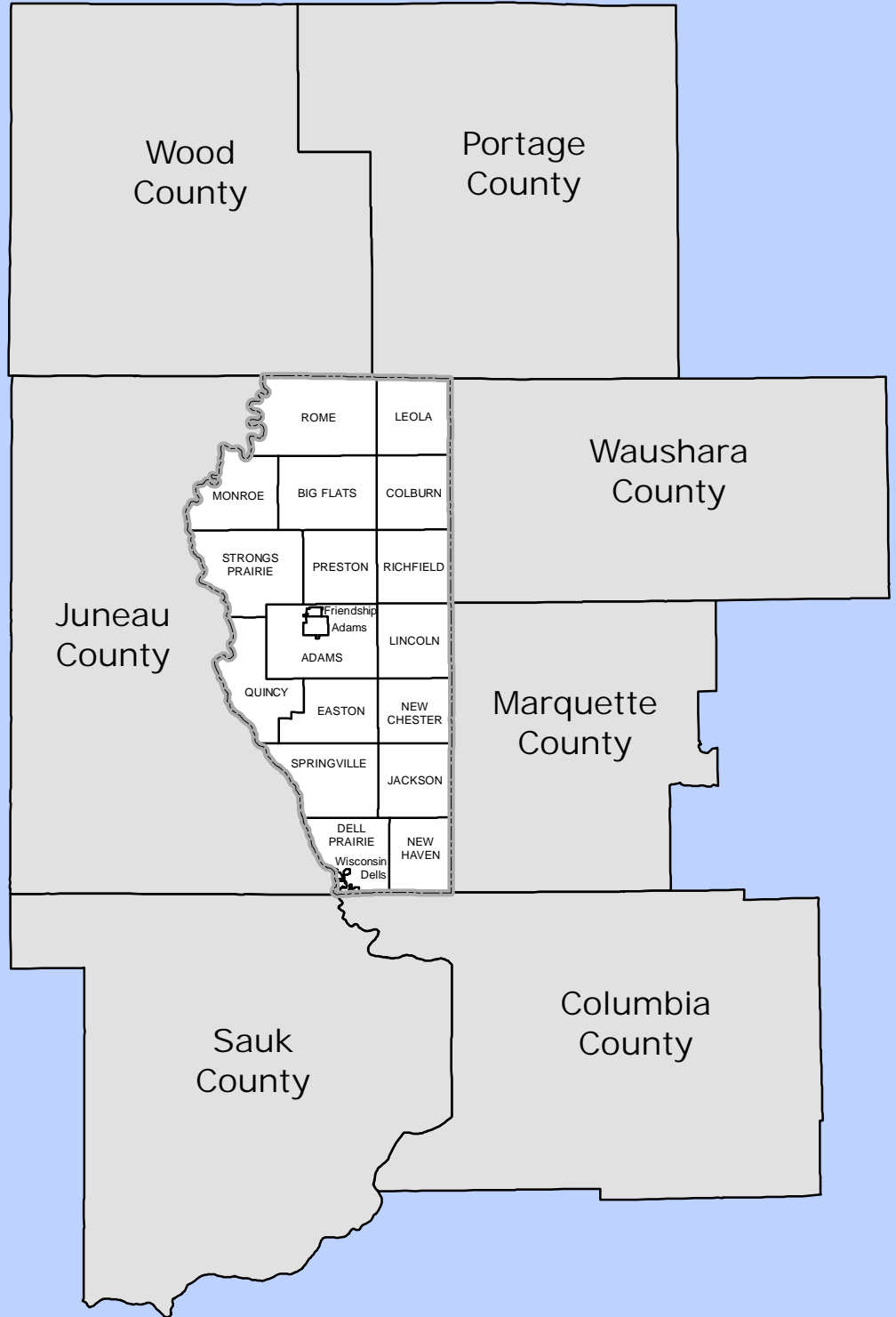
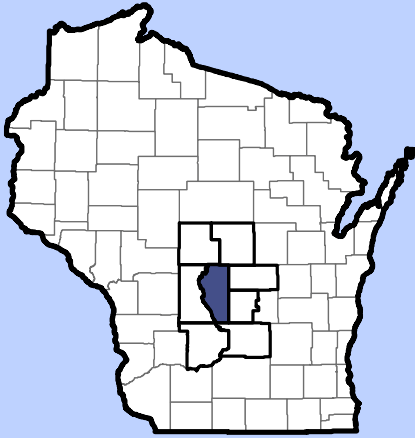
However, when incomes are adjusted for inflation, it is apparent that incomes have stagnated. Had the median household income risen with the Consumer Price Index, it would have been \$47,065 in 2015.

In reality the median household income was \$43,640 in 2015. If the per person capita income would have risen with inflation, it would have been \$25,044. However, the per person capita income 2015 was \$22,783.

Table 1-9: Per Capita Income

Minor Civil Division	1990	2000	2010	2015	1990-00 % Change	2000-10 % Change	2000-15 % Change
Adams	\$ 9,331	\$ 18,225	22,733	\$ 18,965	95.3%	24.7%	4.1%
Big Flats	\$ 9,411	\$ 14,629	21,178	\$ 20,234	55.4%	44.8%	38.3%
Colburn	\$ 5,586	\$ 21,440	30,956	\$ 20,075	283.8%	44.4%	-6.4%
Dell Prairie	\$ 12,274	\$ 19,209	25,530	\$ 24,790	56.5%	32.9%	29.1%
Easton	\$ 9,134	\$ 15,011	21,624	\$ 20,561	64.3%	44.1%	37.0%
Jackson	\$ 10,116	\$ 19,080	27,639	\$ 27,590	88.6%	44.9%	44.6%
Leola	\$ 9,211	\$ 15,699	16,539	\$ 19,373	70.4%	5.4%	23.4%
Lincoln	\$ 12,744	\$ 15,484	19,524	\$ 21,312	21.5%	26.1%	37.6%
Monroe	\$ 12,480	\$ 19,970	17,050	\$ 29,463	60.0%	-14.6%	47.5%
New Chester	\$ 12,444	\$ 14,727	12,939	\$ 15,366	18.3%	-12.1%	4.3%
New Haven	\$ 11,732	\$ 15,624	22,093	\$ 22,395	33.2%	41.4%	43.3%
Preston	\$ 10,347	\$ 19,117	21,137	\$ 21,437	84.8%	10.6%	12.1%
Quincy	\$ 10,029	\$ 16,460	22,528	\$ 21,313	64.1%	36.9%	29.5%
Richfield	\$ 9,676	\$ 23,334	15,459	\$ 47,984	141.2%	-33.7%	105.6%
Rome	\$ 14,781	\$ 23,901	30,218	\$ 33,203	61.7%	26.4%	38.9%
Springville	\$ 11,266	\$ 16,145	19,882	\$ 20,753	43.3%	23.1%	28.5%
Strongs Prairie	\$ 9,513	\$ 15,583	26,543	\$ 22,168	63.8%	70.3%	42.3%
Village of Friendship	\$ 8,773	\$ 14,773	16,670	\$ 19,998	68.4%	12.8%	35.4%
City of Adams	\$ 10,143	\$ 14,744	16,882	\$ 18,198	45.4%	14.5%	23.4%
City of Wisconsin Dells		n/a	n/a	n/a			
Adams County							
Adams County	\$ 11,945	\$ 17,777	21,917	\$ 22,783	48.8%	23.3%	28.2%
State	\$ 13,286	\$ 21,271	26,624	\$ 28,340	60.1%	25.2%	33.2%

Source: U.S. Census (Not adjusted for inflation)



Source: NCWRPC, Adams Co.

This map is neither a legally recorded map nor a survey of the actual boundary of any property depicted. This drawing is a compilation of records, information and data used for reference purposes only. NCWRPC is not responsible for any inaccuracies herein contained.



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Chapter Two

Natural Resources

Introduction

This chapter reviews natural resources, including agriculture and cultural resources. There is a review of ground and surface water, woodland cover, floodplains, wetlands, and topography are important to land use decisions and the economy of agriculture and tourism. Culture relates to natural resources to the extent that the historical development of a community is based upon the rationale for community settlement, use of resources to generate employment, and the necessary developments that accompany the creation and growth of population centers.

This chapter will focus on describing these resources in detail and identify the goals, objectives and policies intended to protect and utilize these resources in a responsible and efficient manner. Future development will be guided by both the county and local level plans as they relate to natural resources.

The chapter is comprised of three basic sections: these are background; inventory & trends; and goals, objectives & policies. There is also a discussion of Natural Resource issues.

Natural Resources

Background

This section provides an inventory of the natural resources found within the county's 685 square miles. The county ranks 43rd in land mass among Wisconsin's 72 counties, but ranks 18th for surface water mainly due to the Petenwell and Castle Rock Lakes on the Wisconsin River.

Much of the county's landscape was formed during the latest glacial epoch over 12,000 years ago. Highlands to the north furnished a temporary protection from ice invasion while faster moving lobes spread around Adams County and the majority of southwestern Wisconsin. The glacial lobes rejoined to the south, thereby encircling sections of Wisconsin and neighboring states in a ring of ice demarcating what is known as the "Driftless Area" because of its lack of rocky glacial debris

(or "drift"). The ice mass reached only as far as the eastern edge of the County before receding.

On the western side of Adams County, glacial melting formed what is known as Glacial Lake Wisconsin. This temporary body of water floated icebergs containing clay, sand, and erratic boulders into the Adams and Juneau County area as well as down what is the Wisconsin River today. Geologists estimate that Glacial Lake Wisconsin covered 1825 square miles (larger than Green Bay), was 960 to 1000 feet above sea level, and was approximately 70 to 150 feet deep. The Lake existed for only a relatively short time, which makes the shorelines and deltas of the lake too faint for recognition. These lake deposits were subsequently covered by sandy, glacial stream deposits and by dunes and loess. The geological impact of both Glacial Lake Wisconsin and the glacial moraine are the reason for much of

Adams County's breathtakingly spectacular scenery.

Adams County's natural scenery includes: spires, pinnacles, castles, domed buttes, and flat-topped mesas. These buttes and mesas are often called mounds despite their craggy appearance. These so-called mounds have simple rock structures, are usually flat-topped, and have cliffed sides much like those commonly found in the southwestern U.S. wherein the distinction between buttes and mesas are determined by small and large size respectively. Roche-a-Cri looks like, from a distance, a ruined castle. It stands about 300 feet above the adjacent plain and crests at 1185 feet above sea level. It is a long, narrow, flat-topped ridge bordered by sheer precipices. Thus, it is probably the steepest hill in Wisconsin. Friendship Mound rises 85 feet higher but is a less striking topographic feature. Lone Rock, Ship Rock, Quincy Bluff, and Rabbit Rock are also prominent mounds in Adams County. These natural monuments once stood as islands in Glacial Lake Wisconsin.

Previous Planning Efforts

Adams County Comprehensive Plan

The existing Adams County plan was adopted in 2006. It was partially funded by the State of Wisconsin Comprehensive Planning grant program. The plan was prepared in conjunction with all but one of the towns as well as the city and village. The Town of Rome had completed its plan prior to this effort. The County Plan document is laid out following the nine chapters identified in the comprehensive plan law. The plan is comprehensive in nature and contains a significant amount of information regarding the physical features and natural resources of Adams County.

County Land & Water Resource Management Plan

This County plan was adopted in 2016. The impetus for the plan was the state legislature's demand for a reevaluation of the state's non-point pollution control programs. Enabling legislation was passed allowing the creation of county land and water resource management plans throughout the state. The plan provides an inventory of the County's

natural resources and a series of goals and objectives intended to improve and protect these resources in the future. This plan identifies a variety of issues, including the increase of high capacity wells and the loss of forest lands.

Neenah Creek Priority Watershed Project Plan

The Wisconsin Department of Natural Resources (WDNR) and the Department of Agriculture, Trade, and Consumer Protection (DATCP) developed a plan in cooperation with the Adams, Marquette, and Columbia County Land Conservation Departments to control non-point pollution control in the Neenah Creek Watershed. This cooperative effort is known as the Neenah Creek Priority Watershed Project and the plan is officially titled: Nonpoint Source Control Plan for the Neenah Creek Priority Watershed Project. The primary objective of the project is to reduce non-point source pollution delivered to the twenty-one lakes and to enhance and protect the water quality of streams in the Neenah Creek Watershed.

State of the Central Wisconsin River Basin

This plan originated with the development of the Central Wisconsin River Water Quality Management Plan in the 1990s and the designation of the Central Wisconsin River Geographic Management Unit (GMU) by the Wisconsin Department of Natural Resources (DNR). Adams County and the Petenwell and Castle Rock dams lie within this GMU. This plan studies everything from the geology to the demographics and land use patterns of the basin and provides an interesting assessment of water quality on the "mainstream" of the Wisconsin River. The plan identifies certain pollution issues including the classification of the Petenwell and Castle Rock Flowages as "impaired water bodies" by the EPA. This effort provided 1) an inventory and assessment of land and water resource conditions, 2) identification of major issues, priorities and objectives, and 3) recommendations for action. Overall, this "State of the Central Wisconsin River Basin" report provides a snapshot of ecological conditions and prioritized management needs. This report also forms the basis for work planning, budget decisions, and management recommendations regarding fish, wildlife, and watersheds. The plan is updated on a six-year cycle.

Adams County Soil Survey

The Natural Resource Conservation Service (NRCS) is a federal agency that produces the Adams County, Wisconsin Soil Survey. The survey contains predictions of soil behavior for selected land uses and also highlights the limitations and hazards inherent in the County's soil. A series of detailed maps identifying the location of soil types in Adams County accompanies the survey.

Land Legacy Report

This draft report was prepared by the Wisconsin Department of Natural Resources to delineate lands that have significant value to the public. The report recommends that these lands should be protected through the use of the State's Stewardship Fund or other means. While the report identifies land in need of protection, it does not speculate on how these lands should be acquired or managed. Potential Land Legacy sites in Adams County are: Central Wisconsin Grasslands, Colburn – Richfield Wetlands, Middle Wisconsin River, Neenah Creek, and Quincy Bluff.

Wisconsin Historic Preservation Plan 2001-2005

This plan is the product of collaboration between the State Historical Society of Wisconsin and a number of governmental and non-governmental agencies. It seeks to describe a vision for historic and cultural preservation efforts throughout the state. The plan identifies five critical areas that should be addressed over the next several years. According to the report there is a lack of funding for preservation; along with a lack of awareness and understanding of the issues surrounding historic and cultural assets; and a lack of planning. A special point is made of the relationship between preservation and comprehensive planning. In describing the effects of the revised comprehensive planning statutes the report states:

“In effect, the doors have been opened, and the preservation community must be ready to provide information and suggestions on how best to preserve those historic resources which make each community unique.”

Issues

Groundwater: Quality and Quantity

Nearly every person in Adams County relies on underground aquifers for their drinking water. The unique geology of the county, lying as it does almost completely within the ancient lakebed of Glacial Lake Wisconsin, creates an abundant and easily accessible supply of water for a wide range of uses. But the same sandy soils and high water tables that make groundwater abundant and accessible make it vulnerable to contamination. The prevalence of on-site sewage disposal systems (septic tanks), many of which are aging and likely to fail, poses a special threat to the quality of the county's groundwater.

The other factor affecting the availability of groundwater is quantity. The DNR and other agencies have researched the effects that high-capacity wells can have on the quantity of groundwater available for the other uses. It has been demonstrated that large-scale

withdrawals from aquifers within the central sands area can have a negative impact of baseline flows that can in turn affect lake levels and stream flow.

The protection of groundwater requires that all of the issues that affect its quality and quantity should be carefully examined as part of any planning process.

Development of Recreational, Cultural, and Tourism Assets

Adams County is at the heart of the Sand Country, of which Aldo Leopold wrote so lovingly. The last glacier endowed the county with a unique landscape, a flat, sandy lake-bottom, interspersed with butte-like islands, known locally as “bluffs”. Virtually the entire county is within the basin of Glacial Lake Wisconsin. Added to this glacial landscape are large impoundments on the Wisconsin River, two of the largest water bodies in the state. This

offers the potential for water-oriented recreational activities on these and other lakes in the county. With its much greater proximity to the large population centers of southern Wisconsin and northern Illinois, Adams County offers an alternative to traditional Northwoods locations. Further, the county has demonstrated a capacity to offer more affordable retirement opportunities than are available in other parts of the state.

How best to utilize the county's natural assets, while at the same time safeguarding the environmental quality that makes the county attractive to tourists, retirees and residents alike requires a difficult balancing act. Great care must be taken so development does not adversely impact water quality. At the same time, opportunities to expand the county's share of visitor dollars should seek to build upon the county's unique natural features. Perhaps nowhere is this opportunity clearer than in the development of the Dells of the Wisconsin Natural Area. Located adjacent to the center of the huge visitor market of the Dells, this area offers enormous potential for nature-based visitor activities that could draw a new cohort of tourists to Adams County. Located in Adams County is the Sand Valley Golf Resort. This high end development has already increased visitors in Rome. As that facility grows its impact will grow. This is an opportunity to capture new visitor dollars.

Waterfront Development

A considerable portion of the new development that has taken place in the county over the last twenty years has been associated with waterfront property able to access Petenwell

and Castle Rock Lakes, or the other smaller water bodies in the county, including the three large artificial lakes in the Town of Rome. Though this development has brought new wealth, it has put new demands for service on local governments. That much of the new development within the county has taken place within close proximity of water fits a national pattern. Waterfront property has become attractive everywhere.

What distinguishes waterfront development from other similar developments elsewhere is the unique potential for environment effects that can result. This is the justification for the shoreland zoning standards that are required by the State, and implemented at the county level. The concentration of on-site sewage disposal systems in close proximity to surface water presents a challenge. The developing awareness of the linkage between surface and ground water gives special urgency to the need to tightly regulate the density of development and the quality of sewer service in waterfront areas. The "Lakes: area in Rome will be see additional development as the Sand Valley development continues to grow.

Deforestation

Over the last several years numerous acres of commercial and private forests have been removed for both agricultural and recreational uses. This is something that needs to be monitored throughout the county, particularly over a long period of time. There is a tradeoff between agriculture and tourism. It is the scenic landscape that attracts visitors as well residents to the area. There are also conservation needs for tree cover in agricultural areas, such as for windbreaks to reduce soil loss.

Inventory and Trends

Understanding the natural resources of Adams County is an essential component of planning for the future. The County's resources represent both the potential and the limiting constraints on development and change. The natural

resources of Adams County are comprised of many chapters such as geology, topography, mineral resources, soils, ground and surface waters, woodlands, wetlands, and wildlife. These chapters continue to provide the stage for

development and exert pressures that greatly influence the direction and form future development will take. For example, constraints in the form of unsuitable soils, steep slopes, and rock outcroppings may preclude the use of an area for certain agricultural pursuits or other development.

Achieving balance and harmony between the conservation and use of the county's natural resources is one of the primary goals of comprehensive planning. Sound decisions about future development depend upon knowledge of the supply, demand and value of Adams County's resources. If properly sustained, the county's resource base will continue to be a prime economic and recreational asset to its residents.

Geography

Adams County is located in central Wisconsin and is bounded on the north by Wood and Portage Counties, on the east by Waushara and Marquette Counties, on the south by Columbia County, and separated from Juneau County on the west by the Wisconsin River. The county's total area is about 685 square miles or 440,646 acres, ranking 43rd in size of land area among Wisconsin's 72 counties. Adams County has approximately 40 square miles or 26,099 acres in surface water area, largely due to the Petenwell and Castle Rock flowages on the Wisconsin River, and ranks 18th in the state with respect to total surface water. Dimensions of the county are 41 miles north-south by 21 miles east-west, narrowing to 9.5 miles at the southern border. See **Map 2 – Planning Area**.

Adams County is located in that part of Wisconsin known as the "driftless area", or, that area of Wisconsin that was not covered by glaciation during the most recent Ice Age. Although Adams County was not glaciated, the county was mostly covered by the Glacial Lake Wisconsin at that time which created what is known as the Central Plain Geographical Province of the state. The Lake bottom collected sandy sediment until the glacier retreated north

which left behind a broad valley plain and an abundance of marshes, swamps, and smaller lakes. Occasionally, this broad plain of sandy soils is interrupted by a mesa or butte. The unglaciated section of Adams County currently lies within the watershed of the upper Wisconsin River. The glacier reached its furthest point in Adams County in the southeast. Soil, rock and sediment were pushed by the force of the glacier to this point and left behind when the glacier eventually receded (also known as a "glacial terminal moraine"). The moraine area drains into the Fox River.

Overall, Adams County is rural in nature and the majority of its land area is comprised of agriculture, wetlands, and forests. Despite its rural character, the county is within convenient driving distance of some of the state's larger population centers. Adams County offers a wide variety of recreational activities on its water bodies and large natural areas providing entertainment for both residents and tourists.

Geology and Topography

Sandstone bedrock generally defined as the "Dresbach Group undifferentiated" lies under Adams County. Overlying this bedrock are outwash and glaciolacustrine (glacial lake) deposits associated with the terminal moraine that lies in the southeastern part of the county and near the County's northeastern border.

The Dresbach Group is comprised of sedimentary sandstone of late (Upper) Cambrian Age that overlies crystalline basement rocks of Precambrian Age. Both the crystalline rock surface and the sandstones decline gently toward the south and the sandstones thicken in the direction of the decline from less than 100 feet in the northern part to nearly 400 feet in the southern part of the county. In places, the sandstones project up through overlying materials to create the scenic sandstone mounds and castle rocks of Adams County. The flat tops of these buttes and mesas are capped by resistant sandstone layers, which are better cemented than average. These

sandstones range from fine to coarse in grain and are relatively permeable. The precipitous cliffs, irregular crags, and towers result from a breakdown in the sandstone along vertical joints caused by rain and wind erosion. These rocks fall to pieces and are blown or washed away slowly making mesas into buttes, and buttes into conical towers. There is one small “pocket” of Precambrian Quartzite bedrock to the southeast of Rome near Lake Camelot.

The extensive outwash plains extend southward along the terminal moraine and covers nearly 400 square miles of the Driftless Area. These plains consist largely of glacial sand and gravel with some silt and clay cover. Outwash deposits also occur east of the terminal moraine. Average thickness of these deposits is about 100 feet but may be as much as 200 feet deep in some places. Generally, outwash deposits are very permeable. The rest of Adams County is covered by glacial lake deposits, consisting of sand, silt, and clay covered with a fine to coarse grain. The lake deposits are less permeable and are generally twenty-five feet or less in thickness. In the northern half of the county, lake deposits actually lie on top of outwash. Unlike areas near the Mississippi River, there are no thick loess deposits adjacent to the outwash deposits in Adams County. This may have been due to local climate, preglacial weathering, topography, or the composition of the glaciers, but the exact reason for this absence is not definitively known. See Map 3 – Natural Resources.

Soils

The majority of the soils that make up Adams County today (sandy and loamy) are a result of these glacial sandstone deposits. Other soils include stream deposits, the glacial till found in southeast Adams County, organic deposits, and small amounts of alluvial soils. Soils are classified based upon similarity in physical characteristics between the soils and the topography of the area. These similarities are put into groupings called soil associations. The U.S. Natural Resources Conservation Service

(NRCS) has grouped Adams County soils into ten of these associations. A more detailed account of these soils may be found in the NRCS’s Soil Survey for Adams County.

Briggsville-Kewaunee-Poygan

This association occurs in the southeast corner of the County on undulating relief. Soils in this group developed in sandy to clay material and range from well to poorly drained and have slight to severe limitations for most development uses. The clay soils in this group have slow permeability and have high shrink-swell potential, low bearing values, and are unstable when wet.

Delton-Wyeville-Plainfield

These soils occur on near level slopes bordering on the Wisconsin River and its major tributaries. This association is comprised of well-drained, sandy soils developed in old glacial lake deposits.

Dickinson-Dakota-Billet

These soils occur on nearly level relief in the south central region of Adams County. They are comprised of well-drained, loamy and sandy soils developed over glacial outwash.

Fordum-Sturgeon-Dunnville

This association occurs on nearly level to undulating relief. This loamy sand may be found in some areas adjacent to the Wisconsin River and is comprised of poorly-drained sandy soils formed in alluvial deposits.

La Farge-Urne-Norden

This association is found on rolling relief in the southwestern part of the County along the Wisconsin River. Soils in this association are loess and loamy deposits over sandstone, well-drained, and closely associated with sandstone bedrock.

Newson-Meehan-Friendship

This association is found on nearly level relief and is comprised of sandy soils with high water tables and organic soils in depressional areas. These soils are primarily found in the northeast portion of the County and in areas south of the Adams-Friendship community. The high ground water table sands and organic soils are well-drained.

Plainbo-Boone-Eleva

This association is found on rolling relief in the southern part of the County. Soils in this association are sandy to sandy

loam, well-drained, and closely associated with sandstone bedrock. Where the bedrock is near the surface or slopes are over 12 percent, these soils have limitations for development purposes.

Plainfield-Friendship-Meehan

This association occurs on nearly level to undulating relief. It is primarily found in the western part of the County and is comprised of well-drained sandy soils (with inclusions of organic soil) and sandy soils with high water tables. Groundwater contamination can be a hazard on these soils.

Plainfield-Richford-Friendship

These soils occur on nearly level relief and are confined mainly to the eastern portion of the County. They are comprised of well-drained, loamy and sandy soils developed over glacial outwash.

Plainfield-Wyocena-Okee

These soils are found on undulating to rolling relief in the southeastern part of the County. Soils in this association are sandy- to sandy-loam, well-drained and stony in places. Because of their sloping relief and sandy nature, these soils have moderate to severe limitations for development. Included in this group are a few small areas with wet mineral and organic soils.

Soils and soil conditions greatly affect certain types of development. Depth to rock, poor filtration capabilities, slow water percolation, wetness, ponding, susceptibility to erosion (slope), and subsidence are all factors which make development/construction activities difficult. These types of soils are generally found in wetlands, on hillsides, in shallow soils overlying bedrock, and in depressioned mineral areas. Due to their fragile nature, destruction of vegetative cover on such soils can trigger irreparable damage from wind and gully erosion.

These soil associations demonstrate the relationship between soil types and characteristics to the various types of development or use. Residential, commercial, and industrial buildings are limited by shallow depth to bedrock which restricts foundation depth or increases construction costs, by high water tables which cause wet basements and

are often found with unstable soils, and by land with excessive slope (over 12 percent) which hampers commercial and industrial uses more than residential. These conditions also pose problems for underground utilities to serve such areas.

Modern codes and ordinances that regulate land development and building location are based upon soil characteristics. Several ways of guiding development where soils are poor include not allowing residential, commercial, or industrial development unless sewer is available; requiring alternative systems to on-site absorption of septic; requiring large lot sizes; and placing particularly severe areas into a “Conservancy” zoning district.

Mineral Resources

No major metallic mine deposits are known within the County; however, there are numerous non-metallic mines, mainly sand and gravel used in the construction industry. Both are discussed below.

Metallic

The majority of Adams County contains no useful deposits of metallic mineral ore since these deposits are generally associated with Precambrian bedrock (most of Adams County is Cambrian sandstone). There is, however, a small “pocket” of Precambrian Quartzite bedrock in the eastern edge of the Town of Rome near Lake Camelot. This site could potentially yield iron ore.

Non-metallic Mineral Resources

There are a number of rock, sand, and other aggregate mines throughout the county and are often referred to as “pits” or “quarries”. These sites produce unconsolidated material such as sand or gravel and can vary in size from just a few acres of land to large excavations covering hundreds of acres. Rock and sand deposits are mostly mined in the area of the Town of Rome. Meanwhile, gravel pits may be found in a variety of locations in the County. The county

has a non-metallic mining reclamation ordinance.

Climate

Adams County is classified in the “continental” climate type. Continental climates are characterized by the marked weather changes common to the interior of large landmasses. Adams County is under the influence of atmospheric high and low pressure systems approaching from predominantly northwesterly directions during colder months and predominantly from the south during warmer months. The wind speed generally ranges from 4 to 15 miles per hour and can bring about weather changes every few days – both warm and cold as well as wet and dry. Daily and seasonal temperature ranges are wide and vary from season to season and from year to year. In general, winters are cold and snowy while summers are warm with occasional periods of uncomfortable heat and humidity. The spring and fall seasons are frequently short with highly variable weather.

Monthly mean temperatures range from 69.6 degrees Fahrenheit in July to 12.3 degrees Fahrenheit in January. Although wide fluctuations are common, periods of weather extremes are infrequent and short. Mean annual precipitation is almost 32 inches which is adequate for agricultural purposes, although some degree of soil moisture deficiency often occurs in July and August. Approximately 60 percent of the year’s precipitation falls in the five-month period of May through September and severe droughts are rare. Snow cover on the ground and ice cover on the lakes lasts from December to April. Snowfall averages 54 inches per year, but there is a significant range between extremes. The county usually receives its first inch or more of snowfall in November and receives its heaviest monthly snowfall in January. Thunderstorms, on average, occur on 32 days out of the year while hailstorms occur on two days.

The percentage of sunshine ranges from an average of about 40 percent in November and December to more than 60 percent during May through October. The remaining months average between 50 and 60 percent sunshine. Relative humidity is highest during the winter and lowest in the spring and fall. The growing season in Adams County is considered to be that period of time between the last 32 degree freeze in the spring and the first frost in the fall. This season lasts approximately 100 days in the extreme northern part of the county to slightly more than 140 days in the southern part. On calm nights, minimum temperatures may vary considerably as the valley land is usually several degrees cooler than land at higher elevations.

Surface Water

Wisconsin identifies its surface water as a primary component of its recreational and tourist appeal. Recreation and tourism has steadily become more important to the economy in Adams County in recent years. The Natural Resources Map provides the general location of the lakes, rivers, and streams within Adams County, as well as wetlands and floodways.

The total surface water area, lakes, streams, and drainage ditches, in Adams County exceeds 26,000 acres. The Petenwell and Castle Rock flowages, the second and fifth largest lakes in the state respectively, cover 36,995 acres at normal elevation. About 18,000 of these acres are attributed to Adams County, but for all practical purposes the whole of each flowage is part of the county’s resource base. These lakes were formed when the Wisconsin River Power Company (WRPCO) built two dams on the Wisconsin River in the late 1940s to regulate flow, control flooding, and produce hydropower. Ten Mile and Fourteen Mile Creeks are the major tributaries to the Petenwell Flowage; Big Roche a Cri Creek, Little Roche a Cri Creek, Klein Creek, and the Yellow River are the major tributaries for Castle Rock Flowage. The US Geological Survey

maintains only one water flow gauging station in Adams County.

Like most of the counties in the central part of the state, Adams County has relatively few natural lakes of significance. There are approximately 47 of these natural lakes comprising about 2,309 acres and are mostly located in the pitted outwash area in the southeast portion of the county. Most of the unnamed lakes amount to less than five acres of surface area and have a maximum depth of less than ten feet. These small lakes are subject to winterkill because of shallowness. Table 2-1 displays the twenty-six named lakes in the County. In addition to this list is Fawn Lake located in the Town of Dell Prairie. The largest waterbodies are Petenwell and Castle Rock Lakes. Other significant lakes include Lake Arrowhead, Big Roche a Cri Lake, Lake Camelot, Jordan Lake, Mason Lake, Sherwood Lake, and the Friendship Lake. Jordan Lake is the deepest lake in the county with a listed maximum depth of 79 feet. Named lakes have over 70 miles of shoreline, and unnamed lakes add less than ten miles.

Artificial impoundments like Lake Sherwood, Lake Camelot, and Lake Arrowhead are increasing in number and importance due to demand for vacation homes near water-oriented recreation sites. These impoundments not only add to the county’s recreational area, but the associated development also adds greatly to the tax base. For example, the Town of Rome has been subject to a large amount of shoreland development in the past forty years.

Adams County has approximately 73 streams covering 234.5 linear miles and 450 surface acres. Twelve of the 26 named streams and 27 of the 47 unnamed streams have average widths of less than ten feet which makes them relatively undesirable for water-oriented development. These streams comprise a minority of the total stream frontage, however they are still very important in the hydrological and ecological regime. The DNR has identified 38 miles of Adams County streams as Outstanding or Exceptional Resource Waters. Table 2-2 provides a listing of the streams in the Adams County area and their respective lengths by watershed.

Table 2-1: Named Lakes in Adams County

Lake Name	Township	Acreage	Max. Depth (Feet)	Public Access	Lake Type
Amey Pond	New Haven	56	7	Roadside	Seepage
Arkdale (Millpond)	Strongs Prairie	55	6	Trail	
Arrowhead (Manchester)		350	30	Boat Ramp	
Big Roche A Cri	Preston	205	20	Boat Ramp	Drainage
Big Spring		7	5	Roadside	Drainage
Camelot	Rome	445	24	Boat Ramp	
Castle Rock*		13,955	36	Boat Ramp	Drainage
Crooked	Jackson	48	56	Boat Ramp	Seepage
Deep	Jackson	35	47	Trail	Seepage
Easton	Easton	24	10	Boat Ramp	Drainage
Fenner	New Chester	33	30	Boat Ramp	Seepage
Friendship (Millpond)	Adams-Preston	115	16	Boat Ramp	Drainage
Goose	Jackson	81	18	Boat Ramp	Seepage
Jordan (Long)	Jackson	213	79	Boat Ramp	Seepage
Kilbourn Flowage*		1,868	35	Boat Ramp	Drainage
Mason*	New Haven	855	9	Boat Ramp	Drainage
McCall	New Haven	4	37		
McDougall	Jackson	9	8		Drainage
McGinnis	New Chester	33	28	Boat Ramp	Spring

Parker	Jackson	59	30	Roadside	Seepage
Patrick	New Chester	50	10	Boat Ramp	Seepage
Peppermill (Beaver Pond)	Jackson	100	9	Boat Ramp	Drained
Petenwell*		23,040	44	Boat Ramp	Drainage
Rollers	New Chester	27	5		Seepage
Sherwood (Deer Lodge)	Rome	246	27	Boat Ramp	
Silver	Quincy	7	11		Seepage
Wolf	Jackson	49	47	Boat Ramp	Seepage
Total Inland Lakes					
23 Named Lakes		2,251			
24 Unnamed Lakes		58			
47 Total Lakes		2,309			
*Lake is in two Counties Source: Wisconsin Department of Natural Resources, 2001					

Three drainage districts cover about 28,339 acres, and contain about 17 ditches covering 43.6 linear miles. All ditches have a number, and formerly natural creeks and rivers also retain their original name. These ditches were created to drain land for agricultural purposes.

The Wisconsin River deserves special mention as a prime recreational resource. The Wisconsin River covers 1,274 acres, after deductions for the Castle Rock and Petenwell Lakes, which is three times the total surface area of all interior streams in the county. The River's abundant fish, game, and scenic qualities are a tremendous natural asset. The Wisconsin is known as the "nation's hardest working river" and has 24 dams between Castle Rock Dam and Lac Vieux Desert. The river gradient is about 3.15 feet per mile with a 60-foot drop (1.6 feet per mile) between Nekoosa Dam and Castle Rock Dam.

The Wisconsin Department of Natural Resources (WDNR), per requirements of the US Environmental Protection Agency (EPA), maintains a list of water bodies that do not currently meet water quality standards under the Clean Water Act. This list is commonly known as 303D, corresponding to the applicable subsection of the Act. The list is used as the basis for development of Total Maximum Daily Loads (TMDLs) under provisions of section 303(d)(1)(C) of the Act. The WDNR is

required to update the list every two years. Adams County has five water bodies appearing on the 2004 list. These water bodies include part or all of Peppermill Creek, Mason Lake, an unnamed tributary to Mason Lake, the Castle Rock Flowage, and the Petenwell Flowage. The fact that both the Petenwell and Castle Rock appear on this list is significant since approximately 85 percent of the land area of the county eventually drains to these flowages.

Surface water is an important resource to Adams County, however it is threatened by both point and non-point source pollution. Excess nutrients entering water bodies from wastewater treatment plants ("point"), and urban development & agricultural runoff ("non-point") causes algae blooms and suffocates fish by using up available oxygen in the water. This negatively affects tourism and outdoor recreation, which are both an important facet of Adams County's economy. Relatively large and constant amounts of groundwater from the outwash plains contribute to the streams leading into the Wisconsin River. Annual regional runoff in the Adams County area averages about nine inches or 0.7 cubic feet per second (cfs) per square mile of drainage basin. This provides the Wisconsin River with a relatively constant flow. Floodplains in Adams County are small and floods typically occur only during periods of exceptionally heavy rainfall. To date, the US Army Corps of Engineers has

not seen cause to recommend improvements for flood control on the Wisconsin River and its tributaries.

Urban and rural non-point pollution is the leading cause of water quality problems in Wisconsin. Nonpoint source pollution is pollution that cannot be traced to a single source; most commonly referred to as stormwater runoff and erosion. As pavement and buildings create more impervious area, there is a decreased amount of ground infiltration by rainwater, hence an increased volume of runoff enters water bodies. A large amount of this water carries pollutants such as sediment, bacteria, pesticides, and waste into

the rivers, lakes and streams. Farm fields and construction sites also contribute to non-point water contamination unless appropriate stormwater and erosion control measures are taken. Wet ponds, infiltration systems, diversions and storage facilities are used to mitigate the effects of stormwater, but these can be costly. The state, under the direction of the Federal Clean Water Act of 1987, has developed a state storm water management and permitting program to address stormwater management issues. This state program is administered by the WDNR, but also involves the Wisconsin Departments of Commerce and Transportation as well.

Table 2-2: Stream Length in Adams County Area Watersheds

Watershed	Stream Name	Total Miles of Stream
Big Roche A Cri Creek	Big Roche a Cri Creek	45.94
	Dead Horse Creek	12.94
	Dry Creek	10.36
	Unnamed	72.62
Duck & Plainville Creeks	Campbell Creek	7.88
	Corning Creek	5.71
	Duck Creek	15.33
	Fairbanks Creek	5.50
	Gulch Creek	5.13
	Plainville Creek	6.65
	Risk Creek	5.47
	Shadduck Creek	5.00
	Trout Creek	3.50
	White Creek	5.09
Unnamed	111.52	
Fourteenmile Creek	Chester Creek	1.22
	Fourteenmile Creek	4.37
	Spring Branch	2.65
	Unnamed	22.08
Little Roche a Cri Creek	Bingam Creek	8.54
	Carter Creek	25.14
	Fordham Creek	6.56
	Klein Creek	3.90
	Little Roche a Cri Creek	22.30
	Unnamed	73.41
Montello River	Lawrence Creek	1.18

Neenah Creek	Big Spring Creek	3.00
	Neenah Creek	7.06
	O'Keefe Creek	7.22
	Peppermill Creek	1.71
	Unnamed	23.59
Total Stream Miles		
	Total Stream Miles	703.35
	Total Named Stream Miles	400.13
	Total Unnamed Stream Miles	303.22
<i>Source: Wisconsin DNR, NCWRPC Data does not include Wisconsin River</i>		

Watersheds and Drainage Districts

Adams County is characterized by flat or gently undulating topography. Relief is generally low except for occasional pinnacles and hills of sandstone such as Pilot Knob, Friendship Mound, and Roche-a-Cri Mound; which rises to a height of 1,185 feet, approximately 300 feet above the surrounding plain. Elevations along the Wisconsin River bottoms range from 850 feet in the southern part of the County to 950 feet in the northern part, and the altitude of the alluvial (or riverbed sediment) plain ranges from 1,000 to 1,100 feet. The Johnstown terminal moraine in southeastern Adams County forms a divide between the Wisconsin River and Fox River drainage basins. The northern half of the county is located in the Upper Wisconsin Basin. The southern half of the county, along the Wisconsin River, is included in the Lower Wisconsin River Basin. The southeastern edge of the county lies in the Upper Fox River Basin.

Five main watersheds make up the two Wisconsin River basins in Adams County: Fourteen Mile Creek, Big Roche a Cri, Little Roche a Cri, Duck and Plainville Creeks, and Neenah Creek. The principal drainage is westward to the Wisconsin River, which forms the western boundary of the county. Little Roche a Cri Creek, Big Roche a Cri Creek, and Fourteen Mile Creek are the largest of the drainage tributaries of the Wisconsin River and flow southwestward. East of the moraine, drainage is to the Fox River via Neenah Creek, Widow Green Creek and their tributaries. The

260.4 miles of the Wisconsin River above Castle Rock Dam drains 7,056 square miles of land in 46 sub-watersheds. The Petenwell Flowage receives drainage from 5,970 square miles and 39 sub-watersheds.

Duck Creek Watershed

The Duck Creek Watershed is located in Adams and Columbia Counties. The creeks and streams in the watershed are mostly comprised of sand and silt substrates with low gradients and small to moderately sizes spring ponds. Most of the 182 square miles of land in this basin is in forest use, however, a quarter of the land area is in agricultural use. The groundwater table is close to the surface and the soil is highly permeable which leads to a contamination threat by chemicals. As a result, portions of the watershed are designated as “no atrazine application” areas. Surface water within the watershed is generally considered to be fair to poor and the Castle Rock Flowage has several limitations on the type and size of fish that is safe to eat. Industrial discharges in the watershed include the Dells Boat Company in Witches Gulch and the Chula Vista Resort (both in the Town of Dell Prairie). The watershed contains a wide variety of public lands that can be used for a variety of recreational activities. The Wisconsin Department of Natural Resources maintains these public lands to help improve the overall habitat quality in and along stream banks and to increase public access to high quality trout streams. The White Creek State Fisheries Area is located in this watershed between White and Duck Creeks.

Little Roche a Cri Watershed

The Little Roche a Cri watershed is located in Adams, Waushara, and Marquette Counties. It measures 193 square miles with 16 streams totaling

99 miles. The upper portions of the watershed lie in the Towns of Colburn, Richfield, and Lincoln; from here the watershed narrows and drains into the Castle Rock Flowage. This watershed has a high need for erosion control in Adams County due to wind and agricultural ditching. Most of the watershed is in forest, agricultural, wetland, and grassland use. There are five named streams in this watershed: Bingham Creek, Carter Creek, Fordham Creek, Klein Creek, and Little Roche a Cri Creek. There are also nine unnamed creeks and two unnamed ditches. There are three lakes in this watershed: Friendship Lake and two unnamed lakes.

Big Roche a Cri Watershed

The Big Roche a Cri watershed is located in Adams and Waushara counties. Measuring 163 square miles with 15 streams totaling 104 miles, this watershed is known for pivot irrigation and potato production. This intense agricultural activity takes place mostly in the Towns of Leola and Colburn and much of the surface water in these areas have been altered by ditching or man-made impoundments. Wind and water soil erosion greatly contributes to pollution in this watershed and water quality data indicates adverse impacts from agricultural activities. The watershed is mostly ditched and drained for crops and cranberry operations. There are three named streams in this watershed: Big Roche a Cri Creek, Dead Horse Creek, and Dry Creek. There are also five unnamed creeks and seven unnamed ditches. There are twelve named lakes in this watershed and two unnamed lakes covering 844 acres. The named lakes include Arkdale Lake, Big Roch a Cri Lake, Bullhead Lake, Crooked Lake, Deer Lake, Fish Lake, Goose Lake, Herrick Lake, Pine Lake, Piper Lake, Reeder Lake, and Sand Lake. The Village of Hancock in Waushara County has a wastewater facility within the watershed. The facility is an oxidation ditch with seepage cells that discharge to groundwater.

Fourteen Mile Creek Watershed

The Fourteen Mile Creek watershed lies in portions of Adams, Wood, Portage, and Waushara Counties. A large portion of this area is commonly referred to as the Leola Marsh. A hundred years ago, this watershed was an extensive wooded wetland. Today, much of the upper portion of the watershed has been ditched and drained for agricultural activities. The watershed measures 157 square miles with 32 streams totaling 87 miles. The streams consist of: Chester Creek, Ditch #7, Fourteen Mile

Creek, Leola Ditch, Spring Brook, and 27 unnamed ditches. There are fourteen lakes within the watershed totaling 1,224 acres and consist of the following: Arrowhead Lake, Camelot Lake, Fiddle Lake, Horsehead Lake, Huron Lake, Long Lake, Mud Lake, Plainfield Lake, Pumpkinseed Lake, Second Lake, Sherman Lake, Sherwood Lake, Shumway Lake, and Weymouth Lake. Intense irrigation farming and cranberry farming in this watershed contributes pesticides, herbicides, and nutrient runoff to the Petenwell Flowage.

Neenah Creek Watershed

The Neenah Creek Watershed lies in southeastern Adams County as well as portions of Marquette and Columbia Counties and is considered part of the Upper Fox River Basin. Nearly half of the 169 square-mile watershed is in agricultural use. There are a number of small glacial pot-hole or kettle lakes with no outlets in this part of Adams County (mostly in the Town of Jackson). The watershed contains six named streams and several unnamed streams and tributaries totaling 116.5 miles.

Adams County has three drainage districts: Leola Drainage District organized in 1907; Colburn Drainage District organized in 1923; and Widow Green Creek Drainage District organized in, 1921. Drainage districts are special purpose districts formed for the purpose of draining land, primarily for agricultural purposes. Lands within a drainage district are drained by means of common drains that cross individual property boundaries. Wisconsin Statutes establish the procedures for creating, modifying and dissolving drainage districts. The Map 3 - Natural Resources shows the major drainage basins in the county.

Groundwater Resources

Groundwater is the primary source of water supply in Adams County. Adams County has abundant supplies of groundwater from unconsolidated glacial deposits and from underlying sandstone aquifers. Generally, unconsolidated outwash covers the northern half of the county and wells yield 500 to 1,000 gallons of water per minute. There are also outwash deposits in the southeastern part of the county and wells adjacent to the terminal

moraine in the south with similar yields. Yields decrease in the southwest as the unconsolidated deposits become thinner and more silty. Groundwater in Adams County is generally of good quality although some areas have non-threatening problems with iron, dissolved solids, and hardness. Depths to the water table generally range from 0 to 20 feet in the outwash glacial lake deposits, 50 to 100 feet in the pitted outwash, and up to 170 feet in the end moraines. Depth to water in the area of ground moraines generally ranges from 20 to 30 feet. Regional groundwater flow is generally from the northeast to the southwest towards the Wisconsin River. There is a groundwater divide in the eastern portion of the county where groundwater flow is to the southeast toward the Fox River.

Natural groundwater generally discharges at streams, marshes, lakes, and springs or as underflow. The continued flow of perennial streams during long dry periods is caused by the natural discharge of the groundwater reservoir. Most of Adams County's natural springs are found in the Neenah Creek Watershed in the vicinity of the terminal moraine. Adams County uses nearly fourteen billion gallons of groundwater for irrigation each year. All other groundwater uses in the County amount to less than one billion combined. Ensuring an adequate supply of usable groundwater is an important issue in Adams County since the water becomes more difficult to obtain for everyone when the resource is more heavily used.

Groundwater quality can be impaired by a variety of pollutants including leaking underground storage tanks (LUSTs), landfills, septic tanks, over-application of pesticides and fertilizers, and spills of hazardous chemicals. The most common contaminants found in Wisconsin's groundwater are pesticides, nitrates, nitrogen, and volatile organic compounds (VOCs). These contaminants come from a multitude of sources including nitrogen-based fertilizers, septic systems, animal waste storage, feedlots, municipal and industrial

wastewater discharges, and sludge disposal. Nitrates are an issue in the eastern part of the county in vegetable and potato production areas. Groundwater contaminants can affect the health of humans, livestock, and wildlife. Because groundwater seeps more slowly than surface runoff, pollution that occurs today may not become evident for several years. Once polluted, the groundwater is very difficult to purify and may take many years to clean itself by the dilution process.

The DNR has developed a groundwater contamination susceptibility model. This model identifies groundwater contamination susceptibility by measuring the ease with which water (and any contaminant carried in the water) travels from the land surface to the top of the groundwater layer. Five characteristics are used to obtain the composite measurement: bedrock depth, bedrock type, soil characteristics, surficial deposits, water table depth, and contaminated source waters. Numerous high capacity wells are located throughout the County. According to the DNR there are 761 active high capacity wells located in the County. A high capacity well is a well that has the capacity to withdraw more than 100,000 gallons per day, or a well that, together with all other wells on the same property, has a capacity of more than 100,000 gallons per day. Residential wells and fire protection wells are excluded from the definition of a high capacity well, and their pumping capacities are not included in the calculation of a property's well capacity. These wells extract water from considerable depths and may impact aquifers.

Shorelands

Shorelands, as defined in Wisconsin Administrative Rule Chapter NR 115, are: "lands within 1,000 feet of the ordinary high watermark of a lake (including ponds and flowages) or 300 feet of a navigable stream or river or to the landward extent of the floodplain (whichever distance is greater)". Many homeowners and visitors seek out lakes and rivers as places to enjoy natural beauty in a

quiet setting, yet the sheer number of users and riparian landowners can create user conflicts due to demand for limited resources. Furthermore, due to the way it can alter the natural landscape shoreland development changes the aesthetic and recreational value of lakes, rivers, and streams. In the unincorporated area of each county, a shoreland zoning ordinance is required by state statute to protect and maintain natural shoreland areas. A shoreland in its natural state can protect surface water by acting as a buffer for sediment and pollutants. A buffer is an undeveloped strip of land that protects water from the impacts of nearby development. If properly designed, a buffer can help protect a water body from physical, chemical, hydrological, and visual impacts.

Shoreline development is an important consideration in lake development, particularly if the lake has a high degree of irregularity in its shoreline. More irregularity means more land area with access to the lake and therefore greater development pressure on the lakefront itself. Reservoirs and other impoundments tend to have more irregular shorelines since they reflect the flooding of existing landforms. Development impacts on these lakes are generally more severe than on natural lakes. The Adams County Shoreland Ordinance details the specific rules for the county.

Wetlands

Wetlands perform many indispensable roles in the proper function of the hydrologic cycle and the local ecological system. They also act as water storage “sponges” in times of high water by absorbing excess water and then releasing it back into the watershed slowly, thereby preventing flooding and minimizing flood damage. Wetlands have valuable ground and surface water purification capabilities since potentially harmful compounds and bacteria in the water are absorbed into plant tissues thus buffering the adjacent water body. Wetlands occur in areas where the water level is usually near or above the soil surface.

The DNR identifies the location of wetlands on their Wisconsin Wetland Inventory maps and associated database. According to this database, Adams County has 52,268 acres, or 12.6% percent of its total area allocated to wetlands. Significant concentrations of wetlands in Adams County include the Leola Marsh Wildlife Area, the Colburn Wildlife Area, and the Quincy Bluff and Wetland Natural Area. Additional wetlands are associated with the floodplains discussed above and smaller wetlands are scattered throughout the County.

Wetland vegetation in Adams County primarily includes emergent wet meadows (such as water lilies and rushes) and broad-leaved deciduous forests. Swamps, bogs, marshes, potholes, wet meadows, and sloughs are all considered wetlands. The soils in these areas are usually saturated within a few inches of the surface during the growing season and need some type of artificial drainage to be made arable. Besides their ecological value, wetlands are also an important recreational, educational, and aesthetic resource. Wetlands are a breeding and nesting ground for waterfowl and for many other animals depending upon aquatic habitats. Maintaining these breeding grounds ensures a variety and adequate amount of game for hunting and wildlife observation activities. Sometimes a particular chain of wetlands can be home to a rare or endangered species thereby provoking interest from scientists and educators. Lastly, the visual appearance of the wetlands themselves can constitute a scenic resource.

Given their important role, destruction of wetlands can negatively affect the public in many ways. The development of impermeable surfaces and the addition of fill materials can destroy the hydrological function of a wetland site while simultaneously increasing flood dangers downstream. The WDNR has promulgated minimum standards for managing wetlands to help reduce the negative impacts of developing in or near wetland areas.

Floodplains

Floodplains are a natural flood control system that provides an area where excess water can be accommodated. The extent to which a floodplain may become inundated depends upon the amount of water, the speed and distance that the water travels, and the topography of the area. Adams County contains approximately 19,016 acres of floodplain, or about 4.6 percent of the total County land area.

Given that these areas are prone to flooding, development in floodplains is usually discouraged. Even so, development does occur in these areas and in turn affects the ability of this system to function properly. The encroachment of development on the floodplain system is often mitigated by the construction of dikes, levies, or other man-made flood control devices. Unfortunately, these mitigation measures are expensive and not always adequate to control a flood or may cause other areas to flood even if they were formerly not part of the floodplain. The expense of maintaining these floodplain control measures and replacement of structures damaged by flooding is eclipsed by the potential for loss of human life due to the danger inherent from flooding.

Chapter NR 115 of the Wisconsin Administrative Code requires all municipalities to adopt reasonable and effective floodplain zoning ordinances for the purpose of protecting individuals, private property, and public investments from flood damage. Floodplain zoning regulates development in the floodway and flood fringe areas usually by requiring structures to be built above flood levels or be otherwise flood-protected. For regulatory purposes, a floodplain is generally defined as land where there is a one percent chance of flooding in any year (also known as the 100-year floodplain). Floodplain regulation can also keep communities eligible for the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program (NFIP). FEMA offers emergency monetary assistance to flood

stricken communities provided these areas are in compliance with NFIP requirements and have also completed a Flood Insurance Study. Currently, Adams County, the City of Adams, and the Village of Friendship all participate in the NFIP program, have completed the Flood Insurance Study, and have created a Flood Insurance Rate Map (FIRM) that delineates those areas likely to be inundated by a 100-year flood (also known as "A" Zones). According to these three FIRMs, there are 19,016 acres of floodplain in Adams County, or approximately 4.6 percent of the land area. Overall, floodplains in Adams County are small and floods occur only during periods of exceptionally heavy rainfall.

Forests

Most of the original woodland cover in Adams County was logged during the initial settlement of the area by early pioneers. For the most part, pine trees and prairie grasses were replaced in its place, however, burr oak, and white oak trees also grew up in the eastern third of the County. Other plant communities in Adams County include conifer swamps and sedge meadows in the northeast and lowland hardwoods in the far northern part along the Wisconsin River. Nearly two-thirds of Adams County, or over 253,000 acres, is in woodland use. See the Map 9 - Existing Land Use Map in Chapter 7.

The change in forest cover over time can be an important indicator of how sustainable forestry activities are within the county. From 2010 to 2015, Adams County forests have decreased by 4,500 acres. Forest cover is typically quantified by a ground level forest inventory or by using satellite imagery data. Commercial forest, pulpwood, and Christmas tree production account for 90 percent of the woodland uses in Adams County. The close proximity of paper mills makes pulp the main forest product in the county. A majority of the woodlands owned by the paper mills are open to the public and offer a variety of recreational opportunities for residents and visitors.

The majority of forestland in Adams County is privately held, while some is owned by federal and state governments. Adams County and the various municipal governments own 3,100 acres of woodlands. Numerous commercial forests are scattered throughout the County.

Some woodlands in the county are maintained through the Managed Forest Law (MFL) and its predecessor program – Forest Crop Law (FCL). This program is a tax assessment available to landowners willing to manage their forestland according to sound forestry practices as specified in a management plan. A portion of the forgone taxes is recouped at the time of a timber harvest when a yield tax is imposed based on the volume of timber removed. In other words, the annual property tax is reduced and a portion of the balance is postponed, or deferred, until the time of harvest.

Woodlands play a key role in the protection of environmentally sensitive areas like steep slopes, shorelands, wetlands, and flood plains. Removal of woodland cover can be detrimental to these areas in both ecological functions and to visual enjoyment. The health of a forest is measured by its capacity for renewal, for recovery from a wide range of disturbances, and for retention of its ecological resiliency. At the same time it must meet current and future needs of people for desired levels of values, uses, products, and services. Invasive exotic species like garlic mustard and multiflora rose present the greatest threat to the long-term health and integrity of the native woodland ecosystem. Invasive plants often dominating a community by competing for nutrients, sunlight and space, and by altering the food web or physical environment. Invasive species like the Gypsy moth and the Asian long-horned beetle can prey on or hybridize with native species.

Development patterns have caused disturbances in forest patterns over the past half-century in Adams County. This “parcelization” of land has broken up the continuity of forest cover in certain areas of the County leading to

difficulties in forest sustainability and health. Frequently, these parcels are used for residential uses and seasonal housing or other recreational uses. Another occurrence is the conversion of forest lands for agricultural uses. Fragmentation of forest cover may become an important issue for Adams County tourism and aesthetics in the future.

Environmentally Sensitive Areas

The presence of surface water, floodways, wetlands, and steep slopes creates situations where some locations are less suitable for development than others. These less suitable areas are often referred to as “environmentally sensitive areas” due to the generally negative impact development in these areas has on the environment. As a rule, the areas where development is most harmful are the same areas where development is most difficult or expensive. For example, building a house on the edge of a steep hillside requires expensive footings and erosion control measures to prevent the structure from falling. At the same time, the removal of trees and dirt for construction can compromise the integrity of the cliff and cause more stormwater erosion or landslides thus harming the entire hill itself.

Steep Slopes

Adams County is mostly level in terrain, but there are some areas with sandstone buttes and mesas rising above this level surface. The sides of these buttes and mesas are extremely steep and unsuitable (if not impossible) for development. These rock formations are constantly in a state of erosion due to wind and rain. Development on these surfaces would be subject to unstable foundations and exacerbate the erosion process. Development on or near these environmentally sensitive areas must be approached carefully. Map 3 - Natural Resources identifies these areas.

Wildlife Habitat

Adams County offers a number of wildlife habitats including: wetlands, riparian forests, forest pine plantations, and fields. The rural nature of the community is quite conducive to the existence of a wide variety of animal species. Consequently, there are many opportunities for visitors and residents to hunt, fish, photograph or watch wildlife. Common species found in the county are deer, turkey, rabbits, ruffed grouse, mallards, wood ducks, blue-wing teal, Canada geese, beavers, minks, squirrels, red foxes, woodchucks, pheasants, woodcocks, muskrats, raccoons, skunks, and weasels. Other species that appear in Adams County but less frequently include: the snowshoe hare, quails, Hungarian partridges, prairie chickens, raptors (birds of prey), green-wing teal, badgers, coyotes, gray foxes, opossums, sandhill cranes, and otters. Fish species are also found in a wide variety including walleye, northern pike, perch, bass, and numerous panfish. Unfortunately, a large number of carp have unbalanced fish communities in the Petenwell and Castle Rock Lakes. Waterfowl numbers have dropped significantly in recent years, likely due to the loss of suitable habitat and the loss of food sources such as the fingernail clam and aquatic macroinvertebrates.

The DNR maintains two wildlife areas in Adams County: the Leola Marsh Wildlife Area and the Colburn Wildlife Area. The Leola Marsh Wildlife Area is 1,860 acres of state-owned land that provides a grassland habitat popular with birdwatchers and hikers. These large parcels of grassland primarily support prairie chickens and require prescribed burns, cuttings, and summer cattle grazing as part of routine maintenance to prevent forestation of the grassland habitat. Leola Marsh is located in the Town of Leola in northeast Adams County. The Colburn Wildlife Area is 4,965 acres of state-owned land that provides a marsh, forest, and brush habitat popular with anglers and hikers. Migrating Sand Hill Cranes are numerous in Colburn Public Hunting Grounds in the spring of the year. They usually spend

two to four weeks resting in the public marsh. The total migration lasts for a period of about two and one-half to three months. The Colburn marsh area is located in the Town of Colburn in northeast Adams County.

Threatened and Endangered Species

Adams County contains a wide range of plant and wildlife resources. Human influence can have a dramatic effect on vegetative communities. Natural habitats have been greatly affected by rural development and agricultural practices. In most cases, these influences are directly responsible for the endangerment or threatening of certain species. The Endangered Species Act (ESA) requires all federal agencies to conserve endangered and threatened species. The State of Wisconsin has similar statutes. In the past, land use changes in Adams County have led to the destruction of habitats for the sharptail grouse and bison. Habitat change and market hunting resulted in the extinction of the passenger pigeon as well. Wisconsin law prohibits the “taking” of any plant or animal listed as endangered or threatened. Taking is defined as the act of killing, harming, collecting, capturing, or harassing a member of a protected species. The WDNR-Bureau of Endangered species operates the Wisconsin’s Natural Heritage Inventory (NHI), which maintains data on the location and status of rare species, natural communities, and natural features in Wisconsin.

Adams County has approximately ten species that are threatened or endangered. The bald eagle is listed on the federal registry as a threatened species, but has not been listed as such on the state registry. The bald eagle is a special concern to the DNR because its rarity increases the possibility of being extirpated from the state. As of 2001, there are nine other species native to Adams County that are listed on the state’s Natural Heritage Working List as endangered or threatened. The Barn Owl and the Trumpeter Swan are the only two endangered species in Adams County. Three

other species are considered threatened: the Greater Prairie-Chicken, the Red-Shouldered Hawk, and the Osprey. The Black Tern and the Northern Harrier are bird species under special concern and fully protected by both federal and state laws under the Migratory Bird Act. Two rare species of tiger beetle are listed as a special concern, but there are no laws in place to protect them.

A substantial concentration of Bald Eagles exists near the Petenwell Dam. The gathering is most numerous during the winter and spring months when the power dam keeps a section of the water open. Both the birds and their nesting areas are visible to the visitor. As yet, neither the county nor the state has taken any measures to safeguard the eagles or to ensure their continued nesting in the Petenwell area.

Agriculture

Background

The history of agricultural development in southern and central Wisconsin is different than the north. While northern counties made a transition from lumbering to dairying directly, the southern and central counties engaged in wheat production after lumbering and before switching to dairying. Adams County followed this pattern by shifting its emphasis from subsistence farming to wheat farming, with wheat production peaking as early as 1870. This transitional period was extremely difficult for early farmers. Many lacked experience with the weather and soils in this part of Wisconsin and few were successful in agriculture.

Closer to the turn of the 20th century, the county's farms began to diversify in the direction of dairying, which soon became the main form of agriculture. This period also saw a large number of immigrant farmers from Eastern Europe lured by promoters promising inexpensive marshland that could easily be converted to fertile farmland through drainage. One significant exception to this general pattern of wheat to dairy production was the large number of potato farms in the county near the turn of the twentieth century. Corn, hay, oats and similar crops have also increased significantly during the last hundred years.

Farming practice in Adams County is influenced by a combination of technology and environmental awareness. Employment in

farming has declined rapidly in Adams County as farms have become less reliant on human labor and more dependent upon machinery and chemicals. The yields of all crops have been enhanced in many areas where modern irrigation techniques have proved economically feasible. Larger farms can now be more easily maintained by fewer people leading to a reduction in the total number of farms in the county and an increase in the average size and value per farm. Despite the importance of farming in Adams County, the productivity of the soil is relatively poor. This low productivity also leads to the elimination of small farms and keeps farm incomes below the state average. Farm size, conservation practices, and effective irrigation techniques have increased productivity to make rural Adams County into profitable farmland.

Today, the primary agricultural crop in Adams County is irrigated vegetable farming. Potatoes, of several russet and white varieties, are particularly suited to the well-drained, sandy soil prevalent in most parts of the county. Corn of both the sweet and field varieties is raised throughout the County, as are snap beans, soybeans, and peas. These vegetables are processed at plants outside the County. Adams County is also becoming increasingly known as a leading Wisconsin cranberry producer. Dairy farms continue to decline in the County, outside of largescale operation. The majority of agricultural activity in the County is moving toward large irrigated row crop farms. A wide

variety of produce is marketed locally by several small farms and offered fresh at seasonal roadside stands.

Previous Planning Efforts

Adams County Agricultural Preservation Plan

The original plan was prepared in 1981 and was intended to address the loss of productive farmland. That plan identified agricultural problems for the purpose of formulating goals and policies. Standards were developed to delineate five main planning districts: Farmland Preservation Areas, Secondary Agricultural Areas, Environmentally Sensitive Areas, Urban Transition Areas, and Exclusion Areas.

In 2016 that plan was updated; again with the goal of preserving prime farmlands in the County. Landowners can participate in a program to receive tax credits for maintaining farmland in the areas identified in the plan. See **Map 4 – Farmland Preservation**.

NRCS Soil Survey for Adams County

The Natural Resource Conservation Service (NRCS) is a federal agency that produces the Adams County, Wisconsin Soil Survey. The survey contains predictions of soil behavior for selected land uses and also highlights the limitations and hazards inherent in the county's soil. A series of detailed maps identifying the location of soil types in Adams County accompanies the survey.

Issues

Agricultural issues in Adams County are similar to those issues found throughout the world with general farming practice. Changes in climate, too much or too little rainfall, insects, invasive vegetation, erosion, and soil nutrient depletion are all hardships faced by the farmer. Fortunately, Adams County is well-drained which counters the effects of too much rain. In dry periods, groundwater is used to irrigate crops to maintain proper soil moisture. Pesticides and herbicides are used to control

insects and weeds and fertilizers are used to maintain soil nutrient levels. Wind and water erosion can be mitigated through the use of proper management practices, tree-plantings, and tiling methods. Central Wisconsin's mild climate keeps temperature levels relatively fluid during the summer months thereby avoiding long periods of excessive heat. All of these factors help to maintain stable agricultural production in Adams County.

Probably the single most important resource in this case is the county's groundwater. Depletion or pollution of groundwater supplies could have a serious impact on agricultural practice in Adams County since it would become more difficult to mitigate the effects of drought, heat waves, and the maintenance of soil moisture in rapidly draining, sandy soils. Sandy soil is also prone to wind erosion and therefore it is important for Adams County to maintain a certain amount of tree cover to prevent loss of productivity. Heavy application of pesticides, herbicides, and fertilizers can create problems for drinking water supplies as well as for fish and wildlife habitats.

Inventory and Trends

Agriculture figures prominently in the economy of Adams County. Agricultural trends have a significant impact on the county for this reason. **Table 2-3A** provides census data regarding the size of farms in Adams County. Data indicate a significant loss in the total acres of farmland between 2002 and 2007, however between the 2007 and 2012 farmland increased. The average size of farms decreased slightly in 2007, but substantially increased since to 378 acres. The number of farms by size is displayed in **Table 2-3B**. Overall, total farms are decreasing; especially the smaller farms less than 500 acres. Note that the 2017 Census of Agriculture is underway as this plan is being developed.

Table 2-3a: Adams County Farmlands (acres)

	Farmlands (acres)			Average Size of Farm (acres)		
	2002	2007	2012	2002	2007	2012
Adams County	123,539	115,343	118,393	298	283	378
State	15,741,552	15,190,804	14,568,926	204	194	209

Source: Census of Agriculture

Table 2-3b: Adams County Farms by Size

Year	Acres					Total Farms
	1 to 49	50 to 179	180 to 499	500 to 999	1,000 or more	
2002	107	159	99	23	26	414
2007	109	169	82	24	24	408
2012	62	121	78	29	23	313
2002-2012 % Change	-42.1%	-23.9%	-21.2%	26.1%	-11.5%	-24.4%
2002-2012 Change	-45	-38	-21	6	-3	-101

Source: Census of Agriculture

Crops

In 2015, a variety of crops were planted throughout the County. Corn for grain was planted on 26,100 acres, while soybeans were planted on 14,500 acres, potatoes on 12,200 acres, followed by 7,200 acres of alfalfa, and 1,300 acres of oats.

Vegetable crops are irrigated extensively in the northeastern part of the county and in the central and southern parts. Large amounts of water are withdrawn chiefly from the groundwater in these areas during the irrigation season. Major crop exports from Adams County include sweet corn, snap beans, and potatoes.

Livestock

Livestock and dairy businesses do not figure prominently into Adams County’s agricultural sector. The number of cattle and calves in the County in 2016 numbered 18,400. There are 13 dairy herds in the County, but production numbers are not published. Other small livestock operations such as hogs, chickens, and

sheep exist, but these are relatively few in number.

Productive Agricultural Areas

The most productive agricultural areas may be found in the northeastern, central, and southern parts of the county. Vegetable crops are extensively irrigated in these areas using large amounts of groundwater. These areas are mostly flat and therefore conducive to the use of large farm machinery and the efficient application of chemicals. Those areas with high water tables, rocky outcroppings, and steep slopes limit agricultural activities to small areas making them less productive. Furthermore, agricultural uses on these marginal lands are more likely to result in extreme erosion due to the porous soils. Prime farmland takes into account, in addition to soils, other factors such as type, size, and locality of agricultural operations. The locations of prime farmland are identified more specifically in the town plans. Agricultural land in Adams County has generally gained value over the past decade.

The number of agricultural land sale transactions varies per year. In 2016, According to Wisconsin Agricultural Statistics, there were four real estate transactions including 316 acres. The average dollar per acre was \$3,500.

Other Agricultural

Farm Infrastructure

Farm-to-market roads are probably the most significant factor when considering farming infrastructure. Quality roads are absolutely necessary to the farmer for transporting the wholesale farm product to the appropriate market in a timely manner. Farm-to-market roads are discussed in more detail in the Transportation Chapter of this plan. Depending upon the type of farming, irrigation wells may also be extremely important. Irrigation sprayers are a common sight in Adams County as they seek to maintain proper soil moisture in the rapidly draining, sandy soil. Irrigation ditching is also used with great effectiveness in draining low fields and in the maintenance of cranberry operations.

Programs

To protect farmland from being converted to some other use, the state enacted the Farmland Preservation Program. The Wisconsin Department of Agriculture, Trade, and Consumer Protection provides oversight to the program. This program requires that each county develop a county Farmland Preservation Plan (FPP) and states that the plan becomes a part of the county comprehensive plan as well. Adams County adopted a Farmland Preservation Plan in 2016.

The federal government's Conservation and Wetland Reserve Program (CRP or WRP) were established in 1985. This program provides landowners with annual payments in exchange for agreements to keep farm fields with high erosion or runoff potential out of agricultural production. The Conservation Reserve Program (CRP) and a number of other land retirement programs traditionally receive the bulk of USDA's conservation funding.

Cultural Resources

Background

The culture of Adams County was originally defined by the natural setting. Most early settlers focused their travels on or near the Wisconsin River. The terrain of Adams County, particularly in the areas near the Wisconsin River, offered artists fine opportunities for the display of taste and skill in rugged studies. The famous "Dells" provided several of the grandest glimpses of scenery some settlers had ever seen. Among them were "Cold Water Canyon" and "Witches Gulch" which extend back into the country more than a mile from the Wisconsin River. Settlers also discovered "Devil's Jug", "Ruffle Rocks", "Steamboat Rock", "Rood's Glen", and other curious and picturesque localities that gained nation-wide renown.

Settlers found the view less grand along the river in the northern towns, but the bluffs were still bold and the scenery ever varied. The soft sandstone banks formed by water erosion offered an endless variety of forms. The next section reviews the natural history of Adams County, and then provides a contemporary historical summary of the transformation of this wilderness into the developed community it is today.

History

As the last ice shields retreated, Adams County became suitable for its first human inhabitants. These prehistoric people utilized the waters of the waning Glacial Lake Wisconsin for sustenance while pursuing mammoth and

mastodon across the Wisconsin tundra. A record of their presence in Adams County is etched into the sheer southwest rock face of Roche-a-Cri Mound in the form of carvings and paintings. Despite having been carved in lichen-prone sandstone and effaced by the graffiti of white settlers, the rock art at Roche-a-Cri Mound remains clearly visible today. The earliest decipherable markings date from about 100 A.D. It is likely that these markings were made to indicate distance and direction when the mound served as a natural landmark along Native American trading routes. There are, however, other figures and symbols of a more mysterious nature. Early cultures often viewed bluff rock faces as doors to the spirit world and therefore this site certainly held a religious significance as well. The native people of Adams County settled into the areas bordering the Wisconsin River.

European-American settlement began in the early 1800s. The need to supply food to the lumbermen in the pineries of Northern Wisconsin induced the first settlement of Adams County. In 1838, the Menominee allowed Jared Walsworth and his Menominee wife to construct a trading post and lodging house along an overland route through the northern pine forests known as the Pinery Road. Walsworth, a former engineer on a Mississippi steamer and experienced frontiersman, maintained a supply post at this location near what is now Big Spring in the Town of New Haven. Walsworth then constructed a tavern on his property and served the loggers who used the Pinery Road. Walsworth's Tavern was the site of the first white child in 1843 - J. S. W. Pardee, son of George Pardee. George Stowell, an employee of Walsworth, is considered to be the first farmer of the County in 1844. His frame "shanty" was put up in the town of New Haven and he began the cultivation of a small tract of land.

In 1845, the Territorial road from Milwaukee to Stevens Point passed through Adams County. William Sylvester opened a supply post upon this highway and combined it with a tavern and

post office. Soon afterwards, a man named Strong began a similar enterprise on the Big Roche-a-Cri, about eight miles north of Friendship not far from another landowner named Cotton. These supply posts, taverns, and post offices combined with the ready supply of white pine for building homes enticed other pioneers to also establish themselves in Adams County. In 1848, the same year Wisconsin became a state, the Menominee relinquished their claim to the entire Wisconsin River Valley. This allowed the Wisconsin Territorial Legislature to create Adams County by an official act on March 11, 1848. This was not the Adams County of today geographically - it was actually the south part of Juneau County. The new county was created out of territory originally belonging to Portage County and was attached to Sauk County for legal reasons. The name of Adams County was chosen to honor John Adams, the second President of the United States. In 1853, Adams County was given its autonomy from Sauk County and enlarged to include all of present-day Adams and Juneau counties combined.

From the year 1850 to 1853 immigrants poured into Adams County. In 1850, Thomas Rich built the first schoolhouse in the county. Rich hired Lewis Carter as teacher, at \$12 and board per month, and invited the neighbors to send in their children. The building was later replaced by the Dell Prairie post office. Reverend Anderson preached the first sermon in the county, in 1852, at the house of Mr. Rich, who paid him one dollar a visit. Rich bought the Reverend a horse for \$65 and told him to wear his legs out in the good cause. In August of 1853, at a special meeting the county board of supervisors, Stillman Niles gave bond to furnish a courtroom and three office rooms. The legislature changed the boundaries of Adams County again in 1855 by splitting Adams County in half thereby creating a new Juneau County on the west side of the Wisconsin River, although Juneau County remained attached to Adams County for judicial purposes for some time afterward.

In May of 1858, Julius C. Chandler issued the Adams County Independent – the first newspaper in the county. Chandler’s interest in starting the paper was to persuade officials to relocate the county seat from Quincy to Friendship. Chandler argued that the creation of Juneau County left Adams County with a county seat on its western border therefore a new county seat should be created that was more centrally located. By January of the following year, a popular vote had been taken and the County seat had been officially moved to the Village of Friendship. The Village brought its name with settlers from Friendship, New York in Allegheny County. These pioneers built a water-powered grist mill on the banks of Roche-A-Cri Creek and the village grew around it. The new courthouse was a two-story frame building measuring 32’ by 46’ feet and was two stories high with a stone, fire-proof vault. The Village also offered a 30’ by 46’ schoolhouse and a church.

There were also settlements in the Towns of New Haven, Jackson, Dell Prairie, and Springville. By 1860, the population of Adams County had reached six thousand with an economy driven by farming and numerous sawmills powered by the county’s many creeks and rivers. By this time, the Press Publishing Company had started the Adams County Press under the direction of S.W. Pierce. Julius Chandler subsequently discontinued his newspaper less than two years later. Population growth slowed until European immigrants from Germany, Norway, Denmark, Bohemia, and Poland arrived in the 1890s seeking inexpensive and fertile farmland. Since there was no railroad, Kilbourn City (the original name of Wisconsin Dells) acted as the chief depot for supplies to the area and the outer terminus of a daily stage line. By 1907, the county seat of Friendship had been officially incorporated into a Village.

In 1910, the Chicago & North Western Railroad skirted two miles to the south of Friendship due to high land prices caused by speculation leaving the village without a train depot. The

result of this decision caused the creation of the community of Adams in an attempt to accommodate the railroad’s workers, depots, and yards. Today, the City of Adams and the Village of Friendship have grown together so that the municipal separation between the two cannot easily be identified. Recreation and tourism brought a development boom in the 1920s to the communities of Dellwood and Quincy. Many recreational cabins were constructed for vacationers to enjoy seasonal activities along the Wisconsin River. Unfortunately, this prosperity was short-lived. Subsisting on a predominantly agricultural economy, Adams County suffered severely from the droughts and economic hardship of the Great Depression era.

The transportation improvements of the 1940s brought new life to Adams County when the Wisconsin River Power Company began construction on the dams creating Castle Rock and Pentenwell Lakes. These dams stimulated the growth of recreational subdivisions and made the County a second home and retirement haven. A bridge spanning the Wisconsin in the 1950s and the development of a nearby interstate highway brought increasing numbers of visitors and urban expatriates to Adams County. This trend has continued to the present day and appears to be increasing in intensity. The accessibility of Adams County’s recreational lakes has made the area very attractive to persons seeking a natural environment for construction of homes, both seasonal and permanent.

Previous Planning Efforts

The Wisconsin Historic Preservation Plan 2001-2005

This strategic plan provides goals and objectives for historic preservation in Wisconsin. The plan was financed by the National Park Service and administered by the State Historical Society of Wisconsin. The plan is used to prioritize tasks and to focus efforts on five critical issues identified in the planning process: education and outreach,

comprehensive planning, under-served groups, publicity, and financial resources.

Issues

Historic Preservation

The practice of preserving historic sites and structures recognizes the architectural, engineering, archaeological, cultural, or historic importance of these assets to a community. In 1994, the Wisconsin Legislature enacted statutes requiring cities and villages with property listed in the National Register of Historic Places or the State Register of Historic Places to enact an ordinance to preserve these places. In 1997, the Village of Friendship created a historic preservation program to preserve and protect its historic buildings and sites. Further, the Village created its own Historic Preservation Commission to act as an advisor in the implementation of an ordinance. The Commission helps to identify significant historic resources, reviews projects affecting those designated properties, and provides necessary preservation services.

Similar to the State Register of Historic Places, the Architecture and History Inventory (AHI) also provides historical and architectural information. This database contains information on approximately 120,000 properties in Wisconsin and is maintained by the Wisconsin Historical Society. The AHI contains data on structures that illustrate Wisconsin's unique history and cultural landscape. Inclusion in this inventory affords no special protection to structures nor does it convey special status, rights, or benefits to owners. The Village of Friendship contains the majority of the structures in the inventory.

The Archaeological Site Inventory (ASI) is the most comprehensive list of the archaeological sites, mounds, marked and unmarked cemeteries, and cultural sites in the state. However, it includes only those sites that have been reported to the Wisconsin Historical Society and therefore does not include all possible sites and cemeteries of archeological

significance in the state. This inventory has been developed over a period of 150 years, therefore, each entry in the database varies widely and the information has not been verified in all cases. Adams County has 244 sites listed on the Wisconsin ASI and four sites on the national ASI.

Inventory and Trends

Historical Structures

There are a large number of historical structures in Adams County. The Village of Friendship has nominated more of these structures than other municipalities likely due to the presence of its own Historic Preservation Commission. The Village currently has 68 architecturally significant buildings on the state AHI, most of which are homes. The City of Adams has listed the Ranger Station and post office on the inventory. Other historic buildings include: Colburn's Town Hall, New Chester's L. Schieber Farm, the Castle Rock Dam in Quincy, and a number of other structures in the Towns of Preston and Strongs Prairie. The special structures are detailed more thoroughly in the municipal plans.

Historical and Cultural Resources

- *The Pinery Road: When European-American settlers first moved into central Wisconsin in the 1830s, the Pinery Road was the main overland route through the wilderness of Adams County. For the lumberjacks, traders and settlers intent on reaching the northern woods, Adams County was merely a temporary resting place during their travels. But for Adams County's pioneers, the Pinery Road was the lifeline that supported their homes, trading posts, inns, and taverns. The Adams County Historical Society sponsors Pinery Road Days during one weekend in mid-July each year in Friendship Village Park. Although there are many activities that take place during the festival, the most prominent is the Buckskinners teepee encampment along Roche-a-Cri Creek. Participants in this activity cook over*

campfires and exhibit the skills and crafts of the pioneer era in period dress. A flea market, miniature log raft race, and other contests are among the many events that take place during this historical celebration.

- ***The McGowan House:*** Having lost his house to a fire in 1889, Dr. Emmett McGowan rebuilt his home and furnished it in the Gothic Revival style popular during the period, incorporating several unique decorative chapters rescued from the blaze. The nine-room, two-and-a half story house reflects Dr. McGowan's social standing in the Village of Friendship in the days before the railroad arrived in Adams County. The McGowan House is the site of the Adams County Historical Society's offices, library and archives, and generally open to the public on weekends from May through October.

Community Design and Retaining Community Character

The shape and appearance of a community often changes over time. Styles of building and development react to changing economic conditions and technologies, and to changing tastes. Each community becomes an expression of the conditions that have prevailed throughout its history. We shape our communities and in turn they form us. The design of a community must be primarily focused on serving the needs of residents today. In the process of adapting community design to changing needs care must be taken not to discard the remnants of the past that has made the community what it is today. At the same time a community is not a museum and must change with the times.

Community design is a balancing act: balancing the past and the future; the needs of business with those of families; the modern and the traditional; and, most importantly, the diverse needs and aspirations of the people who call that community home.

Goals, Objectives & Policies

Natural Resources Goals

- 1) Protection of natural areas, including wetlands, streams, rivers, wildlife habitats, lakes, woodlands, open spaces and groundwater resources.
- 2) Protection of economically productive areas, including forests and scenic landscapes upon which tourism depends.
- 3) Protection of open space and unique landscape resources.

Natural Resources Objectives

- 1) New development should not negatively impact natural resources.
- 2) Minimize impacts to the County's natural resources from non-metallic mineral mining.
- 3) Encourage and support the preservation of natural open spaces that minimize flooding such as wetlands and floodplains.
- 4) Promote development that minimizes groundwater impacts from on-site septic systems and other sources.
- 5) Promote groundwater protection efforts in Adams County to maintain or lower nitrate, pesticide, and volatile organic compound pollution at levels below safe drinking water standards.

- 6) *Reduce contamination of surface waters in Adams County.*
- 7) *Increase and improve wildlife habitat within Adams County.*
- 8) *Encourage multiple uses of forests.*
- 9) *Develop a long-term plan for the identification of land to preserve.*

Natural Resources Policies

- 1) *New development should be discouraged from areas shown to be unsafe or unsuitable for development due to flood hazard, potential groundwater contamination, loss of farmland, highway access problems, incompatibility with neighboring uses, etc.*
- 2) *Expansion of existing non-metallic mining operations or development of new sites should be allowed only on lands where the expansion will not conflict with preexisting development.*
- 3) *Reclamation of non-metallic mining sites should conform to the land use plan map in regard to the reclaimed use*
- 4) *Discourage the draining or filling of wetlands.*
- 5) *Maintain and encourage reforestation to protect large contiguous blocks of forests.*
- 6) *Work to minimize forest fragmentation and explore techniques that would allow fragmented forests to retain a larger portion of their original ecological, and economic values.*
- 7) *Consider the use of conservation easements and purchase of development rights to protect forest resources.*
- 8) *Pursue federal, state, and local funding to acquire and/or protect forest areas.*
- 9) *Support efforts by non-profit land trusts and private landowners to preserve forest areas.*
- 10) *Develop strategies to protect environmental/forest corridors along streams, wetlands, and lakeshores.*
- 11) *Encourage the use of native species in plantings and consider ways to control the spread of invasive exotic species that can have negative ecological, and economic impacts to forests.*

Agriculture Goal

- 1) *Protection of economically productive areas, including farmland.*

Agriculture Objectives

- 1) *Support diversification of farming types and practices to maintain agriculture as a viable economic activity.*
- 2) *Encourage agricultural use and related activities in areas identified for agricultural preservation.*
- 3) *Avoid creating land use conflicts through proper land use planning.*
- 4) *Encourage alternative marketing mechanisms for Farmer's products.*

Agriculture Policies

- 1) *Existing agricultural uses and buildings should be taken into consideration when locating new development to avoid conflicts.*
- 2) *Utilize land use controls to protect prime agricultural land, where applicable.*
- 3) *Encourage measures that will preserve agricultural land and keep agricultural operations viable economic activities.*

- 4) *Non-farm development, particularly subdivisions, will be encouraged in areas away from intensive agricultural activities, in order to minimize farm & non-farm conflicts due to noise, odors, nitrates in well water, pesticides, farm/vehicle conflicts on roadways, late night plowing, etc.*
- 5) *Consider the use of tools to protect sensitive areas, such as purchase of development rights (PDR) or transfer of development rights (TDR).*
- 6) *Irrigation, dust, noise, odors, vehicle traffic, etc. that result from agricultural operations that are not threats to public health or safety, should not be considered a nuisance.*
- 7) *Encourage private landowners to participate in the Managed Forest Land Program as a way of ensuring best management practices and increasing public access to forest resources.*
- 8) *Encourage the development of a community website/bulletin board for consumers and producers to contact each other.*

Cultural Goal

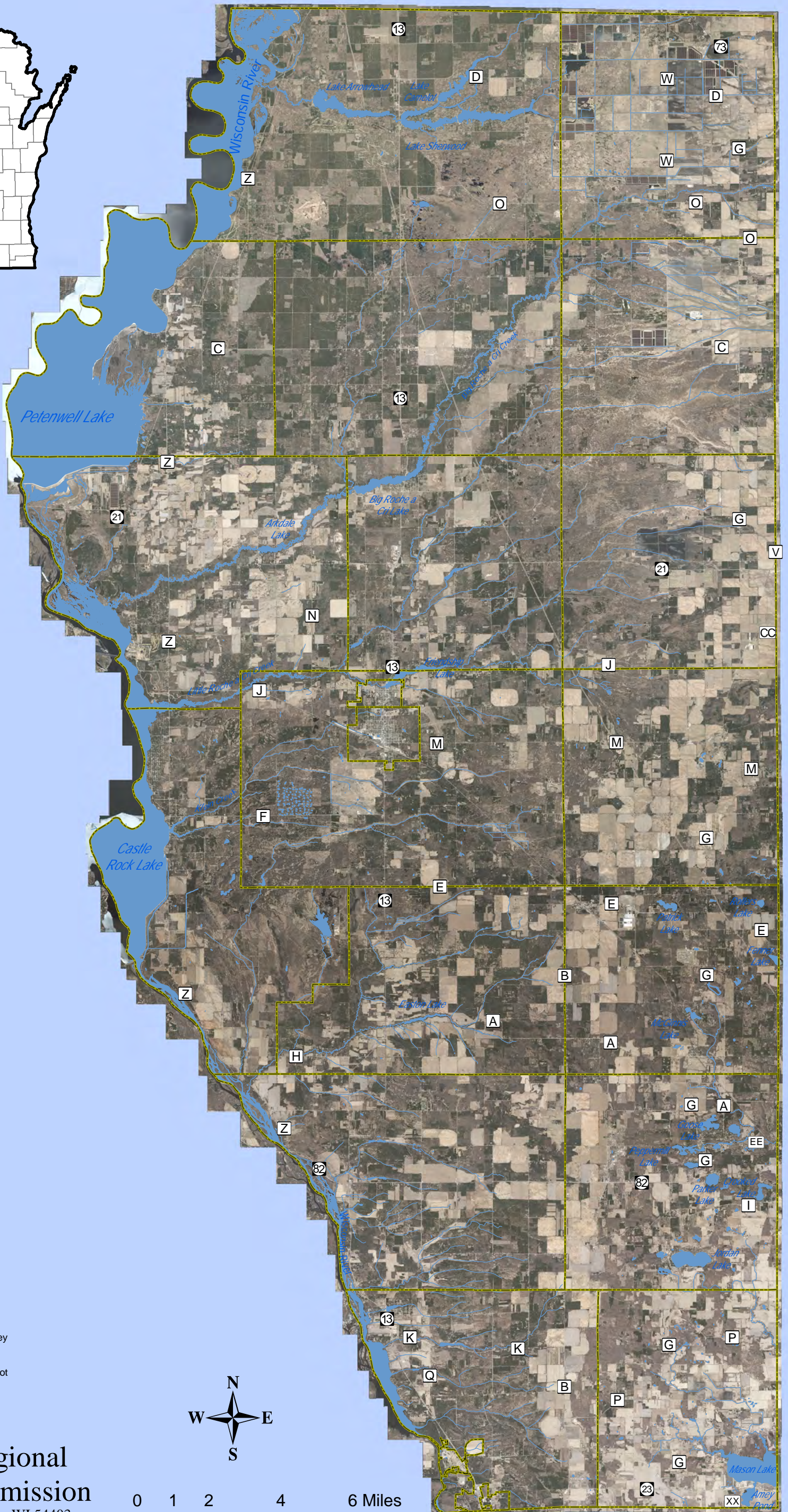
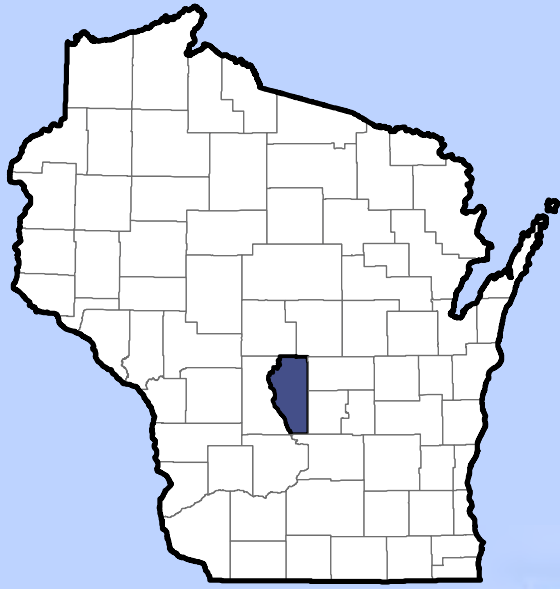
- 1) *Preservation of cultural, historic and archaeological sites.*

Cultural Objectives

- 1) *Respect Century and Sesquicentennial Farmsteads by allowing farming to continue without residential intrusion nearby.*
- 2) *Visually display community values and pride in special attractions and businesses through architecture, landscape design, public art, and cultural arts.*

Cultural Policies

- 1) *Encourage redevelopment and reuse of existing sites and buildings that are visually compatible with the surrounding area.*
- 2) *Seek to nominate more properties for historic designation.*

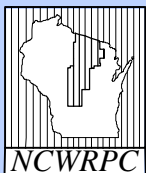


Legend

- State Highways
- County Highways
- Local Roads
- Minor Civil Divisions
- Water

Source: WI DNR, NCWRPC, Adams Co.

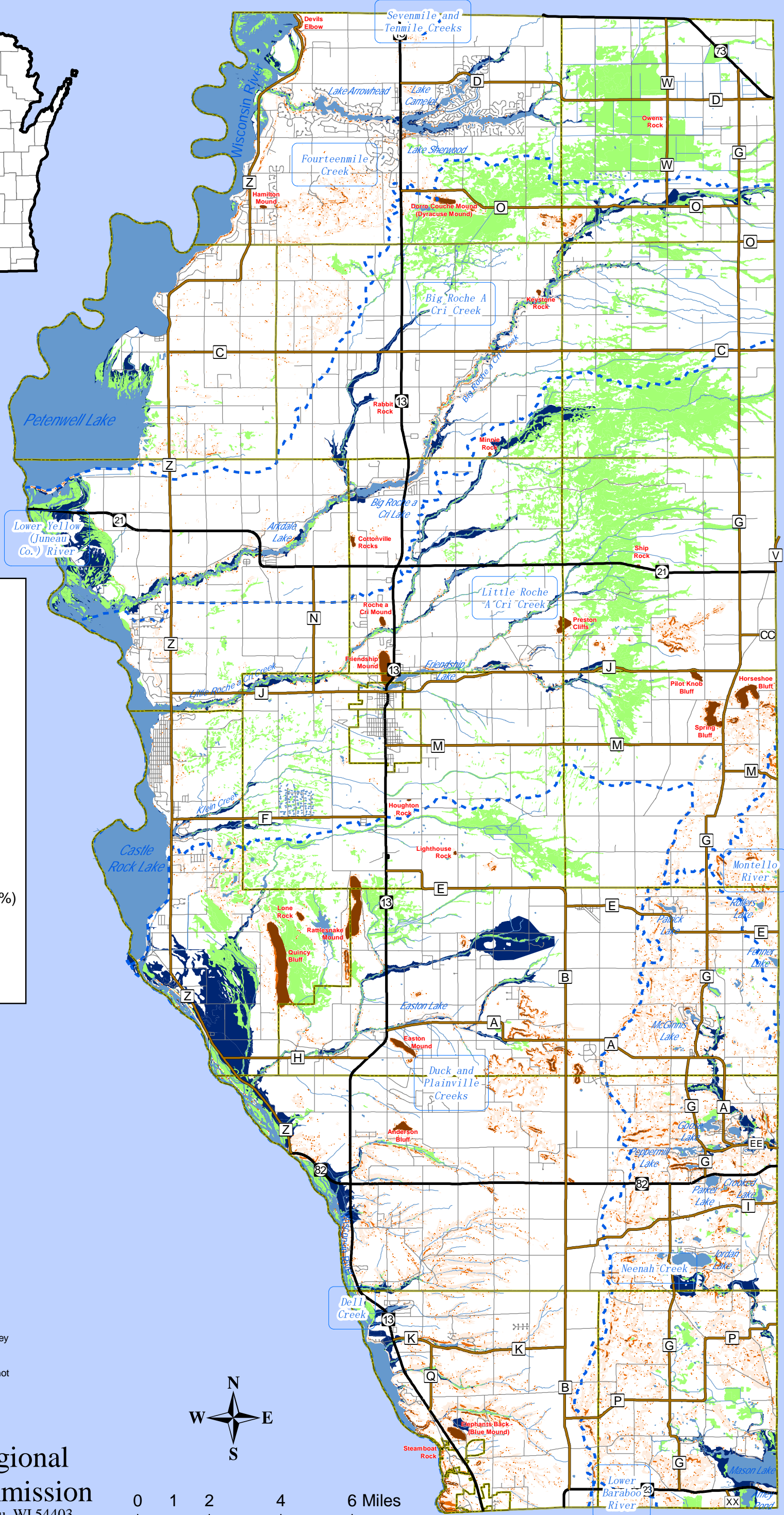
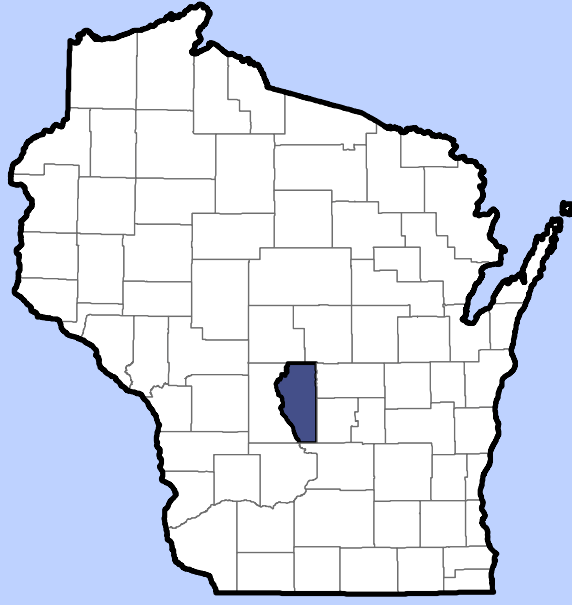
This map is neither a legally recorded map nor a survey of the actual boundary of any property depicted. This drawing is a compilation of records, information and data used for reference purposes only. NCWRPC is not responsible for any inaccuracies herein contained.



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Legend

- State Highways
- County Highways
- Local Roads
- Minor Civil Divisions
- - - Watershed Boundaries
- Water
- Wetlands
- Floodplains

Slopes

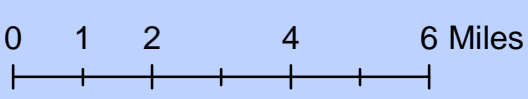
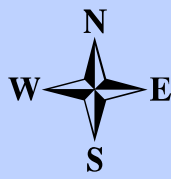
- Level to Gentle Slopes (0-6%)
- Slopes (6-12%)
- Moderly Slopes (12-20%)
- Steep Slopes (>20%)

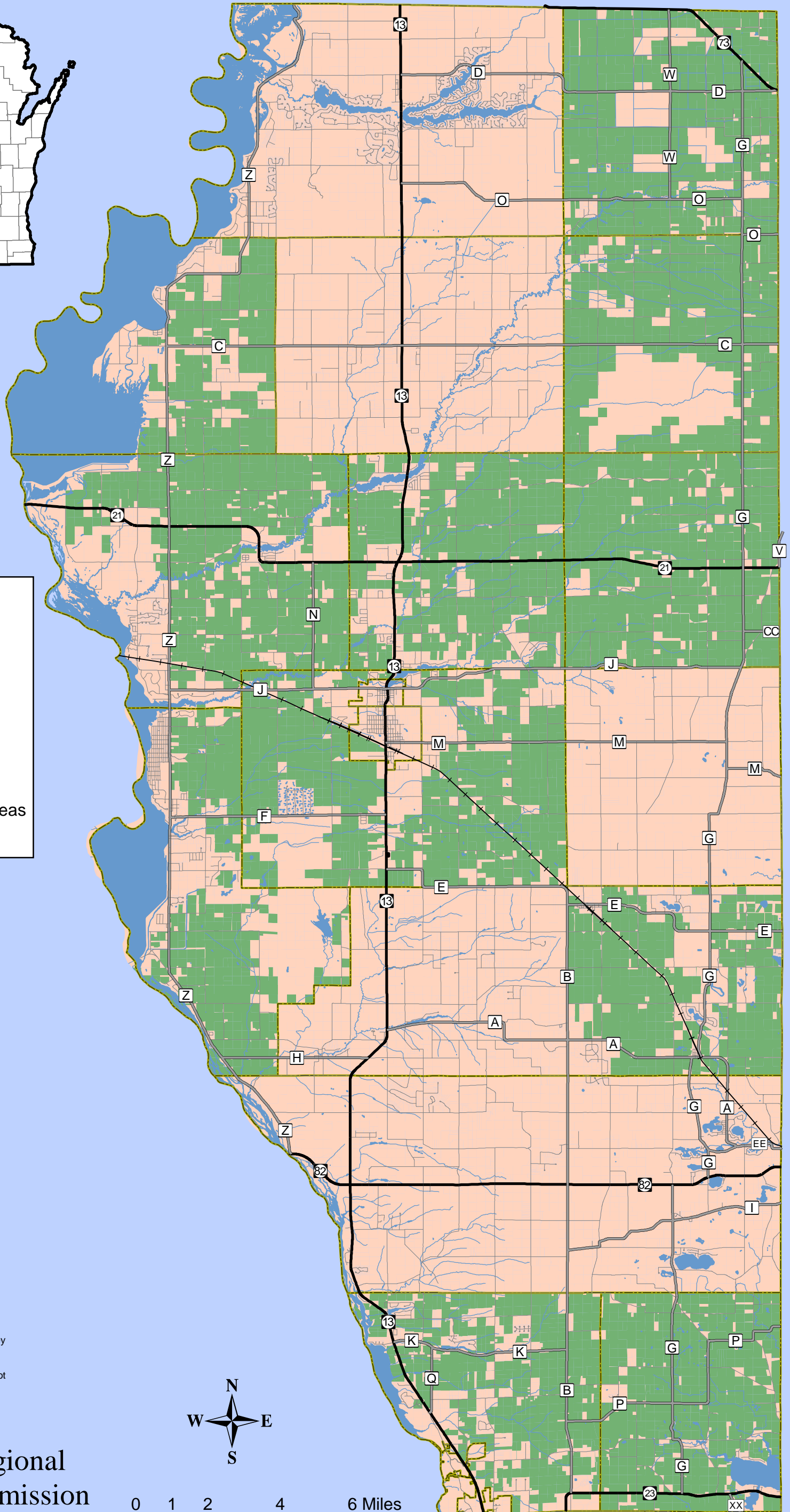
Source: WI DNR, NCWRPC, FEMA, Adams Co.

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Legend

- Minor Civil Divisions
- Water
- State Highways
- County Highways
- Local Roads
- Railroad
- Farmland Preservation Areas
- Planned Out

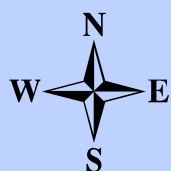
Source: WI DNR, NCWRPC, Adams Co.

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Chapter Three

Housing

Background

This chapter examines the age, structural, value and occupancy characteristics of the housing stock. The chapter also identifies specific policies and programs that promote the development of housing for residents and to provide a range of housing choices that meet the needs of persons of all income levels and all age groups.

The chapter is comprised of three basic sections: these are background; inventory & trends; and goals, objectives & policies. There is also a discussion of housing issues.

Housing is a basic need for everyone. The availability of good housing is a central concern of any comprehensive planning effort. Planning for the future of the county requires a comprehensive approach to assuring that the housing needs of all segments of the population are addressed. Moderately priced housing available to middle-income, working families is as important to the county as meeting the needs of the poor, elderly, or disabled. The availability of housing for workers can be an important factor in economic development.

[Previous Planning Efforts](#)

An important part of any planning process is to look at the planning that has taken place in the past. Previous studies such as the 1977 General Development Plan can give historic perspective to current efforts and offer a “slice of time” view of the county. More contemporary efforts, like the Regional Livability Plan or the State Housing Plan offer a view of what other entities are planning that may affect the county in the future.

[Adams Comprehensive Plan](#)

The 2006 Adams County plan was partially funded by the State of Wisconsin Comprehensive Planning grant program. That plan was prepared in conjunction with all but one of the towns as well as the city and village.

The housing chapter examined a variety of housing information, including the total number of housing units and seasonal dwellings. A variety of goals, objectives and policies were developed. Those provide the foundation for this planning effort.

[Regional Livability Plan](#)

The Regional Comprehensive Plan was adopted by the North Central Wisconsin Regional Planning Commission in 2015. It is an update of a plan adopted by NCWRPC in 1981. The RCP looks at housing in all ten counties that make up the North Central Region, including Adams. It looks at general trends within the Region and recommends how county and local government can address their housing issues.

Housing is a crucial component of livability. The complex dynamics of the housing market impact future housing development. Understanding this relationship provides a basis for the formulation of policy to coordinate transportation facilities with a sustainable pattern of residential development. The connection between home and work is a fundamental function of any transportation system. Home-work connections should be efficient, reinforce and strengthen community ties, and foster economic development and environmental sustainability. Understanding the factors affecting people’s decisions on meeting their housing needs provides a basis for establishing solid home-work connections in the region.

This Assessment Report examines housing on a regional scale. The type of housing and the costs of various housing options, in part, define the Region.

The policies that affect the availability and affordability of housing, such as minimum lot sizes, can have an effect on traffic levels, land use patterns and infrastructure costs, by determining the density of development. A range of factors must be considered to ensure access to a safe, sanitary, and affordable housing for all needs and income levels. Policies that regulate the location and standards for housing can also have a profound effect on the quality of life and the character of our communities throughout the Region.

Balancing the needs of diverse communities with different housing issues requires that each situation be considered individually, but that a uniform standard of quality and affordability be applied, and that each community seeks the solution which fits the unique challenges that it faces. This planning process will identify goals, objectives and performance measures to advance the Region's housing efforts.

Wisconsin State Consolidated Housing Plan

The Consolidated Housing Plan is required by the Department of Housing and Urban Development (HUD) in the application process required of the State in accessing formula program funds of Small Cities Community Development Block Grants (CDBG), HOME Investment Partnerships, Emergency Shelter Grants, and Housing Opportunities for Persons With AIDS. "The Consolidated Plan provides the framework for a planning process used by States and localities to identify housing, homeless, community and economic development needs and resources and to tailor a strategic plan for meeting those needs." This is how the Department of Housing and Urban Development (HUD) describes the Consolidated Plan, which consists of a 5-year strategic plan, annual action plans, and annual performance reports. The Plan must be updated annually.

The Consolidated Plan has five parts: (1) an overview of the process; (2) a description of public participation; (3) a housing, homeless, community and economic development needs assessment; (4) long-term strategies to meet priority needs; and (5) an action plan. The Division of Housing and Intergovernmental Relations (DHIR) prepares the Consolidated Housing Plan, and is focused on low-income and special needs populations.

The Consolidated Plan, in assessing housing needs, looks at a number of different factors that are significant components of the housing picture. Housing affordability is a primary consideration. According to federal guidelines a family should not have to spend more than thirty percent of its income on housing. Using this standard "...households in the low-income range have great difficulty finding adequate housing within their means and that accommodates their needs...an individual in Wisconsin would need to earn \$10.44 per hour to afford the fair market rent unit at 30% of income." This presents a particular problem for the working poor, many of whom earn little more than the federal minimum wage of \$5.15 an hour.

The gap between wages and housing costs is only made worse by the shortage of affordable housing units. "Despite overall economic prosperity state- and nationwide, community and housing resources are becoming more scarce. If the dwindling resources are not as a result of appropriation cuts, it is then because of significantly increasing needs." Bearing in mind that this report was prepared in 2000, it is safe to assume that the situation has not improved significantly. Recent economic conditions have been unlikely to reduce the need for affordable housing, and the supply has probably not kept pace.

Other factors than the construction of new housing units affect the quality and availability of housing as well. Just as the difficulty of providing affordable housing to low-income families can be stated in terms of an hourly wage, there is more involved in a well-housed community than the number of housing units.

"The resounding need stressed is for community housing, public facilities and economic development professionals to give greater weight to the interrelationships between these components. Without adequate infrastructure, housing quantity and quality suffers. Without adequate infrastructure, economic development is limited."

The State Consolidated Housing Plan (CHP) is primarily focused on how government action can address special needs, not on the workings of the private housing market. The focus of activities and

strategies described in the Plan primarily address meeting the evolving needs of low and moderate-income persons, including persons of special needs requiring targeted assistance.

Housing Issues

Affordability

The National Low Income Housing Coalition assembles a yearly list of estimates of the income required to afford housing using this “cost-burden” standard for localities across the country. This report focuses on rental housing, but can be broadly applied to owner-occupied housing as well. Although, housing prices rose across the country, they rose faster in non-metropolitan than in urban areas – 59 percent compared to 39 percent. The Median home value rose by 55 percent in Adams County during the 1990s. Generally low wage rates and the increase in housing values both combine to make housing less affordable for rural, low-income residents.

What can be done to address this problem? A number of programs are available to local governments that offer funding to provide affordable housing units. These are listed under Government Housing Programs. But there is a need also to seek solutions that will yield an increase in affordable housing units through market-based mechanisms. One method put forth to increase housing affordability is a simple change to zoning codes that would permit accessory dwelling units, otherwise known as “granny flats”. These units, often an apartment above a garage or in a basement “can provide affordable rental housing options, especially for young or elderly singles.” Current zoning in the City of Adams, for example, permits residences as small as 480 square feet in the R-2 district, but allows only single-family dwellings and limits accessory uses to those “customarily incident” to them including garages. By adding accessory dwelling units, perhaps as a conditional use, to this district housing options for low-income residents could be expanded and homeowners given another source of income.

One of the more persistent objections to multi-family housing, and to accessory dwelling units, is that apartments compromise the property values of single-family dwellings. In recent years evidence has emerged that, rather than diminishing the value of single-family housing, well-designed and maintained multi-family housing can increase the value of nearby neighborhoods.

Local governments can take actions to foster affordable housing. An affordable Housing Trust Fund is one such alternative. Funding can come from special fees, often on real-estate transactions or late property tax payments. In the case of Adams County an application has been submitted in the last funding cycles to receive a Small Cities CDBG housing grant. Although the county has not yet been awarded the grant, if it is successful this grant would form the basis for a revolving loan fund, whereas loans to improve the quality of housing are paid back that money would be lent out again to provide more and better quality housing for low- and moderate-income residents.

Manufactured Housing

One of the most widely used and easily available forms of affordable housing is the manufactured home. Twenty-five percent of the dwelling units in Adams County are mobile homes (as described by the US Census). The prevalence of this type of housing in the county poses special problems, but also offers a good alternative for solving housing affordability issues for many county residents.

Often described as “mobile homes” or “trailer homes”, manufactured housing has been subject to regulation by the Federal Government since the implementation of the “Manufactured Home Construction and Safety Standards” or “HUD-Code” in 1976. Manufactured housing has evolved from the “travel trailer”, which is built primarily to be towed behind vehicles, they were lightweight and compact, generally

metal clad, and intended to be moved repeatedly from place to place. Over time these structures became larger and often located permanently, either in a mobile-home park or on an individual lot.

The passage of the federal legislation mentioned above, which took effect June 15, 1976, established the preeminence of federal authority in the regulation of what have come to be known as manufactured housing. Under this legislation the federal government established standards and inspection mechanisms for all factory-built housing, and dictated that after its effective date all regulation of manufactured housing must conform to those standards. The inspection of the manufacturing process is meant to ensure the quality of housing built “on a chassis”. Since adoption of the HUD-Code a series of court rulings have reinforced the preeminence of the federal standards.

In Wisconsin, the case of *Collins v City of Beloit* is the most important precedent. In this case the City denied Collins a permit to install a manufactured home on a lot he owned, at first citing the Uniform Dwelling Code (UDC) and then the local zoning ordinance which required that all “mobile homes” be located in designated mobile home parks. The court overruled the City on both counts, stating that after June 15, 1976 any manufactured home was specifically exempt from the provisions of the UDC, and could not be described as a mobile home. It had been a specific provision of the federal act that any home manufactured after the HUD-Code took effect was not a mobile home and all references in federal law were to be changed to manufactured homes, and that local regulation of such units must conform exactly to the HUD-Code. The court found that there was no inherent characteristic of manufactured housing that distinguished them from site-built housing, and thus there was no reasonable basis under the police powers for justifying their exclusion from residential zoning districts.

This is not to say, however, that local governments cannot regulate manufactured

housing to ensure that it compare favorably to site-built housing. Such characteristics as roof pitch, overhangs, roofing and siding materials, and building area can be regulated. Permanent installation on a foundation can be required. Design standards can be fairly specific, but are more likely to be upheld by the courts if they apply equally to all housing within a district. A Michigan court has upheld a standard requiring a minimum width of 24 feet. Mobile homes (built before June 15, 1976) may still be restricted to mobile home parks only.

Because of the economies of scale, savings in labor costs and process efficiencies possible for manufactured housing, “the most affordable housing on the market today, square foot for square foot, may be the factory-built house.” There are three basic types of factory-built housing: panelized, where windows and other building components are included in flat wall sections transported to the building site and assembled there; modular, where three-dimensional components are assembled on-site; and manufactured housing, where the entire house is assembled on a chassis in the factory and towed, in one or more parts, over the road and installed on a permanent foundation. Panelized and modular construction is subject to the UDC; manufactured housing is under the HUD-Code.

In recent years “developer series” manufactured homes have been developed that are virtually indistinguishable from site-built housing, but can be constructed for roughly 75 percent of the cost. Land-lease communities, which operate very much like the traditional mobile home park, where residents own the house, which is taxed as personal property not real estate, and rent the site and which can include many shared amenities, are another option. Manufactured housing offers a realistic alternative for providing affordable homes that can fit well with existing neighborhoods or be developed as new communities. Because of the federal oversight of the construction process today’s manufactured homes meet the highest quality standards while allowing for significant

cost-savings that can make inroads into a community's affordable housing problems.

Elderly/Retiree Housing Needs

Adams County is aging, and not just as a result of residents getting older. The county is getting more and more older people who move there to retire. Adams County has been identified as one of a number of counties around the country that is particularly attractive to residents looking for a place to retire. During the 1990s Adams was the third fastest growing county in Wisconsin. This influx of seniors has a number of results: it obviously has increased the population and led to the construction of many new housing units; it has raised the median age in the county; and it has brought many new residents into the county from a number of different backgrounds and with personal assets that have expanded the local economy. In one way though, it has introduced a different dynamic into the county from its rural-agricultural past. This change creates a special set of housing issues.

Around the country a number of local governments have made a conscious decision to make it part of their economic development strategy to attract retirees. As in Adams County these new residents bring new resources to the community; they can provide growth to what had been stagnant rural economies; and have led to job growth in other sectors that capitalize on the same amenities that draw people to the county looking for a retirement home. The coming retirement of the baby boom generation, the first of who turn 65 in seven years, will bring a new influx of retirees to the places that seek to serve this growing market.

If the County is serious about marketing itself as an attractive alternative for retiring boomers then it needs to look at an integrated approach to the kind of public services that go along with an increase in the aging population. As people age they have more need for specialized services. The most obvious of these is for health care, but there is a more subtle relationship between an aging population and their housing needs.

As our physical capacities diminish it can become more of a challenge to perform the basic tasks of maintaining a household. "Aging in place" is the phrase used to describe how a person is able to remain in their home as they age. Sometimes the support a person needs to remain in her home can be as simple as someone to help with the yard-work, cleaning, or shopping. Sometimes it can mean having a home health-care worker visit a few times a week to assist with medications or physical therapy. Almost always such services are cheaper than moving that person to a more structured living situation. Whether and how these services, that permit seniors to age in place, are provided is thus a housing issue.

What is required is an integrated view of senior housing. It involves more than just a place to live; it involves a way to live in the place where you are. This is the message that comes from the Commission on Affordable Housing and Health Facility Needs for Seniors in the 21st Century, which was appointed by Congress to look at issues surrounding the coming retirement of the baby boom generation. They identify this need to age in place as a central problem to be addressed. Among the Commission's strongest recommendations is the need to look at housing and health care needs of seniors in a holistic manner. "The most striking characteristic of seniors' housing and health care in this country is the disconnection between the two fields."

Creating a linkage between housing policy and the kinds of supportive services that can keep seniors in their homes longer can go a long way to making Adams County an attractive alternative for people looking for a place to retire. And it's not just a matter of subsidies to low-income individuals. "A senior with financial resources may navigate these passages more easily than one without, but in many instances, particularly in rural areas, the shelter and care options may simply not exist at any price." The availability of health care and the kind of supportive services that will help them

stay in their retirement “dream home” can be the deciding factor in these choices. So in implementing policies directed at fostering the county as a retirement destination, care must be taken to ensure that the full range of considerations – housing, health care, supportive services and amenities – that will attract these residents be integrated into a coherent whole.

Subsidized/Special-needs Housing

There are 164 subsidized housing units in Adams County, this is one unit for every 114 people. By contrast, in Juneau County there is one unit for every fifty people. Nearly two thirds of these units are designated for the elderly. A third are for families and six are designed for the disabled. Whether this is sufficient is a matter of judgment for the community to decide. What is not open to question is that disabled and low-income citizens often require special housing accommodations. How best to meet these needs should be a focus of any planning process that the County engages in.

All of the project-based units in the county were funded under the U.S. Department of Agriculture – Rural Development (USDA-RD) Section 515 program that supports the construction of multi-family housing for low-income residents. Under the program, which has been in operation in Wisconsin since 1969, USDA underwrites fifty-year mortgages at a one percent interest rate in exchange for an agreement to provide housing for low and very low-income residents.

The other major housing subsidy program is the housing choice voucher program, commonly known as Section 8. Administered locally by the Central Wisconsin Community Action Corporation (CWCAC), eligible families are issued vouchers that they can use to secure housing in the private market. Having found a suitable housing unit, which meets minimum health and safety standards, where the owner has agreed to rent under the program, the eligible family uses its voucher to cover the part

of the rent beyond the portion it pays, usually 30 percent of its income. The landlord receives a subsidy directly for the portion of the Fair Market Rent not paid by the tenant. The voucher-holder signs a lease for a term of, at least, one year and the landlord signs a contract with CWCAC, running concurrently with the lease. Eligibility for the program is generally limited to families with incomes below 50% of the median for the county in which they reside. The program is open to any housing unit where the owner agrees to participate and where the unit satisfies the standards. Congress is considering replacing the current voucher program with a block grant to states. If enacted, eligibility criteria for the program may change.

Beyond the need for subsidized units a number of program alternatives are available to meet the needs of a range of citizens. USDA-RD is focused on rural areas, and thus may be the most promising source of housing-related funding. Under the Government Housing Programs heading in this chapter are many of the programs available to localities.

Waterfront Development

A considerable portion of the new development that has taken place in the county over the last twenty years has been associated with waterfront property able to access Lakes Petenwell & Castle Rock, or the other smaller water bodies in the county, including the three large artificial lakes in the Town of Rome. Though this development has brought new wealth, it has put new demands for service on local governments. Much of the new development within the county has taken place within close proximity of water, which fits a national pattern. Waterfront property has become attractive everywhere.

What distinguishes waterfront development from other similar developments elsewhere is the unique potential for environmental degradation. Shoreland zoning has the goal of protecting water quality, fish and wildlife habitat, recreation, and natural beauty. The

concentration of on-site sewage disposal systems in close proximity to surface water presents two challenges. First, adequate land is necessary to contain a septic system away from all drinking wells. The second challenge is to keep septic effluent contained in a drainage field long enough to break down nitrates and phosphates, so they don't combine with surface

water. High nitrate and phosphate levels in surface waters produce algae blooms. The developing re-awareness of the linkage between surface and groundwater contamination from lakeside development has started a DNR rule revision process for shoreland zoning (NR 115), which will become final by fall 2005.

Housing Inventory & Trends

Adams County has a high level of owner occupancy, nearly twenty percentage points higher than the state. Homeownership levels are lowest in the City of Adams and the Village of Friendship. Nearly forty percent of all housing units in the county are seasonal. Although the number of seasonal dwellings is increasing in some towns – by thirty percent in Easton and twenty percent in Rome – it is decreasing in twelve of the towns. This may be a manifestation of seasonal dwellings being converted to year-round homes. Related to this, the median age in Adams County is considerably higher than the state, and in some towns is over 50.

Existing Housing Stock

Total Housing Units

The total number of housing units in Adams County (17,410) rose by 23 percent, nearly 10 percent more than the state as a whole. But this increase was not spread evenly across the county. Housing units in the Town of Rome increased by 45 percent and in the Town of Monroe increased 47 percent, while the Village of Friendship and the Town of Easton had a net loss of housing units over the decade. The total number of housing units has increased 40 percent since 1990. Table 3-1 shows the trend in housing units.

Table 3-1: Total Housing Units

Minor Civil Division	1990	2000	2010	1990-10 % Change	1990-10 Net Change
Adams	721	862	895	24.1%	174
Big Flats	796	754	1,110	39.4%	314
Colburn	178	154	221	24.2%	43
Dell Prairie	638	741	1,064	66.8%	426
Easton	610	814	778	27.5%	168
Jackson	827	988	1,037	25.4%	210
Leola	159	177	195	22.6%	36
Lincoln	230	202	248	7.8%	18
Monroe	360	440	649	80.3%	289
New Chester	582	653	743	27.7%	161
New Haven	306	308	351	14.7%	45
Preston	844	992	1,033	22.4%	189
Quincy	1,468	1,611	1,736	18.3%	268
Richfield	108	94	141	30.6%	33
Rome	1,679	2,351	3,412	103.2%	1,733
Springville	805	867	1,066	32.4%	261
Strongs Prairie	1,016	966	1,428	40.6%	412
Village of Friendship	300	293	292	-2.7%	-8

City of Adams	791	846	956	20.9%	165
City of Wi. Dells (part)	0	10	55	-	55
Adams County					
Adams County	12,418	14,123	17,410	40.2%	4,992
State	2,055,774	2,321,144	2,641,627	28.5%	585,853

Source: U.S. Census

Building Age

Overall the housing stock in the county, mostly made up of single-family residences and with over a quarter being mobile homes, is much newer than the state as a whole. Adams County has a large percent of new housing stock.

While over 37 percent of the housing in the state was built before 1960, in Adams County only 11 percent are that old. Table 3-2 shows the number and percentage of housing units built during twenty-year periods.

Table 3-2: Housing Units, Year Built

Minor Civil Division	Before 1940	1940-59	1960-79	1980-99	2000-15	Total Units
Adams	95	57	285	367	91	895
Big Flats	16	60	400	422	212	1,110
Colburn	26	23	63	59	50	221
Dell Prairie	68	51	217	491	237	1,064
Easton	47	74	221	286	150	778
Jackson	62	84	225	497	169	1,037
Leola	2	1	64	95	33	195
Lincoln	50	10	43	102	43	248
Monroe	24	30	145	279	171	649
New Chester	77	34	258	266	108	743
New Haven	53	25	85	136	52	351
Preston	28	44	370	472	129	1,033
Quincy	56	65	628	771	216	1,736
Richfield	31	11	29	57	13	141
Rome	9	78	1,006	1,608	711	3,412
Springville	32	27	304	520	183	1,066
Strongs Prairie	119	109	277	531	392	1,428
Village of Friendship	48	69	81	70	24	292
City of Adams	177	128	299	267	85	956
City of Wi. Dells (part)	0	0	29	0	26	55
Adams County	1,020	980	5,019	7,296	3,095	17,410
State	531,451	453,567	649,871	630,806	375,932	2,641,627

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

And while only about 38 percent of housing in the state reported in the 2015 American Community Survey was built in the forty-five twenty years, nearly 60 percent of housing in Adams County was built after 1980. Here again the patterns vary from town to town, with

Town of Rome being the extreme example of new housing; over 67 percent built since 1980 and less than three percent of houses built before 1960. The City of Adams more closely mirrors the state pattern, with 31.9

percent of housing built before 1960, and 36.8 percent built between 1980 and 2015.

Housing Type

The most significant fact about housing types in Adams County is the predominance of what the Census describes as mobile homes; 26.9 percent for the county as against 3.6 percent for the state as a whole. Table 3-3 shows the number and percentage of housing units of each type.

Table 3-3: Housing Type, 2015

Minor Civil Division	Single Family	Duplex	3 to 19 Units	Over 20 Units	Mobile Homes	Other
Adams	649	-	-	-	246	-
Big Flats	566	3	-	-	538	3
Colburn	159	4	-	-	58	-
Dell Prairie	742	37	54	-	223	8
Easton	468	-	-	-	310	-
Jackson	800	6	-	-	231	-
Leola	123	-	-	-	72	-
Lincoln	199	-	-	-	49	-
Monroe	416	7	18	-	208	-
New Chester	453	11	3	-	273	3
New Haven	255	-	12	-	84	-
Preston	693	3	21	-	316	-
Quincy	1,074	2	-	-	657	3
Richfield	96	-	5	-	40	-
Rome	2,694	-	36	-	674	8
Springville	585	-	132	-	346	3
Strongs Prairie	831	-	262	14	321	-
Village of Friendship	208	8	65	-	11	-
City of Adams	604	34	179	117	22	-
City of Wi. Dells (part)	30	-	25	-	-	-
Adams County	11,645	115	812	131	4,679	28
State	1,875	173,234	318,585	179,061	95,128	473

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Although single-family residences are the largest class of housing type at roughly 67 percent, only slightly less than that of the state, they range from 79 percent of total housing units in the Town of Rome to approximately half in the Towns of Big Flats and Springville. In the Town of Big Flats 48.5 percent of all housing units are mobile homes. In the Towns of Springville, New Chester and Quincy 32-38 percent of housing is mobile homes. As noted earlier the Census includes manufactured housing under the heading of mobile homes.

Value Characteristics

Median Home Value

Only the Towns of Colburn and Rome, of all the municipalities in Adams County, were above the median home value for the state. Five other towns (Dell Prairie, Jackson, Lincoln, Monroe, and Springville) are at eighty percent of the state median. Eight towns (Big Flats, Dell Prairie, Easton, Leola, Monroe, Richfield, Rome, and Springville) had median home values rise by more than \$40,000 between 2000 and 2015, and

two towns (Lincoln and Colburn) had median home values double during the fifteen-year period. All towns except Big Flats and New Chester, and the City of Adams and the Village

of Friendship all have median home values at or above 80 percent of the county median. Table 3-4 shows the median value of owner-occupied housing and how it has changed.

Table 3-4: Median Home Value of Owner Occupied Housing

Minor Civil Division	1990	2000	2015	2000-15 % Change	2000-15 Net Change
Adams	\$42,400	\$82,600	\$121,400	47.0%	\$38,800
Big Flats	\$34,600	\$64,500	\$104,500	62.0%	\$40,000
Colburn	\$27,500	\$65,000	\$175,000	169.2%	\$110,000
Dell Prairie	\$57,600	\$96,500	\$161,400	67.3%	\$64,900
Easton	\$38,900	\$66,200	\$109,400	65.3%	\$43,200
Jackson	\$59,000	\$97,600	\$149,700	53.4%	\$52,100
Leola	\$32,500	\$65,000	\$106,800	64.3%	\$41,800
Lincoln	\$35,500	\$54,000	\$151,300	180.2%	\$97,300
Monroe	\$39,500	\$83,500	\$140,000	67.7%	\$56,500
New Chester	\$39,800	\$75,500	\$98,800	30.9%	\$23,300
New Haven	\$43,800	\$91,700	\$130,800	42.6%	\$39,100
Preston	\$52,700	\$86,500	\$124,300	43.7%	\$37,800
Quincy	\$45,400	\$70,300	\$102,200	45.4%	\$31,900
Richfield	\$38,800	\$62,500	\$123,800	98.1%	\$61,300
Rome	\$63,900	\$115,600	\$191,000	65.2%	\$75,400
Springville	\$47,000	\$83,600	\$141,700	69.5%	\$58,100
Strongs Prairie	\$43,900	\$72,500	\$113,400	56.4%	\$40,900
Village of Friendship	\$43,800	\$64,100	\$92,100	43.7%	\$28,000
City of Adams	\$36,100	\$58,200	\$82,800	42.3%	\$24,600
City of Wi. Dells (part)	\$0	\$187,500	-	-	-
Adams County	\$46,500	\$83,600	\$131,600	57.4%	\$48,000
State	\$62,500	\$112,200	\$165,800	47.8%	\$53,600

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Although the median home value in Adams County is roughly eighty percent of the state median, it grew at a faster rate between 2000 and 2015 than that of the state. Rents in Adams County are comparable to rents in surrounding counties, and there seems to be no correlation between the level of rents and the median home values. Neither does there appear to be a connection between high home values and the level of affordability, defined as spending more than 30 of income on housing.

Monthly Owner Costs

There is a general consensus that a family should not have to spend more than thirty percent of its income on housing – this is the

accepted definition of housing affordability. Not surprisingly the Town of Rome, with the highest median home price, has the highest owner costs, both with and without a mortgage, but in terms of the percentage of households that spend more than 30 percent of their income on housing Rome, at 24 percent, is seventeenth among the 20 Adams County municipalities. The highest percentage of households with owner costs more than 30 percent of income are in the Town of Lincoln (39.7%) followed by Richfield (35.4%) and Springville (34.8%). The lowest percentages are in the City of Adams (17.4%), the Town of Colburn (18.9%), and the Town of Rome (24.0%). Overall, 31.3 percent of Adams County homeowners reported spending

over 30 percent of their income on housing, a rate somewhat higher than that for the entire state. Table 3-5 shows the percentage of homeowners and renters who spend more than thirty percent of their income on housing.

There seems to be little connection between the dollar value of housing units and affordability as expressed as a percentage of income. Town of Rome, with the highest home prices is

seventeenth in terms of affordability; Colburn with the second most expensive housing is eighteenth in affordability; while Lincoln, with the highest percentage of the population spending more than 30 percent of their income on housing, has the fourth highest median home value in the county, and Easton, with the second highest affordability indication, has the tenth highest home price.

Table 3-5: Monthly Housing Cost >30% of Income, 2000-2015

Minor Civil Division	2000		2015	
	Owner	Renter	Owner	Renter
Adams	21.3%	14.7%	28.4%	72.5%
Big Flats	15.2%	34.9%	26.9%	46.7%
Colburn	20.0%	25.0%	18.9%	10.7%
Dell Prairie	18.4%	30.4%	31.2%	37.7%
Easton	32.1%	22.6%	30.4%	6.7%
Jackson	22.3%	36.8%	29.2%	20.0%
Leola	17.2%	46.2%	32.6%	30.8%
Lincoln	36.4%	33.3%	39.7%	7.7%
Monroe	22.4%	42.9%	30.6%	33.3%
New Chester	24.0%	36.6%	29.3%	58.3%
New Haven	26.9%	15.0%	27.6%	11.8%
Preston	16.6%	29.7%	26.8%	63.6%
Quincy	21.8%	15.8%	34.0%	75.0%
Richfield	20.0%	0.0%	35.4%	-
Rome	19.0%	53.6%	24.0%	11.0%
Springville	16.9%	21.7%	34.8%	38.4%
Strongs Prairie	27.8%	24.0%	32.4%	9.0%
Village of Friendship	17.3%	42.3%	25.4%	42.5%
City of Adams	17.7%	32.9%	17.4%	42.3%
City of Wi. Dells (part)	50.0%	-	0.0%	-
Adams County	20.6%	31.3%	31.3%	34.9%
State	7.0%	32.3%	28.4%	44.2%

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

According to the 2015 American Community Survey, affordability problems were not evenly distributed through the county. Less than 10 percent of renters in the Towns of Easton, Lincoln, and Strongs Prairie reported spending more than 30 percent of their income on housing. By contrast 75 percent of renters in the Town of Quincy and over 72 percent in the Town of Adams said they spent over 30 percent of their income on housing.

Occupancy Characteristics

Owner Occupied

Homeownership is about fifteen percent higher in Adams County than in the state as a whole. At over 83 percent in 2010 this rate has remained relatively stable going as far back as 1960 (when the rate was 84 percent). This is fairly typical of rural areas, where there are few rental units. The Town of Rome, with 94 percent owner-occupancy, has the highest level. Leola, with 81 percent, has the lowest owner-occupancy of any town, as well as the fastest rate of owner occupancy decline of any town. The levels of owner-occupancy are lowest in the City of Adams and the Village of Friendship (and the portion of the City of Wisconsin Dells within Adams County), which are lower than the state levels and have gone down in the last decade. Table 3-6 shows the percentage of owner occupied units and how it has changed.

Table 3-6: Owner Occupancy

Minor Civil Division	1990	2000	2010	1990-10 % Change
Adams	80.2%	85.5%	84.3%	4.1%
Big Flats	83.0%	87.1%	89.0%	6.0%
Colburn	66.0%	76.5%	86.2%	20.2%
Dell Prairie	84.8%	87.5%	85.8%	1.0%
Easton	80.90%	83.8%	84.3%	3.4%
Jackson	89.9%	94.2%	89.0%	-0.9%
Leola	88.9%	87.7%	81.1%	-7.8%
Lincoln	81.6%	85.2%	92.2%	10.6%
Monroe	88.2%	91.5%	88.6%	0.4%
New Chester	80.5%	88.3%	86.9%	6.4%
New Haven	82.8%	88.1%	87.1%	4.3%
Preston	82.6%	90.4%	85.9%	3.3%
Quincy	87.4%	91.0%	87.8%	0.4%
Richfield	90.0%	96.1%	85.9%	-4.1%
Rome	91.7%	95.3%	93.5%	1.8%
Springville	84.1%	88.3%	85.9%	1.8%
Strongs Prairie	87.8%	85.1%	87.9%	0.1%
Village of Friendship	68.4%	59.1%	63.7%	-4.7%
City of Adams	60.2%	59.5%	49.7%	-10.5%
City of Wisconsin Dells (part)	-	100.0%	54.8%	-
Adams County	81.4%	85.4%	83.2%	1.8%
State	66.7%	68.4%	68.1%	1.4%

Source: U.S. Census

Vacancy

The vacancy rate in Adams County (6.0%) closely mirrors the rate for the entire state (3.8%). The highest vacancy rate in 2010 is 13.3

percent in the Village of Friendship and 7.9% in the City of Adams. Table 3-7 displays the vacancy rates for 1990, 2000 and 2010, and the change over that time period.

Table 3-7: Vacancy Rates

Minor Civil Division	1990	2000	2010	1990-10 % Change
Adams	4.9%	2.7%	5.8%	0.9%
Big Flats	3.9%	3.1%	5.2%	1.3%
Colburn	1.1%	0.0%	4.1%	3.0%
Dell Prairie	6.9%	3.8%	6.2%	-0.7%
Easton	6.1%	3.4%	8.7%	2.6%
Jackson	2.5%	3.5%	3.6%	1.1%
Leola	4.4%	6.8%	6.3%	1.9%
Lincoln	13.0%	4.0%	3.2%	-9.8%
Monroe	4.2%	1.8%	4.0%	-0.2%
New Chester	3.6%	1.7%	5.0%	1.4%
New Haven	2.6%	3.2%	3.7%	1.1%
Preston	3.6%	2.7%	5.9%	2.3%

Quincy	2.7%	3.4%	4.9%	2.2%
Richfield	3.7%	0.0%	8.2%	4.5%
Rome	2.7%	2.0%	4.5%	1.8%
Springville	2.5%	2.7%	6.3%	3.8%
Strongs Prairie	4.1%	4.7%	11.1%	7.0%
Village of Friendship	8.3%	7.2%	13.3%	5.0%
City of Adams	5.3%	6.1%	7.9%	2.6%
City of Wisconsin Dells (part)	-	0.0%	4.3%	-
Adams County				
Adams County	4.0%	3.2%	6.0%	2.0%
State	4.1%	4.1%	5.8%	1.7%

Source: U.S. Census

In 1990 the highest rate was in the Town of Lincoln. Over the next two decades this rate declined by 10 percent. During the 1990s and 2000s the biggest increase in vacancy came in the Town of Strongs Prairie and the Village of Friendship. The Town of Richfield had the third highest rate of increase.

Seasonal Units

There are over 7,700 seasonal housing units in the County, up from 5,800 in 2000. The trend in seasonal dwellings in Adams County also mirrors the state; both rose by about 30% between 1990 and 2010. *Table 3-8* displays seasonal housing units.

Table 3-8: Seasonal Housing Units

Minor Civil Division	1990	2000	2010	1990-10 % Change	1990-10 Net Change
Adams	231	288	261	13.0%	30
Big Flats	460	337	599	30.2%	139
Colburn	129	69	100	-22.5%	-29
Dell Prairie	192	167	249	29.7%	57
Easton	233	297	312	33.9%	79
Jackson	539	537	595	10.4%	56
Leola	53	59	82	54.7%	29
Lincoln	75	72	82	9.3%	7
Monroe	209	243	350	67.5%	141
New Chester	294	275	262	-10.9%	-32
New Haven	95	45	101	6.3%	6
Preston	388	401	473	21.9%	85
Quincy	1,000	992	1,050	5.0%	50
Richfield	44	43	56	27.3%	12
Rome	936	1,125	1,917	104.8%	981
Springville	457	355	460	0.7%	981
Strongs Prairie	574	423	690	20.2%	116
Village of Friendship	25	18	24	-4.0%	-7
City of Adams	12	23	26	116.7%	14
City of Wisconsin Dells (part)	0	0	35	-	35
Adams County					
Adams County	5,946	5,769	7,724	29.9%	1,778
State	150,280	142,313	193,046	28.5%	42,766

Source: U.S. Census

Seasonal dwelling are a significant part of the housing stock in all the towns, though only eight percent of housing in Friendship and three percent in the City of Adams. Since the 1990s the greatest number of seasonal dwelling was added in Town of Rome, which also has the largest number of these units, followed by Quincy and Strong Prairie. The Town of New Chester lost the most seasonal dwellings, an 11 percent loss.

Demand Characteristics

Median Age of Population

Adams County is aging, but all the municipalities are not aging at the same rate. In fact, the Town of New Chester had its median age drop during the 2000s. Table 3-9 shows how the median age has changed.

Table 3-9: Median Age

Minor Civil Division	1990	2000	2010	1990-10 % Change	1990-10 Net Change
Adams	36.8	42.4	48.9	32.9%	12.1
Big Flats	37.9	45.1	52.5	38.5%	14.6
Colburn	48.7	47.8	57.1	17.2%	8.4
Dell Prairie	38.0	41.0	47.1	23.9%	9.1
Easton	38.3	39.1	46.5	21.4%	9.2
Jackson	46.4	46.8	54.0	16.4%	7.6
Leola	36.1	45.3	49.3	36.6%	13.2
Lincoln	42.4	44.9	53.0	25.0%	10.6
Monroe	43.8	52.6	57.6	31.5%	13.8
New Chester	35.5	40.9	37.0	4.2%	1.5
New Haven	43.1	41.5	47.2	9.5%	4.1
Preston	40.7	44.4	52.2	28.3%	11.5
Quincy	55.8	53.8	55.4	-0.7%	-0.4
Richfield	39.2	48.0	54.5	39.0%	15.3
Rome	46.0	51.0	58.5	27.2%	12.5
Springville	43.5	42.7	46.1	6.0%	2.6
Strongs Prairie	44.2	47.5	53.4	20.8%	9.2
Village of Friendship	44.2	39.7	45.6	3.2%	1.4
City of Adams	35.2	38.7	42.2	19.9%	7.0
City of Wisconsin Dells (part)	-	41.8	42.8	-	-
Adams County	40.1	44.5	49.2	22.7%	9.1
State	32.9	36.0	38.5	17.0%	5.6

Source: U.S. Census

No municipality in the county had a median age at the state level (39 years). Four towns (Colburn, Monroe, Quincy, and Rome) had a median age over 55, and only the Town of New Chester had a median age below 40. Three towns (Big Flats, Leola, and Richfield) had their median age rise by over a third since 1990. The smallest rise in median age (3%) was in the

Village of Friendship. During this period the median age for the county rose by nine percent.

Persons per Household

Except for the Town of Springville, household size declined in every municipality in the county during the 1990s. This mirrors a trend in the state and the nation. The rate of decline for the county was slightly higher than for the

state. The greatest decline (24.8%) was in the Town of Richfield, followed by Colburn, Monroe, Strongs Prairie and Lincoln.

Table 3-10 shows the average number of persons per household.

Table 3-10: Persons Per Household					
Minor Civil Division	1990	2000	2010	1990-10 % Change	1990-10 Net Change
Adams	2.6	2.3	2.3	-11.5%	-0.3
Big Flats	2.5	2.4	2.3	-8.4%	-0.2
Colburn	2.6	2.2	2.1	-21.2%	-0.6
Dell Prairie	2.6	2.5	2.5	-5.8%	-0.2
Easton	2.5	2.5	2.4	-5.2%	-0.1
Jackson	2.4	2.3	2.2	-10.0%	-0.2
Leola	2.6	2.5	2.4	-6.5%	-0.2
Lincoln	2.6	2.4	2.3	-11.9%	-0.3
Monroe	2.3	2.2	2.0	-13.9%	-0.3
New Chester	2.6	2.3	2.3	-11.2%	-0.3
New Haven	2.6	2.5	2.5	-4.6%	-0.1
Preston	2.5	2.4	2.3	-10.0%	-0.3
Quincy	2.2	2.1	2.0	-7.7%	-0.2
Richfield	2.7	2.3	2.0	-24.8%	-0.7
Rome	2.4	2.3	2.1	-11.7%	-0.3
Springville	2.3	2.4	2.5	6.5%	0.2
Strongs Prairie	2.5	2.2	2.2	-13.2%	-0.3
Village of Friendship	2.4	2.3	2.3	-4.6%	-0.1
City of Adams	2.3	2.3	2.2	-4.3%	-0.1
City of Wisconsin Dells (part)	-	2.1	2.0	-	-
Adams County					
Adams County	2.4	2.3	2.2	-6.7%	-0.2
State					
State	2.6	2.5	2.4	-6.5%	-0.2

Source: U.S. Census

Government Housing Programs

The Federal Low Income Housing Tax Credit (LIHTC) is administered by Wisconsin Housing and Economic Development Authority. Investors who allocate a number of units as affordable to low-income families for a certain period (usually 15 years) are allowed to take a credit on their income tax. There are 24 housing units that utilize the LIHTC in the county.

U.S. Department of Housing and Urban Development Section 8 Housing Choice Vouchers are administered locally by the Central Wisconsin Community Action Corporation (CWCAC). Eligible

families are issued vouchers that they can use to secure housing in the private market. Having found a suitable housing unit, which meets minimum health and safety standards, where the owner has agreed to rent under the program, the eligible family uses its voucher to cover the part of the rent beyond the portion it pays, usually 30 percent of its income. The landlord receives a subsidy directly for the portion of the Fair Market Rent not paid by the tenant. The voucher-holder signs a lease for a term of, at least, one year and the landlord signs a contract with CWCAC, running concurrently with the lease. Eligibility for the program is generally limited to families with incomes below 50% of the median for the county in

which they reside. The program is open to any housing unit where the owner agrees to participate and where the unit satisfies the standards. Congress is considering replacing the current voucher program with a block grant to states. If enacted, eligibility criteria for the program may change.

U.S. Department of Agriculture – Rural Development (USDA-RD) is focused on rural areas, and thus may be the most promising source of housing-related funding. Below is a partial listing of programs available to localities:

- Section 502 Homeownership Direct Loan program of the Rural Health Service (RHS) provides loans to help low-income households purchase and prepare sites or purchase, build, repair, renovate, or relocate homes.
- Section 502 Mutual Self-Help Housing Loans are designed to help very-low-income households construct their own homes. Targeted families include those who cannot buy affordable housing through conventional means. Participating families perform approximately 65 percent of the construction under qualified supervision.
- Section 504 Very-Low-Income Housing Repair program, provides loans and grants to low-income homeowners to repair, improve, or modernize their homes. Improvements must make the homes more safe and sanitary or remove health or safety hazards.
- Section 515 Multi-Family Housing Loan program supports the construction of multi-family housing for low-income residents. Under the program, which has been in operation in Wisconsin since 1969, USDA underwrites fifty-year mortgages at a one percent interest rate in exchange for an agreement to provide housing for low and very low-income residents.
- Section 521 Rural Rental Assistance program provides an additional subsidy for households with incomes too low to pay RHS-subsidized rents.

- Section 533 Rural Housing Preservation Grants are designed to assist sponsoring organizations in the repair or rehabilitation of low-income or very-low-income housing. Assistance is available for landlords or members of a cooperative.

The above programs are all available through USDA-RD to those who meet the income requirements. There are also programs through the Department of Housing and Urban Development (HUD):

- The HUD Self-Help Homeownership Opportunity Program finances land acquisition and site development associated with self-help housing for low-income families. Loans are made to the nonprofit sponsors of development projects and are interest-free. Portions of the loans are forgiven if promised units of housing are completed within a given period.
- The HOME Investment Partnership Program aims to encourage the production and rehabilitation of affordable housing. HOME funds may be used for rental assistance, assistance to homebuyers, new construction, rehabilitation, or acquisition of rental housing.
- The Low-Income Housing Tax Credit (LIHTC) aims to encourage the production and rehabilitation of affordable housing. It provides an incentive for private entities to develop affordable housing. The credit reduces the federal taxes owed by an individual or corporation for an investment made in low-income rental housing. The amount of the tax deduction is tied to the proportion of low-income residents in the housing produced. The credit is paid out over 15 years to investors in the housing project.
- The Small Cities Development Block Grant (CDBG) program is the rural component of HUD's Community Development Block Grant program, which is administered by state agencies. The state CDBG program provides assistance for the development of affordable housing and economic development efforts targeted to low- and moderate-income people.

The Central Housing Region, funded by the Community Development Block Grant Program serves several counties, including Adams County. The Central Region program provides

no-interest, deferred payment home repairs for low and moderate income occupants. The program is currently managed by the Juneau County Housing Authority.

Goals, Objectives & Policies

Housing Goals

- 1) Encourage an adequate supply of affordable housing for individuals of all income levels throughout the County.
- 2) Discourage residential development in unsuitable areas.
- 3) Allow adequate affordable housing for all individuals consistent with the rural character of the County.
- 4) Encourage neighborhood designs that support a range of transportation choices, if applicable.

Housing Objectives

- 1) *Multi-family dwellings and subdivision facilities should be located to coincide with major throughways.*
- 2) *Retain single-family residences as the preferred type of housing supply in rural areas*
- 3) *Encourage local land use controls and permitting procedures that allow affordable housing opportunities.*
- 4) *Promote appropriate public & private sector development of senior and special needs housing within the County.*

Housing Policies

- 1) *Restrict the location of new development in areas that are shown to be unsuitable for specific uses due to septic limitations, flood hazard, groundwater pollution, highway access problems, etc.*
- 2) *Direct new or expanded agricultural development away from existing residential or commercial buildings.*
- 3) *In the event that a manufactured home does not utilize a perimeter load-bearing foundation, any space between ground level and siding should be enclosed with permanent, non-load bearing concrete or masonry having a foundation-like appearance.*
- 4) *Mobile home, manufactured before 1976, which have been allowed to deteriorate or have taken on an unsightly appearance should be removed and replaced with housing units that meet the requirements of the current regulations.*
- 5) *Steer more intensive residential development such as two-family, multi-family and senior housing to the Village of Friendship or City of Adams where the utilities and services exist to accommodate the development.*
- 6) *Direct residential development away from existing agricultural uses and buildings to avoid conflicts.*

Chapter Four

Utilities & Community Facilities

Background

This chapter reviews the various utilities and community facilities in the County, including: solid waste disposal, on-site wastewater recycling facilities, parks, telecommunications facilities, transmission lines, cemeteries, health care facilities, child care facilities and other public facilities, such as police, fire and rescue facilities, libraries, schools and other government facilities.

The chapter is comprised of three basic sections: these are background; inventory & trends; and goals, objectives & policies. There is also a discussion of utility and community facility issues.

Previous Planning Efforts

Adams County Comprehensive Plan

The existing Adams County plan was adopted in 2006. It was partially funded by the State of Wisconsin Comprehensive Planning grant program. The plan was prepared in conjunction with all but one of the towns as well as the city and village. The document is laid out following the nine chapters identified in the comprehensive plan law, including utilities and community facilities.

Adams County All-Hazard Mitigation Plan

This document was adopted in 2013 and is required for local governments to be eligible for certain disaster mitigation programs. The report looks at general conditions in Adams County, including population, transportation, land use and economics. A detailed description of the county's wetlands, floodplains and water bodies sets the stage for subsequent discussions of flooding events. An inventory of utilities, community facilities and emergency services

form the background for understanding how the County might respond to a disaster. Risk assessment is at the heart of the All-Hazards Mitigation program. In order to mitigate the risks, it's necessary to assess their relative importance.. Examples of hazards include floods, tornadoes, winter storms, drought, fire, and hazardous materials accidents. The likelihood of any given hazard occurring is estimated based upon historical data and the impact of these hazards is evaluated. The plan seeks to recommend how County government should respond to such occurrences and suggests mitigation measures to reduce the risk caused by identified hazards.

Adams County Outdoor Recreation Plan

This Plan was adopted in 2016 and contains an extensive inventory of outdoor and recreational resources in the county, including parks, geological and historic sites, wildlife and natural areas, and trails. The Plan also looks at open space resources, many of which are privately owned, such as woodlands and golf courses. The Plan concludes with a needs assessment of the outdoor recreation resources within the county. One of the themes that emerges from the Plan is the changing demand for recreational facilities that is taking place in the county and throughout the state. Trails for hiking and biking, and for such activities as ATV-riding offer an opportunity and a challenge for growing recreational facilities within the county.

Statewide Comprehensive Outdoor Recreation Plan

To help with planning for outdoor recreation, the WDNR updates the Statewide Comprehensive Outdoor Recreation Plan (SCORP) every five years. The purpose of the

SCORP is to offer a sourcebook and overall guide for providers of recreational activities/facilities. The SCORP identifies a number of issues such as 1) the changing demands on recreational resources, 2) how new recreational activities compete for the same limited recreation resources as the traditional ones, and 3) the effect of surrounding land uses on recreational areas. According to a statewide survey, over ninety percent of respondents indicated that walking for pleasure was their most common recreational activity. Hiking, bicycling, and nature study/bird watching are enjoyed by over half of the survey participants. These results emphasize the importance of planning recreational trails.

Rural Areas and the Internet

Although dated, this report is based on survey data collected by the Pew Internet & American Life Project. It seeks to provide a portrait of how the Internet has impacted rural areas in contrast to suburban and urban areas. Many of the differences identified conform to the demographic profiles of these urban, suburban and rural areas. Populations in rural areas generally are older, have lower incomes, and a lower degree of education than their urban and suburban counterparts. These are characteristics that generally correlate to lower rates of Internet usage. Therefore, lower rates of Internet usage in rural areas may simply be a reflection of demographic differences in rural areas.

A more substantive difference between rural and urban areas may be found in Internet access. The report finds that nearly thirty percent of rural residents said they had access to only one local ISP compared to less than ten percent in urban and suburban areas. A quarter of rural residents said they lacked broadband access while only five percent of urban residents and eleven percent nationally lacked broadband access. Surprisingly, eight percent of rural users did not have Internet access at their home or workplace and needed to use other places like libraries or cyber-cafes to gain access.

American Transmission Company: 10 Year Transmission System Assessment

The American Transmission Company manages transmission infrastructure in the state. New substations are planned for Saratoga in Wood County, Coloma in Waushara County, and at the Kilbourn Dam in Sauk County. An upgrade of the transmission line from Kilbourn to Kirkwood is also planned. The Badger Coulee project is currently underway. Although it does not cross Adams County, it does pass just south of Wisconsin Dells.

Issues

Groundwater Protection

Virtually every Adams County resident depends on groundwater for drinking water. A combination of factors makes the county's groundwater both abundant and vulnerable to contamination at the same time. The glacial geology of Adams County, mostly related to Glacial Lake Wisconsin, has produced high water tables and extremely permeable soils. Care must be taken to safeguard the quality of groundwater in the county due to its high level of vulnerability.

One of the major threats to groundwater quality is the large number of septic systems that have reached, or are about to reach, the end of their useful life. A program to replace or update these systems is an important step that could be taken to safeguard the quality of drinking water in the county. As growth continues, more and more on-site sewage disposal systems will be installed and thereby increase the amount of water requiring filtration by the county's sandy soil. Malfunctioning or older septic systems in large numbers can overload this natural filtration system and contaminate the underground drinking water aquifers.

Another threat to groundwater quality and general aesthetics is the disposal of sludge on fields in the northern portion of the county. This waste product is brought via trucks from the nearby paper mills in Wood County. There have been no studies on the long-term effects of

this on the groundwater. There are also related odor issues with this material.

Needs of an Aging Population

Adams County's increasing aging population puts special burdens on the infrastructure in the county, especially the health-care system. As noted in the Housing Chapter, there are special services that can help seniors stay in their homes as they age and to avoid more expensive institutional care. The quality and availability of hospitals, nursing homes, and EMS facilities is crucial to making the county a viable retirement destination while certain kinds of policies address problems that are of particular concern to older residents. Accessibility of public facilities is a consideration not merely to the disabled, but to the entire aging population. For example, curb cuts and handicap accessible ramps make it easier for everyone to get around. Also, the provision of transportation alternatives can open up opportunities for independent living for those who cannot (or choose not to) drive. Social support networks and nutrition programs also provide a fuller and richer life for seniors and special needs populations.

The Adams County Community Center provides information and other resources that will continue to help the area be attractive as a retirement destination. It also acts as a focal point for bringing together different generations and segments of the Adams County community.

Appealing to Nature and Cultural Tourism

There has been recent attention to the effects of the sedentary lifestyle on the health of Americans. Obesity has been described as an epidemic. One of the more obvious prescriptions for this condition is to get out and walk more or ride a bike. The infrastructure to support such a cure is clear: sidewalks or trails, and somewhere to go within walking or biking distance. The low population density and distances between places in rural areas can pose significant obstacles to this kind of activity, but in the built-up areas of the county like the City and Village sidewalks and trails can be more

feasible. Policies that foster walkability are useful. Development of a county-wide trail system would offer county residents an attractive way get their exercise.

Recreational trails provide a benefit that goes beyond health, however. With growth in the popularity of biking as a sport and increasing interest in nature tourism, trail systems are becoming an important visitor attraction for the county. Low cost, outdoor activities that make the most of the county's assets have the potential to open up new markets. Features such as the pictographs at Roche a Cri or the McGowan House Museum offer an alternative to the visitors who tire of the hustle and bustle of the Wisconsin Dells area. A bike and hiking trail from the McGowan House to Roche a Cri, or along the shores of Castle Rock and Petenwell Lakes, could lure visitors to what has been described as "the quiet side of the Dells". Perhaps the greatest single opportunity for nature-based tourism in the county is the Dells of the Wisconsin Natural Area, which stretches along both sides upriver from the City of Wisconsin Dells and recently annexed into the city. It is crucial that Adams County has a seat at the table when DNR and the City make its plans for this very valuable property.

Access to Broadband

Internet access is the key to the information economy. Adams County does not have the broadband access that is necessary to do significant business over the Internet. Telephone service coverage in the county is a patchwork and comes from a number of providers. Although DSL services are available from out-of-county providers in fringe areas near Wisconsin Dells and Wisconsin Rapids, broadband is not available in the City, Village, along the river, or much of central Adams County. Wireless Internet is available through the Marquette-Adams Telephone Coop in the City and the Village. Overall, the County needs a significant upgrade in the service that is available, especially in the lakeshore areas and in some of the rural areas.

Inventory & Trends

Water-related Facilities

Drinking water

The City of Adams and the Village of Friendship provide municipal water supplies for domestic and commercial use. The Oxford Federal Correctional Institution also supplies water but only for its facility. The City of Adams serves about 700 customers and the Village of Friendship serves about 350 customers. The City of Adams maintains four high capacity wells and two large water towers that combined turn-over roughly 400,000 gallons per day. The Village buys water from the City at wholesale rates and receives it through three connections between the two separate municipally owned water distribution systems. The Town of Rome Water Utility also provides a private water supply system to 1,100 customers around Lake Camelot.

Wastewater

A municipal wastewater treatment facility serving the Adams-Friendship area is located on the west side of Friendship along the Little Roche a Cri Creek. A private wastewater treatment facility serves the Easton Lake District. It is located in the Town of Easton along Campbell Creek.

The current City of Adams' wastewater treatment plant was originally built in 1972 with a design capacity of 300,000 gallons per day. The construction of the plant was also accompanied by a considerable amount of new sewer lines to serve the Adams-Friendship area. The plant has a capacity of about 435,000 gallons per day. A wholesale service agreement allocating up to 115,000 gallons per day capacity applies to the Village. The City also provides sewage treatment services to the Northern Bay development in the Town of Strongs Prairie via a 7-mile long pipeline under a special agreement. Under City ordinance, sewer service may be provided only to areas that have been

annexed, with the exception of the Village's agreement to provide service at wholesale rates.

In Adams County, a combination of County and state regulations control the installation and maintenance of privately owned wastewater disposal systems (POWTS). Traditionally on-site disposal systems have relied on drain-fields or mounds that spread effluent over a large area allowing waste to be dispersed without adversely affecting groundwater quality. The success of these systems is dependent on the depth and permeability of the soils in which they are installed.

Soil suitability characteristics in Adams County vary widely for installation of POWTS. A substantial portion of land in the County holds severe limitations for these systems. A severe rating usually indicates that the soils are not desirable for the operation of a soil absorption system because of poor soil permeability, high water tables, periodic flooding, shallow depth to bedrock, and steep slopes. When these conditions prevail, the area is unsuitable for development that utilizes septic tanks for wastewater disposal.

Stormwater

Both the City of Adams and the Village of Friendship have stormwater management systems. The City has an ordinance requiring curb and gutter on all streets constructed or reconstructed in the city. The stormwater system drains to the west of the city, eventually flowing into Klein Creek. There are several retention ponds in the city to serve the properties where they are located: one at the school bus garage and one at the high school. At the high school, baseball fields occupy the land where the pond is located, so obviously it is dry for much of the year. Another pond is located behind the Shopko/Ace shopping center to accommodate runoff from that development. Storm sewers draining directly into Friendship

Lake or Little Roche A Cri Creek serve about forty percent of the Village.

Dams

There are two major hydroelectric dams in the county. The Petenwell Dam on the Wisconsin River is owned and operated by the Wisconsin River Power Company. Construction of this 20,000-kilowatt capacity dam was completed in 1960 and resulted in the creation of the 22,000-acre Petenwell Flowage. The Castle Rock Hydroelectric Plant, also owned by the Wisconsin River Power Company, was built completed in 1951 and created the 13,000-acre Castle Rock Flowage. Three smaller hydroelectric dams also exist in the county. These are: Cottonville, Friendship Lake, and White Creek. All are privately operated.

In all, there are 54 dams in Adams County. Twenty three of these dams are described as large and thirty-one are small. Fifteen of the small dams are in the Town of Leola alone. Three dams in the Town of Rome have created three large lakes: Lake Sherwood (created 1967), Lake Camelot (1969), and Lake Arrowhead (1978). These lakes have become a significant focus for residential development, both seasonal and year-round.

High Capacity Wells

Currently there are 761 wells in Adams County. A high capacity well is a well that has the capacity to withdraw more than 100,000 gallons per day, or a well that, together with all other wells on the same property, has a capacity of more than 100,000 gallons per day. Residential wells and fire protection wells are excluded from the definition of a high capacity well, and their pumping capacities are not included in the calculation of a property's well capacity.

Adams County lies in the Central Sands Region of Wisconsin. The land cover in the Central Sands region is half forest and one quarter agricultural, which is mostly irrigated. In recent years, the number of high capacity wells and reduced water levels in some areas has caused concerns about the potential impacts of

groundwater withdrawals on water resources. Currently there is a study underway examining high capacity wells and their impact on ground water tables.

Solid Waste & Recycling Related Facilities

Adams County operates a sanitary landfill located in Strongs Prairie. The 500 acre facility has a projected lifespan of approximately 30 years. At one time there were 13 landfills operated by the Towns in Adams County. Currently, there are 19 transfer sites maintained by the Towns. The County collects garbage in the City of Adams and the Town of Jackson, while the Village of Friendship does its own garbage pick-up. Until recently, collection was done through private companies, but these firms could not compete with the County's own bid. Private companies still do trash collections at some industrial operations. The County Landfill is considered to be a full "Materials Recovery Facility" and is the responsible unit for waste-related matters. The landfill has capacity remaining.

Adams County and City of Adams are the two designated responsible recycling units in the county, as defined by the DNR. Currently, the county operates a recycling center at the county landfill, and all of the towns in the county locate recycling dumpsters at their transfer sites. There is sufficient land area for the future expansion of the county recycling facility.

Public Works

Town Halls & Garages

Each town, the Village, and the City have a primary public building to house government functions and other public meetings. Several communities also have other buildings are garages for the storage of road maintenance equipment as well as firefighting equipment. Many of the Town Halls are also where solid waste transfer sites are located. See **Map 5 – Utilities & Community Facilities**.

Drainage Districts

Laws dealing with the drainage of agricultural lands predate the founding of the State - the earliest laws dating from 1839. There was considerable activity in drained land agriculture during the 1890s and early 1900s in Wisconsin. Between 1900 and 1905, twelve drainage districts were established, draining 320,000 acres. Chapter 88 of the Wisconsin Statutes governs the operation of these districts.

In 1977, drainage ditches were exempted from being considered navigable water and are not subject to the Public Trust Doctrine (ss 30.10(4)(c)) unless they had a proven stream history. The maintenance and dredging of these ditches within an active Drainage District is exempt from the requirement for a permit from DNR. Part of the maintenance of these ditches involves removal of woody plants from an area twenty feet on either side.

There are three Drainage Districts in Adams County. One covers almost all of the Town of Leola, another in the northern half of the Town of Colburn, and the third in Widow Green in the Town of Jackson. These Districts have the power to levy assessments on property in the district based upon the benefit to the property. The Colburn District extends into Waushara County while the Leola District extends into both Waushara and Portage Counties. Although not a part of County government, the Adams County Drainage Board governs all three districts.

Cemeteries

Cemeteries serve as unique and tangible links to our past. There are thirty-five cemeteries located throughout the county. Nearly every town, the city and the village have cemeteries located within them. Many of the existing cemeteries have substantial existing capacity and there are many undeveloped areas throughout the County suitable for new cemeteries. See the Utilities & Community Facilities Map.

Public Safety

Sheriff/Police

The Wisconsin State Patrol, the Adams County Sheriff's Department, the City of Adams Police Department, and the Town of Rome Police Department are the four law enforcement agencies that operate within Adams County. The State Patrol has statewide jurisdiction on all public roads but operates mainly on State and U.S. numbered highways as a matter of general practice. The County Sheriff provides general law enforcement services throughout the County and by contract to the Village of Friendship. The Adams' police force and the Town of Rome's police force serve their respective communities.

Historically, the rural and sparsely settled areas of Adams County have needed minimal police service. However, recent development and increasing population has multiplied law enforcement problems and increased demand for law enforcement services. Adams County has recognized this demand and added manpower and increased law enforcement expenditures.

Fire

Fire protection services in Adams County are provided by volunteer fire departments in a complex pattern with mutual aid assistance agreements between Towns. There are six fire departments located in Adams County that serve the local units of government: Rome, Big Flats, Quincy, Adams, Friendship and New Chester. Five municipalities rely on the Adams County Fire District while five municipalities along the eastern and southern borders rely on fire departments located outside the county - Coloma, Hancock, Plainfield, Oxford and Kilbourn.

The City of Adams, and much of the central and western area of the County, receives service from the Adams Volunteer Fire District. The department maintains a station in the City of Adams and one in Arkdale. The Adams Fire Department covers 195 square mile area,

including all of the City of Adams, the Village of Friendship and the Towns of Adams, Strongs Prairie, Preston, and Springville north of WI-82. This area has an ISO rating of seven (the level of fire protection on a one-to-ten scale where one is the highest rating) for properties within five miles of a station. For the areas of the City where fire hydrants exist, the ISO rating is four. A good ISO rating can have a positive impact on fire insurance premiums.

The Adams County Fire District and the various rural fire departments all continue to grow as needed based on the demands of the communities they serve. All existing departments are meeting the needs in the county. Each of these volunteer organizations annually reviews local needs and makes adjustments regarding staffing, equipment and facilities. These departments also coordinate with the County Emergency Management Department for various fire and other hazardous related issues.

In addition, the State of Wisconsin Department of Natural Resources (DNR) maintains a ranger station, located in the City of Adams, responsible for wildland fire suppression throughout the county. The DNR utilizes mutual aid agreements with all of the local and surrounding fire departments. Three fire towers are located in the county.

Prisons and Jails

The Adams County Jail was built in 1996 as an addition to the County Courthouse in Friendship. It handles all prisoners for the County Sheriff's Department as well as those from the City of Adams and the Town of Rome. The jail is administered by a Captain and staffed by 16 full-time jailers. The Oxford Federal Prison in the Town of New Chester houses both maximum- and minimum-security prisoners in separate facilities on the prison grounds. Although the population varies, approximately 1,800 to 2,000 inmates are housed there at any given time.

Emergency Medical Service

There are multiple ambulance service providers in the County. Various service agreements are in place to provide ambulance service in the County. These arrangements change regularly. Currently, Waushara County covers the Town of Leola. Marquette County ambulance covers the Town of Jackson and part of the Town New Chester. Nekoosa provides emergency service to the Town of Rome through their fire department. Wisconsin Dells provides their municipally owned service to the Towns of Dell Prairie, Springville, and New Haven.

Health Care

The northern Towns of Rome, Leola, and Monroe are served by Riverview Hospital in Wisconsin Rapids; while most of the County is served by Gundersen Memorial Hospital in Friendship, which is a "critical access" facility. Long-term care facilities are provided at Villa Pines Nursing Home.

Education, Recreation & Culture

Libraries

The Adams County Library serves the entire County. Other parts of the county may also access public libraries in Wisconsin Rapids, Wisconsin Dells, and other nearby communities. The library is located in the Adams County Community Center space and contains over 18,000 books, reference works, CDs, videos, and cassettes. County officials anticipate that usage of the library will increase in the new location. The library is co-located with the Senior Center and provides a built in patron base for the library. The library also participates in the Inter-Library Loan Program. The Town of Rome has a 2,500 square-foot library that includes a children's area, an adult reading area, fully equipped computer stations, and a computerized card catalog. The Town of Rome has also extended services to adjoining Towns.

Parks, Trails & Natural Areas

Adams County provides a wide range of recreational activities on a year-round basis. The increase in tourism and rapid expansion of seasonal and second home construction in Adams County underscores the importance of recreation to the area. Artificial lake developments such as Lake Camelot, Lake Sherwood, and Lake Arrowhead have radically increased the number of seasonal residents in the County. The County has approximately 411 acres of State Parks, 7,938 acres of wildlife and natural conservancy areas, and 46,159 acres of county land for recreation. Most of the 54,508 acres of public land provides a valuable wildlife habitat as well as outdoor recreation.

Public recreation areas in the county include Roche-A-Cri State Park, seven state waysides, and six County parks. Both Petenwell and Castle Rock County Parks have seen recent improvements. The number of campgrounds has increased along with tourists seeking recreational activities like fishing, swimming, boating, hunting, snowmobiling, and skiing. Petenwell and Castle Rock Lakes, the second and fifth largest lakes in the state, offer especially rich opportunities for boating and water sports.

The City of Adams and Village of Friendship also provide neighborhood and community level recreational facilities for their residents. These facilities provide opportunities for active and passive recreation experiences. In addition to the Roche a Cri State Park, there are several other state-owned recreational and natural areas in the county, including four state natural areas and three wildlife areas that function as public hunting grounds and state-sponsored fishery areas.

There are several developed trails in the county, mostly within existing parks. The Van Kuren Trail in the Town of Monroe is on Wisconsin River Power Company land. A proposed national trail system known as the Ice Age National Scenic Trail would pass along the glacial terminal moraine in southeastern Adams

County if completed. There is some discussion related to expanding the trail system in the County. The Adams County Bike and Plan is discussed in the Transportation Chapter.

Schools

Adams County is served by five school districts. The Town of Rome is part of the Nekoosa School District. The Town of Leola sends students to the Tri-County District in Plainfield. Parts of the Towns of Colburn, New Chester and Jackson are included in the Westfield District. All of Dell Prairie and New Haven along with parts of Springville and Jackson are in the Wisconsin Dells School District. The remainder of the county is served by the Adams-Friendship School District. The district has four schools. In the City of Adams there is a high school, a middle school and a elementary schools in Adams and Grand Marsh.

Museums

The only functioning museum in the County is the McGowan House in Friendship, which also houses the Adams County Historical Society. Built in 1889 by Dr. Washington McGowan, the home served as a McGowan's office where he practiced medicine for several years until his death in 1893. His descendants lived in the house until it was purchased by the Wisconsin Department of Transportation and moved as part of a Main Street improvement project. It was then sold to the Historical Society and an historical museum was developed. The museum is open to the public during summer weekends and houses an archive of historic documents and artifacts. Located at the County Fairgrounds is the Old Farmers Antiques Museum. This is a collection of historical farming equipment.

Day Care

The state maintains a list of child-care providers available to Adams County residents. The majority of the providers are located in Adams-Friendship.

Energy & Telecommunication

Electric

The Adams-Columbia Electric Cooperative serves the largest part of the County. The Waushara Electric Cooperative serves part of the northeast quarter of the County while Alliant Energy serves the Adams-Friendship area and parts of the Towns of Dell Prairie and Leola. Pioneer Power and Light serves most of New Chester. There are several high-voltage transmission lines traversing the County. One line runs along the Wisconsin River to the north from the crossing at WI-21; one is located near the River from the Wisconsin Dells to the Town of Springville; and another cuts across the center of the County from the Town of Quincy eastward to the Town of Lincoln.

Natural Gas

The Wisconsin Gas Company distributes natural gas in the Adams-Friendship area and at the Federal Correctional Institution at Brooks. The remainder of the community depends upon bottled gas from local supplies. An oil pipeline crosses the county diagonally from the Town of Rome to the Town of New Chester.

Telecommunication

There are four telephone providers in the County – Wood County, Union, GTE North (Verizon), and Marquette-Adams. Internet Dial-up service is available throughout the County. Some areas on the edge of the County have Integrated Service Digital Network (ISDN), an international digital standard for providing more bandwidth to consumers by

adding a third data channel to standard copper twisted pair cables that can increase bandwidth to 144Kbps. Digital subscriber line (DSL) makes efficient use of copper wire using special equipment to provide broadband access on existing phone lines. Delivery of DSL service is dependent on the length of the customer's loop from the central office (depending on the technology used this can range from 10,000 to 18,000 feet). This distance can be extended by installation of an access multiplexer at an intervening point along the line. There are several cell towers located in Adams County.

Wireless, broadband service is provided in the Adams-Friendship area by the Marquette-Adams Telephone Cooperative. This service is available throughout the urbanized area from an antenna located in the City industrial park on a line-of-sight basis. A company operating out of Sauk County, offers dial-up service with a data compression system known as Slipstream Accelerator. This compression system can significantly increase the capacity of dial-up connections. Dial-up connections are only available in the fast-growing lakefront areas in the western part of the County. Wireless telephone coverage is intermittent throughout the County. Cable TV service is available from Charter Communications in both the City and Village as well as in the Town of Rome from Wisconsin Rapids and in Dell Prairie from Wisconsin Dells.

Goals, Objectives and Policies

Utilities & Community Facilities Goals

- 1) Provide adequate infrastructure and public services and an adequate supply of developable land to meet existing and future market demand for a harmonious mix of residential, commercial and industrial uses.

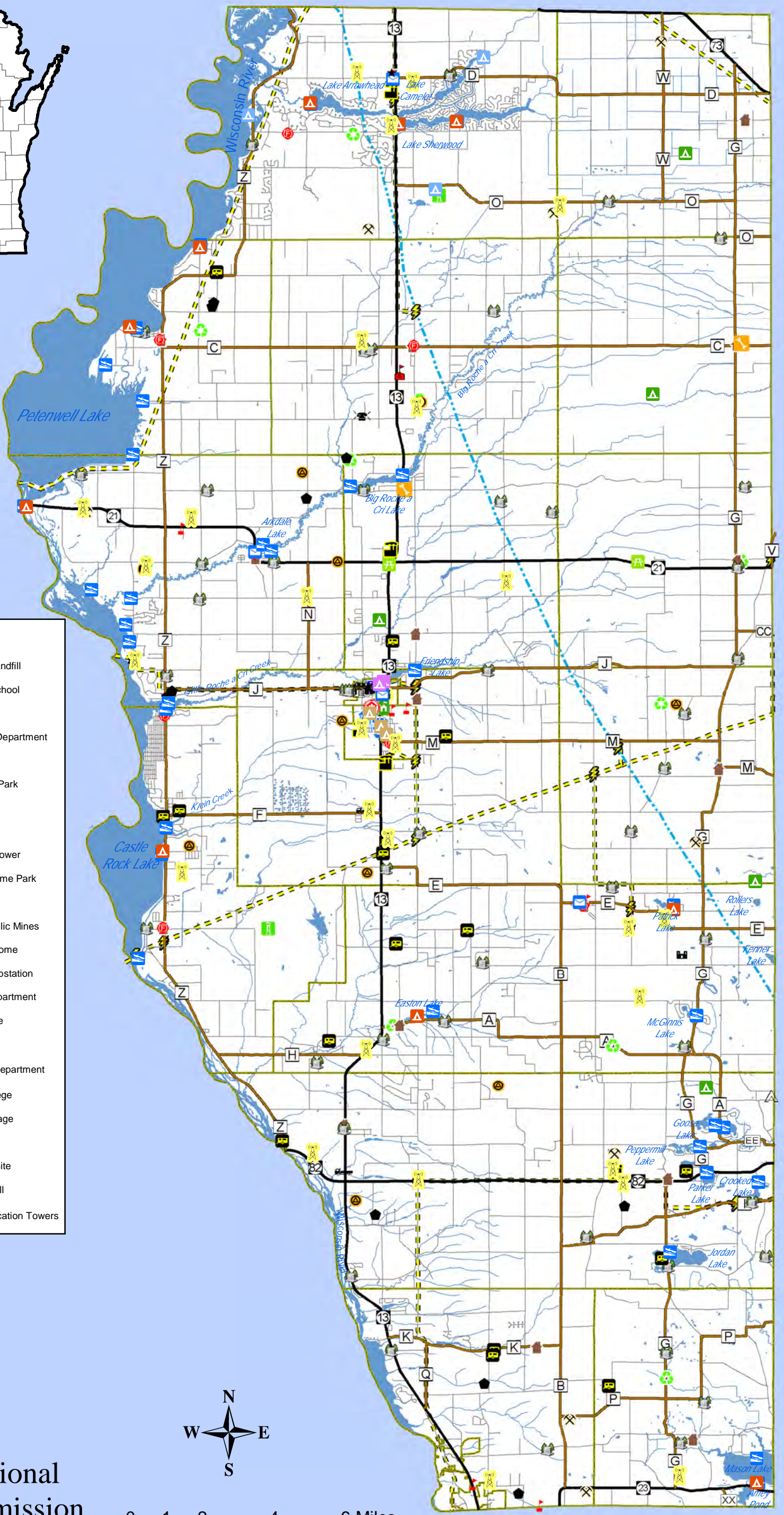
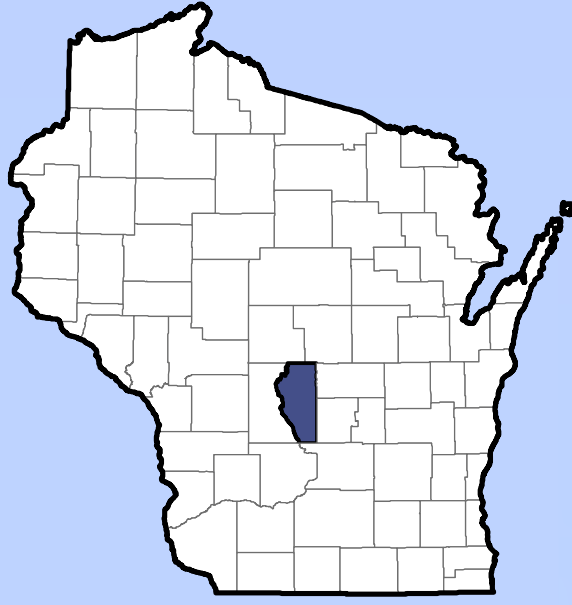
- 2) Protect the quality and availability of groundwater in every part of the County.
- 3) Ensure quality public services, such as schools and libraries, law enforcement, fire and EMS, to all the citizens of Adams County.
- 4) Maximize the opportunities for residents and visitors to enjoy the natural resources within the county through development and/or maintenance of parks, trails and wildlife areas.

Utilities & Community Facilities Objectives

- 1) *Direct more intensive development to areas where a full array of utilities, community facilities and public services are available*
- 2) *Monitor and control the effects of high-volume wells, private on-site waste disposal systems, and solid waste disposal on the quality and quantity of groundwater in the county.*
- 3) *Provide for law enforcement, ambulance, volunteer fire and first responder services to residents, whether by the County or by local units of government.*
- 4) *Support high quality educational opportunities for all residents.*

Utilities & Community Facilities Policies

- 1) *Encourage more intensive rural development so that community facilities and services can be provided in a cost-effective manner.*
- 2) *Make more extensive use of the Wisconsin Fund to upgrade failing on-site disposal systems on qualifying properties*
- 3) *Assure public health and groundwater quality when permitting and monitoring private on-site wastewater and wells.*
- 4) *Encourage recycling by residents.*
- 5) *Ensure that schools, public safety, health care, and other community facilities are of the highest quality without placing undue financial burden on county taxpayers.*
- 6) *Encourage land acquisition and development strategies for parks and wildlife areas, boat launch and related facilities, and an outdoor education center, as well as other items listed in the Adams County Outdoor Recreation Plan.*
- 7) *Encourage the development of a comprehensive county-wide trail plan that includes facilities for hikers, bikers, ATVs, as well as the disabled and elderly, and that ties together attractions and natural and cultural resources throughout the county, including the Ice Age National Scenic Trail.*
- 8) *Encourage methods of increasing broadband Internet access to residents.*

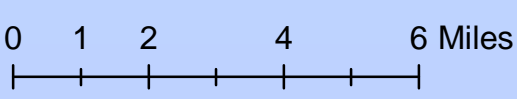
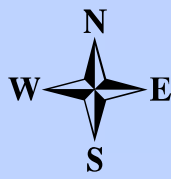


Legend

State Highways	Former Landfill
County Highways	Former School
Local Roads	Heli-Pad
Minor Civil Divisions	Highway Department
Water	Hospitals
Substations	Industrial Park
Pipeline	Landfill
High Voltage Powerline	Library
Picnic Areas	Lookout Tower
Boat Launches	Mobile Home Park
State Parks	Museum
County Parks	Non-Metallic Mines
Town Parks	Nursing Home
City Parks	Phone Substation
Village Parks	Police Department
Assisted Living	Post Office
Boy Scout Summer Camp	Schools
Cemeteries	Sheriff's Department
City Hall	Tech College
Correctional Facility	Town Garage
Courthouse	Town Hall
DNR Ranger Station	Transfer Site
Emergency Operations Center	Village Hall
Fire Station	Communication Towers

Source: WI DNR, NCWRPC, Adams Co.

This map is neither a legally recorded map nor a survey of the actual boundary of any property depicted. This drawing is a compilation of records, information and data used for reference purposes only. NCWRPC is not responsible for any inaccuracies herein contained.



Chapter Five

Transportation

Background

This is the fifth of nine chapters that comprise the Adams County Comprehensive Plan. This chapter is based on the statutory requirement for a “compilation of objectives, policies, goals, maps and programs to guide the future development of the various modes of transportation, including highways, transit, transportation systems for persons with disabilities, bicycles, walking, railroads, air transportation, trucking and water transportation. The chapter also reviews various state and regional transportation plans.

The chapter is comprised of three basic sections: these are background; inventory & trends; and goals, objectives & policies. There is also a discussion of Transportation Issues.

Previous Studies

Connections 2030

The Wisconsin Department of Transportation (WisDOT) historically has conducted medium to long range planning for the state's transportation system. In addition, separate plans were drafted for various modes like air, rail and waterborne transportation systems.

Connections 2030 is Wisconsin's latest long-range, statewide multimodal transportation plan. It was prepared by WisDOT in 2009. Connections 2030 identifies a series of system-level priority corridors that are critical to Wisconsin's travel patterns and the state's economy. The following priority corridors have been identified with routes through Adams County:

- The Badger State Corridor, connecting Madison and Eau Claire, runs near Adams

County along I-90/94 through the Wisconsin Dells, but also on state trunk highways throughout the County. Rural accommodations for bicycle and pedestrian infrastructure are recommended along STH 21 connecting CTH Z to STH 80 in Necedah.

- The Cranberry Country Corridor, connecting Tomah to Oshkosh, also crosses through Adams County along STH 21.

Regional Livability Plan (RLP), 2015

The 2015 RLP, prepared by the North Central Wisconsin Regional Planning Commission (NCWRPC), addresses issues of livability in the areas of housing, transportation, economic development, and land use. The RLP identifies three major transportation issues

- **Modes of Transportation to Work:** The Region's workforce is extremely dependent on the automobile. In 2012, over 80 percent of the Region's workforce drove alone to work on a daily basis. Another ten percent carpoled, leaving less than ten percent for the non-automobile methods such as walking, biking, and using transit. The average commute time in the South Sub-Region, which includes Adams County, was 25.5 minutes.
- **Age of Drivers in the Region:** The Region is seeing a change in the number of licensed drivers by age groups. Between 2004 and 2013, the region saw a 20 percent decrease in the number of drivers age 17 and age 19. During the same years, the Region had a 20 percent increase in drivers over age 65. These changes mean communities

increasingly need multimodal options for those who are unable or choose not to drive,

- **Transportation Costs:** It is expensive to maintain the transportation infrastructure in the Region. The current reliance on fuel tax and registration fees is inadequate, unstable, and may soon be outmoded. The inability to fund improvements and maintenance on transportation infrastructure will impact the ability to transport goods and provide safe, reliable, and efficient roads. Additionally, transportation accounts for a large portion of the average household's budget, and is greatly affected by housing location. Many low income and fixed income families are unable to afford the cost of owning and maintaining vehicles, thereby limiting employment opportunities.

Adams County Bicycle & Pedestrian Plan, 2013

The Adams County Bicycle and Pedestrian Plan was developed by the NCWRPC with guidance from an advisory group of citizens and oversight provided by the Adams County Highway Committee. Adams County and community leaders alike recognized that bicycle and pedestrian travel are viable forms of transportation in the County. In addition, they understood that there are other important benefits to be had when bicyclists and pedestrian can travel safely and conveniently within and between communities in Adams County.

The existing conditions report found that town roads were often the most suitable for bicycle routes, as they had low traffic volumes and paved surfaces. Off-road bicycle and pedestrian facilities were uncommon in the rural areas of Adams County. The only extensive sidewalk network was in the City of Adams. There are several recreational trails open to the public in some of the state natural and wildlife areas. A proposed bicycle facilities map shows where walking and bicycling facility improvements are needed. A number of facility improvements were recommended, including the following

- Route wayfinding signage
- Bicycle Parking
- Designated Bicycle Routes
- Blind Highway Curve Modifications
- Sidewalk alternatives when appropriate (i.e., paved shoulder)
- Recommendations for crossing railroad tracks when tracks are not perpendicular
- Future bridge construction to accommodate bicycle and pedestrian travel, particularly on State Highways 21 and 82 crossing the Wisconsin River

Issues

A variety of issues were identified during the planning process. Some of these issues were identified in the previous, while others are new.

Maintenance / Improvement of Road System

A major concern is the need to maintain and upgrade the current road system. Funding is critical to this effort. A quality road system is important for economic development, tourism and the overall community.

Roadway Use Conflicts / Capacity

Slow moving agricultural vehicles and equipment are often forced to compete with motor vehicles for use of many public highways in the County, particularly in areas where significant agricultural and residential uses coexist.

Speeding Areas

High-speed traffic was identified as an issue. Areas such as the curve on CTH G near Big Spring and in the Town of Lincoln are a particular concern due the safety issue posed by the geometrics of the road itself, further compounded by excessive speed. Higher traffic speeds may be a factor in the increase in the percentage of fatal crashes in the County.

Bus Service/Transit

Access to bus service has continued to decline over time, especially to places outside the county. The County does provide some services

related to elderly and disabled. Those persons without access to a vehicle are at a disadvantage. One way to address the issue of transportation affordability is the development

of public transit and other alternative means of travel. There is no regular intercity bus service in Adams County.

Inventory & Trends

The transportation system in Adams County is comprised of a road network used by automobiles, trucks, and buses, a rail line with rail yard, a public airport and several private landing strips. In this section the transportation system is described examining the road network, traffic volumes and commuting patterns, network users and finally other modes. See **Map 6 – Transportation**.

Road Network

Adams County's roadway network is comprised of about 1,454 miles of highways and streets connecting communities and their citizens to businesses and recreational activities throughout the County, as well as to major urban centers in relatively close proximity. This is an increase of 18 miles since the last plan inventory of 1,436 miles.

Classifications

These roads are classified in two ways: 1) by jurisdiction and 2) by function. The

jurisdictional classification indicates who owns or is responsible for the roadway. The functional classification identifies the role or function the roadway plays in moving traffic.

Within a jurisdictional framework, the County's roads fall into three major classifications: state (state trunk highways – "STH"), county (county trunk highways – "CTH") and city, village or town streets/roads (local roads). Towns maintain jurisdiction over the greatest mileage of the County's road system with about 76 percent of the total mileage. County trunk highways make up the next largest category with 227 miles for about 16 percent of the system.

Over the last decade, the mileage of state and county roads has remained relatively stable. Since the 2005, only a few miles of roadway has been added to the system and that has been at the local level. **Table 5-1** gives the mileage breakdown for the jurisdictional classification of roads within Adams County.

Table 5-1: Adams County Roadway Miles by Jurisdiction, 2018

Jurisdictional Class	Mileage	Percent of Total
State	93.2	6%
County	226.8	16%
Town	1,103.9	76%
Village	7.7	1%
City	22.6	2%
Total	1,454.1	

Source: WisDOT & NCWRPC

There are no Interstate or U.S. highways in the County. However, Interstate 90/94 from Chicago and Milwaukee to La Crosse and Minneapolis is located near the southwest

corner of the County. Interstate 39 is located in a north-south direction just east of the County. The County does contain portions of five state trunk highways: 13, 21, 23, 73 and 82, with the

two major ones (13 and 21) bisecting the County almost evenly in a north-south and east-west direction. The majority of highways and roads are located according to a one-mile grid pattern with most of the irregularly aligned roads in the southeast corner of the County where lakes are prevalent and the terrain more hilly. STHs 21 and 82 provide the only crossing of the Wisconsin River.

A functional classification system groups streets and highways into classes according to the character of service they provide. The current functional classification system used in

Wisconsin consists of five classifications that are divided into urban and rural categories. Functional classifications are used to determine eligibility for federal aid. For purposes of functional classification, federal regulations define urban as places of 5,000 or more population, so the rural classifications apply throughout Adams County. Some parts of the City of Wisconsin Dells and the Town of Dell Prairie are located within the Wisconsin Dells Urban Area. **Table 5-2** summarizes the rural functional classification system.

Table 5-2: Rural Highway Functional Classification System

Principal Arterials	Serve interstate and interregional trips. These routes generally serve all urban areas greater than 5,000 in population. The rural principal arterials are further subdivided into 1) Interstate highways and 2) other principal arterials.
Minor Arterials	In conjunction with the principal arterials, they serve cities, large communities, and other major traffic generators providing intra-regional and inter-area traffic movements.
Major Collectors	Provide service to moderate-sized communities and other inter-area traffic generators and link those generators to nearby larger population centers or higher function routes.
Minor Collectors	Collect traffic from local roads and provide links to all remaining smaller communities, local important traffic generators, and higher function roads. All developed areas should be within a reasonable distance of a collector road.
Local Roads	Provide access to adjacent land and provide for travel over relatively short distances. All roads not classified as arterials or collectors are local function roads.

Source: WisDOT

The County has four highway routes in the arterial category at this time. STHs 21 and 82 are classified as principal arterial – other, while STHs 13 and 73 are minor arterials. The remaining state highways and much of the

county trunk system are major or minor collectors. **Table 5-3** displays the mileage for each functional classification of roads within Adams County.

Table 5-3: Adams County Roadway Miles by Function, 2017

Functional Class	Mileage	Percent of Total
Arterial	95.1	7%
Collector	242.0	17%
Local Road	1,116.1	77%
Totals	1,453.2	

Source: WisDOT & NCWRPC

The distribution of roads within the functional categories generally falls within current state guidelines except for minor collectors, which are slightly under represented. The guidelines suggest that principal arterials should be between 2 and 4 percent, minor arterials 4 to 8 percent, major collectors 5 to 18 percent, minor collectors 5 to 10 percent and locals 65 to 75 percent of the total system. Arterials make up about 7 percent of the system in Adams County. One reason behind this is the County having more miles of town roads than the average county, particularly when compared to other counties of similar size. Although the County is only slightly outside the guideline range for local roads at 77 percent, WisDOT indicates that most counties should be at 68 to 72 percent, putting Adams on the high side.

Another classification of roads includes the Rustic Road. The Rustic Road program is a state program administered by WisDOT. WisDOT sees this program as a cooperative venture between state and local governments to identify scenic routes for the enjoyment of residents and visitors alike. Roads accepted into the program remain under local jurisdiction. To qualify, roadways must have outstanding natural features such as rugged terrain, native vegetation and wildlife or other cultural or historic qualities that set the road apart. Adams County contains two rustic roads:

- Ember Drive in the Town of Easton and Cottonville Avenue in the Town of Richfield. Rustic Road #14 is a two-mile segment of Ember Drive between CTH A and CTH B with a gravel surface. This thickly forested area supports a multitude of wildlife and wildflowers. The road winds up through a cleft on top of a bluff. A natural spring runs from the top of the bluff down the side of the road to the east.
- Rustic Road #50 is a 4.6-mile segment of Cottonville Avenue from 8th Drive east to 4th Avenue that is unpaved. This

road is locally called the Old State Road because it was laid out by the state, probably in the 1800s. Vistas along this road include native lowland and upland trees, shrubbery and marshes. Wild birds, deer and grouse abound.

Rustic Road designation provides local governments with flexibility to maintain the road in a rustic state as long as safety and drivability are maintained. Rustic Roads may be narrower or have more vegetation in the right-of-way than other roads. Maintenance is at local discretion with no oversight from the state. There are no direct financial incentives (or penalties) from the state in this program, however, WisDOT provides and maintains the Rustic Road signs. Other directional and regulatory signs remain the responsibility of the local unit.

Surface Conditions

Adams County and many of the local units within the County utilize the PASER system developed by the University of Wisconsin Transportation Information Center for measuring the condition of their roadways. PASER stands for Pavement Surface Evaluation and Rating System. Although there are different scales for concrete, asphalt, sealcoated, gravel and unimproved roads, they are generally based on a scale ranging between "1" (very poor condition) to "10" (excellent condition).

The riding surface of the County system is currently in very good condition with the majority (62%) requiring no treatment. About 27% need preventive maintenance such as crack filling or sealcoat, and only 11% of the system miles are candidates for rehabilitation. However, this does not take into account subsurface conditions in Adams County such as wetness, susceptibility to frost action, some shrink-swell problems and low strength substrata, all of which negatively impact the design life of a roadway.

WisDOT now requires all local units of government to submit road condition rating

data every two years as part of the Wisconsin Information System for Local Roads (WISLR). PASER and WISLR are tools that local governments can use to manage pavements for improved decision making in budgeting and maintenance. The Adams County Highway Department uses this information in the development of its long-range highway improvement program, discussed below.

Bridges

Bridges are critical infrastructure to support the road network. A bridge can be defined as a structure having a clear span of more than twenty feet, designed to convey vehicles (and/or pedestrians) over a watercourse, railroad, public or private right-of-way, or any depression. Structures having a clear span of less than twenty feet are generally designated as culverts.

WisDOT maintains bridges in the County along STHs 13, 21 and 82. The Adams County Highway Department maintains 8 bridges on county trunk highways. The Union Pacific Railroad owns the Edgewood Avenue Bridge. Various local governments are responsible for the remainder of the bridges. There are 33 bridges within the County, as illustrated in **Table 5-4**.

WisDOT inspects bridges on state trunk highways on a two-year rotation and requires that local units of government have bridges on roads under their jurisdictions inspected every two years by qualified inspectors. The inspections allow WisDOT to monitor the condition of all bridges and prevent any deterioration of structural integrity that might threaten safety or level of service.

WisDOT is in the process of rebuilding the Highway 82 bridge across the Wisconsin River. The project is expected to be completed in 2019.

Table 5-4: Highway Bridge/Structures Inventory - Adams County, Wisconsin

Bridge ID	Location	Owner	Feature On	Feature Under	Sufficiency (2018)
B-01-002	T Lincoln	County	CTH Z	Big Roche a Cri Creek	98.6
B-01-003	T Preston	Town	13TH LANE	Big Roche a Cri Creek	99.3
B-01-004	T Preston	Town	CZECH RD	Roche a Cri Creek	98.0
B-01-005	T Preston	Town	13TH DR	Carter Creek	91.2
B-01-006	T Big Flats	Town	BROWNDEER LN	Big Roche a Cri Creek	96.1
B-01-007	T Preston	Town	8TH DR	Fordham Creek	97.3
B-01-008	T Preston	Town	8TH DR	Bingham Creek	98.0
B-01-009	T Preston	Town	8TH DR	Little Roche a Cri Creek	100.0
B-01-010	T Preston	Town	COTTONVILLE AVE	Carter Creek	100.0
B-01-012	T Easton	Town	15TH AVE	White Creek	100.0
B-01-013	T Strongs Prairie	State	STH 21	Wisconsin River	64.8
B-01-014	T Colburn	Town	6TH AVE	Buckner Creek	100.0
B-01-015	T Strongs Prairie	Town	18TH AVE	Big Roche a Cri Creek	93.8
B-01-016	T Strongs Prairie	Town	20TH AVE	Big Roche a Cri Creek	100.0
B-01-017	V Friendship	State	STH 13-MAIN ST	Little Roche a Cri Creek	93.6
B-01-018	T Quincy	County	CTH Z	Klein Creek	98.2
B-01-019	T New Chester	Railroad	ELK AVE	Union Pacific Rail Line	97.0
B-01-020	T Dell Prairie	Town	RIVER RD	Coldwater Canyon	100.0

B-01-021	T Big Flats	County	CTH C	Big Roche a Cri Creek	93.8
B-01-022	T Preston	Town	11TH AVE	Bingham Creek	90.9
B-01-023	T Easton	County	CTH H	White Creek	94.0
B-01-025	T Leola	County	CTH W	Big Roche a Cri Creek	99.9
B-01-028	T Leola	County	CTH O	Br Big Roche a Cri Creek	99.9
B-01-029	T Leola	County	CTH O	Big Roche a Cri Creek	99.9
B-01-030	T Quincy	Town	EDGEWOOD DR	Br Wisconsin River	93.8
B-01-031	T Leola	County	CTH G		99.8
B-01-032	T Strongs Prairie	State	STH 21	Wisconsin River Backwater	87.8
B-01-033	T Preston	State	STH 13	Big Roche a Cri Creek	95.7
B-01-034	T Preston	State	STH 21	Carter Creek	90.5
B-01-036	T Preston	State	STH 13	Carter Creek	70.7
B-01-325	T Strongs Prairie	State	STH 21	Big Roche a Cri Creek	75.9
B-01-537	T Rome	State	STH 13	Fourteen Mile Creek	81.2
B-29-011	T Springville	State	STH 82*	Wisconsin River	19.8

*Source: Wisconsin DOT and Adams County
Bridge is currently being reconstructed

Bridges with sufficiency ratings of less than 50 are eligible for replacement or rehabilitation, while those of 50 to 80 are only eligible for rehabilitation. Based on the current ratings three bridges, all owned by the state, are eligible for rehabilitation:

- B-01-13: STH 21 over the Wisconsin River, in the Town of Strongs Prairie.
- B-01-036: STH 13 over Carter Creek, in the Town of Preston
- B-01-325: STH 21 over Big Roche a Cri Creek, in the Town of Strongs Prairie.

Culverts function similar to bridges in conveying lanes of travel over some underlying feature. Culverts are commonly used to carry water under roadways but also serve as pedestrian, bicycle or cattle underpasses. Culverts range from a small diameter tube to multi-celled box culverts. There are hundreds of culverts throughout the County. A common road maintenance issue in Adams County is washout of culverts and roadways during periods of heavy rains.

Culvert and roadway washouts are due to various problems. Culverts, which are too small, damaged or plugged due to actions of beavers or muskrats, act like earth dams and backup water. The water builds up to the point that it pours over the roadway, usually washing away the roadway and culvert. Heavy rains that exceed design capacity of the culvert may washout the culvert and roadway. Properly designed drainage ditches and culverts and proper maintenance of all existing culverts and ditches will reduce washout problems.

Congestion

Traffic conditions vary considerably depending on the time of day, season, type and location of the roadway, weather, and other factors. The heaviest traffic typically occurs during travel periods most important to the economy as people are traveling to work, businesses are shipping products, or tourists are heading to their destinations. These factors tend to exacerbate the effects of traffic congestion.

Traffic congestion is used by WisDOT as a measure of mobility in the State Highway Plan. Mobility relates to the efficient movement of vehicles along the highway system. Congestion

results when roadways are forced to carry more traffic than they were designed to safely and efficiently handle.

The more congested a highway, the less mobility it offers. As congestion increases, travel time increases and mobility declines. As industry increasingly relies on just-in-time delivery of materials and products, congested conditions can have a significant adverse impact on economic development as the reliability of the highway system declines. At the same time the highway system declines, the safety of the system also decreases. Congestion often leads to more crashes resulting from stop and go traffic conditions that foster unsafe driving actions due to increased driver frustration.

For Adams County, the State Highway Plan projects moderate levels of congestion by the year 2020 on STH 13 in Adams/Friendship and north of the lakes area in the Town of Rome as well as on STH 21 west of STH 13, assuming no capacity improvements. Moderate congestion indicates that speeds and distance between vehicles are reduced, constricting traffic flow. Freedom of drivers to maneuver within the

traffic stream or enter the highway is noticeably limited. Minor incidents can result in traffic jams because the traffic stream has little space to absorb disruptions.

Currently, WisDOT has no long-range plans for capacity improvements in these areas. The current budget situation and WisDOT's policy of accepting higher levels of congestion than in the past make it difficult to predict future improvements. However, STH 21's status as a Corridors 2030 connector route indicates that WisDOT will need to continue to monitor the highway for future capacity issues and address, if necessary. In fact, WisDOT has identified STH 21 in Connection 2030 as a potential for the addition of passing lanes, although no specific projects have yet been identified.

Crashes & Safety

The number of crashes in Adams County has remained relatively stable around an average of 392 between 2011 and 2015. There has been an average of 3.2 fatal crashes in Adams County between 2011 and 2015. Table 5-5 summarizes selected traffic crashes in Adams County.

Table 5-5: Five Year Summary of Motor Vehicle Crashes in Adams County

Year	Fatal	Total	Economic Loss
2011	4	428	\$39,996,236
2012	4	390	\$30,619,538
2013	1	373	\$29,051,339
2014	2	376	\$27,971,126
2015	5	392	\$32,159,932

Source: WisDOT, UW TOPS Lab, Wisconsin Crash Outcome Data Evaluation System (CODES) and NCWRPC

The significance of motor vehicle crashes becomes more apparent by looking at the fiscal impact. In Adams County, the economic loss to the County averages \$31.9 million per year according to cost estimates from the UW Wisconsin Crash Outcomes Data Evaluation System (or CODES) cost estimates. Taking into account medical costs (professional fees, drugs, rehabilitation, hospital costs, long term care costs and emergency room costs), "Other Costs"

(police/fire/ambulance costs, loss of work wages, insurance administration costs, legal and court costs, loss of household work costs, and property damage costs), and Quality of Life Costs from crashes, indirect costs of crashes cost Adams County anywhere between \$29 million and \$40 million dollars per year since 2011.

Access Management

WisDOT manages access along state trunk highways through its connection permit process. Within Adams County, this would include access along STHs 13, 21, 23, 73 and 82. The permit process is administered under state statute 86.07 and administrative code Trans 231.

The goal of access management is to limit the number and spacing of access points along a roadway. This will reduce the number of potential conflict points and create a more safe and efficient flow of traffic. Some access management techniques include:

- Restricting access points a certain distance from an intersection.
- Limiting the number of access points allowed for each property.
- Requiring shared driveways between adjacent developments.

- Promoting inter-connectivity between adjacent parcels.

The County does have a driveway ordinance, which it uses to regulate access onto county highways. Some towns also have driveway ordinances for their local roads, however, these are often more concerned with emergency vehicle access to the property than the impact of access on the roadway. Local governments should consider more actively managing access, particularly those in areas with significant development and or traffic anticipated.

Table 5-6 shows recommended minimum distances between driveways along local roadways. These lane spacings are based on average vehicle acceleration and deceleration rates and are considered necessary to maintain safe traffic operations.

Table 5-6: Recommended Spacing between Direct Road Access Points

Roadway Speed Limit <i>(miles per hour)</i>	Minimum Driveway Spacing Measured at the Road Right-of-Way Line <i>(feet)</i>
25	105
30	125
35	150
40	185
45	230
50	275

Source: Institute of Traffic Engineers

Road Design Standards

Roads should be designed for the function they serve. Lightly traveled rural town roads may remain graveled to reduce speed levels and maintain a rural "country" character in the landscape. Where higher traffic volumes are expected, roads should be paved. Communities should consider the current and potential future usage of a road to determine if minimum design standards will be adequate or if more is needed. WisDOT has multiple resources and guidelines for facility design.

Construction of new or complete reconstruction of existing town roads are required to meet a higher level of design

standards than less substantial resurfacing or reconditioning improvements. Examples of resurfacing and reconditioning improvements which may be appropriate for existing town roads include pavement rehabilitation; widening of lanes and shoulders; replacing bridge elements to correct structural deficiencies; bridge deck overlays, bridge and culvert replacement; and other related improvements such as minor grading, sub-grade work, and correction of drainage problems.

Proposed Highway Improvements

WisDOT prepares a six-year improvement program that identifies improvement projects for state trunk highways statewide, including Adams County. The County Highway Department prepares its own roadway management plan identifying needed improvements on county highways. Adams County plan takes a long-range look into the future to try and anticipate overall system needs. It is important to remember that continually changing needs, funding availability, and political climate affect the ultimate implementation of these improvement plans on a year-to-year basis.

Traffic Volumes

Daily Traffic

Annual Average Daily Traffic (AADT) counts for selected locations on state and county highways in Adams County are show in Table 5-7. The counts come from WisDOT's regular traffic counting program, which provide a general overview of traffic levels throughout the County. The selected counts do not necessarily reflect the peak traffic location of a given road. WisDOT places counters at selected locations along principal arterials and some higher volume minor arterials every three years. All classified roadways are counted in the County every nine years, which will occur next in 2020

Average Annual Daily Traffic counts are calculated by multiplying raw hourly traffic counts by seasonal, day-of-week, and axle adjustment factors. The daily hourly values are then averaged by hour of the day and the values are summed to create the AADT count.

Table 5-7: Average Annual Daily Traffic in Adams County

Highway	Most Recent Traffic Count	Intersection	Location
STH 13	5400	South of Alpine Dr and CTH D	Town of Rome
STH 13	5100	South of Antler Road	Town of Rome
STH 13	3000	North of Archer Ave	Town of Rome
CTH Z	1100	North of Alpine Dr	Town of Rome
CTH Z	1100	South of Alpine Dr	Town of Rome
CTH D	1800	East of STH 13 intersection	Town of Rome
STH 13	8900	Between Aspen Ave and Badger Ave	Town of Big Flats
STH 13	3100	South of CTH C	Town of Big Flats
STH 21	4400	West of CTH N	Town of Strongs Prairie
STH 21	3900	West of CTH Z	Town of Strongs Prairie
CTH J	1100	East of CTH Z	Town of Strongs Prairie
CTH Z	1500	South of CTH J	Town of Strongs Prairie
STH 13	3600	North of STH 21	Town of Preston
STH 13	4200	South of STH 21	Town of Preston
STH 21	3000	East of STH 13 intersection	Town of Preston
STH 21	4200	West of STH 13	Town of Preston
STH 21	3900	Between CTH N and 13th Dr	Town of Preston
STH 21	2700	East of CTH G	Town of Richfield
STH 13	4200	North of CTH F	Town of Adams
STH 13	3100	North of CTH E	Town of Adams

STH 13	3400	South of CTH E	Town of Adams
CTH F	1100	West of STH 13	Town of Adams
CTH E	1100	Between 11th Ave and 10th Ave	Town of Adams
STH 13	4800	North of Moundview Road	Village of Friendship
STH 13	6000	North of CTH J	Village of Friendship
CTH J	2900	West of STH 13	Village of Friendship
STH 13	6800	Between W 6th St and W North St	Village of Friendship
STH 13	8200	Between Liberty St and Brevoort St	City of Adams
STH 13	8000	Between W Hazel St and W Center St	City of Adams
STH 13	7400	Between E June St and E May St	City of Adams
CTH M	1800	East of STH 13 intersection	City of Adams
CTH Z	1200	North of CTH F	Town of Quincy
CTH Z	1200	South of CTH F	Town of Quincy
STH 13	3100	South of CTH A	Town of Easton
STH 13	3200	South of CTH H	Town of Springville
STH 13	3500	North of STH 82	Town of Springville
STH 82	3400	West of STH 13	Town of Springville
STH 82	2000	East of STH 13	Town of Springville
CTH Z	1200	North of STH 82	Town of Springville
STH 13	3300	South of STH 82	Town of Springville
CTH B	1200	South of STH 82	Town of Springville
STH 82	2900	East of CTH B	Town of Jackson
STH 82	2900	Between CTH G North and CTH G South	Town of Jackson
STH 82	3200	East of CTH G North	Town of Jackson
CTH B	1500	South of CTH I	Town of New Haven
STH 23	2300	East of CTH G	Town of New Haven
CTH B	2000	North of STH 23	Town of Dell Prairie
STH 23	1600	East of CTH B	Town of Dell Prairie
STH 23	4200	North of Columbia County Line	Town of Dell Prairie
STH 13	5800	North of Columbia County Line	Town of Dell Prairie
STH 13	3300	South of CTH K	Town of Dell Prairie

Source: WisDOT Traffic Counts

Traffic volumes on Adams County roadways have generally been increasing. State highway traffic has grown from 10 to 42 percent, while county highway traffic growth ranges from 10 to 82 percent. Traffic in certain areas such as CTH M west of CTH G has remained stable.

The growth in AADT can be attributed to a number of factors. First is the increase in development within the County resulting in

higher population and housing units: there are more residents traveling the roadways. Another factor is the significant role tourism plays in the County's economy: people traveling into and around the County.

Statewide, the trends are toward an increase in the average number of vehicle trips per person and of vehicle miles traveled: people are generally traveling more. Locally, the net job

shortage within the County, discussed below, results in significant commuter travel.

Commuting Patterns

County-to-County Longitudinal Employment-Household Dynamics data compiled by the US Census is a convenient way to analyze commuting patterns, as illustrated in Table 6-8.

Adams County is highly dependent on surrounding counties/communities for

employment opportunities. The total labor force residing in the County is about 7,219 of which only 2,288 – or 32 percent - are employed within the County. The other 4,931 workers have to travel to other counties/communities outside Adams for employment.

Sauk and Wood counties provide the most jobs for Adams County residents, accepting 833 and 546 respectively. Columbia, Juneau, and Marquette take in 447, 326 and 278 workers from Adams.

Table 5-8: Adams County Commuting Patterns

	Living in listed County Working in Adams County	Living in Adams County Working in Listed County	Net gain/loss of Workers
Adams	2,288	2,288	0
Sauk	860	833	27
Wood	265	546	-281
Columbia	321	447	-126
Juneau	320	326	-6
Marquette	211	278	-67
Dane	213	207	6
Portage	140	229	-89
Waushara	138	139	-1
Milwaukee	42	159	-117
Outagamie	23	158	-135
Monroe	77	115	-38
Elsewhere	685	1,494	-809
Total	5,583	7,219	-1,636

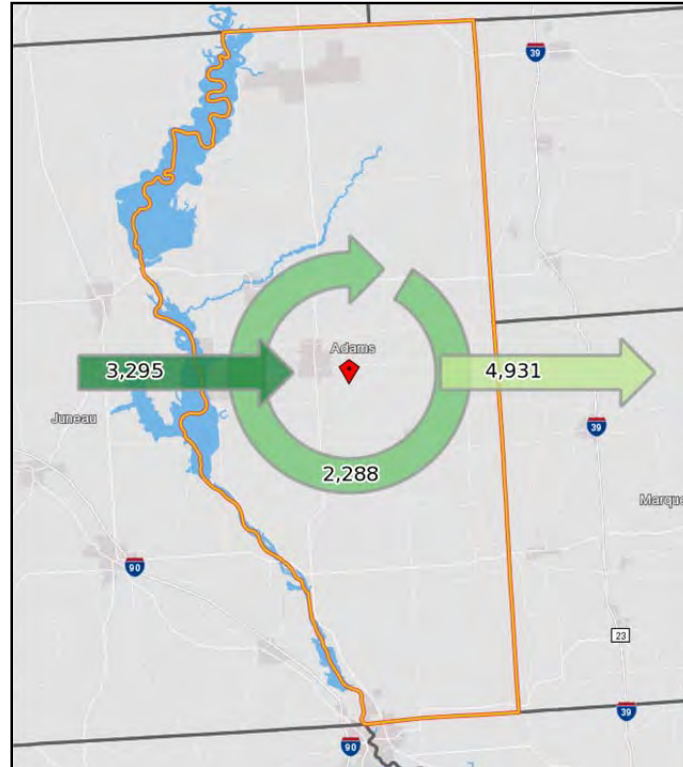
Source: U.S. Census LEHD 2015 & NCWRPC

At the same time, there are about 3,295 non-residents crossing into Adams to work from outside counties/communities. Sauk, Columbia, and Juneau counties send the most workers to Adams. According to the Wisconsin Department of Workforce Development, geography, housing costs, wage differentials and industry mix contribute to these trends.

Geographically, Adams County has a long border with Juneau County, and the City of Wisconsin Dells straddles Sauk, Columbia and Adams counties. Many workers probably cross county lines to get to jobs that are closer than many jobs in their own counties. In some cases, workers in a community like the Town of Rome will feel the pull of a nearby area like Wisconsin Rapids. **Display 4** illustrates the worker flow associated with Adams County.

Display 4: Commuter Inflow/Outflow, 2015

Source: LEHD, 2015



Adams County's industry mix offers a lower concentration of professional and business service jobs and financial activities jobs than Sauk. Columbia, Juneau and Sauk offer higher concentrations of manufacturing jobs. Health Care and Social Assistance job concentrations are greater in Wood. Workers in industry specific occupations cross lines to find work in their field, especially when the overall number of jobs available locally is smaller.

About 41 percent of Adams County's work force comes in from other counties while about 68 percent of the County's working residents must commute to jobs beyond the County. 59.6 percent of Adams County residents travelled 24 miles or less to get to work, while 40.4 percent of residents travelled over 24 miles. Today, the level of commuter traffic is a significant factor in increasing traffic and potential congestion on some routes in Adams County.

Network Users

Trucking

The principal designated truck routes within the County include STHs 13, 21, 73 and 82. Significant freight moves along these routes, which have easy linkage with Interstates 39 and 90/94. These routes provide Adams County with access to the rest of the state and the nation. Local truck routes often branch out from these major corridors to link local industry with the main truck routes as well as for the distribution of commodities within the local area. Mapping these local routes is beyond the scope of this study, and local issues such as safety, weight restriction and noise impacts play significant roles in the designation of local truck routes.

The network of county trunk highways (CTH) connects the County's rural areas with the main state truck routes. County trunk highways serve an important role in linking the County's

agricultural and forestry resources to the Region's major highways and economic centers. All county highways are generally open to truck traffic. The County uses seasonal weight limits in an effort to minimize damage.

Trucks can carry significant hazardous materials to and through the County. Regular shipments of gasoline, propane, acid and other substances are being delivered. The primary truck routes are of most concern, but any roadway in the County is a potential route for hazardous material transport. The primary intersections in the county are: STH 13 & STH 21, STH 73 & CTH G, STH 82 & STH 13 and STH 23 & CTH B.

Long Distance Intercity Bus Service

There are no major intercity bus terminals located in Adams County. However, Greyhound busses can be access in nearby Baraboo and Portage; Lamer Bus Lines in Portage and Stevens Point; Jefferson Lines in Baraboo; and Megabus in Baraboo and Portage. The bus lines run routes that eventually reach urban center such as Milwaukee, Madison, Wausau, Eau Claire, and Minneapolis-St. Paul.

Transit & Transportation Systems for Persons with Disabilities

Everyone is a pedestrian at some point during their trip, whether they are walking to their car,

bus stop, or make the entire journey on foot. Pedestrian facilities are designed to improve the safety of pedestrians and reduce conflicts between the various road users. These include sidewalks, crosswalks, paved shoulders, traffic signals, street lighting, median islands, terraces, multi-use paths, and other treatments. These types of facilities are especially important for at-risk populations, including children, the elderly, and those with physical disabilities. Without designing the transportation network to accommodate these individuals, the network is incomplete.

Bicycle & Pedestrian Facilities

The Wisconsin State Bike Map classifies state and county roads in terms of bicycling conditions or suitability. Traffic volume and pavement width are the primary factors affecting bicycling conditions. Secondary factors including sight line, truck traffic and speed limit were also considered in the methodology used to classify the roads. See **Map 7 – Proposed Bike Routes**. These routes need to be further studied to from a variety of factors, including safety, efficiency and connectivity. Additionally, the North Central Wisconsin Regional Bicycle and Pedestrian Plan 2018 rates and inventories conditions of bicycle corridors within Adams County, and corridors connecting to nodes in Juneau and Portage Counties, as summarized in **Table 5-9**.

Table 5-9: Bike Corridors in Adams County

Node 1	Node 2	Description of Route	Overall Corridor Condition
Adams/Friendship	Rome	The quickest route between Adams/Friendship and Rome lies on town roads – alternatively, bicyclists can ride on STH 13, mostly defined as moderately conditioned for bicycling.	Moderate Condition
Adams/Friendship	Necedah	Most of this route follows STH 21, most of which is designated as a high volume, undesirable route with paved shoulders between the two communities.	Poor Condition
Adams/Friendship	Mauston	This route follows STH 13, a moderate condition bike route with paved shoulder and then crosses the Wisconsin River at STH 82, a high volume undesirable road for bicycling with paved shoulders.	Poor Condition
Adams/Friendship	Wisconsin Dells	The entirety of this route runs along STH 13 on paved shouldered road, most of which is listed as moderate condition for bicycling.	Moderate Condition

Lyndon Station	Wisconsin Dells	CTH N is an ideal bicycle route that runs uninterrupted from Lyndon Station to the Wisconsin Dells.	Good Condition
Rome	Wisconsin Rapids	The entirety of this route runs along STH 13 on paved shouldered road, most of which is listed as high volume, undesirable conditions for bicycling.	Poor Condition

Source: WisDOT Bicycle Suitability Map 2015/NCWRPC 2017

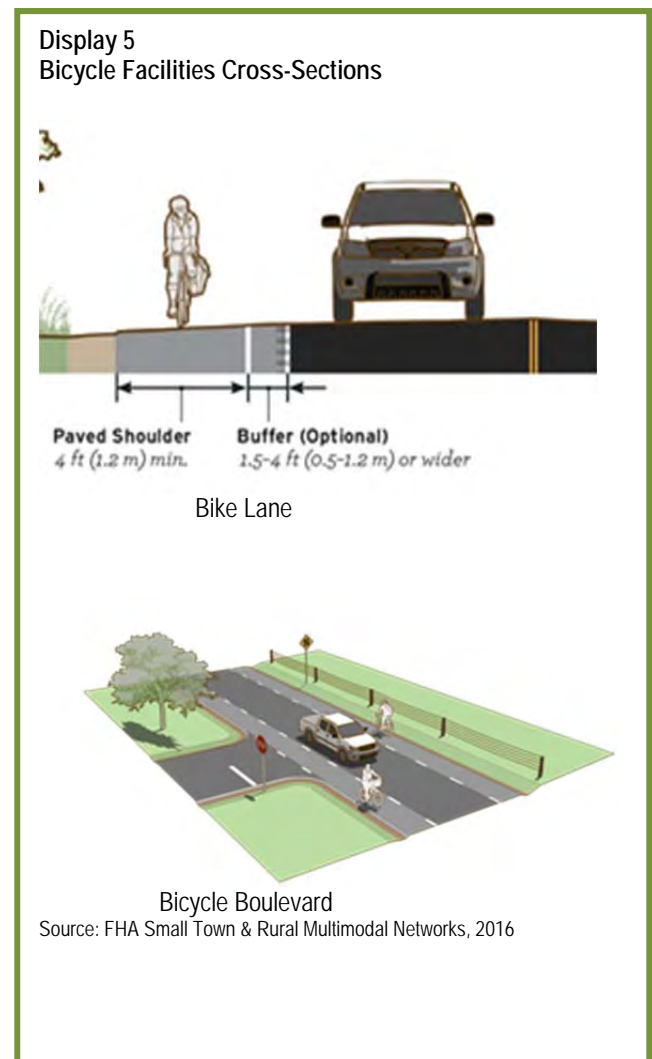
The North Central Wisconsin Bicycle & Pedestrian Plan that was adopted in 2018 was created to guide the development of an interconnected bikeway system for the North Central Wisconsin Region including Adams and 9 other counties: Forest, Juneau, Langlade, Lincoln, Marathon, Oneida, Portage, Vilas and Wood.

Additionally, the 2013 Adams County Bicycle and Pedestrian Plan proposes fifteen bicycle routes throughout the county. Some of these routes could be added with only additional pavement widths, while others would need other accommodations based on traffic volumes and layout. The proposed segments are as follows:

- Segment 1: CTH Z to Plainfield
- Segment 2: Rome
- Segment 3: Wisconsin River
- Segment 4: STH 13
- Segment 5: CTH G
- Segment 6: Necedah to Hancock
- Segment 7: Necedah to Coloma
- Segment 8: Arkdale
- Segment 9: Dellwood to Adams-Friendship to Coloma
- Segment 10: Adams-Friendship to Castle Rock
- Segment 11: Quincy Bluff to Grand Marsh to Westfield
- Segment 12: Castle Rock to Oxford (North STH 82 Alternative)
- Segment 13: Mauston to Oxford
- Segment 14: Wisconsin Dells to Briggsville

Other bicycle corridors exist between Adams-Friendship and Wautoma, Westfield, and Oxford; and between Rome and Plainfield. The basic types of bicycle facilities discussed in this

plan include shared roadways and improved shoulders (bike lanes), see Display 5. However, opportunities for off-road bike paths should not be overlooked.



As an example, on a shared roadway, bicyclists and motorists are accommodated in the same travel lane, so that motorists may sometimes find it necessary to overtake bicyclists by switching into the oncoming travel lane.

The majority of cycling that takes place in the rural areas currently occurs, and will continue to occur, on paved roadways with no special accommodations for bikes. Fortunately, the volume of traffic on these roads is relatively low, providing appealing routes for adult riders desiring longer distance opportunities.

Where traffic volumes are generally less than 1,000 AADT, cyclists and motorists can share roadways with lane widths ranging from 9 to 12 feet (with or without shoulders) with no additional improvements necessary. In undertaking route mapping or signing, it should be remembered that all roadways are really bicycling routes.

The mapping or marking of bike routes is done as a "way finding" practice and done so on roads where the combination of traffic and pavement width presents favorable conditions for bicycle use. It is recommended that regular roadway maintenance is in place and all hazards to bicycle travel including potholes, bumps and other pavement surface irregularities, and debris be removed before route designation.

The concept that every street is a bicycling street is even more applicable in an urban street network. Where traffic volumes are under 2,000 AADT and speeds are under 30 mph, extra pavement width is not required for bicycle use on these routes. However, removal of hazards including wheel-catching drainage grates, potholes and debris is important.

Improving shoulders by expanding their width and/or paving may be necessary in some areas of the bike system. This is particularly recommended where traffic volumes exceed 1,000 AADT. Paved shoulders for bicycle use should be four feet wide, the AASHTO minimum standard. WisDOT recommends

three to five foot paved shoulders on rural two-lane state trunk highways. Paved area should be wider at the intersection of gravel drives to reduce the amount of loose gravel carried onto the bicycle path. Shoulder rumble strips should not be used unless additional paved width is provided for bicycle use.

Other Transportation Modes

The overall transportation network is made up of all modes of transportation, including railroads, airports and more. The following sections highlight these other modes.

Rail

In 1911, the Chicago and Northwestern Railroad Company established the first railroad route within the County. One of the reasons for the establishment of this new route was so that freight trains would not have to pass through the three tunnels on the existing line between Elroy and Sparta. When the new line from Sparta to Milwaukee was built, the railroad station in Adams County was located one mile from Friendship. A controversy arose over whether the new station should be named Nottingham or Adams. Of course, Adams was finally selected. The building of the road and operation of the trains in 1911 opened many opportunities for employment to men who came with their families from Baraboo, Madison and Elroy. Since there were no homes in the new community of Adams, the railroad company provided boxcars for people to live in until homes could be built.

The Adams railroad station soon became a hub of rail activity. A place where the fast-moving trains from Minneapolis and Milwaukee changed crews. Adams soon became a prosperous and growing community where the railroad employed the largest part of the population. It grew up around the roundhouse and owed its very existence to the railroad. By the mid-1950's, a sharp decline in the railroad stops at Adams forced the railroad company to close the roundhouse. Today trains still pass through the City of Adams.

The Union Pacific Railroad (UPRR) crosses Adams County with a connection to the Canadian National (formerly Wisconsin Central) at Necedah. Union Pacific has about 29 miles of line in Adams County. One of the largest railroads in North America, Union Pacific runs across the state from Superior and the Twin Cities to Milwaukee and south to Chicago. UPRR handles many commodities such as coal, automobile parts, potash, and supplies for malt houses and flourmills.

Amtrak provides the County with access to passenger rail via stations in Wisconsin Dells or Tomah. Amtrak's Empire Builder route has two trains per day between Chicago and Seattle (including stops in Milwaukee or Minneapolis). Approximately 12,000 passengers utilize the depot in Wisconsin Dells each year.

Airports

Adams County Legion Field, located east of Adams/Friendship, is the only public airport in Adams County that is part of the State Airport System Plan. The field has two runways: a 3,400-foot asphalt surface and a 3,300-foot grass strip. The airport is classified as a Basic Utility - B (BU-B) facility. The airport has 19 general aviation aircraft based there and had 7,070 total aviation operations (take offs and landings) in 2010. WisDOT projects total aviation operations at Legion Field to increase to 7,600 by 2030. This is a seven percent increase from 2010 to 2030.

Basic Utility - B (BU-B) airports are intended to serve all small single-engine piston aircraft and many of the smaller twin-engine piston aircraft with a gross takeoff weight of 12,500 pounds or less and wingspans of less than 49 feet with approach speeds below 121 knots. These aircraft typically seat from two to six people and are commonly used for business and some charter flying as well as a wide variety of activities including recreational and sport flying, training, and crop dusting.

There are seven other private landing strips within the County. Most are grass landing strips ranging from 1,000 to 2,500 feet. Clearwater Aero Estates is a 2,675-foot asphalt runway located in the Town of New Haven near the intersection of CTHs G and I.

The closest scheduled air passenger service available to Adams County is at the Central Wisconsin Airport in Mosinee or the Dane County Regional Airport near Madison. These airports are also primary air cargo facilities, while the Baraboo-Wisconsin Dells airport is the closest air cargo feeder airport.

Water Transportation

No water transportation is available within Adams County. The Wisconsin River contains several dams and hydroelectric facilities along its length, but there is no locks system to provide for commercial transportation for passengers or freight. The Wisconsin River and other waterways in the County provide only recreational uses, such as tubing, boating and sailing. Adams has several canoe trails winding through more than 100 miles of navigable streams.

Other Modes of Travel

There is a variety of miscellaneous other vehicles within Adams County including snowmobiles, all-terrain vehicles (ATVs), horses, cross-country skis and others. For the most part, however, these forms of travel are not recognized as modes of transportation, but rather as forms of recreation. As such, these alternative forms of travel will not be addressed extensively in the transportation chapter. However, it is important to be aware of interactions between recreational forms of travel and more traditional transportation systems. For example, snowmobiles have an extensive network of their own trail routes that often parallel or cross public highways. A snowmobiles and ATVs trails may compete against a bike trail for the same right-of-way.

Goal, Objectives & Policies

Transportation Goal

- 1) To provide an integrated, efficient and economical transportation system that affords mobility, convenience, and safety and that meets the needs of all citizens, including transit-dependent and disabled citizens, while maintaining the rural character of the County.

Transportation Objectives

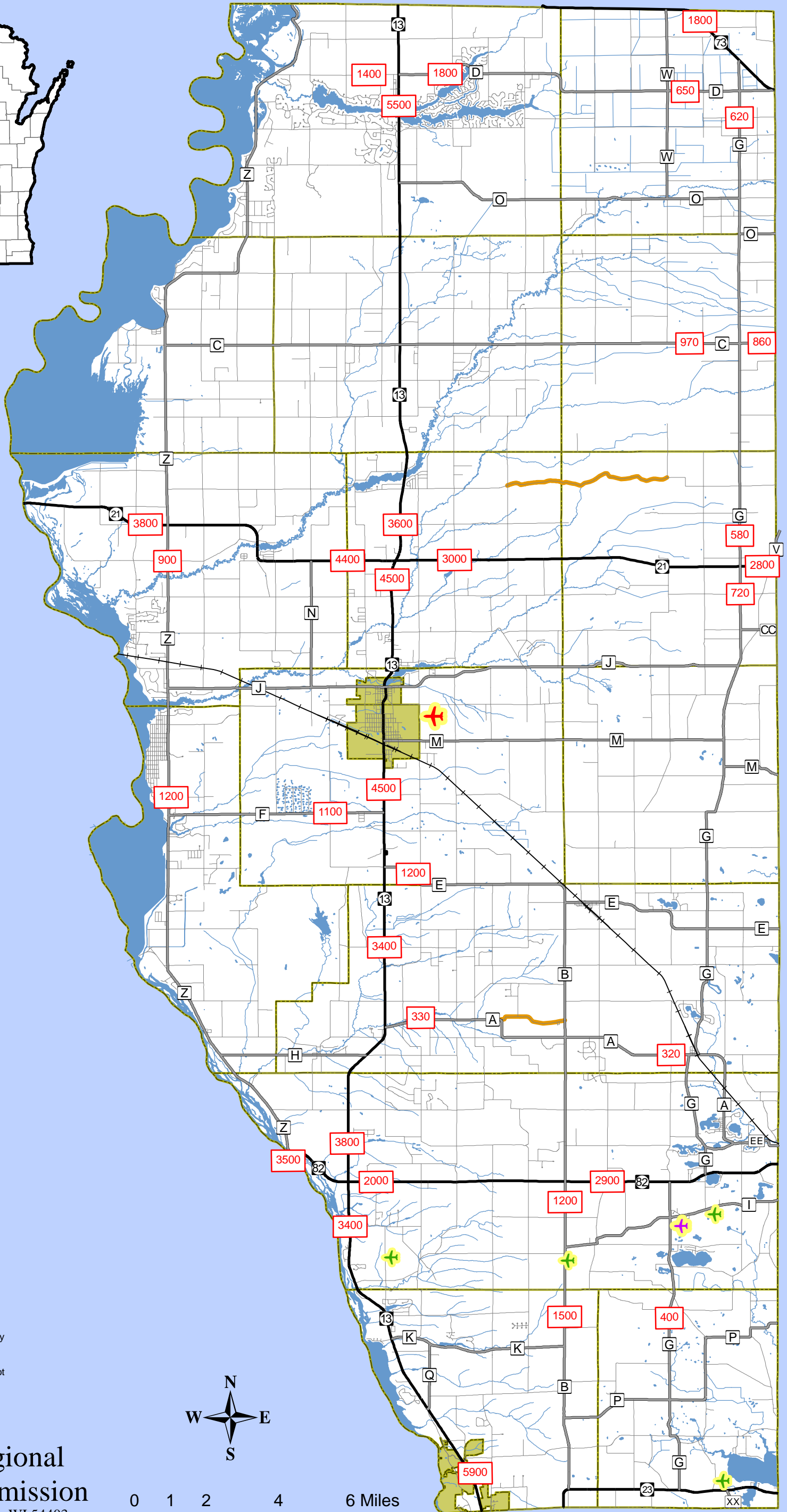
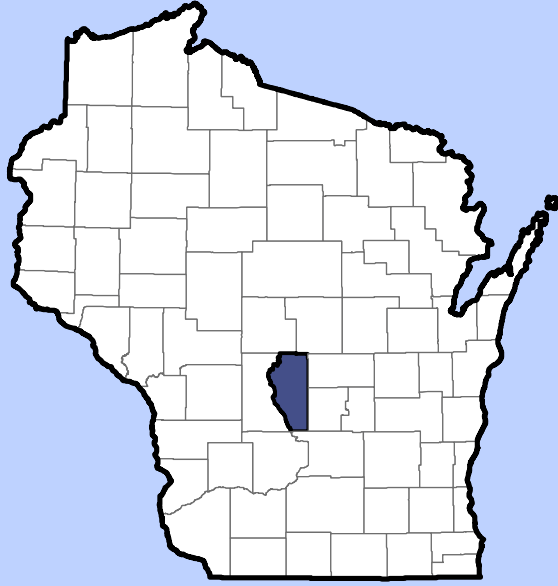
- 1) *Maintain the efficiency, safety and functionality of the County's existing transportation system, which links the urban center with outlying towns, adjacent communities and the region.*
- 2) *Encourage a balanced transportation network that provides a choice in the type of mode (i.e. car, bus, bike, walking, etc.) easy transfer between modes and transportation opportunities for those without use of an automobile.*
- 3) *Achieve close coordination between development of transportation facilities and land use planning, land development, and rural character preservation.*
- 4) *Preserve the scenic value along select roadways to enhance and protect the County's rural character.*
- 5) *Minimize the negative impacts of proposed transportation facility expansions.*

Transportation Policies

- 1) *Work with the Department of Transportation (WisDOT) and local communities to ensure that the County's transportation system is coordinated with surrounding regional systems and that the County's interests are well served when major transportation facilities or programs are proposed.*
- 2) *Work with WisDOT to control access onto Highways 13, 21 and 73 to preserve capacity and movement of traffic. Encourage WisDOT to commission/fund highway corridor plans for these highways to address corridor development, intersection deficiencies, sight distances and turning movements.*
- 3) *Work with WisDOT, the towns and landowners along the Highway 21 corridor to manage the pace, location and appearance of development and billboards to help preserve the highway for future Scenic Byway designation.*
- 4) *Plan for extension of County highways and other major arterials as necessary to complete connections, provide for appropriate routes for trucks and emergency vehicles and serve planned development areas.*
- 5) *Consider future road locations, extensions or connections when reviewing development plans and proposals.*
- 6) *Work with city, village and towns to plan for a network of interconnected new roads in planned development areas to control highway access, preserve rural character, and improve access to these areas.*
- 7) *Discourage large amounts of "side of the road" development on state and County highways to prevent congestion and preserve rural character. Work with towns and WisDOT to develop frontage/service roads where development will significantly impact higher function roads.*
- 8) *Space roadway access according to minimum standards to increase safety and preserve capacity.*
- 9) *Avoid land uses that generate heavy traffic on roads that have not been constructed or upgraded for such use.*
- 10) *Plan for new developments to minimize extensive road construction and avoid burden to towns for maintenance. Consider assisting towns with implementing road impact fees for new development projects that place a burden on or require upgrading of town roads.*

- 11) *Work with the towns to update and implement Town Roadway Management Plans to provide for the appropriate upgrading of town roads.*
- 12) *Support additional transportation options for those without access to an automobile, including the disabled, seniors, youth or low-income individuals.*
- 13) *Work with rail service providers and users to address facility or service issues in order to maintain safe and efficient rail operations within Adams County.*
- 14) *Consider utilizing WisDOT's Traffic Signing and Marking Enhancements grant program to improve visibility of highway signing across the County to assist elderly drivers and reduce crashes.*
- 15) *Evaluate areas where speeding is a concern and identify measures to address safety concerns.*
- 16) *Support Intelligent Transportation Systems (ITS) applications, such as warning systems for animal crossings, to improve traveler safety and emergency response.*

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Legend

- Minor Civil Divisions
- Water
- State Highways
- County Highways
- Local Roads
- Railroad
- Rustic Roads

Airport Class

- Small General Aviation
- Paved Landing Strip (Private)
- Grass Strip (Private)

Major Traffic Counts

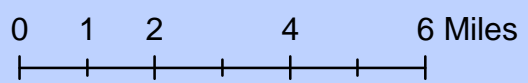
Source: WI DNR, WisDOT, NCWRPC, Adams Co.

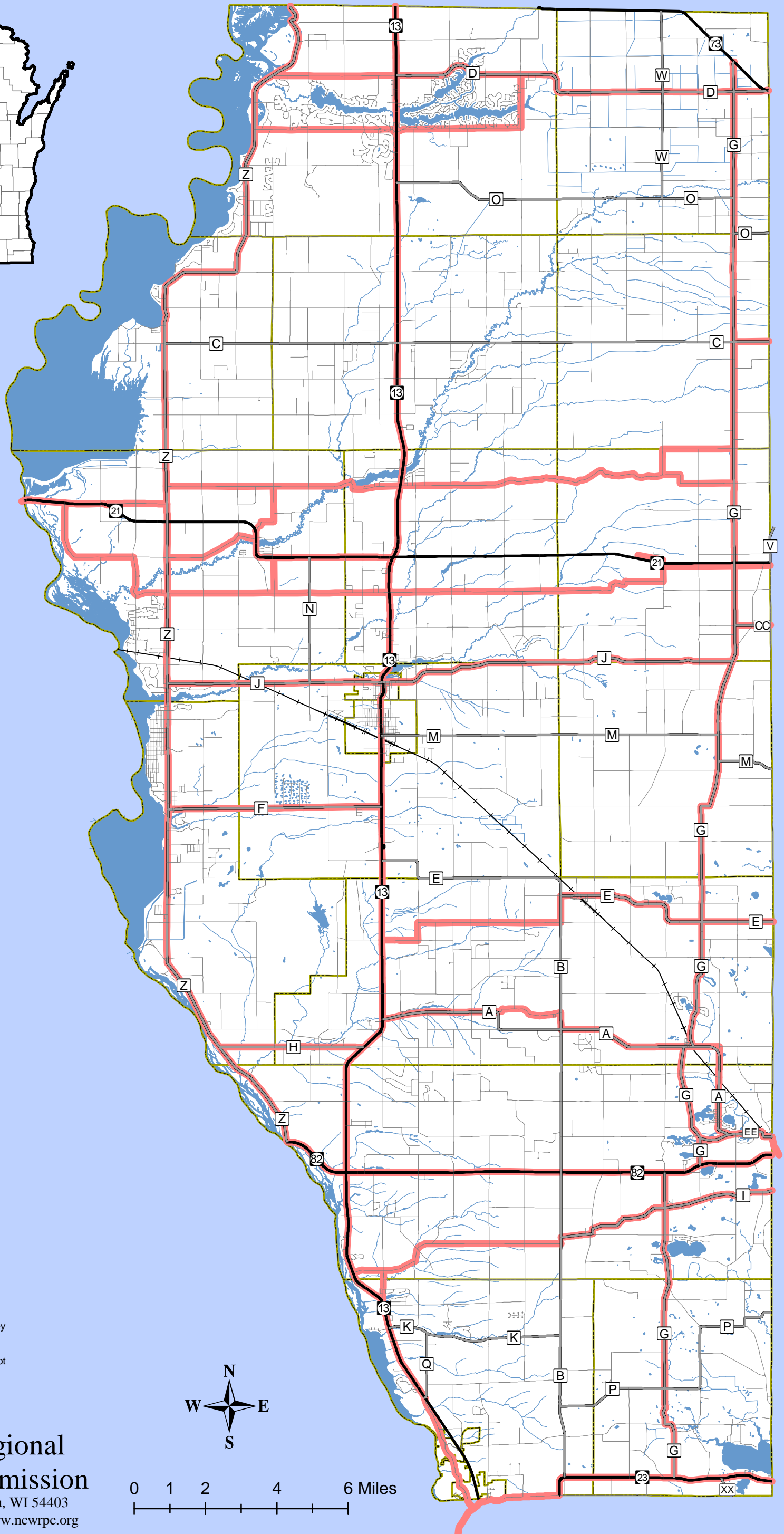
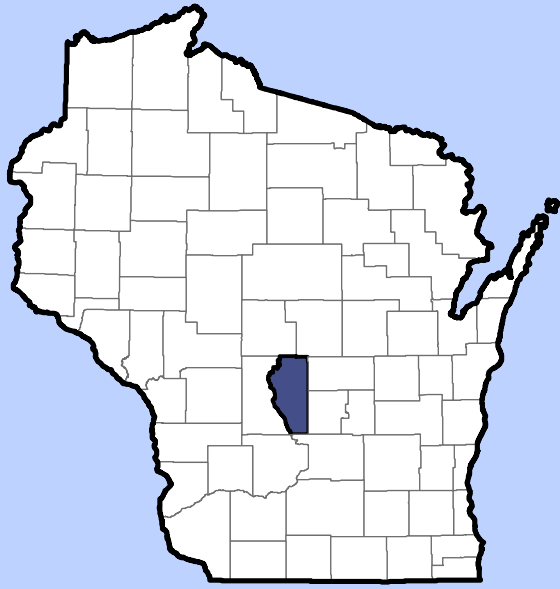
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Legend

- Minor Civil Divisions
- State Highways
- County Highways
- Local Roads
- Railroad

2013 Bike Plan

- Proposed Bike Routes*
- Water

* Several of these routes need to be examined for safety and other factors.

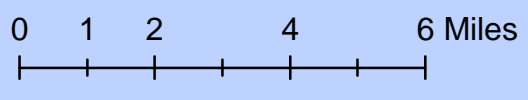
Source: WI DNR, NCWRPC, Adams Co.

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Chapter Six

Economic Development

Background

This chapter examines the County economy and provides some comparison to both the state and nation. The analysis includes location quotients and other economic methods to identify local strengths. The reuse of environmentally contaminated sites for commercial and industrial redevelopment is discussed, as are the different economic development programs available at the local, regional, state, and federal levels.

The chapter is comprised of three basic sections: these are background; inventory & trends; and goals, objectives & policies. There is also a discussion of Economic Development issues.

Previous Plans

All planning processes should include a review of previous planning efforts at both the county and regional levels. Below is a review of the three most relevant economic development planning efforts.

Adams County Economic Development Strategy, 2016

The Adams County Rural and Industrial Development Commission developed a 2016 Economic Development Strategy with assistance from the North Central Wisconsin Regional Planning Commission (NCWRPC) and the U.S. Department of Commerce Economic Development Administration (EDA). The Strategy identifies salient demographic, housing, labor force and transportation trends throughout Adams County that pertain to economic health throughout the County. The Economic Strategy also includes a comprehensive economic assessment of key indicators of economic health in Adams County

including such measures as Industry Earnings, Employment Projections, Location Quotient Analyses and Cluster Analyses. This document concludes with a comprehensive strategy, which includes the following goals and objectives:

- Goal 1: Foster & Grow Entrepreneurship
- Goal 2: Coordinate Economic Development and Tourism
- Goal 3: Education and Train the Workforce.
- Goal 4: Retain, Expand, and Attract businesses to Adams County.
- Goal 5: Improve Adams County Infrastructure
- Goal 6: Support Unique Industries in Adams County.
- Goal 7: Improve Livability and Quality of Life in Adams County.
- Goal 8: Increase visibility of the Adams County Rural and Industrial Development Commission – now the Adams County Economic Development.

Comprehensive Economic Development Strategy (CEDS), 2017

Adams County is one of ten counties included in the North Central Wisconsin Economic Development District as designated by the U.S. Department of Commerce, Economic Development Administration (EDA). The North Central Wisconsin Regional Planning Commission (NCWPRC) is the agency responsible for maintaining that federal

designation. As part of maintaining that designation, the NCWRPC annually prepares a Comprehensive Economic Development Strategy (CEDS) report. The report serves to summarize and assess economic and demographic data and to review activities of the past year and present new and modified program activities for the upcoming year.

Key findings from this regional level plan involve an inventory of the physical geography of the Region and its residents. Labor, income, and employment data are covered with analysis of the economic status of the Region. Information, Mining, Quarrying & Extraction, and Management of Companies & Enterprises have all have grown rapidly since 2010. Crop Production, Paper Manufacturing, Animal Production and Aquaculture, Accommodation, and Gasoline Stations were found to have the highest location quotients in Adams County as of 2015. State and federal government programs are identified for use by economic development professionals in enhancing the economy of the Region.

Regional Livability Plan (RLP), 2015

The Regional Livability Plan is a comprehensive plan for the ten-county Region by the NCWRPC. The RLP identified ways to address the region's opportunities and weaknesses to increase the region's ability to become more livable for all residents. The Plan addresses four specific areas: housing, economic development, transportation, and land use. The economic development goals of the RLP are as follows:

- Foster efficient business expansion and retention to increase employment opportunities and employment in the region.
- Create an innovative atmosphere to foster an entrepreneurial-supportive environment.
- Promote and attract new business from outside the region.
- Encourage the future availability of a skilled and flexible workforce prepared

to meet the needs of both existing and emerging industries and technologies.

- Meet the full range of businesses' infrastructure needs with emphasis on transportation, utilities, and communications.
- Promote and increase communications between regional and county economic development, workforce development, and planning organizations.

Issues

A variety of issues were identified as part of the planning process. They are listed below:

Business & Industrial Development

Although Adams County has sites that are ready for industrial development, not all of these sites are capable of offering the wide range of services necessary to appeal to all types of industrial development. Effective industrial development requires facilities such as sewer, water, and telecommunications facilities as well as easy access to highways and rail. While Adams County offers many of these in its industrial parks, access to a major interstate highway is located outside the County. This makes enticing businesses to the industrial parks more difficult. Adams County also suffers from lack of diversification in its industrial economy leading to a heavy reliance on only a few industries. Such dependence means that local employment, as well as commercial retail trade, goes up and down with the business cycles for the dominant local industry.

Downtown Redevelopment

This issue particularly pertains to the City of Adams and the Village of Friendship; however, it also applies to the many small cross-road communities scattered throughout the county. Both municipalities have long-established commercial districts that have degraded over time and need to be renovated. Fortunately, the majority of economic activity in these communities still takes place in the downtown area and therefore commercial property owners

can be expected to actively maintain their properties to continue business. There are, however, some properties that have fallen into disrepair and are in need of revitalization. Economic development tools can be used to rehabilitate these properties to make them ready for reuse.

Recreation & Tourism

The development of the recreation and tourism industry in Adams County has had a generally positive effect; however, the County must be careful to moderate the growth of this industry with its capacity to serve it. With the development of the Sand Valley golf area in the Town of Rome and the County's close proximity to the Wisconsin Dells recreational areas causes a great deal of development pressure. Many people are attracted to Adams County's recreational amenities because of its rural nature. Improper management of the recreation and tourism industry could lead to the outstripping of the attraction and a decline in the County's overall standard of living. The community must also take care to justify the expenditures of promotional funds spent to attract visitors during the year by tracking returns on investments. To do so will require a cooperative effort among the municipalities within Adams County to avoid inefficiencies and duplication of efforts.

Agriculture

Agriculture is an important natural resource and a key component of the County's economy. While forestry and farming are important to the local economy, Adams County still has experienced a reduction in the number of farms

over time. This is due, in part, to the competition with the expanding tourist economy and the increase in scattered residential development. These uses are often incompatible and create problems for the agriculture industry. Those seeking to enjoy scenery look upon forestry and farm practices with concerns when trees are cut down and fertilizers are spread on fields. Adams County must carefully balance the use of land if agriculture is to maintain its position as a primary driver of the county's overall economy.

Income & Unemployment Levels

Although the county has made progress toward closing the gap, income levels still are below state and federal levels and the unemployment rate exceeds state and federal levels. These are both issues that have been identified and discussed at various levels throughout the county. Both need to be addressed to make the county a better place to live.

Commuting Patterns

The desire for Adams County residents to find work is shown in the 2016 American Community Survey, which indicates that approximately 55% of the Adams County labor force is employed outside the county. While there are daily commuters to Adams County from surrounding counties, more workers exit the county for work than are received each day. There are over 4,900 persons leaving the county for employment opportunities. These are potential employees for Adams County firms, but they need to leave the county to find employment.

Inventory & Trends

The purpose of analyzing the County's economy and identifying economic trends in this element is to answer some obvious questions. Which industries in the County have lagged in terms of economic performance? What are the underlying causes of poor economic

performance in certain industries? What measures can be taken to address the economic problems that exist? When answering these questions, it is customary to use a comparative analysis between the County, the State of Wisconsin, and the nation. The analysis helps

to pinpoint the strengths and weaknesses of each industry in the County thereby identifying potential strategies for economic development. Much of the information presented in this analysis has been collected from the Wisconsin Department of Workforce Development (DWD) and the U.S. Census Bureau and focuses on the indicators of income, housing units, poverty, commuting patterns, employment, and unemployment.

Economic Overview

As discussed earlier, the county’s population has increased at a slower rate than the state between 2000 and 2016. According to 2013 population projections from the Wisconsin Department of Administration Demographic Services Center, Adams County will add over 2,400 people to its population between the 2010 census and 2040. Most of that growth will likely be concentrated along the Wisconsin River in the unincorporated areas as much of Adams County’s increases are due to the conversion of lands from forestry and agriculture to other uses. This increased population will generate additional demand for services. The total number of persons employed in Adams County has remained relatively steady in the last fifteen years, with many residents are still commuting outside the county to work in places like Wisconsin Rapids and Wisconsin Dells.

Economic analysis indicates that the county’s economy has shifted towards agriculture, and the recreation and tourism industries. The county appears to be making a transition from slow-growth industries into rapid growth

industries, but this shift will necessitate workforce development and training before the economy and employment reaches equilibrium. Adams County has managed to remain competitive in agriculture, accommodation, transportation, and accommodation during the past fifteen years.

Economic Sectors

Overall, in 2015, there were 4,455 persons employed in the basic economic “supersectors” in Adams County. That is an increase of nearly 18 percent since 2000. Those basic economic sectors are presented in Table 1. They are: natural resources & Mining, Construction, Manufacturing, Trade, Transportation & Utilities, Information, Financial Activities, Professional & Business Services, Education & Health Services, Leisure & Hospitality, Other Services, and Public Administration.

Between 2000 and 2015, the three fastest growing sectors were public administration, natural resources & mining, and leisure & hospitality. In terms of total employment, leisure & hospitality is the largest segment of the economy, followed by trade, transportation & utilities.

It should be noted that the number of employees in certain sectors, particularly those workers engaged in agriculture, forestry & fishing, may be understated because this information utilizes Department of Workforce Development data; those who are self-employed or work in family businesses are not reflected in this data.

Table 6-1: Employment by Sector

Sector	2000	2010	2015	2000-15 Net Change	2000-15 % Change
Natural Resources & Mining	187	399	538	351	187.7%
Construction	192	153	165	-27	-14.1%
Manufacturing	396	346	294	-102	-25.8%

Trade, Transportation, Utilities	675	669	730	55	8.2%
Information	35	*	23	-12	-34.3%
Financial Activities	70	90	93	23	32.9%
Professional & Business Svcs.	142	188	190	48	33.8%
Education & Health Svcs.	743	742	741	-2	-0.3%
Leisure & Hospitality	616	1,158	915	299	48.5%
Public Administration	632	702	661	29	4.6%
Other Svcs.	632	131	105	-527	-83.4%
Totals	4,320	4,578	4,455	135	3.1%

Source: WI Dept. of Workforce Development: OCEW ES202 Results, 2000, 2010 and 2015 & NCWRPC
 *Data suppressed – some federal employees not reflected in totals

Natural Resources & Mining

Between 2000 and 2015, this sector grew drastically, more than doubling in employment. The state's growth rate in this sector was 56 percent. About 538 persons are employed in this sector. This is the fifth largest sector in the County, accounting for about 12 percent of total employment.

This natural resource based sector is critical to the county and surrounding counties. It is these raw products that supply the demand for many major industries. Agriculture production of milk, potatoes, oats, barley and hay, snap beans, green peas, sweet corn, soybeans, and cranberries is critical for the dairies and food processing industries. The timber produced in the area supplies the lumber mills, the pulp and paper mills, the millwork and housing components industries and the factory-built housing industry.

Construction

Between 2000 and 2015, this sector shrunk by 14 percent, roughly equivalent to the 13 percent decrease experienced in the state during the same time period. 165 persons are employed in this sector. Construction is the eighth-largest sector, accounting for about 4 percent of total employment.

Manufacturing

Between 2000 and 2015, this sector shrunk by 26 percent, somewhat similar to the statewide decrease during this time period – 22 percent. 294 persons are employed in this sector. Manufacturing is the sixth largest sector, accounting for about 7 percent of total employment.

Trade, Transportation & Utilities

Between 2000 and 2015, this sector grew by 8 percent in contrast with the state, where the industry shrank by about 5 percent. 730 persons are employed in this sector. Transportation, Public Utilities and Communication is the third-largest sector, accounting for over 16 percent of total employment.

Information

Between 2000 and 2015, this sector shrunk by about 34 percent, even faster than the statewide decline during that same time period of 8 percent. Information is the xth-largest sector, accounting for less than one percent of total employment.

Financial Activities

Between 2000 and 2015, this sector grew by about 33 percent, which exceeded the state's growth rate of less than one percent. 93 persons are employed in this sector. Finance, insurance and Real Estate is the tenth-largest sector, accounting for about 2 percent of total employment.

Professional & Business Services

Between 2000 and 2015, this sector grew by about 34 percent, even faster than the state's growth rate of about 27 percent. 190 persons are employed in this sector. Professional and Business Services is the seventh-largest sector, accounting for about 4 percent of total employment.

Education & Health Services

Between 2000 and 2015, this sector slightly declined by about one-fourth of one percent, as opposed to the state growth rate of the industry by 23 percent. Education & Health Services are the second largest sector in the County, accounting for about 17 percent of total employment.

Leisure & Hospitality

Between 2000 and 2015, this sector grew by nearly 49 percent, well ahead of the state's growth rate of 14 percent. 915 persons are employed in this sector. Leisure and Hospitality is the largest sector, accounting for every one in five jobs in Adams County.

Public Administration

Between 2000 and 2015, this sector grew by about 5 percent, behind the state's growth rate of 20 percent. 661 persons are employed in this sector at the local, state, and federal levels. Government is the fourth-largest sector in the county, account for about 15 percent of total employment.

Adams County's largest employers are displayed in Table 6-2. The largest employers in the County are the Adams-Friendship Public School System, Adams County, Allied Cooperative of Adams, Chula Vista Resort, and WestRock of Adams.

Table 6-2: Major Employers, 2014

Employer Name	Industry
FCI Oxford	Federal Prison
Adams-Friendship School District	Elementary & Secondary Schools
Allied Cooperative	Fuel Dealers
Chula Vista Resort	All Other traveler Accommodations
County Market	Supermarket & Other Grocery Stores
Adams County Government	Government
Lake Arrowhead Golf Course	Golf Courses & Country Clubs
Moundview Memorial Hospital & Clinic	General Medical & Surgical Hospitals
Napa Auto Parts	Automotive Parts & Accessories Stores
Terrace Homes	New Single-Family Home Construction (exc. For-Sale Bldrs.)
Villa Pines Living Center	Nursing Care Facilities
Westrock	Other Paperboard Container Manufacturing

Source: Wisconsin DWD 2014 & NCWRPC

Economic Analysis

There are two economic analysis techniques used here to examine the county's economic base. One is called "Location Quotient" and the other is called "Shift-Share". Both of these techniques are commonly used to provide detailed economic information. Additionally, this section provides employment projections for major sectors in Adams County for the following decade.

Location Quotient

This analysis technique compares local, state and national employment levels by economic sector. The result of this analysis is a numeric value called a location quotient. The model is derived from the premise that the local economy

may be divided into two sectors: 1) a "basic" or non-local sector and 2) a "non-basic" or local sector. Data for the following section is provided by Economic Modeling Specialists International (EMSI), a detailed synthesis of employment and labor data from federal, state, and private sources in order to provide a more detailed view of the Adams County economy.

Those employers providing goods and services that are purchased or consumed by customers outside the study (the county in this case) are considered to be basic employers. Conversely, goods and services consumed by the local community are considered non-basic. Thus, economic success of the community is measured by its ability to bring in money from outside of the community; the community offers goods

and services that are sought out by other regions that do not have them. This type of economy is also known as an export economy and is usually the overall goal of many economic development programs.

The location quotient model uses employment information for both the County and the nation by industry and compares their ratios of sectoral employment to total employment. Each industry sector is assigned a location quotient value which in turn is used to identify those employees considered export, or “basic” within a given industry sector. “Non-basic” employees are those workers whose wages are derived from money circulating within the existing local economy. In any community, certain goods and services simply cannot be obtained locally and consumers must look elsewhere. This is known as an industry sector “leakage”. Too many leakages can result in a declining economy as consumers continue to spend their money in communities other than their own. Fortunately, Adams County has more basic employees than non-basic, however,

if existing industries are not retained and new opportunities are not created, this status could change in the future.

The location quotient can be described by the following equation:

$$LQ_i = (e_i^t / e_T^t) / (E_i^t / E_T^t), \text{ where:}$$

- e_i^t = regional (county) employment in industry i in year t
- e_T^t = total regional (county) employment in year t
- E_i^t = national employment in industry i in year t
- E_T^t = total national employment in year t

If that number is greater than 1.00, it is determined to be an exporting sector, while if it is below 1.00, it is determined to be an importing sector. Exports bring money from outside the county into the local economy and imports represent local dollars flowing outside the county. Table 6-3 provides a summary of the location quotient analysis results.

Table 6-3: Location Quotient by Major Category, 2015

Economic Category	Location Quotient
Agriculture, Forestry, Fishing & Hunting	18.61
Utilities	2.97
Accommodation & Food Services	1.68
Government	1.34
Transportation & Warehousing	0.91
Construction	0.86
Arts, Entertainment & Recreation	0.84
Retail Trade	0.76
Other Services (exc. Public Admin.)	0.69
Manufacturing	0.63

Source: EMSI 2017.4

*Some Categories are estimated because of non-disclosure

The non-government sectors are highlighted below:

- ***Agriculture, Forestry, Fishing & Hunting:*** The agricultural industry is both the largest employing industry in Adams County, and the highest exporting industry. This category has a Location Quotient of 18.6,

reflecting that Adams County is a significant exporter of agricultural goods. Additional information regarding agriculture in Adams County may be found in the Natural, Cultural & Agricultural Resources and Land Use chapter of this plan.

- **Utilities:** The Adams-Columbia Electric Co-op is the primary player in Adams County's utility industry sector. This category has a Location Quotient of almost 3.0. Adams County is a major exporter of electrical power. Additional information regarding these entities may be found in Utilities and Community Facilities chapter of this plan.
- **Accommodation and Food Services:** Adams County is a popular tourist destination and therefore offers a variety of lodging and food services to accommodate the demands that tourism generates (such as hotels, motels, and full-service restaurants). This category has a Location Quotient of 1.68. This economic sector is considered to be a major export economy for Adams County and is likely to see dramatic increases in the years to come.
- **Transportation and Warehousing:** Adams County has a developed transportation and warehousing industry. The local supply of these services is mostly adequate to meet overall demand. This category has a Location Quotient of 0.91. Many industries rely upon transportation and warehousing as a major component of their business practice. Adams County's rural setting creates a situation where the local industries must have effective transportation and warehousing services to compete in a regional, national, or global market.
- **Construction:** Adams County does not have major construction contractors, but it does have many small, independent construction businesses that focus on building residences and small business buildings. This category has a Location Quotient of 0.86. These firms are generally capable of handling most of the demand for construction in Adams County. Substantial projects or specialized contractors can only be found elsewhere outside the County.
- **Arts, Entertainment, and Recreation:** Although Adams County does not offer the arts and entertainment opportunities of larger cities, it compensates in this sector through its relatively extensive recreation economy. This category has a Location Quotient of 0.84. With increases in population and proximity to Wisconsin Dells as a major tourist attraction, Adams County will continue to see increases in this industry sector in the future.
- **Retail Trade:** Retail trade is generally commonly in demand in rural areas. Adams County provides basic retail services to residents, but most specialized retail requires imports from surrounding areas. This category has a Location Quotient of 0.76.
- **Other Services:** This category collects all of the private sector service jobs that do not fit into other categories. This category has a Location Quotient of 0.69.
- **Manufacturing:** Manufacturing is always an important component of any economy given its tendency to provide more and higher paying jobs than most other sectors. This category has a Location Quotient of 0.63. Two significant export industries are prefabricated wood building manufacturing and fiber box manufacturing, both of which are closely related to the forestry industry.

Exports

Primary export industries are defined as those in which the location quotient exceeded one and had employment of 175 persons or greater; secondary export industries are those with employment between 174 and 100; and other export industries are defined as those with employment between 50 and 99. Industries that have employment below fifty but have location quotients above one were assumed to have minor impact on the export economy of the county.

When grouping economic data, individual industry data is often generalized because of other industries within that category. To further examine the data and identify industries within these categories, a listing of primary, secondary, and other exporters was developed. Primary exporters are those industries that comprise a major portion of local employment and therefore have a major economic impact on the local economy through the export of goods out of the community. Secondary exporters have an impact to a lesser extent but are still significantly important. Other exporters are those industries that showed some magnitude in the data, but of a much more minor effect than the previous two categories.

There is an increasing demand for wood and wood products and agricultural goods. Adams County’s land-based economy has long supported employment opportunities and generated strong revenues for landowners. The presence of agriculture and forestry in Adams County has also led to a demand for a mix of both forest products and recreational uses. As more people move into the rural areas of Adams County, more development follows, which affects how the forest is used and impacts the ecology of these areas. The county must address the issue of how much forested land to protect and how much to develop.

The export industries listed are considered strengths that may be built upon in the future as niche industries to pull more money into the County. Building on strengths brings more money into the community, but stopping leakages also keeps the money within the economy. The final list given above identifies certain industries as “in demand” in the Adams

County area based on the location quotient analysis. These industries present opportunities for potential entrepreneurial ventures in the County to meet this demand. Note that these high demand industries are all in the services industry sector.

In a rural community, these goods are often obtained by either traveling to a bigger community or the services obtained by contracting with an out-of-town firm. Although not shown as an “in demand” industry above, manufacturing is always an export industry and usually has a demand that far exceeds the needs of the local community. For this reason, manufacturing is considered to be the most likely kind of employment to bring in money from outside the community. The service industry, on the other hand, usually focuses on serving those local to the area and therefore constitutes mostly internal money flows in the community.

Table 6-4: Exports and Demand, Adams County, 2015

Primary Export Industries	Secondary Export Industries
<ul style="list-style-type: none"> • Crop Production • Local Government, exc. Education & Hospitals • Federal Government, Civilian, exc. Postal Service • Corrugated and Solid Fiber Box Manufacturing • Animal Production 	<ul style="list-style-type: none"> • Gasoline Stations with Convenience Stores • Supermarkets & Other Grocery (exc. Convenience) Stores

Source: EMSI, 2017.4

Shift Share

The second analysis technique is called “Shift-Share”. While the location quotient analysis provides a snapshot of the economy at a given time, shift-share analysis introduces trend analysis (change over a period of time). This is an analysis technique that examines economic change and incorporates a “what-if” component. The theory behind shift-share is that local economic trends can be determined to be “up” or “down” relative to national trends, called the National Growth Component. It also identifies if the growth is in fast or slow growing industries or sectors, called Industrial Mix; and finally, it identifies how competitive an area is

for attracting different economic sectors, called the Competitive Share. Both models use the same employment data.

The National Growth value is simply the result of comparing the county’s economic growth as compared to the national growth rate, and what actually occurred over the ten-year period between 2005 and 2015. Using this method we would expect the county to gain about 289 new jobs over that period.

The Industrial Mix value is either a positive or negative and attempts to describe the region’s (county in the case) employment trend as either

fast-growth or slow-growth. If the IM is positive, it means that the majority of the county's employment is engaged in fast growth sectors; a negative value means the county's employment is engaged in slow growth sectors. The more the value is away from zero (be it positive or negative), the more closely associated the county's employment is related to fast or slow growth industries. Growth in fast growing sectors is the most desirable.

The Competitive Share component is similar to the IM in that it also will result in a positive or negative value. It is an indicator of how attractive the region (county in this case) is to a particular sector. If an area has a large number of persons gainfully employed in a given sector, the model concludes that the area must be an attractive location for that type of industry. On the other hand, if the area has proportionally fewer persons engaged in a given sector, the model draws the opposite conclusion. Again, the higher the positive value, the more competitive the location; while the lower the value, the less competitive.

The model assumes that these forces of change can come from three sources: 1) local economic changes as a simple extension of the national trend; 2) local economic changes caused by concentration of businesses in certain industry sectors; or 3) local economic changes arising from local competition (or lack thereof) in certain industry sectors. While the model can provide some insight into the magnitude of these factors, it is merely a descriptive tool and does not indicate why employment changed. Basically, the model measures the movement (shift) of the local economy into faster or slower growth sectors and the community's larger or smaller portion (share) of the growth occurring in a given economic sector.

The industrial mix (IM) and competitive share (CS) components are computed as follows:

$$IM_i = e^{05}_i (R_i - R_T)$$

where:

e^{05}_i = regional (county) employment in industry i in year 2005
 R_i = national growth rate in employment in industry i, 2005 to 2015
 R_T = average national growth rate from 2005 to 2015
 IM_i = industrial mix component for regional (county) industry i

The county employment for each sector in 2005 is used as a base value and multiplied by the difference between the national sector growth rate and the overall economic growth rate of the nation.

$$CS_i = e^{05}_i (r_i - R_i)$$

where:

e^{05}_i = regional (county) employment in industry i in year 2005
 r_i = regional (county) growth rate in employment in industry i, 2005 to 2015
 R_i = national growth rate in employment in industry i, 2005 to 2015
 CS_i = competitive share component for regional industry i

Here, the regional employment is multiplied by the difference between the local sector growth rate and the national sector growth rate to obtain a positive or negative value.

Table 6-5 summarizes the shift-share analysis results. Under the Industrial Mix (IM) column, it appears that Adams County has a great deal of employment in the health care and social assistance, and accommodation and food services sectors – both of which the model considers to be high-growth industries by national average. On the other hand, Adams County also has many employees in the low-growth categories of construction, manufacturing, and other services. The total industrial mix for all industry sectors is about - 86, indicating that Adams County is somewhat more guided by slow-growth than high growth industries.

Under the Competitive Share (CS) column the county appears to be highly competitive in the agriculture, forestry, fishing and hunting sector. The accommodation and food services sector is also a competitive industry in Adams County. Adams County is attractive to these industry sectors due to the county's natural resources and high levels of tourism. The agricultural and forestry infrastructure combined with abundant water resources create a variety of economic incentives to make the county an appealing location. However, a relative lack of

telecommunications and major transportation infrastructure makes Adams County less competitive in terms of retail and service industries. The total CS value for all industry sectors in Adams County is about 192. This value could be best interpreted by the following statement: Adams County should have generated about 192 jobs in the last decade due to its population, competitive location, amenities, and/or historic economic development efforts.

Table 6-5: Shift-Share Analysis, 2005-2015

Industry	IM	CS
Accommodation & Food Svcs.	72	202
Admin. & Support & Waste Mgmt. & Remediation Svcs.	4	-8
Agriculture, Forestry, Fishing & Hunting	-37	624
Arts, Entertainment & Recreation	12	-60
Construction	-88	-126
Educational Svcs.	1	0
Finance & Insurance	-5	3
Government	-53	-93
Health Care & Social Assistance	100	-155
Information	-6	-18
Mgmt. of Companies & Enterprises	7	-16
Manufacturing	-80	-69
Mining, Quarrying & Oil & Gas Extraction	0	0
Other Svcs. (Exc. Public Administration)	-5	-24
Professional, Scientific & Tech Svcs.	12	-22
Real Estate & Rental & Leasing	-6	4
Retail Trade	-15	-5
Transportation & Warehousing	9	13
Unclassified Industry	0	0
Utilities	-4	-36
Wholesale Trade	-5	-22
County Total	-86	192

Source: EMSI 2017.4

Employment Projections

Based on analyses of historical and national data, EMSI projects predicted employment for industries and occupations for the next decade from the current year. In this comprehensive plan, projections are provided out to 2025. The following process is used to inform these projections:

- Creation and averaging of short-term, mid-term, and long-term trend line of county and industry patterns
- These numbers are then adjusted to complement employment projections from state and national sources (i.e., the U.S. Bureau of Labor Statistics and the

Wisconsin Department of Workforce Development).

Table 6-6 shows employment projections and growth between 2015 and 2025. Industries that are projected to employ over 100 people in 2025 in Adams County are discussed in detail below.

Table 6-6: Employment Projections, 2015-2025

Industry	2015 <i>Number of Jobs</i>	2025 <i>Number of Jobs</i>	Net Change	% Change
Agriculture, Forestry, Fishing & Hunting	1,390	1,865	475	34%
Government	1,238	1,261	-23	-2%
Accommodation & Food Svcs.	846	802	-44	-5%
Retail Trade	486	521	35	7%
Health Care & Social Assistance	461	547	86	19%
Manufacturing	303	280	-23	-8%
Construction	274	295	21	8%
Other Svcs. (exc. Public Admin.)	199	187	-12	-6%
Transportation & Warehousing	184	200	16	9%
Admin. & Support & Waste Mgmt. & Remediation Svcs.	124	125	1	<1%
Wholesale Trade	107	128	21	20%
Arts, Entertainment & Recreation	84	117	33	39%
Professional, Scientific & Tech. Svcs.	74	77	3	4%
Utilities	64	73	9	14%
Finance & Insurance	62	75	13	21%
Real Estate & Rental & Leasing	58	56	-2	-3%
Mgmt. of Companies & Enterprises	25	45	20	80%
Information	16	26	10	63%
Educational Svcs.	2	5	3	150%
County Total	5,997	6,685	688	11%

Source: EMSI 2017.4

- **Accommodation & Food Services:** While Accommodation & Food Services are projected to remain the third largest sector in Adams County, jobs in these industries are projected to experience a five percent dip in employment by 2025, a net loss of 44 jobs. Most of these jobs losses are expected to occur in the Hotels and Motels (except Casino Hotels) Industry.
- **Administrative & Support & Waste Management & Remediation Services:** Administrative, support, waste management, and remediation services are projected to maintain nearly the same level of employment by 2025.
- **Agriculture, Forestry, Fishing & Hunting:** This sector is projected to experience 34 percent employment growth, a net change of 475 jobs by 2025. Most of these additional jobs are expected in the Crop Production Industry, although Animal Production is also expected to add a number of jobs to the Adams County economy by 2025.
- **Arts, Entertainment & Recreation:** The Arts, Entertainment & Recreation industry is projected to add 33 jobs by 2025 from 2015, marking a 39 percent growth rate from 2015 to 2025. The vast majority of job growth in this industry is projected to come from Amusement, Gambling & Recreation Industries.
- **Construction:** Construction jobs are expected to grow 8 percent, or a net change in 21 jobs, meaning the construction will move from the seventh to sixth largest employing sector in Adams County by 2025. This job growth will likely be attributed to the specialty Trade

Contractors industry, and the Heavy & Civil Engineering Construction Industry.

Grantmaking, Civic, Professional, and Similar Organizations.

- **Government:** The Government sector will remain the second largest employing sector in 2025, though it is projected to experience a two percent drop in employment, or a net loss of 23 jobs. These losses are projected to be driven by a decline in Federal Government, Civilian jobs (however, these losses are partially offset by a projected growth in Local Government jobs, which include jobs in Elementary and Secondary Schools, Colleges, Universities, and Professional Schools).
- **Health Care & Social Assistance:** The Health Care & Social Assistance sector is projected to have a 19 percent growth rate, adding 86 new jobs between 2015 and 2025. This growth may be attributed to a rise of employment in Residential Care Facilities, Ambulatory Health Care Services, and Individual and Family Services.
- **Manufacturing:** The Manufacturing Sector is expected to experience an eight percent decline, or a loss of 23 jobs by 2025, spread across multiple industries.
- **Other Services (except Public Administration):** This sector is projected to decrease by twelve net jobs, or six percent by 2025, primarily driven by projected decline in jobs with Religious,
- **Retail Trade:** This sector is projected to grow at a rate of seven percent, adding about 35 new jobs by 2025. Industries catalyzing this growth are Gasoline Stations, Motor Vehicle & Parts Dealers, and Sporting Goods Stores.
- **Transportation & Warehousing:** This sector is projected to experience a growth rate of nine percent, adding about 16 new jobs by 2025. The Pipeline Transportation of Crude Oil Industry is projected to be the main catalyzing industry behind this growth.
- **Wholesale Trade:** This sector is projected to experience a 20 percent growth rate, adding about 21 new jobs by 2025. Farm Supplies Merchant Wholesalers are projected to be the main catalyst behind this growth.

Labor Force Analysis

This section examines four factors related to the county labor force. These factors are labor force, unemployment, workforce participation, and education & training. Table 6-7 displays a variety of information related to the County labor force.

Table 6-7: Labor Force Indicators

Indicator	2000	2010	2015	2000-15 County Change	2000-15 State Change
Labor Force	8,859	9,137	8,337	-5.9%	4.1%
Employed	8,454	8,005	7,729	-8.6%	4.3%
Unemployed	8,454	8,005	7,729	-8.6%	4.3%
Unemployment	4.6%	12.4%	7.3%	59.5%	17.1%
Participation Rate	56.0%	50.9%	47.0%	-16.1%	-2.8%

Source: DWD Local Area Unemployment Statistics (LAUS) Annual Averages: 2000, 2010 & 2015; U.S. Census

Labor Force

Overall, the labor force has shrunk from 8,859 in 2000 to 8,337 in 2015. That represents a drop of about six percent, less than the state's growth rate of about four percent. The labor force is defined simply as the number of persons, sixteen and over, employed or looking to be employed. Persons over sixteen who are

students, homemakers, retired, institutionalized, or unable/unwilling to seek employment are not considered part of the labor force. In 2000, 8,454 of those were employed and that dropped to about 7,729 in 2015, a decrease of about nine percent.

As identified earlier in the plan, the County has experienced a significant amount of aging. In 2000, about 19 percent of the population was 17 and under, while about 20 percent were 65 and older. By 2015, only about 15 percent 17 and under, while the 65 and older grew to over 26 percent. These population trends create issues for the expansion of the local labor force.

Unemployment

In 2000 the County had 4.6 percent unemployment, compared to the state rate of 3.5 percent. In 2015, the County had a 7.3 percent unemployment rate, compared to the state rate of 4.1 percent. Unemployment is defined as the difference between the total civilian labor force and total persons employed. Stay-at-home parents, retirees, or persons not searching for employment are not considered unemployed because they are not considered to be part of the “labor force”. Over the last fifteen years, Adams County has generally had higher unemployment rates than the state average.

Workforce Participation

In 2000, about 56 percent of the population over 16 was in the labor force. By 2015, that rate decreased to 47 percent. Workforce participation is a measure expressed in terms of a percentage of persons not actively seeking employment divided by the total working age population. These persons may not seek employment due to retirement, disability, choose to be a home care provider, or simply are not looking for work. In any event, these persons are not receiving unemployment benefits, nor are they seeking employment in any capacity.

Considering its population, Adams County has relatively few people participating in the workforce. Overall, the County has a labor force participation rate of about 47 percent while the state average is about 67 percent. This, along with the decline in the labor force participation rate, can partially be attributed to the County’s high median age.

Education & Training

Worker productivity has often been cited as one important reason for the strength of Wisconsin’s economy. Both education and training is critical to maintaining that productivity. The level of educational attainment is an important indicator of the skills of the labor force. Formal education and job training reflect a community’s ability to provide a labor force for certain types of industry. As identified earlier in the plan, educational attainment in the county is very similar to the national average in terms of those with a high school diploma or better, and bachelor’s degrees or higher, although, the county does lag behind the state in both areas.

Training is another labor force indicator. Partnerships between local businesses, governments, and educational institutions are very useful in developing the Regional economy. Institutions such as UW-Stevens Point and Midstate Technical College, often direct their programs to the training needs of local workers and businesses. Training services for dislocated workers is provided at the “Job Center” located in the City of Adams. The center is intended to be a one-stop resource for employers to meet their workforce needs and job seekers to get the career planning, job placement, and training services they need to obtain jobs. Organizations such as the North Central Wisconsin Workforce Development Board are important to this process as well.

Incomes & Wages

There are two basic measures of income: median household income and per capita income. Median household income provides an indication of the economic ability of the typical family or household unit while per capita income provides a measure of relative earning power on a per person level. As identified in the Issues & Opportunities Element of this plan the Median Household income in 2000 was \$33,408 and the Per Capita income was \$17,777. Both Median and Per Capita Incomes have risen over the last fifteen years, by 31 and 28 percent respectively. Median households incomes grew

at a faster rate during this time period than in Wisconsin, while per capita incomes grew slower in Adams County than in the states as a whole.

Table 6-8 provides average annual wage data by industry as collected by the Wisconsin Department of Workforce Development (DWD) in 2015. While average wages in

Adams County are overall somewhat lower than its neighboring counties, significant variations exist in certain industries. For example, average wages in the manufacturing, leisure and hospitality, and public administration sectors are higher in Adams County than in neighboring Juneau, Portage, and Wood Counties.

Table 6-8: Average Annual Wage by Industry, 2015

Industry	Adams	Juneau	Portage	Wood
Natural Resources	\$40,849	\$47,504	\$39,397	\$35,199
Construction	\$34,911	\$37,703	\$42,240	\$50,827
Manufacturing	\$56,457	\$49,439	\$44,683	\$55,847
Trade, Transportation & Utilities	\$33,568	\$28,803	\$30,819	\$34,601
Information	\$36,726	\$43,810	-	\$78,843
Financial Activities	\$27,172	\$32,260	\$63,005	-
Professional & Business Svcs.	\$34,368	\$30,380	\$46,299	\$37,102
Education & Health	\$33,411	\$41,283	\$45,087	\$45,011
Leisure & Hospitality	\$18,645	\$12,466	\$11,514	\$11,592
Other Svcs.	\$18,630	\$28,665	\$22,246	-
Public Administration	\$43,453	\$40,704	\$36,824	\$35,788
County Total	\$34,058	\$37,781	\$38,966	\$41,471

Source: WI DWD, 2015

Redevelopment

Generally redevelopment areas are those that are underutilized or vacant and there is some existing infrastructure and public services in place. Often these might be called blighted or deteriorated, or even condemned. These areas are efficiently redeveloped since they will utilize existing infrastructure and services. Some of these areas include the former Terrace Homes facility in Adams and the former Potato World building.

In addition, the Wisconsin Department of Natural Resources (WDNR) lists information on contaminated properties and documents activities relating to eventual reuse and cleanup of these “brownfield” lands through the Wisconsin Bureau for Remediation and Redevelopment Tracking System (BRRTS). The five types of sites tracked by BRRTS include Leaking Underground Storage Tank (LUST)

sites, Environmental Repair (ERP) sites, Spills, Liability Exemption (VPLE) sites, and Abandoned Container sites. There are currently five LUST sites and one ERP site in the County.

Economic Development Infrastructure

Overall, Adams County’s economic development infrastructure is concentrated in the central part of the county along Highway 13. This infrastructure investment provides a wider range of opportunities for the prospective entrepreneur and greatly increases the county’s chances of developing and maintaining a stable employment base for its workforce in the future.

Adams County’s variety of infrastructure amenities includes:

- Two fully serviced industrial parks the City of Adams, totaling over 60 acres.

- Three partially serviced industrial parks: one in the Town of Jackson (75 acres), one in the Town of Preston (5 acres), and one in the Town of Rome (240 acres).
- 98 miles of state highway, including State Highways 13, 21, 23, 73, and 82.
- Approximately 234 miles of County maintained highways.
- A public-use airport with a 6,000' runway suitable for commercial and freight service. It is classified as a Basic Utility – B Airport.
- The Union Pacific Railroad with a terminal in the City of Adams.

Industrial Parks are the critical economic development infrastructure in the county. The creation of industrial parks enables communities to compete with other communities to attract new businesses or to relocate existing businesses for expansions. An industrial park is a parcel of land that has been developed according to a plan that provides sites for potential industrial firms. The “park” is designed in such a way that it ensures compatibility among industrial operations and the existing activities of the area in which the park is located. The “park plan” provides for appropriate building setbacks, lot sizes, building to land ratios, architectural specifications, and landscaping required by the local codes and as necessitated by the nature of industrial activity.

[Economic Development Programs](#)

There are a variety of programs available to both communities and businesses related to economic development. Many of them are listed below:

Local

Adams County Economic Development(ACED)

ACED is a non-profit organization that promotes the economic development of Adams County, Wisconsin, and its respective cities, villages, and towns. It is comprised of area businesspersons, citizens, local government, utility company representatives, state agencies and elected officials, educational institutions and other organizations essential to the growth of Adams County. ACED is prepared to serve the needs of new businesses coming to the area as well as to assist existing companies.

Adams County Chamber of Commerce

The Adams County Chamber of Commerce is dedicated to the development of the business community in Adams County. The Chamber offers information on local business and industry and also provides a variety of programs designed to assist business development.

Adams County Revolving Loan Fund

In 1996 the State of Wisconsin provided funds to Adams County to establish a revolving loan fund to assist local businesses. This program is administered by the ACED.

Adams - Columbia Electric Coop (ACEC) Revolving Loan Fund

The ACEC established a USDA - Rural Development IRP revolving loan fund designed to address a gap in private capital markets for long-term, fixed-rate, low down payment, low interest financing. It is targeted at the timber and wood products industry, tourism and other manufacturing and service industries.

Regional

Central Wisconsin Economic Development (CWED)

CWED was created to provide overall management of several CDBG funded revolving loan funds, including funds from Adams County. This group provides centralized management of these loans.

North Central Wisconsin Development Corporation

The North Central Wisconsin Development Corporation (NCWDC) manages a revolving loan fund designed to address a gap in private capital markets for long-term, fixed-rate, low down payment, low interest financing. It is targeted at the timber and wood products industry, tourism and other manufacturing and service industries

State

Economic Development Programs

This program administrated by Wisconsin Economic Development Corporation (WEDC) provides a variety of programs to assist businesses and local communities.

Wisconsin Small Business Development Center (SBDC)

The UW-SBDC is partially funded by the Small Business Administration and provides a variety of programs and training seminars to assist in the creation of small business in Wisconsin.

The Wisconsin Innovation Service Center (WISC)

This non-profit organization is located at the University of Wisconsin at Whitewater and specializes in new product and invention assessments and market expansion opportunities for innovative manufacturers, technology businesses, and independent inventors.

Transportation Economic Assistance (TEA)

This program, administered by the Wisconsin Department of Transportation, provides immediate assistance and funding for the cost of transportation improvements necessary for major economic development projects.

Other State Programs

Technology Development grants and loans; Customized Labor Training grants and loans; and Major Economic Development Project grants and loans.

Federal

Economic Development Administration (EDA)

EDA offers a public works grant program. These are administered through local units of government for the benefit of the local economy and, indirectly, private enterprise.

U.S. Department of Agriculture – Rural Development (USDA – RD)

The USDA Rural Development program is committed to helping improve the economy and quality of life in all of rural America. Financial programs include support for such essential public facilities and services as water and sewer systems, housing, health clinics, emergency service facilities, and electric and telephone service. USDA-RD promotes economic development by supporting loans to businesses through banks and community-managed lending pools. The program also offers technical assistance and information to help agricultural and other cooperatives get started and improve the effectiveness of their member services.

Small Business Administration (SBA)

SBA provides business and industrial loan programs that will make or guarantee up to 90% of the principal and interest on loans to companies, individuals, or government entities for financing in rural areas. Wisconsin Business Development Finance Corporation acts as an agent for the U.S. Small Business Administration (SBA) programs that provide financing for fixed asset loans and for working capital.

Goals, Objectives & Policies

Economic Development Goals

- 1) Maintain, diversify and expand the economy in the County, while maintaining the rural character of the County.
- 2) Preserve and enhance the quality of life by promoting the compatibility with economic development.
- 3) Encourage the coordination of economic development, including tourism efforts, throughout the County and the region.

Economic Development Objectives

- 1) *With the Adams County Economic Development (ACED), promote the retention and expansion of the current economic base.*
- 2) *With ACED, encourage the creation of new businesses.*
- 3) *With ACED, promote the relocation of businesses to Adams County.*
- 4) *With ACED and area schools, develop and maintain a well-trained workforce.*
- 5) *Maintain and enhance public facilities and services that support economic development.*
- 6) *Pursue increased funding from both public and private sources.*

Economic Development Policies

- 1) *Conduct a business retention survey from time to time to understand the needs of area businesses.*
- 2) *Establish a Business Retention Committee to meet with businesses and identify needs.*
- 3) *Develop a recognition program for local businesses.*
- 4) *Support a “How to Start a Business” Education Program.*
- 5) *Assist local inventors to create new firms and work with area entrepreneur networks.*
- 6) *Market available sites and buildings to targeted firms.*
- 7) *Determine current employment characteristics and identify existing and future employment needs.*
- 8) *Encourage educational institutions to develop training programs needed by the area’s businesses to meet identified needs.*
- 9) *Support and work with local school officials on expanding the school to work program.*
- 10) *Evaluate, maintain and enhance infrastructure as necessary to facilitate economic growth, such as an industrial park.*
- 11) *Plan for an adequate supply of land for commercial and industrial needs.*
- 12) *Promote telecommunications infrastructure and other technology related to development and expansion.*
- 13) *Direct industrial development to areas with the infrastructure and services to support the development.*
- 14) *Work with local governments on all aspects of economic development.*
- 15) *Continue to support the Adams County Airport as an economic development asset.*
- 16) *Expand existing and secure additional revolving loan funds to assist local economic development efforts.*
- 17) *Pursue Wisconsin Economic Development Corporation and Wisconsin Housing and Economic Development Authority funds, among others.*
- 18) *Pursue U.S. Economic Development Administration and USDA – Rural Development funds, among others.*

CHAPTER SEVEN

LAND USE

Background

This is the seventh of nine chapters that comprise the Adams County Comprehensive Plan. This chapter brings together all of the previous chapters to provide a general framework for planning throughout the County. Land use examines the way land is currently being used and identifies where future uses and development will occur. The chapter is comprised of three basic sections: these are background; inventory & trends; and goals, objectives & recommendations, as well as identifying a variety of land use issues.

Previous Planning Efforts

It is important to review prior planning efforts related to land use. The plans summarized below start with regional plans, followed by county level plans, and finally a brief review of some local plans.

Regional Livability Plan (RLP), 2015

The 2015 RLP, prepared by the North Central Wisconsin Regional Planning Commission (NCWRPC), addresses issues of livability in the areas of housing, transportation, economic development, and land use. The RLP identifies two major issues:

- Increasing Density: each county has incorporated areas and clusters of development in unincorporated areas that have existing infrastructure and services. These areas should be priority areas for new development, such as higher density housing, commercial and industrial development. Using existing infrastructure and services is the most efficient way to grow.

- Farmland Preservation: each county needs to identify large tracts of productive agriculture to continue in the future. These areas should be away from other uses and be protected for the long-term.

The RLP also goes on to identify two overall goals related to land use. These are:

- Preserve and protect the region's landscape, environmental resources, and sensitive lands while encouraging healthy communities.
- Manage and reduce vacant land and structures.

The purpose of the RLP is to act as a general starting point or framework for county and local comprehensive planning efforts.

Farmland Preservation Plan

Adams County Farmland Preservation Plan was prepared as outlined in the 2009 Working Lands Initiative. The plan incorporates four major components. These are: modernization of previous farmland preservation plan, establishment of agricultural enterprise areas, increase tax credit opportunities, and the development of conservation easements. The plan was adopted by the County in 2015.

Under the Working Lands initiative the new Farmland Preservation Plan becomes part of the County Comprehensive Plan. Therefore, the Farmland Preservation Map is incorporated into this comprehensive plan. See the Adams

County Farmland Preservation Plan for more details.

Other County Plans

The County has a variety of other specialized plans which influence the comprehensive plan. These are:

- Adams County Land & Water Conservation Plan 2016-2025: The primary intent of this plan is to identify strategies to protect the quality and quantity of the county’s soil and water resources.
- Adams County Outdoor Recreation Plan 2013-2018: This plan’s primary purpose is to identify existing recreational facilities and identify needed facilities for a five-year period. This plan is currently in the process of being updated.
- Adams County All Hazards Mitigation Plan, 2015: This plan’s primary purpose is to identify how to prevent injury and

property damage from natural and man-made hazards.

Local Planning Efforts

As part of the multijurisdictional planning process in in 2005 all of the towns as well as the city and village prepared comprehensive plans. The Town of Rome, was not part of that effort but had completed a plan a year earlier. Since plans need to be updated every ten years, all of those plans need to be updated. Of the seventeen towns, eleven have completed updates and two more are underway. Only four have not completed an update. New Haven and Springville both under County Zoning have yet to complete an update and the Towns of Quincy and Strongs Prairie, which have their own town level zoning, have not completed an update. Both the City of Adams and the Village of Friendship have completed updates. See Table 7-1.

All of these local plans are used to “build” the County Comprehensive Plan, in particular the future land use plan maps. Where no current plan is available, the County will use the last adopted plan/maps.

Table 7-1: Community Zoning and Comprehensive Plan Status (8/18)

Minor Civil Division	General Zoning	Local Plan Adopted/Updated	Plan Status
Town of Adams	County	2018	Current
Town of Big Flats	Town	2013	Current
Town of Colburn	County	2016	Current
Town of Dell Prairie	County	2016	Current
Town of Easton	County	2006	Updating
Town of Jackson	County	2017	Current
Town of Leola	None	2006	Updating
Town of Lincoln	Town	2017	Current
Town of Monroe	None*	2017	Current
Town of New Chester	County	2016	Current
Town of New Haven	County	2006	Overdue
Town of Preston	County	2017	Current
Town of Quincy	Town	2006	Overdue
Town of Richfield	County	2017	Current
Town of Rome	Town	2016	Current
Town of Springville	County	2006	Overdue

Town of Strong's Prairie	Town	2006	Overdue
Village of Friendship	Village	2018	Current
City of Adams	City	2017	Current
City of Wisconsin Dells			NA
Adams County	County	2006	Updating

*Currently considering adopting County Zoning

Surrounding County Efforts

Adams County adjoins seven other counties: Sauk, Columbia, Marquette, Waushara, Portage, Wood, and Juneau. All of these counties have prepared comprehensive plans. These plans are important to review, especially the land use maps. No major land use conflicts have been identified; however, discussions with adjoining communities are important to be aware of development or other issues before they arise. The Intergovernmental Chapter contains graphic showing the status of the adjoining plans.

Issues

Several land use issues were discussed as part of the planning process. They are listed below:

Conflicting Land Uses

Conflicting land uses in urban and rural areas often include such things as: industries adjacent to residences, intermingling of commercial and residential uses, and residences adjacent to industrial uses. Agricultural practices such as manure spreading and forestry practices, such as clear cutting, can be offensive to non-farm rural residents and visitors to forest areas. With regard to recreational land-use, competition on public lands between backpackers, bicyclists, all-terrain-vehicles, and horseback riders as well as public water bodies between water skiers, boaters, anglers, and swimmers must be considered.

Sustainable Agriculture

Sustainable practices in agriculture involve carefully planned techniques to prevent soil erosion, soil contamination, non-point water pollution, and productivity loss. Organizations such as the State Department of Natural Resources (DNR) and the Natural Resources

Conservation Service (NRCS) support responsible land management practices with the intent of preserving land productivity for the long-term. Activities such as row cropping heavily sloped land, manure spreading, clear-cutting, and untreated animal confinement waste discharges are among those practices discouraged by these agencies.

Sustainable Forestry

Sustainable practices in forestry involve carefully planned techniques to prevent soil erosion, soil contamination, non-point water pollution, and productivity loss. The process of converting large contiguous areas of forest into smaller patches of forest is called forest fragmentation. Breaking up the continuous area with non-forest land-uses can inhibit the regeneration of the forest and may negatively impact both plant and animal species. Wildlife often needs a safe path from food to water; development may prevent animals from obtaining these necessities because of man-made barriers such as highways, fences, structures, etc. Fragmentation may be temporary or permanent. Fire and timber harvest are examples of temporary fragmentation, while road building, agriculture, and urban development cause permanent fragmentation.

Environmentally Sensitive Areas

Wetlands, rivers, streams, lakes, steep terrain, and other natural features are often in conflict with human development. Over-development along shorelines and in other riparian areas can cause pollution and destruction of an area's natural beauty as well as detrimental impact on flora and fauna. This, in turn, may negatively impact recreational activities and subsequently the economy of the County. Failing septic systems can cause contamination of surface

water bodies reducing recreational attractions and increasing health risks. Steep slopes or other areas unsuitable for building foundations should be avoided for development, because the shifting earth can cause great damage to a structure's foundation over time.

Location of Public Facilities and Infrastructure

The location and impacts of public service facilities are of great importance to land-use planning. Schools, airports, and highways tend to attract new development while utility corridors, power plants, and landfills generally try to avoid areas where development will occur. The topography, geography, population, land market, and economic conditions of the County often directly affect these location decisions.

Community Revitalization

Cities, villages and unincorporated communities provide identity to their surrounding areas. Where important parts of such communities are deteriorating, the rest of the area suffers. Problems involving abandoned and dilapidated buildings, loss of business and tax revenue, and inefficient use of valuable urban land gives rise to the need for appropriate land-use policies to address them. Planned redevelopment helps to re-establish a positive identity for these communities. Orderly appearance, vegetation, appropriate building designs, and scenic views all contribute to maintaining a positive visual appearance to a community. This, in turn, improves the satisfaction of the residents within the community as well as the enjoyment of visitors.

Inventory and Trends

The inventory and trends section identifies the County's land uses. It also looks at the change over the last twenty years and makes projections into the future. The element relies on many things discussed in earlier elements, such as population and natural resources.

Overview of the Natural Landscape

As discussed in the Natural Resources Chapter of this plan the County has an abundance environmentally sensitive areas, which includes open water, wetlands, floodplains, as well as soils with limitations for development, groundwater contamination susceptibility, steep slopes, large tract forest and areas of prime agricultural soils. Many of these natural features have an impact on where development can and cannot occur.

Surface water is common throughout the County. The major area of surface water is the Wisconsin River which also makes up the County's border with Juneau County. In addition, the Lakes area in Rome and several scattered lakes add many acres of water in the

County. Waterfront development continues to be desirable and places development pressure on these areas. The County contains over 27,000 acres of open water.

Wetlands also abound throughout the county. Wetlands act as a water storage mechanism, lessening flooding during heavy rain events by moderating downstream flow rates by releasing collected water over a longer time. The water filtration function of wetlands protects the quality of both groundwater and surface water. Development increases the amount of runoff and can make flooding worse, endangering wildlife habitat and damaging property. The County contains about 39,500 acres of wetlands.

Floodplains follow along the river and streams within the county. Building within floodplain areas can increase flood elevations and velocity, causing damage to downstream property and infrastructure, and increasing erosion and sedimentation. The County contains about 12,000 acres of floodplains.

Surface water, wetlands, and floodplains make up a major portion of the County's land. Other natural features that should be considered in the development of a future land use plan include soils with limitations for development, groundwater contamination susceptibility, steep slopes, large tract forest and areas of prime agricultural soils.

Many areas in the county have natural limitations for site development. These limitations are based upon a variety of characteristics, such as contiguous wetlands, steep slopes, and open waterways. Some other areas of concern include soils that are highly susceptible to groundwater contamination based upon soil type and depth to groundwater, and the effect on wildlife populations from forest fragmentation. These are areas that would have high limitations that would need to be overcome for building development. Groundwater quality is also impaired by a variety of land use activities including feedlots, leaking underground storage tanks, landfills, septic tanks, over-application of pesticides and fertilizers, and spills of hazardous chemicals.

Steep slopes create difficulties for development; however, these areas are often unique and desirable sites for development. Development in these areas can create a negative effect on the landscape. Slopes are extremely vulnerable to erosion, are difficult to stabilize once disturbed by construction, and can reduce the aesthetics of an area. In addition to erosion, many rare habitat communities and species are lost to construction on steep slopes. There are relatively few areas of steep slopes, those that are greater than a 20 percent grade, in the county. Most of the steep slopes exist near buttes that are distributed throughout the county, and the bluff line that parallels parts of the Wisconsin River.

Development, especially in larger tract forests creates some problems, although not for the actual development of the parcel, but indirectly as a result of the development in the larger community. Much of the county is forested,

with large tracts in private ownership. Fragmentation results in the decrease of forest products production, and decreased production of interior forest wildlife species. Scattered development within the agricultural community creates problems of conflicting land uses. When enough residential development occurs, it decreases the ability of the area to continue in agricultural uses, because of neighbor opposition to farming activities and because the amount of contiguous farmland shrinks to an un-economic amount of acreage. Land with the optimal soil composition, slope, and moisture for agriculture is considered to be "prime".

Overview of County Development

Adams County is about 42 miles north to south and about 21 or so miles east to west, narrowing to 9.5 miles at the southern border of the county. Vast woodlands and forested wetlands cover much of the county. Agriculture is the other dominant land use throughout the county, with pockets of rural and urban development. Historic development patterns have had a lasting impact on the current land use patterns of the County. The majority of Adams County was forested until the 1850's, and then it was cutover and was devoted to farming. Population growth stalled until about 1910 when the railroad reached the county. In the 1920's and 1930's, a major drought caused many farms to fail.

After World War II, the Wisconsin River Power Company began developing power generation facilities, which created the Wisconsin River impoundments of Petenwell Lake and Castle Rock Lake. Agriculture continued to thrive, and the interstate highway system opened in the 1960's, making Highways 82 and 21 important connecting transportation routes.

In the 1970s, three recreational lakes were created and housing was developed around them in the Town of Rome. This began a long trend toward building seasonal homes.

Additional lake development occurred in the Towns of Jackson, New Haven and Preston, as well along the length of the Wisconsin River. Today the county has a resident population of about 20,700. The largest community is the Town of Rome with about 2,700 people, followed by the Town of New Chester with 2,000, and the City of Adams with about 1,900.

Land Breakdown

In terms of land area the County covers approximately 413,000 acres. Most of the seventeen towns are typical 6 by 6 mile towns, or about 23,000 acres. However, the largest is the Town of Rome and the smallest is the Town of Monroe, with 34,632 acres and 13,999 acres respectively. The City of Adams is the largest of the three incorporated communities in the county with 1,883 acres, followed by the Village of Friendship with 576 acres and the City of Wisconsin Dells with 1,109.

Table 7-2 provides detailed information for each community in the County. The majority of the towns are six mile by six mile townships and average about 23,000 square miles.

Public Ownership

A variety of federal and state owned lands are scattered throughout the county, in addition to county, town, city, village and other landowners. Combined federal, state, county and town governments own over 20,000 acres or about 5 percent of the land in Adams County.

Federal ownership is concentrated in the Town of New Chester where a federal prison is located. The majority of State and County holdings are for wildlife and recreational uses, such as the Colburn Wildlife Area, and the County Parks at Castle Rock and Petenwell. See Map 8 - Public Ownership.

Table 7-2: Land Area, 2015

Minor Civil Division	Land in Acres	% of County Land Area
Town of Adams	32,080	7.8%
Town of Big Flats	30,677	7.4%
Town of Colburn	22,970	5.5%
Town of Dell Prairie	20,157	4.9%
Town of Easton	23,074	5.6%
Town of Jackson	22,187	5.4%
Town of Leola	23,871	5.8%
Town of Lincoln	23,088	5.6%
Town of Monroe	13,999	3.4%
Town of New Chester	19,908	4.8%
Town of New Haven	18,658	4.5%
Town of Preston	22,624	5.5%
Town of Quincy	20,782	5.0%
Town of Richfield	22,764	5.5%
Town of Rome	34,632	8.4%
Town of Springville	27,966	6.8%
Town of Strongs Prairie	30,197	7.3%
Village of Friendship	576	0.1%
City of Adams	1,883	0.5%
City of Wisconsin Dells	1,109	0.3%
Adams County	413,203	100.0%

Source: 2010 U.S. Census

Existing Land Use

The first step in analyzing land use is to inventory existing land uses. To do that, the NCWRPC completed a review using air photos from countywide flights in 2015. To categorize the information thirteen (13) broad land use classifications were used, they are: Agriculture, Commercial, Cranberry Bog, Commercial, Government/Institutional, Industrial, Multi-Family, Open Lands, Outdoor Recreation, Residential, Transportation, Water, and Woodlands. See **Map 9 - Existing Land Use**.

The Existing Land Use Map provides a “birds eye view” of existing development patterns in the county. Easily observed are the vast woodlands in the county, as well as the major agricultural areas. The concentration of residential uses around the lakes in Rome, Preston, Jackson and New Haven are noticed as well as along the river, especially in Quincy, Strongs Prairie, and Monroe. Also noticed is the scattered residential development all across the county adjoining town and county roads. A

concentration of mixed-use development occurs in the center of the county, that being the City of Adams and the Village of Friendship, with a variety of uses, including residential, transportation, industrial, commercial, and outdoor recreation.

Data from the Existing Land Use Map was then converted into a digital format using a geographic information system (GIS) to determine acres for each of the land uses. **Table 7-3** displays that information. The results are not exact acreage calculations, but rather generalized areas as calculated from the lines on the map. Note that about 27,000 acres of water are added, which are not included in the previous table.

Woodlands are currently the largest land use in the county. Over 57 percent of the county is considered woodlands, followed by agriculture with about 22 percent of the total. Combined, these two uses represent nearly 80 percent of the land use in the county. Residential uses make up just over four percent of the total.

Table 7-3: Generalized Existing Land Use – 2015

Land Use	Acres	%
Agriculture	97,432	22.1%
Cranberry Bogs	1,922	0.4%
Commercial	1,775	0.4%
Industrial	649	0.1%
Government/Public/Institutional	779	0.2%
Open Lands	19,383	4.4%
Parks & Outdoor Recreation	1,739	0.4%
Residential	19,301	4.4%
Multi-Family, includes Mobile Home Parks	141	0.0%
Quarry & Utilities	178	0.0%
Transportation	15,038	3.4%
Water	27,934	6.3%
Woodlands	253,962	57.7%
Total	440,234	100%

Source: NCWRPC GIS & Local Plans

Real Estate Values

Equalized Values

Over the last fifteen years there has been substantial real estate value growth in the county. The average growth for the county was 86.6 percent. Table 7-4 displays the information for all of the local units of government in the county. This data is not

adjusted for inflation. Besides the portion of the City of Wisconsin Dells located in Adams County, the Town of Strongs Prairie had the greatest growth, in terms of percentage, with 137.5 percent increase, followed by Monroe and Adams. The least growth occurred in the City of Adams with an increase of only 42.3 percent.

Table 7-4: Equalized Values

Minor Civil Division	2000	2010	2015	2000-15 % Change
Adams	\$61,506,200	\$134,273,800	\$122,811,800	99.7%
Big Flats	\$45,591,800	\$94,991,000	\$87,490,300	91.9%
Colburn	\$23,057,000	\$41,767,300	\$44,002,800	90.8%
Dell Prairie	\$91,583,100	\$171,256,400	\$164,243,600	79.3%
Easton	\$47,011,400	\$93,370,100	\$84,643,900	80.0%
Jackson	\$100,443,600	\$192,625,500	\$173,855,900	73.1%
Leola	\$22,584,000	\$38,991,700	\$37,292,000	65.1%
Lincoln	\$24,261,100	\$42,903,600	\$41,450,600	70.9%
Monroe	\$39,376,900	\$99,820,900	\$88,400,100	124.5%
New chester	\$47,818,800	\$91,273,900	\$84,522,400	76.8%
New Haven	\$30,231,000	\$57,421,900	\$55,119,500	82.3%
Preston	\$77,293,700	\$143,955,400	\$136,845,100	77.0%
Quincy	\$99,234,800	\$215,079,800	\$173,761,100	75.1%
Richfield	\$18,653,400	\$28,691,300	\$28,903,200	54.9%
Rome	\$304,248,100	\$694,290,800	\$581,301,500	91.1%
Springville	\$66,797,300	\$131,635,200	\$102,650,100	53.7%
Strongs Prairie	\$77,910,900	\$201,036,800	\$185,043,100	137.5%
Village of Friendship	\$16,153,200	\$28,023,200	\$24,199,600	49.8%
City of Adams	\$41,439,500	\$65,029,500	\$58,982,300	42.3%
City of Wisconsin Dells (part)*	\$616,900	\$23,504,500	\$30,657,700	4,869.6%
Adams County	\$1,235,812,700	\$2,589,942,600	\$2,306,176,600	86.6%

Source: WI Department of Revenue
*1990 to 2000 % Change Reflected

Opportunities for Redevelopment & Growth

The most efficient development utilizes existing public services and infrastructure; these areas are referred to as “Development Areas” areas. Currently, the majority of existing services are located in the City of Adams/Village of Friendship and the Town of Rome. The City of

Wisconsin Dells extended sewer & water along Highway 13 in Dell Prairie and the City of Adams extended sewer into the Town of Strongs Prairie. Some water facilities are located in the Town of Rome, however, there is a need for sewer.

These areas have existing infrastructure and service capacity. The use of existing infrastructure and services is more cost-

effective; therefore, new commercial, industrial and higher density residential development should be located in these areas. Local plans identified those areas already served and those areas that are most efficiently served by existing infrastructure and services. Areas where sewer & water and other infrastructure and services are not available should have minimal industrial and commercial development and only scattered residential development, where appropriate. These areas are further refined in the local planning efforts, mainly in the Adams-Friendship and Wisconsin Dells areas.

Demographics Affecting Land Use

Population, housing and employment are critical demographic factors that influence land use patterns. In an effort to examine future land use needs, projections were completed for population, housing units and employment. The result provides needed information to identify the future the number of additional persons, housing units and jobs that will need to be located within the County.

The population of the Adams County has continued to grow over the last fifteen years. In 2016, there were nearly 20,700 people living in the County. Between 2000 and 2016, population grew by about four percent, while jobs increased at 3 percent. Population, employment and housing all impact land use.

Population

Population density is an indicator that compares the number of persons occupying a specific geographic area. A rural area would have fewer persons per square mile, while an urban area would have more persons per square mile.

Table 7-5 displays 2000, 2010 and 2015 data. In 2000, there were 29.2 persons per square mile in the County. In comparison, the overall state density was 98.8 persons per square mile. By 2015, there were 31.7 persons per square mile in the county, an 8.6 percent increase in density. The Village and the two cities had the highest densities. Dell Prairie and New Chester had the highest densities among the towns. New Chester's density is higher since it reflects the population within the federal prison. Richfield and Colburn had the least density among the towns. In 2015, the statewide density was 106.0 persons per square mile, much higher than the Adams County.

According to the Department of Administration, population projections for Adams County show an 11 percent population increase over the next twenty years (2015 to 2035), from 21,410 to 23,780. This translates to about 2,370 additional residents. Examining the projections more closely, 625 persons will be added by 2020, 1,085 persons will be added by 2025, 770 persons will be added by 2030 and the population declines slightly by 50 persons in 2035. These new residents will increase the demand for housing and other services.

Table 7-5: Population Density (Persons Per Square Mile)

Minor Civil Division	2000	2010	2015	2000-2015 % Change	2000-2015 Net Change
Town of Adams	25.1	26.8	28.6	13.9%	3.5
Town of Big Flats	19.7	21.2	17.8	-9.6%	-1.9
Town of Colburn	5.0	6.2	7.9	58.0%	2.9
Town of Dell Prairie	42.5	49.8	50.7	19.3%	8.2
Town of Easton	33.1	31.3	27.5	-16.9%	-5.6
Town of Jackson	26.6	28.9	34.3	28.9%	7.7
Town of Leola	7.1	8.3	8.7	22.5%	1.6
Town of Lincoln	8.6	8.2	10.0	16.3%	1.4
Town of Monroe	16.6	18.2	19.7	18.7%	3.1
Town of New Chester*	27.7	72.6	64.7	133.6%	37.0
Town of New Haven	22.5	22.5	23.7	5.3%	1.2
Town of Preston	38.4	39.4	41.3	7.6%	2.9
Town of Quincy	36.0	35.9	37.9	5.3%	1.9
Town of Richfield	4.1	4.4	4.1	0.0%	0.0
Town of Rome	49.0	50.3	50.1	2.2%	1.1
Town of Springville	26.6	30.2	28.2	6.0%	1.6
Town of Strongs Prairie	23.5	24.4	23.5	0.0%	0.0
Village of Friendship	775.6	824.6	791.6	2.1%	16.0
City of Adams	660.0	667.0	562.9	-14.7%	-97.1
City of Wisconsin Dells*	190.0	43.6	8.6	-95.5%	-181.4
Adams County	29.2	32.3	31.7	8.6%	2.5
State of Wisconsin	98.8	105.0	106.0	7.3%	7.2

Source: U.S. Census, & NCWRPC (*only a small portion is within the County)
 *Note the densities are inflated as a result of the FCI Oxford facility

Housing

Housing density compares the number of housing units within a certain specific area. Here the indicator is housing units per square mile. Again, a rural area would have fewer units per square mile, while an urban area would have more units per square mile. Housing will continue to be needed throughout the county as the population continues to increase.

Table 7-6 displays information 2000, 2010, and 2015 data. Over the last fifteen years there have been changes in the number of housing units in the County. Countywide in 2000, there were 18.1 housing units per square mile. In comparison, the overall state density was 42.7 housing units per square mile. By 2015, there were 27.0 housing units per square mile in the county, an increase of 49.2 percent. The statewide density in 2015 was 48.8 housing units per square mile, much higher than Adams County.

Table 7-6: Housing Density (Housing Units Per Square Mile)

Minor Civil Division	2000	2010	2015	2000-2015 % Change	2000-2015 Net Change
Town of Adams	17.0	17.8	17.8	4.7%	0.8
Town of Big Flats	16.6	22.9	23.2	39.8%	6.6
Town of Colburn	4.3	6.1	6.2	44.2%	1.9
Town of Dell Prairie	22.6	30.0	33.3	47.3%	10.7
Town of Easton	22.7	24.0	21.6	-4.8%	-1.1
Town of Jackson	27.3	31.7	29.9	9.5%	2.7
Town of Leola	4.8	6.0	5.2	8.3%	0.4
Town of Lincoln	5.8	6.0	6.9	19.0%	1.1
Town of Monroe	18.4	26.2	29.7	61.4%	11.3
Town of New Chester	20.4	23.4	23.9	17.2%	3.5
Town of New Haven	11.6	13.0	12.0	3.4%	0.4
Town of Preston	27.1	32.8	29.2	7.7%	2.1
Town of Quincy	49.2	52.6	53.5	8.7%	4.3
Town of Richfield	2.9	4.1	4.0	37.9%	1.1
Town of Rome	43.4	61.9	63.1	45.4%	19.7
Town of Springville	19.7	24.4	24.4	23.9%	4.7
Town of Strongs Prairie	20.7	29.1	30.3	46.4%	9.6
Village of Friendship	326.7	367.4	332.1	16.5%	5.4
City of Adams	292.1	335.7	324.2	11.0%	32.1
City of Wisconsin Dells*	90.0	49.3	39.3	-56.3%	-50.7
Adams County					
Adams County	18.1	27.0	27.0	49.2%	8.9
State of Wisconsin	42.7	48.5	48.8	14.3%	6.1

Source: U.S. Census, & NCWRPC (* only a small portion is within the County)

Utilizing the population projects and persons per household of 2.4 we can determine the need for additional housing units. Assuming that most units on county-wide average require about 2 acres of land we can also determine the land demand for residential development.

Therefore, if we add 2,370 persons we can expect about 988 new housing units, which in turn will require about 1,975 acres of land. In five year increments, we can expect to add 260 units by 2020, 425 units by 2025, 295 units by 2030, and by 2035 population declines as does the demand for units based on population growth.

Employment

According the economic modeling software, EMSI, employment in the Adams County is expected increase by 11 percent over the next decade. In 2015, there were about 6,000 jobs in

the County and by 2025 that should increase to nearly 6,700. That projects almost 700 additional jobs being created. Most of these are expected to be in the agricultural & forestry and health care sectors.

With much of the employment projected in the agricultural & forestry sector existing lands will be utilized. Some expansion of retail and commercial is expected as a result of others uses. Since there are substantial lands available for industry in the existing business and industrial parks, there does not appear to be a need for more land for those uses.

Land Demands

Population and employment are some of the major factors driving land consumption, along with agriculture and forestry demands. As the County’s population grows there is demand for

more housing which in turn uses land for residential development, while employment increase require additional space for retail, commercial and industrial space in the County. The previous section highlighted those trends.

Based on existing density patterns and projections, about 1,975 acres will be needed to meet future residential land demands. Other uses such as retail and commercial will have demands as well, but will likely be in areas already identified for these uses.

Future Land Use

The future land use plan map represents the preferred long-term land uses in the county as developed by the local units of government. The Future Land Use Plan map is not the same as the Existing Land Use map. Although, these two maps are similar, the purpose of each is very different. The existing land use map categorizes the way land is being used today, while the future land use map identifies areas for future development. The map is advisory and does not have the authority of zoning, but does reflect community desires and serves as a guide for local officials to coordinate and manage future development.

Basically, once the natural and built environments are inventoried and demographic information is collected, the future land use plan map is developed. Land uses are located where they complement existing uses and not negatively impact the natural environment. All of the towns as well as the city and village completed this process, although, some of the towns are in need of updating their future land use plan maps. To create the County Future Land Use Map all of the local plan maps were merged together. The County relies upon the local units to create and update their own plans. See Map 10 – Future Land Use.

Future Land Use Categories

To create the future land use plan map at the local level, eleven general future land use categories were established. Using these

general categories the local planning commissions identified the desired future land use in their communities.

A general description of each classification follows:

1. **Residential:** Identifies areas recommended for residential development typically consisting of smaller lot sizes. (Usually about 5 acres or less)
2. **Rural Residential:** Identifies areas that are recommended for less dense residential development, consisting of larger minimum lot sizes than the residential category. These areas will also allow a mixture of residential uses, and provide a good transition from more dense development to the rural countryside. (About 10 acres or more)
3. **Commercial:** Identifies areas recommended for commercial development, as well as existing commercial establishments located throughout the county.
4. **Industrial:** Identifies areas recommended for industrial development, as well as existing industrial areas located throughout the county.
5. **Governmental/Public/Institutional:** Identifies existing or planned governmental/public/institutional facilities within the county, including recreational facilities.
6. **Agriculture:** Identifies areas to be preserved for the purpose of general crop farming or the raising of livestock.
7. **Woodlands:** Identifies areas of large woodlands within the county, including commercial forest.
8. **Transportation Corridors:** Identifies the existing road network along with the recommendations for improved and safe traffic movement in the county. This also includes rail corridors and airports.

9. *Preservation:* Contains sensitive environmental areas, such as 100-year floodplains as defined by the Federal Emergency Management Agency, DNR wetlands, and steep slopes.

10. *Open Space:* These are areas that are generally open lands with little woodland cover or fallow fields. Some of these include marshlands.

11. *Outdoor Recreation:* These are areas with major recreation facilities, such as golf courses.

Most of the communities used these same general categories; however some had slight variations in definition. See local plans for specific details.

The Future Land Use Plan map is not a zoning map. The Future Land Use Plan map is general in nature and was developed as a general guide for future land use, with mixed uses and scattered uses expected where deemed appropriate by the local communities. The identification of desired future land use types through the map does not imply that an area is immediately appropriate for rezoning. Given service demands and a desire for controlled growth, careful consideration to the timing of zoning decisions is essential. In some places, it may be desirable to rezone land to reflect the planned land use designations as soon as possible. In other cases, it may be appropriate to wait to rezone the area until an actual development proposal is brought forward.

Although general, the future land use classifications displayed on the map indicate appropriate future land uses and regulations, such as zoning. In many areas the existing zoning districts already reflect the desired future land uses; while in other areas, zoning map or text changes may be required to meet some of the desired future land uses.

Overview of Local Plans

The Future Land Use Plan map displayed represents the desired arrangement of preferred land uses for the future at this time by each town, the city and village. The major future

land uses continue to be forestry and agriculture, but numerous areas have been identified for residential, particularly rural residential in the towns, and new commercial and industrial uses. Overall, there appears to be sufficient land acres identified on the future land use map to meet expected demands in Adams County in the future.

Land Use Tools

Zoning Regulations

There are two basic types of zoning, general and shoreland:

General Zoning has been a tool used by units of government since the 1920's in Wisconsin. Zoning provides a reasonable protection of property rights of landowners by minimizing incompatible uses. Generally, zoning identifies a variety of broad districts that identifies the primary allowable or permitted uses, as well as a list of permitted uses with some conditions, called conditional uses. Often a district will list non-permitted uses. These districts are displayed on an official zoning map.

Adams County's general zoning covers ten towns, these are: Adams, Colburn, Dell Prairie, Easton, Jackson, New Chester, New Haven, Preston, Richfield, and Springville. Cities and Villages have their own zoning and towns may also elect to have their own town zoning; these are Big Flats, Lincoln, Quincy, Rome, and Strongs Prairie. Only two towns in the county have no general zoning regulations, these are Leola, and Monroe. No zoning makes these areas particularly vulnerable to a variety of land use issues.

Shoreland Zoning is mandated by state law and is administered by the county level. The intent of shoreland zoning is to control development near waterways, in the most sensitive environmental areas. The area defined by state law is the area within 300 feet of a stream or river and 1000 feet of a lake or pond.

County Shoreland Zoning is administered by the County Planning & Zoning. The county has jurisdiction throughout all of the towns for shoreland zoning, regardless if they have county zoning, local town zoning or no zoning. Shoreland zoning does not apply to incorporated areas. There are anticipated changes and updates needed for the Shoreland Ordinance.

Land Division Regulations

The purpose of a land division or subdivision ordinance is to regulate and control the division of land to: Further the orderly layout and use of land; Prevent the overcrowding of land; Lessen the congestion on streets and highways; and Facilitate adequate provision for water, sewage and other public improvements. A subdivision ordinance includes technical requirements, design standards for plats and certified survey maps, and required improvements (i.e. stormwater detention, public and private sewage, land dedication).

The Adams County Land Division Ordinance outlines procedures for land division, technical requirements, design standards for plats and certified survey maps, and outlines required improvements (i.e. stormwater detention, public and private sewage, land dedication). Local units of government may also elect to have a separate land division ordinance if it is more restrictive than the county ordinance. There are anticipated changes and updates needed for this Ordinance.

Official Mapping

Counties have limited official mapping powers. However, counties may adopt highway width maps showing the location and width of proposed highways, as well as widths of any existing highway that may be expanded.

Farmland Preservation

In addition to the future land use map – the County Farmland Preservation Map is incorporated as part of this comprehensive plan. The 2016 Adams County Farmland Preservation Plan identified appropriate lands to be preserved for agricultural purposes and related economic growth. The Farmland Preservation Plan identifies many of the same goals, objectives, and policies set forth in this comprehensive plan with regards to agricultural. Language regarding farmland preservation has been included in both the Farmland Preservation Plan and County Comprehensive Plan — in the case of any inconsistencies, the Farmland Preservation Plan supersedes the Comprehensive Plan.

The Farmland Preservation Plan adds another tool to use for the preservation of the farming industry. All towns had a chance to review the farmland preservation maps, which guided the County in formulating as to how and where agricultural lands are to be preserved. Not all towns embraced farmland preservation. See the Farmland Preservation Map in Chapter 2.

Goals, Objectives & Policies

Land Use Goals

- 1) Encouragement of land uses, densities, and regulations that promote efficient development patterns and relatively low municipal, state governmental, and utility costs.
- 2) Provide adequate infrastructure & public services, and an adequate supply of developable land to meet existing and future market demand for residential, commercial, industrial, agricultural, and other uses.
- 3) Promotion of the redevelopment of lands with existing infrastructure and public services and the maintenance and rehabilitation of existing residential, commercial, and industrial structures.
- 4) Planning and development of land uses that create or preserve varied and unique urban and rural communities.
- 5) Balance individual property rights with community interests and goals.

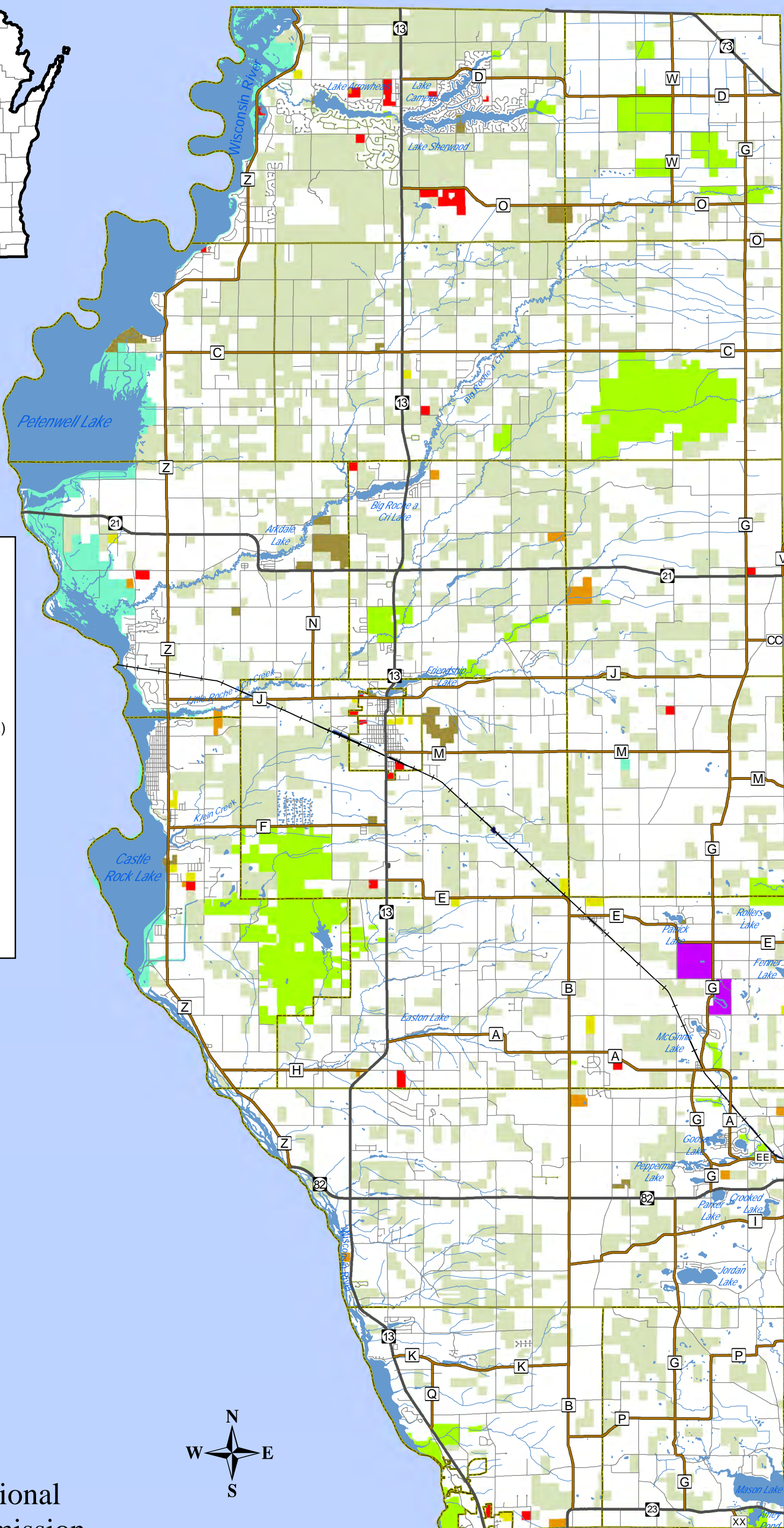
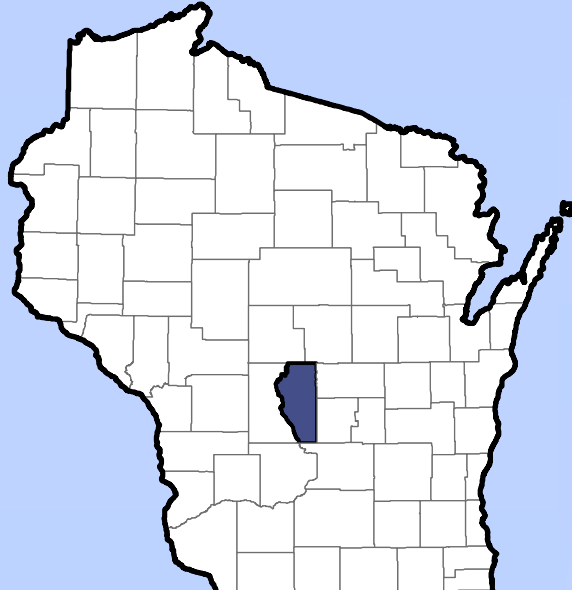
Land Use Objectives

- 1) *Maintain orderly, planned growth which promotes the health, safety and general welfare of county residents and makes efficient use of land and efficient use of public services, facilities and tax dollars.*
- 2) *Encourage local units of government to provide quality public services in an efficient and cost-effective manner.*
- 3) *Encourage local units of government to utilize existing capacity of services and facilities before new services and facilities are provided.*
- 4) *Assure that the pace of development does not exceed the capacity of utilities, roads, and community facilities and services.*
- 5) *Discourage sprawling, low-density development where there is no existing infrastructure and service capacity.*
- 6) *New development should be responsible for paying for the cost of any utility extensions or new services required for that development without unfairly burdening the existing taxpayers.*
- 7) *All comprehensive land use plans should strive to be consistent with and seek to minimize conflicts with other levels of government.*
- 8) *Local units of government should use the County Comprehensive Plan as a guide for their own planning efforts.*
- 9) *Encourage local units of government to develop individual comprehensive plans and create or modify implementation tools to reflect the future needs of their communities.*
- 10) *New development will be permitted based on consideration of this Plan, as well as other Town, County, Regional, and state plans.*
- 11) *Minimize residential development in rural areas by encouraging expansion of existing residential areas that can sufficiently accommodate future growth needs.*
- 12) *Conserve and revitalize older neighborhoods and commercial areas.*
- 13) *Promote new land development that is compatible with local government comprehensive plans and related plans.*

- 14) *Development should be discouraged in environmentally sensitive areas, including wetlands and flood plains.*
- 15) *Discourage new development that adversely affects the property value or livability of neighboring properties.*
- 16) *Comprehensive plans and related implementation tools should be used to avoid conflicts among different uses of land.*

Land Use Policies

- 1) *Guide the location, mix, and quality of private development to meet both private and public land use objectives.*
- 2) *Update land use regulations to better guide and manage the location, mix, quality, and impacts of development in the county.*
- 3) *Land uses should be planned so that development occurs in an orderly manner and land use conflicts are avoided.*
- 4) *County will incorporate individual town plans when they are officially adopted at the local level.*
- 5) *The County will maintain the Comprehensive Plan, which will serve as a guide for future land use and zoning decisions.*
- 6) *Assist local units of government to plan for a compatible land use pattern.*
- 7) *Minimize strip-type commercial development along high-volume traffic roads to insure traffic safety and mobility and to avoid general "sprawl".*
- 8) *Promote/regulate development which minimizes groundwater impacts from on-site septic systems, wells, and other sources.*
- 9) *Encourage infill and the reuse of underutilized areas.*
- 10) *Promote higher residential densities in the appropriate areas.*
- 11) *The location of new development should be restricted from areas in the county shown to be unsafe or unsuitable for development due to flood hazard, potential groundwater contamination, loss of farmland, highway access problems, incompatibility with neighboring uses, etc.*
- 12) *Non-farm and non-forestry-related housing should be discouraged in agricultural and forestry areas.*
- 13) *Manage public lands in a manner compatible with land use goals, objectives, policies, and plans.*
- 14) *Allow higher density development (1-2 acre lot size) where it is compatible with existing development patterns, or as a cluster subdivision.*
- 15) *Use-buffer areas should be used as shields to lessen the impacts of potentially conflicting land use types located in relatively close proximity; i.e. such as a buffer between single-family and agricultural areas.*
- 16) *All comprehensive plans should strive to maximize public input in their planning efforts.*



Legend

- State Highways
- County Highways
- Local Roads
- Minor Civil Divisions
- Railroad
- Water
- Managed Forest Lands (104,162 ac.)

Tax Exempt Lands

- County (1,985 ac.)
- Federal (958 ac.)
- State (18,092 ac.)
- Utility (6,427 ac.)
- Schools (668 ac.)
- Municipal (1,211 ac.)
- Railroad (165 ac.)
- Other (847 ac.)

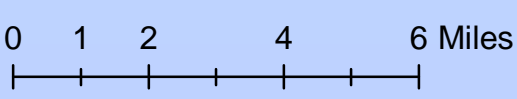
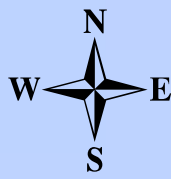
Source: WI DNR, NCWRPC, Adams Co.

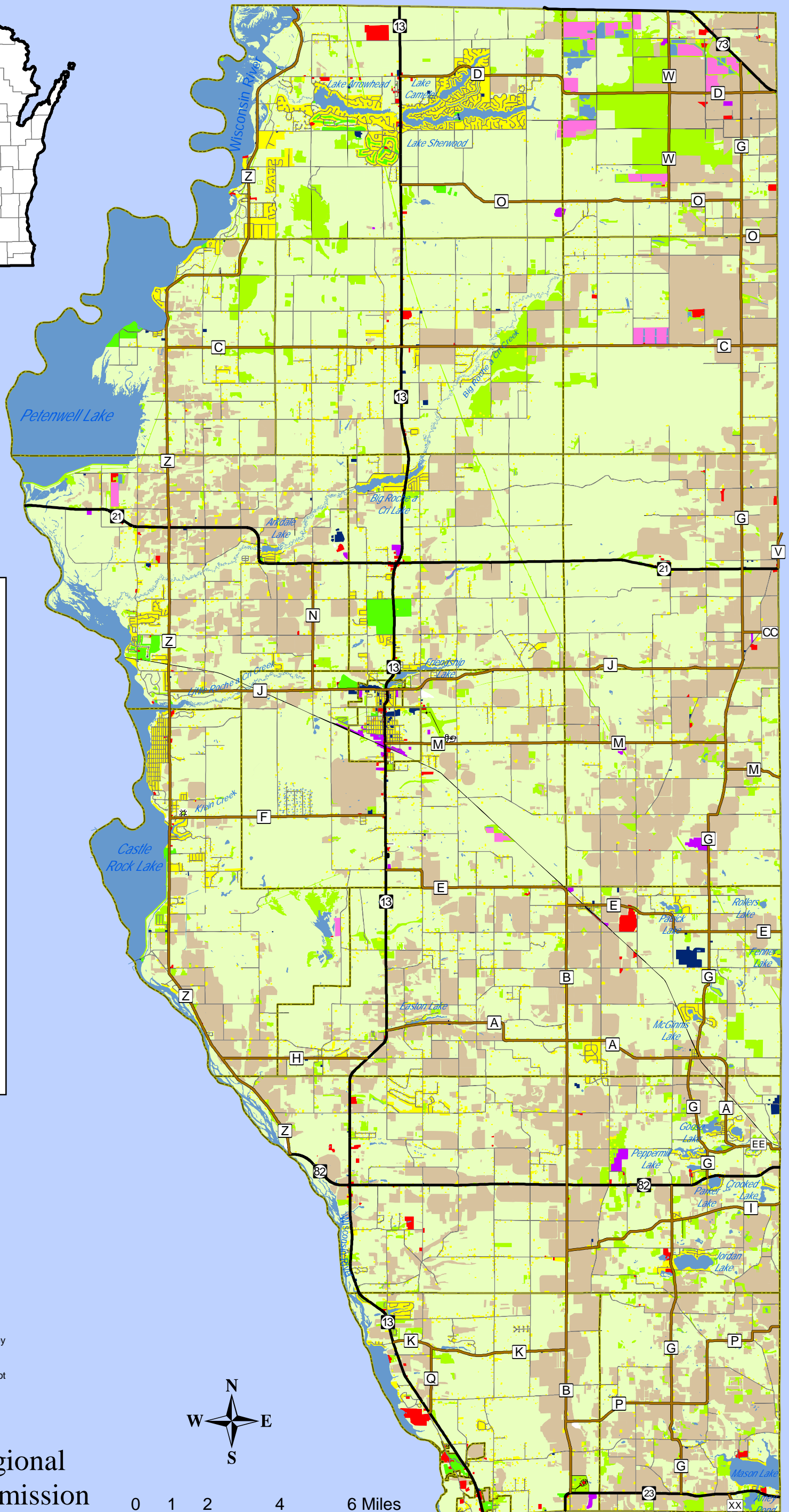
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Legend

- State Highways
- County Highways
- Local Roads
- Minor Civil Divisions
- Water
- Agriculture
- Commercial
- Cranberry Bog
- Governmental / Institutional
- Industrial
- Multi-Family
- Open Lands
- Outdoor Recreation
- Residential
- Transportation
- Woodlands

Source: WI DNR, NCWRPC, Adams Co.

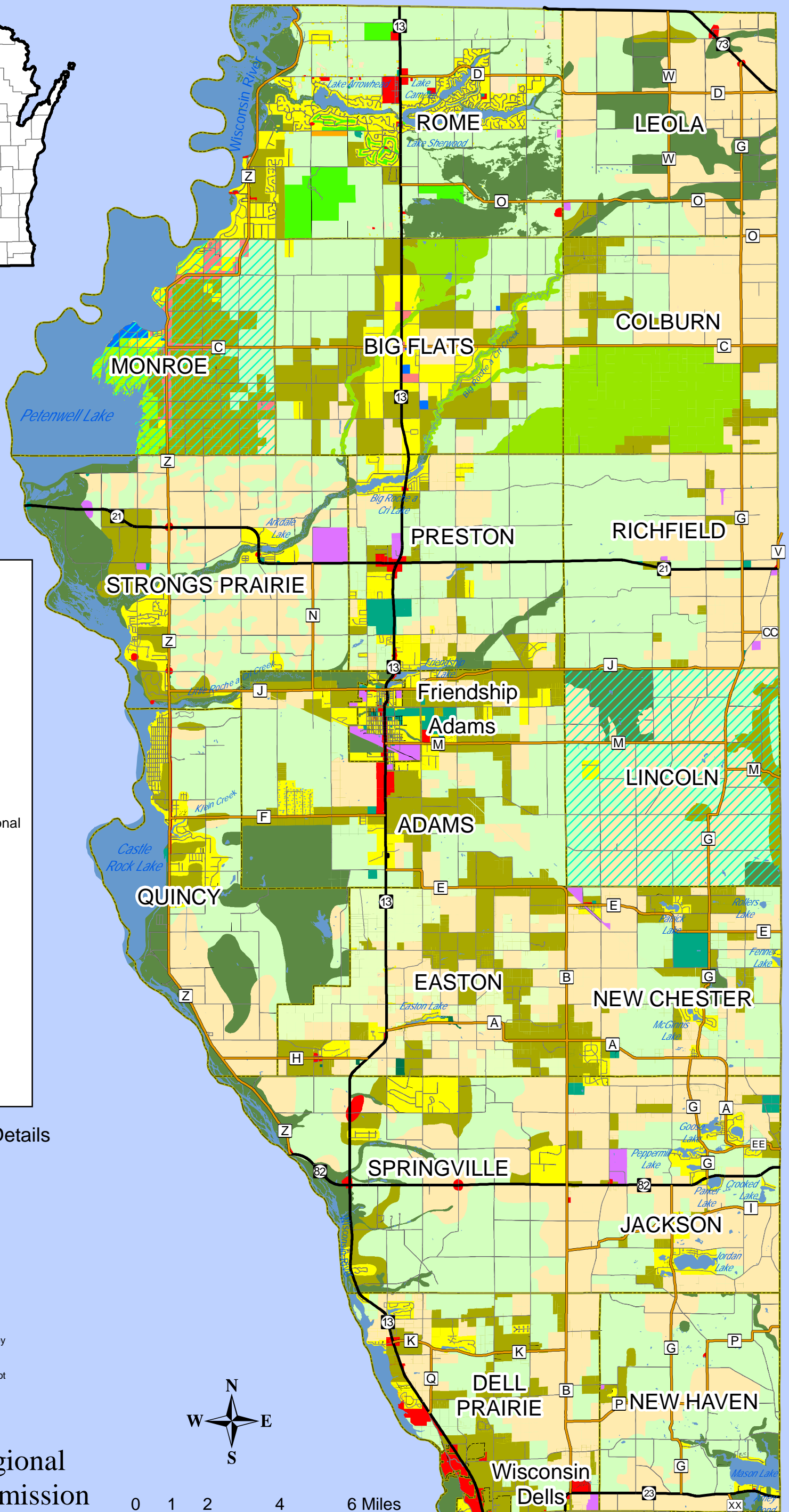
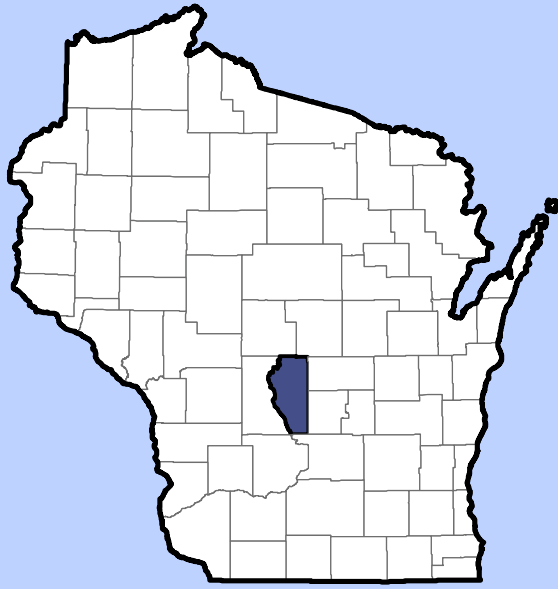
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Legend

- State Highways
- County Highways
- Local Roads
- Minor Civil Divisions
- Agriculture
- Commercial
- Woodlands
- Governmental / Public / Institutional
- Industrial
- Open Land
- Outdoor Recreation
- Preservation Areas
- Residential
- Rural Residential
- Transportation
- Water
- See Local Plan*

* See Local Plan For More Details

Source: WI DNR, NCWRPC, Adams Co.

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CHAPTER EIGHT

Intergovernmental Cooperation

Introduction

This is the eighth chapter of the Adams County Comprehensive Plan. This chapter is based on the statutory requirement for a “compilation of objectives, policies, goals, maps and programs for joint planning and decision making with other jurisdictions, including school districts and adjacent communities, for siting and building public facilities and sharing public services. The chapter also examines the relationship of the County with area school districts and adjacent local units of government, the state and other governmental agencies. In addition, this element shall identify existing or potential conflicts between the County and other governmental units that are specified in this paragraph and describe processes to resolve such conflicts.

This Comprehensive Plan provides overall recommendations for relationships with adjacent, local and overlapping jurisdictions to achieve visions for future growth, avoid inefficient or conflicting development patterns, and promote intergovernmental agreements.

Previous Studies

Adams County Comprehensive Plan, 2006

The previous comprehensive plan provided an overview of a variety of joint efforts that were underway or in discussion at the time. There was substantial discussion of the Kettl Commission that was the foundation of much of the State’s efforts to promote intergovernmental cooperation. A listing of various joint efforts was also identified. Many of these are reflected in the text below. The plan also identified some areas of potential cooperation and concluded with goals, objectives, and policies. Some of the

information that is still relevant is included here.

Regional Livability Plan, 2015

This plan was prepared by the North Central Wisconsin Regional Planning Commission as the regional comprehensive plan. The Regional Livability Plan (RLP) is only advisory and seeks to provide a framework for local planning efforts, informing local governing bodies about the context for their planning. Although at this time the need for consistency between plans of governmental bodies at various levels is not yet entirely clear, the degree to which planning efforts in various jurisdictions can be coordinated makes subsequent problems of inconsistency less likely.

The RLP also focuses on land use, housing, economic development and transportation, but does touch on intergovernmental cooperation, cooperative agreements, and other methods that local governments can use to address common issues. Not all conflicts between local governments can be settled through the use of these methods, but by looking at problems that transcend local boundaries in a regional context, solutions are more likely to be discovered.

Intergovernmental Issues

Consistency of Plans

It is required that, after 2010, land-use control actions be consistent with an adopted plan. An attempt should be made to make policies between adjoining jurisdictions consistent with one another, to the greatest degree possible. The consistency requirement in the comprehensive planning statutes deals with the

need for land use decisions to be consistent with the plan, but there is no legal requirement that plans be consistent one with the other, except that where a town is under county zoning the adopted plan of the town should be consistent with the county plan, so that decisions that affect the town reflect a common policy direction.

Inconsistency between town and county plans would put those charged with making land use decisions in the difficult position of choosing between competing visions for the proper policy course. Although the ultimate responsibility for defining the extent to which local plans must be consistent will fall to the courts, prudence would demand an attempt to resolve conflict between plans, especially where more than one level of government has a say in a single land use decision. An obvious example is rezoning, where the town has the ability to reject a decision made by the county. If the town and the county plans are significantly different in terms of the vision for land use that they express, it will be hard for decision makers to be consistent with each.

Shared Services

Adams County presents opportunities for local governments sharing services. Whether this involves one town contracting with another for fire or EMS service, or the County agreeing to work with an adjacent county to solve a common problem, the goal is to maximize the benefit from the expenditure of public dollars. The economies of scale that result from a single entity providing service to a number of jurisdictions can benefit all by reducing cost and at the same time improving the quality of services received.

The Adams County Volunteer Fire District is a good example of how services are being provided to a number of jurisdictions to improve service and reduce costs to all. Likewise the agreement between the Towns of Lincoln and Easton and New Chester, or

Monroe and Big Flats, or the Town of Jackson and the Town of Westfield and the Village of Oxford, or Colburn and the Village of Hancock to contract fire service show how shared service agreements can work to the benefit of each party to the agreement. There are mutual aid agreements in place amount all fire departments throughout the county. Changing demographics is having an impact on many fire departments that have relied on volunteers. With an overall aging of the population there are fewer persons able and willing to volunteer.

Overlapping Jurisdiction

Corporate boundaries of towns and counties often do not coincide with the boundaries of other functional units set-up by service-providing agencies, most notably school districts. This overlapping of service boundaries can often cause problems and be an obstacle to providing services in the most cost-effective manner.

The school districts within the county offer a particularly clear illustration of how functional boundaries do not always coincide with established units of government. Of the five school districts that operate in Adams County only the Adams-Friendship District is in only one county. The others include at least three counties, and the Wisconsin Dells District is in four counties. School district boundaries are set based on the location of school buildings, where the students live and the efficiency of transporting children to any given school.

In planning for intergovernmental cooperation it is important to remember that jurisdictional boundaries can present an obstacle to efficient service delivery. There can also be inconsistency between service delivery districts and other entities. All of these overlapping jurisdictions must be taken into consideration when considering how best to effectuate intergovernmental agreements and how best to deliver services to citizens.

Overview of Efforts

This portion of the chapter examines the various existing governmental cooperation agreements, identifies some potential efforts, and provides a summary of the surrounding county planning efforts.

Existing Efforts

Adams County Solid-Waste

In 1989 Adams County opened its own sanitary landfill that serves the majority of the county. There are 19 transfer sites staffed by the towns. The County currently does garbage pick-up in the City of Adams and the Town of Jackson. Up till only a few years ago private companies did this pick-up, but lost these contracts to the County. Private companies still do trash collections at some industrial operations.

The majority of funding for the department's operation comes from tipping fees. Although the department receives some funding from the County general fund, to cover free services such as tire collection that are offered to County residents, the goal is for the department's operations to be self-sustaining. County residents are charged for loads that they bring to the landfill personally and towns are charged for disposal of materials left in the County-provided containers at transfer sites operated by several of the towns.

The fact that the Solid Waste Department of County government was able to secure the contract for curbside collection in the City of Adams and the Town of Jackson, which had previously been provided by private companies, offers a different view on the debate about privatization of government services. The County was able to offer a competitive proposal that allowed them to win the bid to provide services that had previously been provided by the private companies that operated a landfill in Wood County.

Adams Volunteer Fire District

Six volunteer fire departments are located in Adams County and another five located outside of the County operate under joint service agreements with Adams County towns. There are two volunteer fire departments in the County (Big Flats and New Chester) that contract with adjoining towns (Monroe, Lincoln and part of Easton) to provide fire services. Fire service is one of the most common types of cross-jurisdictional services.

This type of joint service arrangement is fairly standard. What is more unique to Adams County is a free-standing fire district that provides service to a number of municipalities, but is independent of them. The City of Adams and much of the central and western area, encompassing about one-third of the County, receive services from the Adams Volunteer Fire District. The department maintains stations in the City of Adams and in Arkdale. The Adams Fire District covers an area of 195 square miles, including all of the City of Adams, the Towns of Adams, Easton, Preston, Strongs Prairie, and Springville north of WI-82. Each Town and the City contract for services individually with the Adams District.

The district has no taxing authority, owns its equipment, but rents the space to store it from the City of Adams and the Town of Strongs Prairie. Mutual Aid agreements exist also with the volunteer forces in New Chester, Big Flats and the Village of Friendship. The Adams County Fire District offers one model for how an essential service normally provided by municipalities can be provided by a separate entity.

Adams-Friendship School District

The majority of the County is served by the Adams-Friendship School District. The district currently has four schools. The high school, middle school and an elementary school are located in the City of Adams; another

elementary school is located in Grand Marsh. There are five other districts that serve the county, but none have actual facilities in the county, including the Wisconsin Dells School District, the Nekoosa School District and the Tri-County School District.

Schools are an important factor for the overall quality of life. Schools are often a major consideration for families with children when relocating. For those reasons there should be a high level of cooperation between local governments and the school districts that serve them. The location of a school can have a large impact on land use and development patterns. The quality of education is a major factor in creating a competitive workforce. Schools are often, especially in rural communities, the site of the most visible recreational facilities and a focus of community identity.

Adams County Drainage Districts

There are three Drainage Districts in Adams County. One is located in the northern half of the Town of Colburn and another is the Widow Green in the Town of Jackson. The largest is the district in the Town of Leola, but that district is currently inactive. Drainage districts have the power to levy assessments on property within the district, apportioned based on the benefit. Another district, the Colburn District, extends into Waushara County, and the Leola District extends into both Waushara and Portage Counties.

All three districts are governed by the Adams County Drainage Board, which is not directly a part of County government. This provides a model of how a district that crosses jurisdictional boundaries to provide a very specific purpose can be structured.

Potential Efforts

County Trail System

Adams County has a number of trails: snowmobile trails, horse trails, off-road motorcycle and ATV trails, and hiking trails; including the Van Kuren Trail, County park

trails, the Roche-a-Cri State Park, and on Nature Conservancy land at Quincy Bluff. However, there is no unified system of trails in the county. This is an area the County, the city, the village, and towns could work together to promote trails throughout the County as well as work with surrounding counties to connect to other trail networks. Various communities, such as the Town of Rome, are already working on trail development. Other projects that have been discussed include:

- Creating a hard-surface, off-road route from Friendship Park to Roche-a-Cri State Park;
- Expanding the use of the county's two current rustic roads to include marked bike trails with car parking areas for the public; and
- Linking proposed Adams County trails to planned or existing trails in adjacent counties.

Such a unified trail system would be a great asset to the County, and the process to achieve it may represent a model that could be applied to other problems and projects.

Adams - Friendship

Although there is a limited role for the County, the cooperative efforts displayed by the City of Adams and the Village of Friendship provide an example for other communities to follow. The City of Adams and the Village of Friendship have a long history of intergovernmental cooperation, most notably related to shared sewer and water facilities. Although full consolidation may never take place, merging various functions to provide services to residents in the most cost-effective manner could be beneficial. An objective appraisal of the most efficient and effective way to deliver essential services is the best starting point for any consolidation effort, followed by a sincere effort to inform the public on all the implications of consolidation. Cooperative efforts and the sharing of resources, if they yield savings or higher levels of service, will be a positive outcome for both.

Other Areas

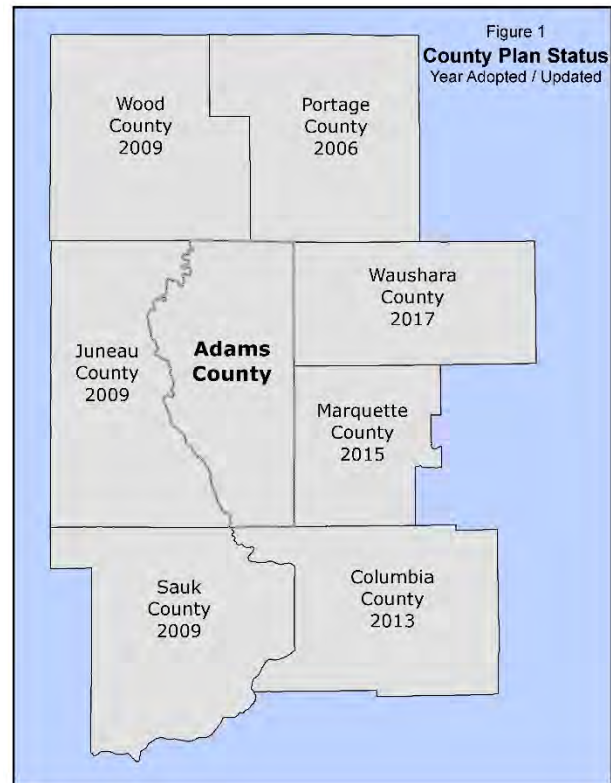
Tourism is an important component of the County economy. Building on that foundation is a major project in the Town of Rome – Sand Valley. This resort is home to three golf courses in the prehistoric sand dunes of Central Wisconsin. Golfers from around the world visit to play these unique courses. Another asset located in Rome is the Dyracuse Recreational Area. This is a 500 acre facility with ATV/UTV, off road motorcycle, snowmobile, snowshoe, biking, and hiking trails. Another asset that brings visitors to the area is the Roche-A-Cri State Park located in the Town of Preston. The park features a 300 foot-high rock outcropping with Native American petroglyphs and pictographs.

These destination areas provide multiple opportunities for the county, local towns and various local organizations to maximize the economic impact within the County

Surrounding Planning Efforts

It is important for every local jurisdiction to look beyond its boundary to see if there are plans in adjacent jurisdictions that will impact them. There could be potential conflicts or there might be opportunities to work cooperatively, such as related to service delivery.

Each of the seven counties surrounding Adams County has an adopted comprehensive plan. See **Figure 1 - County Plan Status**. Some of these plans need to be updated, while others have recently been updated. None of these plans appear to highlight any conflict or issues with Adams County.



Goals, Objectives & Policies

Intergovernmental Cooperation Goals

- 1) Encourage coordination and cooperation among units of government.
- 2) Coordinate activities across jurisdictional boundaries to improve the quality and efficiency of services.
- 3) Encourage countywide and regional planning efforts to address issues that will affect the future of Adams County

Intergovernmental Cooperation Objectives

- 1) *Promote communication with other units of government, including adjoining towns, the County, the Region, the State, and federal government.*
- 2) *Work together with other units of government, and others, to provide services in a more cost-effective manner.*
- 3) *Identify alternative solutions to existing or potential land use, administration or policy conflicts that may hinder inter-governmental cooperation.*
- 4) *Coordinate planning with federal, State and local partners.*
- 5) *Encourage regularly scheduled meetings and on-going communications between County departments, local governments, state agencies, and surrounding governments.*
- 6) *Engage in and support processes to resolve conflicts between the plans of governments with overlapping jurisdictions.*
- 7) *Encourage the sharing of information between departments, local governments and citizens.*

Intergovernmental Cooperation Policies

- 1) *Pursue dialogue with and between the Towns in the County to seek areas of cooperation.*
- 2) *At least annually, meet with adjoining units of government to discuss issues of mutual concern.*
- 3) *Periodically review existing shared service agreements, and explore additional agreements.*
- 4) *Encourage cooperative agreements regarding annexation, expansion of public sewer and water services, growth management and boundary agreements between the Towns and with the City/Village.*
- 5) *Encourage towns to explore joint service agreements with neighboring towns and municipalities where consolidating and coordinating services will result in better services and/or cost savings.*
- 6) *Continue the exploration of consolidation of services and facilities between the City of Adams and the Village of Friendship with the goal of full consolidation in mind, but not necessarily held out as the object of any particular action.*
- 7) *Encourage coordination with surrounding counties and the North Central Wisconsin Regional Planning Commission to address issues that cross jurisdictional boundaries or involve the larger region.*
- 8) *Involve all school districts that serve the County in the planning process, to assist them with facility planning and site selection.*

CHAPTER NINE

Implementation

Overview

This is the ninth and final chapter of the Adams County Comprehensive Plan. It outlines the various implementation tools available to the County and describes how each of the chapters of the comprehensive plan will be integrated and made consistent with the other chapters of the comprehensive plan. Also included is an overview of the process to adopt, amend, update and evaluate the comprehensive plan.

The Adams County Comprehensive Plan, along with locally adopted comprehensive plans, is intended to help guide growth and development in the County. To be effective, this plan should be actively used as a tool to guide decisions concerning:

1. The development and implementation of programs and support systems that further the goals and objectives set forth in this plan.
2. The implementation of specific actions as identified in this plan.
3. The implementation and enforcement of regulatory ordinances based on the goals and objectives identified in this plan.
4. The establishment of a continued planning process providing for periodic review and updates to this plan.

Existing Implementation Tools

There are two primary types of implementation tools: Non-regulatory and Regulatory. Non-regulatory approaches generally involve decisions related to policy and about how the County will spend its financial resources. Regulatory approaches involve implementing various rules and regulations, mainly related to land use regulations. In particular, the zoning ordinance and subdivision regulations comprise the principal regulatory devices used to protect existing development and guide future growth and development.

Non-regulatory Tools

Adams County annually prepares both an operational budget as well as a capital improvement plan. In addition, each County department, as well as agencies funded by the County, set objectives and prepare work plans.

Another major policy effort to be undertaken by the County is the Strategic Plan.

Annual Operating Budget

Adams County prepares a budget each year and it is one of the most important policy documents prepared. It is a statement of the prioritization and allocation of financial resources to achieve certain objectives over a specific time period. The budget is based on the needs of County residents, priorities set by the County Board, and the related work plans identified by each County department.

The budget and the services provided by that budget are instrumental in achieving the goals and objectives of the plan. The 2018 County operating budget is about \$52 million, which includes funding for twenty-five different departments. The largest components of the budget are general government (11%), health

and human services (30%), public works (32%), and public safety (12%). Combined, these functions comprise over 85% of the budget.

The budget is prepared by the county manager/administrative coordinator in conjunction with department heads. The Administrative & Finance and Committee provides oversight and the budget is adopted by the County Board.

Capital Improvement Plan

A Capital Improvement Program (CIP) of Capital Fund is a blueprint for planning the County's major capital expenditures. A Capital Fund is simply a method of planning for and scheduling expenditures for public improvements over a period of several years in order to maximize the use of limited public funds.

Adams County sets up various Capital Improvement Funds with the following goals:

- Protect the County's investment in its buildings, equipment, improvements and infrastructure.
- Develop the most cost effective way to manage the County's assets through a comprehensive process that cuts across departments, boards and committees.
- Recognize the need to preserve and maintain existing assets over acquiring new assets.
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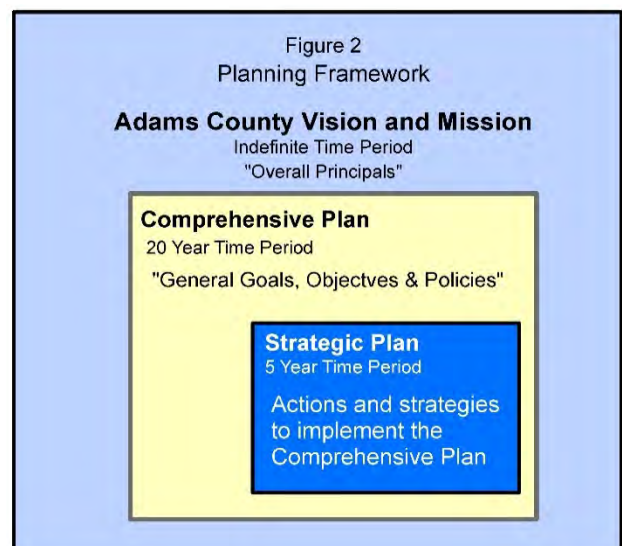
The Capital Improvement Program is usually composed of two parts - a capital budget and a capital program. The capital budget is the upcoming years spending plan for capital items. The capital program is a plan for capital expenditures that extends five years beyond the capital budget. Public improvements or expenditures typically considered in a CIP include: major non-recurring costs, assets with a cost of over \$25,000 and a service life of 7 years or more, and rolling stock and equipment

replacement that is of critical importance to the functioning of the department involved.

Each year the CIP is reviewed and extended one year to compensate for the previous year that was completed. This keeps the improvement program current and allows for modifications to meet changing needs. It coordinates community planning, financial capacity, and physical development. The preparation of a CIP is a joint responsibility between County administration and various departments. The County Board approves the CIP as part of the Annual Budget.

Strategic Plan

The County is preparing for its first strategic plan. Strategic planning is an organizational management activity that is used to set priorities, focus energy and resources, strengthen operations, ensure that employees and other stakeholders are working toward common goals, establish agreement around intended outcomes/results, and assess and adjust the organization's direction in response to a changing environment. It is a disciplined effort that produces fundamental decisions and actions that shape and guide what an organization is, who it serves, what it does, and why it does it, with a focus on the future. It usually focuses on a 3 to 5 year time-period. See Figure 2 – Planning Framework.



An effective strategic plan articulates not only where an organization is going and the actions needed to make progress, but also how it will know if it is successful. The strategic plan is a document used to communicate the organizations goals and the actions needed to achieve those goals. The comprehensive plan provides the foundation for the strategic plan process.

Regulatory Tools

There are three basic implementation tools that the County can use to implement this comprehensive plan. These are 1) General & Shoreland Zoning, 2) Land Division Ordinance, and 3) Official Mapping.

These tools apply to different degrees in different areas of the County. General zoning applies only to those ten towns that have adopted County zoning, while Shoreland zoning applies to the entire county outside of the incorporated areas of Adams and Friendship. Meanwhile, the land division ordinance applies to the entire County (outside of the city and village) unless a town has adopted a more restrictive ordinance. Official mapping applies throughout the entire County, but is a very limited tool. These tools are all detailed more in the land use chapter.

General & Shoreland Zoning

Zoning is used to manage and control how land is used and developed. The general zoning ordinance establishes detailed regulations concerning how land may be developed, including setbacks, the density or intensity of development, and the height and bulk of building and other structures. The general purpose of zoning is to minimize undesirable side effects resulting from development by segregating and/or buffering incompatible uses and by maintaining standards that ensure development will not negatively impact the community's character or environment.

The zoning map indicates where specific types of development can and should be located. Zoning districts shown on the zoning map should be coordinated with the land use plan and map. While the zoning map and land use map do not need to directly match at the time the land use map is adopted, the intent is that the land use map will serve as a guide indicating how the property should eventually be zoned. Changes to the zoning districts should only be made if they are consistent with the adopted future land use map. However, there may be situations where changing the zoning district boundary makes sense and is in the best interest of the community. If changing the zoning would result in a conflict with the future land use map, the land use map should also be changed.

The future land use map should only be changed if it does not accurately reflect the community's desired land use pattern. Achieving consistency between zoning and land use designation is also discussed in the Land Use chapter. The comprehensive plan, including the future land use map should be periodically reviewed and updated to adjust for unforeseen changes or events that were not considered at the time the initial plan and land use map were developed.

As discussed in Chapter 7, Shoreland Zoning is mandated by state law and is administered by the county level. The intent of shoreland zoning is to control development near waterways, in the most sensitive environmental areas. The area defined by state law is the area within 300 feet of a stream or river and 1000 feet of a lake or pond. The Shoreland Ordinance may need to be reviewed and updated in the near future.

Land Division Ordinance

Land Division or subdivision regulations serve an important function by ensuring the orderly development of unplatted and/or undeveloped land. These regulations provide the procedures and standards for dividing a large parcel of land into smaller parcels. Land Division ordinances

set forth reasonable regulations for lot sizes, road access and design, public utilities, parks and open space, and other improvements necessary to ensure that new development does not conflict with surrounding land uses and/or cause unreasonable burdens on provision of services. The way lands are divided plays a key role in the orderly development of a community. The Land Division Ordinance may need to be reviewed and updated in the near future.

Official Mapping

Counties have limited official mapping powers. Counties may adopt highway-width maps indicating location and width of proposed highways and any highways being expanded.

Other planning and zoning related regulations

Although the County is usually not directly involved in either annexation or extra-territorial zoning, it may be asked for general information or recommendations related to either of these.

Annexation is the statutory process for transferring lands from unincorporated areas (towns) to incorporated areas (cities and villages). Annexations are usually initiated by landowners to transfer their land into a city or village. Cities and villages can only accept or reject the petition. As a result, annexations often become contentious between local governments as is extra-territorial zoning.

Annexations often provide the trigger for lengthy and expensive legal struggles between competing community land use visions, and for tax base and community identity. A more constructive approach may be to explore intergovernmental agreements. The methods of intergovernmental cooperation available to address annexation-related issues include: general intergovernmental agreements; municipal boundaries fixed by court judgment; boundary change by cooperative plan agreement; and revenue sharing agreements.

Under state law, a city or village has certain land use authorities for Extraterritorial Plat Review within 1½ to 3 miles depending on the size of the community. This applies automatically if the city or village adopts a subdivision ordinance or an official map. This allows the city or village to influence the pattern of development outside their corporate limits. There is also the potential for extra-territorial zoning to be implemented in this area as well. This gives cities and villages the right to review and approve any land division within the 1½ or three mile area. In order to exercise extraterritorial zoning it is necessary for the city or village to form a committee with the adjacent town, in which both parties have three representatives. A majority of committee members must agree and the governing body of both jurisdictions must adopt whatever agreement is reached in order for extraterritorial zoning to go into effect. Neither the City of Adams nor the Village of Friendship currently has pursued this authority.

Consistency Review

The State of Wisconsin planning legislation requires that the Comprehensive Plan describe how each of the required chapters will be integrated and made consistent with the other chapters of the plan. Since Adams County completed all planning chapters simultaneously, no known inconsistencies exist. It is noted that some overlap naturally exists between chapters. The Comprehensive Plan also references previous and concurrent related planning efforts to ensure they are considered in planning decisions in conjunction with the recommendations of this document. Recommendations from other plans have been incorporated in this plan as deemed appropriate, to foster coordination and consistency between plans. Some related plans, are incorporated by reference in this plan and are essentially considered appendices of this plan even though they are separate documents. In the future, as plan amendments occur, it is important that consistency reviews be

conducted. These reviews will ensure that the plan is up-to-date. It is also critical that as towns make comprehensive plan amendments, those amendments are forwarded to the County for inclusion in the Adams County Comprehensive Plan. This should ensure that

the Planning & Zoning Committee is using the most current information available.

Plan Adoption, Amendments, Updates, and Evaluation

While this comprehensive plan is intended to provide a long-term framework to guide general development, it must also respond to continuous changes that occur that may not have been foreseen when the plan was adopted. It is appropriate that some chapters of the plan are rarely amended while others are subject to updating on a more regular basis. Plan maps should also be updated periodically. In general, key maps, such as the future land use map, should be reviewed annually to make sure they are still current.

Plan Adoption

The first step in implementing this plan involves the Planning and Zoning Committee passing a resolution recommending adoption of the Adams County Comprehensive Plan by the County Board. Next a public hearing is held to allow public comment on the document. Following that the County Board must adopt the plan by ordinance. Adoption formalizes the plan document as the framework to guide local development decisions over the next 10 to 20 years. The adopted plan should also be recognized as a tool for communicating the County's land use policy and goals and objectives regarding coordination of growth and development.

Upon plan adoption, Adams County should review the Adams County Zoning Ordinance, including both map and text, to be consistent with local comprehensive plans. In addition, the various departments that are impacted by this plan should develop actions to implement the plan.

Plan Amendments

From time to time the plan may need to be amended. If circumstances do arise that requires text or maps to change the Planning and Zoning Committee should review and recommend adoption by the County Board. Amendments may be appropriate throughout the lifecycle of the plan, particularly if new issues emerge or trends change. These amendments will typically consist of minor changes to the plan text or maps. Large-scale changes or frequent amendments to meet individual development proposals should be avoided or the plan loses integrity. The public should be notified of proposed plan amendments to allow an opportunity for review and comment.

In towns where an officially adopted comprehensive plan exists, future amendments and updates to any town plan must be promptly forwarded to the Adams County Planning & Zoning Department. Receipt of town plan will allow staff and the planning & zoning committee to make recommendations that are based on the amended town plan. These local future land use maps will also become the basis for future amendments to the County future land use map.

Plan Updates

According to the State comprehensive planning law, State Statute 66.1001, comprehensive plans must be updated at least once every ten years. As opposed to the more routine amendments described above, plan updates should involve

re-writing of whole sections of the plan document and significant changes to supporting maps. A plan update should include a thorough examination of the County's goals and objectives based on an analysis of current growth trends and major changes that have occurred since the plan was initially adopted or last amended. Plan updates must be formally adopted following the same procedure described above for initial plan adoption.

Plan Evaluation

This plan should be evaluated at least every 5 years. Members of the County Board, standing committees, County staff, and any other local decision-making bodies should periodically review the plan and identify areas that might need to be updated. The evaluation should involve first reviewing the goals and objectives to ensure they are still relevant and reflect current community desires. Then the strategies and actions should be reviewed and refined to eliminate completed tasks and identify new approaches if appropriate. Many of the policies identified in the plan are continuous or on-going and should also be monitored to measure the plan's overall success. Thus, many of the

objectives and their related actions can be accomplished in the short term, say 1 to 5 years. However, some will take longer to accomplish, say 6 to 10 or more years.

As part of the comprehensive planning process, a number of goals, objectives, and policies were developed. When implemented these are intended to provide direction to County staff and its committees, as well as the board of supervisors. To measure progress towards meeting these goals, objectives, and policies, a variety of actions need to take place. Therefore, the task to measure plan progress, is as simple as determining if any action was taken or not. That information will provide guidance to the County Board on when specific actions are to be initiated. Based on the targets, measures of progress in achieving implementation of the comprehensive plan can be examined.

A periodic "Plan Status" report could be prepared to summarize the progress toward implementation. This report might be jointly developed by various County departments, as related to their involvement in the implementation of the goals, objectives, and policies developed within this plan.

Conclusion

The Adams County Comprehensive Plan is intended to be a "living" document. Periodic amendment and update of the plan is critical to ensure that it is accurate and consistent with the needs and desires of the County. The specific policy statements are meant to serve as the mechanisms for achieving the goals and objectives, which were defined throughout the planning process. Ultimately, the success of the planning process will be measured by the future quality of life experienced by both residents and visitors to Adams County.

In an effort to move the plan forward a formal strategic planning process will occur as the next step in the planning process. As part of that effort, goals will be prioritized, benchmarks will be established, and responsible parties will be identified. The result will be a framework for the county in the coming years to help implement the comprehensive plan.

APPENDIX A

Public Participation Plan

Adams County Public Participation Plan (PPP)

The County recognizes the importance of public participation in the planning process. As such, a goal during the comprehensive planning process will be to inform and involve the public in the planning process.

I. Plan Development:

Throughout the plan process, the Planning & Development Committee will provide oversight for the update of the Comprehensive Plan. The Committee will also recommend adoption of the Public Participation Plan to the County Board.

The public participation plan will incorporate the following:

1. All meetings for the planning process will be posted and open to the public.
2. Plan related materials will be available at the Courthouse for review by the public.
3. The draft plan and maps will be available on the website for review by the public.
4. A public hearing will be held to solicit comment from the public.
5. The Comprehensive Plan will be distributed as outlined in state statute.

The Committee will review and recommend adoption of the Comprehensive Plan to the County Board.

II. Implementation, Evaluation & Update:

The Comprehensive Plan will be used as a general guideline for development in the County. The plan will support the existing zoning and other regulations that the County has in place.

As with all plans, it is critical for the Comprehensive Plan to be maintained and updated on a regular basis to keep it current as things change.

Any planning process is subject to change, and this public participation plan is no different. Over the planning period the process may vary from that presented.

APPENDIX B

Resolution

RESOLUTION _____-2018
RESOLUTION TO ADOPT THE ADAMS COUNTY COMPREHENSIVE PLAN

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INTRODUCED BY: Planning & Zoning Committee

INTENT & SYNOPSIS: To recommend County Board adoption of the 2018 Adams County Comprehensive Plan.

FISCAL NOTE: \$20,000.00 {previously budgeted}

WHEREAS: After January 1, 2010, if a local governmental unit engages in official mapping, subdivision regulation, or zoning, those actions must be guided by, and consistent with, the community's comprehensive plan; and

WHEREAS: The County previously adopted a Comprehensive Plan; and

WHEREAS: The Planning & Zoning Committee of Adams County, Wisconsin, by this Resolution, adopted on proper notice with a quorum and by a roll call vote of a majority of members present and voting resolves and recommends to the County Board, adoption of the 2018 Adams County Comprehensive Plan; and

WHEREAS: All maps and other materials noted and attached as exhibits to the Adams County Comprehensive Plan are incorporated into and made a part of the 2018 Adams County Comprehensive Plan; and

WHEREAS: The vote of the Planning & Zoning Committee in regard to this resolution shall be recorded by the secretary in the official minutes of the Planning & Zoning Committee.

WHEREAS: The Agenda and Resolution were properly posted or published as required under §60.80, Wis. Stats.

NOW THEREFORE, BE IT RESOLVED by the Adams County Board of Supervisors that the Adams County Comprehensive Plan is adopted.

Recommended for adoption this 13th day of September, 2018.

Rocky Hibus (CHAIR)

Barbara Waugh

Barbara A. Morgan

Jeff Katlowski

Larry Boud

Adopted _____

Defeated _____

Tabled _____

by the Adams County Board of Supervisors this
16th day of October, 2018.

County Board Chair

County Clerk

- Reviewed by Corporation Counsel
- Reviewed by County Manager/Administrative Coordinator

APPENDIX C

Ordinance

ORDINANCE 1 - 2019

ADAMS COUNTY COMPREHENSIVE PLAN ORDINANCE

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The County Board of Supervisors of the County of Adams does ordain as follows:

WHEREAS: This ordinance is titled the Adams County Comprehensive Plan Ordinance for the purpose of adopting a comprehensive plan as outlined in §66.1001 Wis. Stats; and

WHEREAS: The County adopted written procedures designed to foster public participation in every stage of the preparation of a comprehensive plan as required by §66.1001, Wis. Stats; and

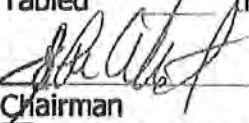
WHEREAS: The Planning & Zoning Committee provided oversight for the 2018 Plan Update and by a majority vote, has adopted a resolution recommending to the County Board the adoption of the Adams County Comprehensive Plan, which contains all of the elements specified in §66.001 Wis. Stats; and

WHEREAS: On January 15, 2019 the County Board held a public hearing on this plan, with notice in compliance with requirements of §66.1001 Wis. Stats.

NOW THEREFORE BE IT RESOLVED that the County Board, by enactment of this Ordinance, formally adopts the 2018 Adams County Comprehensive Plan document attached hereto and incorporated herein.

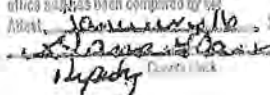
Recommended for enactment by the Adams County Planning & Zoning Committee this 13th day of September, 2018 per Resolution 56-2018.

Enacted X
Defeated _____ by the Adams County Board of Supervisors
Tabled _____ this 15th day of January, 2019.


Chairman


County Clerk

Reviewed by Corporation Counsel
 Reviewed by County Manager/Administrative Coordinator

State of Wisconsin
County of Adams
This document is a full, signed correct copy
of the original on file and of record in my
office and has been compared by me
Attest:  20-19
County Clerk

Adams County, Wisconsin
Comprehensive Plan
2018