



Forest County Comprehensive Plan 2023-2043



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Chapter I: Background & Demographics

I.1 Background

This is the first of nine chapters that comprise the Forest County Comprehensive Plan. The plan provides detailed information on the county and also includes information on all fourteen towns, the city, and the two tribes. Data and text related to geography, climate, and demographics came from the 2004 Forest County Soil Survey, and the 2010 and 2020 U.S. Census, and NCWRPC.

Forest County is located in northeastern Wisconsin and is bound on the north by the Upper Peninsula of the state of Michigan, on the east by Florence and Marinette Counties, on the south by Oconto and Langlade Counties, and on the west by Oneida, and Vilas Counties. See the Planning Context Map I-1.

Forest County is predominantly rural forestland. Nearly half of the county is part of the Chequamegon-Nicolet National Forest. Two Native American Tribes also inhabit the county. The largest settlements of all county residents include Laona, Nashville, and the City of Crandon, which is also the county seat that has a 2008 estimated population of 1,713 people.

A. History

Native Americans inhabited Forest County when the first European explorers, missionaries, and fur traders traveled into the county. A new military road and railroads lead to communities being established in the 1860's as trading posts and later as railroad towns to support the timber industry in the county. These communities include Argonne, Armstrong Creek, City of Crandon, Laona, and Wabeno.

After most of the timber had been harvested, and the Great Depression arrived, most of the lumber mills shut down. In the 1920s, the Nicolet National Forest was established in 10 counties on over 1,500,000 acres of land, and numerous land companies purchased the abandoned lands for a second wave of settlers. In the 1930s, the Civilian Conservation Corps (CCC) was established, and workers performed forest fire control, tree planting, road construction, recreation area construction and maintenance, installation of telephone lines, fish and wildlife habitat improvement, timber stand improvement and surveying. After several decades of growth, the cutover land is harvestable again. Tourism has joined the timber industry as the driving economic forces to this day.

B. Physical Geography

The county has a total area of 669,507 acres. Of this total, about 646,711 acres is land and 22,736 acres is surface water. Forest County is located mostly in the North Central Forest ecological landscape, which was glaciated during the Pleistocene Age. The latest glaciation by the Langlade Lobe has determined the physiography, relief, and drainage

The elevation in the county generally ranges from about 1,800 feet above sea level in the west and northwest to about 1,300 feet in the southeast. The third highest point in the state, Sugar Bush Hill, is a drumlin east of Crandon. It rises about 1,938 feet above sea level. The west end of McCaslin Mountain, a Precambrian quartzite isolated rock hill in the southeastern part of the county, is about 1,610 feet above sea level.

C. Public Participation

Forest County’s Land Conservation-Land Information-GIS Committee adopted a Public Participation Plan (PPP) to kick off the planning process, which outlines the opportunities the public has to attend meetings throughout the development of the plan as well as the public hearing as the plan was considered for adoption. See Attachments A-D for the public participation plan, committee resolution to recommend the plan, public hearing notice, and County ordinance to adopt the plan.

D. Planning Context in Wisconsin

A comprehensive plan is a local government's guide to community physical, social, and economic development. Comprehensive plans are not meant to serve as land use regulations in themselves; instead, they provide a rational basis for local land use decisions with a twenty-year vision for future planning and community decisions.

The comprehensive plan law (§66.1001 WI Stats. Adobe PDF 113 KB) defines the contents of a local comprehensive plan as a combination of nine chapters—Issues & Opportunities; Natural, Cultural, & Agricultural Resources; Housing; Transportation; Economic Development; Land Use; Utilities & Community Facilities; Intergovernmental Cooperation; and Implementation.

According to §66.1001 WI Stats., if a town, village, city, or county engages in official mapping, subdivision regulation, or zoning, those actions must be consistent with that community's comprehensive plan. This plan is an update of the 2011 Comprehensive Plan adopted by the county. Much of that plan is brought forward with updated data.

E. County Planning Process

The comprehensive planning process followed the Public Participation Plan (PPP) adopted by the County Board, which involved four public meetings with the Forest County Land Conservation-Land Information-GIS Committee to review and discuss changes to draft chapters of the plan. Edits to the draft plan were incorporated prior to the Committee’s final review of the document. Upon review, the Committee adopted a resolution to recommend that County Board adopt the plan following a public hearing.

1.2 Demographics

Reviewing the socio-economic trends throughout the county is important to understand what has occurred, and what is likely to occur in the future. The following demographics section includes total population, age distribution, total households, educational levels, employment, and income levels.

A. Population

In 2020, 9,304 people lived in Forest County. This is a decrease of over 8 percent since 2000. Table 1 displays total population for each local government in the county, as well as the overall state. Although the county experienced growth between 1990 and 2000, every community declined in population in the last decade, except for the Town of Crandon. Over the last twenty years, the population increased by only 528 persons.

In terms of percentage growth, the county had a lower rate of change when compared to the state over the last two decades. In terms of race, according to the 2000 Census, about 86 percent of Forest County residents are white, while about 11 percent are Native American, and 1 percent is other. Note that the sharp decrease in population for the Town of Blackwell was likely due to COVID-19 temporarily shutting down the Blackwell Job Corps Center, which houses living quarters. Census estimates are also less accurate in smaller communities due to a methodology that relies on projections.

Table 1: Total Population

| Community | 2000 | 2010 | 2020 | 2000-2010 % change | 2010-2020 % change | 2000-2020 % change |
|----------------------|---------------|--------------|--------------|---------------------------|---------------------------|---------------------------|
| Alvin | 186 | 157 | 173 | -15.6% | 10.2% | -7.0% |
| Argonne | 532 | 512 | 546 | -3.8% | 6.6% | 2.6% |
| Armstrong Creek | 463 | 409 | 422 | -11.7% | 3.2% | -8.9% |
| Blackwell | 347 | 332 | 152 | -4.3% | -54.2% | -56.2% |
| Caswell | 102 | 91 | 72 | -10.8% | -20.9% | -29.4% |
| Crandon (Town) | 614 | 650 | 606 | 5.9% | -6.8% | -1.3% |
| Freedom | 376 | 345 | 324 | -8.2% | -6.1% | -13.8% |
| Hiles | 404 | 311 | 359 | -23.0% | 15.4% | -11.1% |
| Laona | 1,367 | 1,212 | 1,215 | -11.3% | 0.2% | -11.1% |
| Lincoln | 1,005 | 955 | 1,133 | -5.0% | 18.6% | 12.7% |
| Nashville | 1,157 | 1,064 | 1,215 | -8.0% | 14.2% | 5.0% |
| Popple River | 79 | 44 | 43 | -44.3% | -2.3% | -45.6% |
| Ross | 167 | 136 | 132 | -18.6% | -2.9% | -21.0% |
| Wabeno | 1,264 | 1,166 | 1,074 | -7.8% | -7.9% | -15.0% |
| City of Crandon | 1,961 | 1,920 | 1,713 | -2.1% | -10.8% | -12.6% |
| Forest County | 10,024 | 9,304 | 9,179 | -7.2% | -1.3% | -8.4% |
| Wisconsin | 5,363,715 | 5,686,986 | 5,893,718 | 6.0% | 3.6% | 9.9% |

Source: U.S. Census, 2000, 2010, & 2020

B. Age Distribution

Population distribution is important to the planning process, and two groups are examined here in detail. 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, shows demographic changes in the county.

All three towns in Forest County that grew in population (Lincoln, Nashville, and Wabeno) have large Tribal populations, and have many vacation homes (seasonal housing). The Tribal populations are relatively

young populations as shown with 25.9 (Potawatomi) & 35.1 (Mole Lake) median ages in 2020 (ACS). The Sokaogon Chippewa Community lives next to Mole Lake in Nashville. The Forest County Potawatomi Community lives in Lincoln and Wabeno. School aged children from Lincoln and Nashville attend school in Crandon. About 31% of the Crandon School District's student body, and about 21.8% of the Wabeno School District's student body in 2006 was Native American (WDOA, State Tribal Relations Office, Nov. 2006). Most of the housing in Forest County is seasonal (88.6%), with Blackwell (98.2%), Ross (95.3%) and Popple River (94.9%) having the highest rate of vacation homes, which throughout the Northwoods have been converting to permanent homes as people retire.

Since Forest County is adding residents from net migration, and since in-migrants are almost always retirees, Forest County's average age of its residents is growing faster than the state. Forest County's average age was 43.2 years in 2000. By 2020, it jumped to an estimated 47.2 years. This puts the county's average age substantially above the state mean of 36.4 years of age in 2000 and 39.6 years in 2020. The gap widens with time as the state average age increases to 42.4 years in 2040. (ACS, WDOA)

Between 2020 and 2040, the population is projected to increase by 1,476 residents, or around 16.1 percent. Those 19 and younger are projected to increase by more than 429 or 21.3 percent. Those 65 and older are projected to increase by almost 909 or 43.3 percent. The aging population may have repercussions for employers in the future. See the Economic Development Chapter for more information about how this affects the workforce in Forest County. (ACS, WDOA)

Table 2 shows that the population of the 17 and younger group from 2000 to 2010 declined from 22 percent to about 19.8 percent of Forest County's population. This age group became a larger percentage of the population in Alvin, Armstrong Creek, Laona, Popple River, and Ross. However, in terms of total numbers, there was a decrease of 313 people in this group. Five communities had a slight increase, while eleven had a decline. The county percentage is now about the same as the state percentage of the population under 17 years old.

Table 2: Persons 17 Years of Age and Younger

| Community | 2010 | 2020 | 2010 % of Total | 2020% of Total | 2010-2020 Net change |
|----------------------|--------------|--------------|-----------------|----------------|----------------------|
| Alvin | 6 | 43 | 4.5% | 22.4% | 37 |
| Argonne | 104 | 102 | 19.5% | 24.9% | -2 |
| Armstrong Creek | 121 | 64 | 29.1% | 14.3% | -57 |
| Blackwell | 52 | 10 | 14.4% | 4.3% | -42 |
| Caswell | 12 | 6 | 16.9% | 9.4% | -6 |
| Crandon (Town) | 189 | 134 | 25.4% | 20.0% | -55 |
| Freedom | 55 | 22 | 14.9% | 5.9% | -33 |
| Hiles | 33 | 38 | 9.3% | 9.0% | 5 |
| Laona | 250 | 264 | 20.6% | 23.1% | 14 |
| Lincoln | 267 | 237 | 25.0% | 20.9% | -30 |
| Nashville | 289 | 246 | 26.3% | 21.6% | -43 |
| Popple River | 0 | 7 | 0.0% | 15.2% | 7 |
| Ross | 21 | 46 | 14.7% | 29.7% | 25 |
| Wabeno | 275 | 197 | 27.0% | 23.3% | -78 |
| City of Crandon | 423 | 368 | 21.3% | 21.2% | -55 |
| Forest County | 2,097 | 1,784 | 22.0% | 19.8% | -313 |
| Wisconsin | 1,337,396 | 1,274,321 | 23.5% | 21.9% | -63,075 |

Source: American Community Survey, 2010 & 2020

Forest County's older population is increasing at a much faster rate than the rest of the population. The Wisconsin Department of Administration (DOA) predicts that while the total population of 15 and older is expected to increase by only about 18 percent between 2020 and 2040, those 65 and older are expected to increase by about 43 percent, an increase substantially higher than that of the general population.

Table 3 shows that from 2010 to 2020 the 65 and older group increased from 20.1 percent to about 23.3 percent of Forest County's population, while the state level increased from 13.7 percent to 16.9 percent. At the local level, a few towns had a lower percentage of the older age group in their populations, which means that their population is getting younger by additional births or in-migration of people under 65 years old. Based on increasing life expectancy and advances in medicine, the 65 and older group is expected to grow in absolute numbers and as a percentage of total population. This trend is occurring at both the state and national levels as well. The shift in population toward the older age groups will significantly impact the future labor supply, school system, and health care industry in the county.

Table 3: Persons 65 Years of Age and Older

| Community | 2010 | 2020 | 2010 % of Total | 2020% of Total | 2010-2020 Net change |
|----------------------|--------------|--------------|------------------------|-----------------------|-----------------------------|
| Alvin | 57 | 49 | 43.5% | 25.5% | -8 |
| Argonne | 58 | 62 | 10.9% | 15.2% | 4 |
| Armstrong Creek | 86 | 173 | 20.7% | 38.7% | 87 |
| Blackwell | 86 | 67 | 23.8% | 28.8% | -19 |
| Caswell | 8 | 13 | 11.3% | 20.3% | 5 |
| Crandon (Town) | 93 | 113 | 12.5% | 16.9% | 20 |
| Freedom | 107 | 111 | 28.9% | 30.0% | 4 |
| Hiles | 126 | 233 | 35.7% | 55.2% | 107 |
| Laona | 260 | 231 | 21.4% | 20.2% | -29 |
| Lincoln | 206 | 266 | 19.3% | 23.5% | 60 |
| Nashville | 201 | 269 | 18.3% | 23.6% | 68 |
| Popple River | 9 | 18 | 29.0% | 39.1% | 9 |
| Ross | 29 | 30 | 20.3% | 19.4% | 1 |
| Wabeno | 177 | 190 | 17.4% | 22.5% | 13 |
| City of Crandon | 413 | 276 | 20.8% | 15.9% | -137 |
| Forest County | 1,916 | 2,101 | 20.1% | 23.3% | 185 |
| Wisconsin | 779,673 | 982,799 | 13.7% | 16.9% | 203,126 |

Source: American Community Survey, 2010 & 2020

C. Households

The county trend in households in the county reflects the national trend of fewer people living in each household. As more people decide to live alone and more couples are having fewer children or no children at all, the number of households has increased faster than the population as a whole. Forest County's households were smaller (2.21 people per household) than the state (2.38) in 2020. Table 4 shows the county (-6.0%) with a decrease in the number of households from 2010 to 2020 than the state, which saw an increase (4.3%). The Department of Administration (WDOA) projects that persons per household will decline to 2.18 in Forest County by 2040.

Table 4: Total Households

| Community | 2010 | 2020 | 2010-2020 % Change | 2010-2020 Net Change |
|----------------------|--------------|--------------|--------------------|----------------------|
| Alvin | 78 | 82 | 5.1% | 4 |
| Argonne | 238 | 165 | -30.7% | -73 |
| Armstrong Creek | 174 | 175 | 0.6% | 1 |
| Blackwell | 29 | 38 | 31.0% | 9 |
| Caswell | 34 | 34 | 0.0% | 0 |
| Crandon (Town) | 327 | 271 | -17.1% | -56 |
| Freedom | 179 | 184 | 2.8% | 5 |
| Hiles | 197 | 230 | 16.8% | 33 |
| Laona | 575 | 484 | -15.8% | -91 |
| Lincoln | 487 | 483 | -0.8% | -4 |
| Nashville | 477 | 526 | 10.3% | 49 |
| Popple River | 20 | 24 | 20.0% | 4 |
| Ross | 75 | 73 | -2.7% | -2 |
| Wabeno | 462 | 408 | -11.7% | -54 |
| City of Crandon | 830 | 752 | -9.4% | -78 |
| Forest County | 4,182 | 3,929 | -6.0% | -253 |
| Wisconsin | 2,279,532 | 2,377,935 | 4.3% | 98,403 |

Source: American Community Survey, 2010 & 2020

The WDOA household projections indicate that by 2040 there will be 4,674 households in the county, an increase of 745. The most households are projected to occur in the Town of Crandon (119 households by year 2040), the Town of Nashville (120), and the Town of Wabeno (212). The towns of Armstrong Creek, Blackwell, Hiles, Popple River, and Ross are projected to lose households between now and 2040.

D. Educational levels

Educational attainment increased overall from 2010 to 2020. Table 5 shows the number of people who graduated from high school as a percentage of those over 25 in Forest County, increased from 85.6 percent in 2010 to 89.8 percent in 2020. The county increase was reflected in all the local communities, except Caswell, which decreased slightly.

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

| Community | 2010 | 2020 | 2010 % of total | 2020 % of total | 2010-2020 net change |
|----------------------|--------------|--------------|-----------------|-----------------|----------------------|
| Alvin | 98 | 137 | 77.8% | 91.9% | 39 |
| Argonne | 350 | 278 | 90.0% | 96.9% | -72 |
| Armstrong Creek | 228 | 333 | 80.9% | 89.8% | 105 |
| Blackwell | 117 | 124 | 88.0% | 89.9% | 7 |
| Caswell | 31 | 50 | 88.6% | 86.2% | 19 |
| Crandon (Town) | 468 | 470 | 90.9% | 92.9% | 2 |
| Freedom | 230 | 294 | 87.5% | 93.0% | 64 |
| Hiles | 284 | 347 | 93.1% | 93.8% | 63 |
| Laona | 786 | 704 | 88.7% | 89.9% | -82 |
| Lincoln | 673 | 688 | 89.1% | 89.9% | 15 |
| Nashville | 647 | 745 | 82.8% | 88.3% | 98 |
| Popple River | 29 | 37 | 93.5% | 94.9% | 8 |
| Ross | 90 | 70 | 78.9% | 82.4% | -20 |
| Wabeno | 497 | 478 | 81.5% | 82.3% | -19 |
| City of Crandon | 1,139 | 1,066 | 81.8% | 89.7% | -73 |
| Forest County | 5,664 | 5,821 | 85.6% | 89.8% | 157 |
| Wisconsin | 3,406,450 | 3,686,911 | 91.1% | 92.6% | 280,461 |

Source: American Community Survey, 2010 & 2020

The rate of persons 25 and older with four or more years of college is increasing within the county, but not all local units saw an increase. See Table 6. Even though the county and state rates are increasing, the gap is narrowing between the county and state. In 2010, the gap was 22.4 percent, and by 2020 the gap has decreased to 15.6 percent.

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

| Community | 2010 | 2020 | 2010 % of total | 2020 % of total | 2010-2020 net change |
|----------------------|-------------|-------------|------------------------|------------------------|-----------------------------|
| Alvin | 7 | 39 | 5.6% | 26.2% | 32 |
| Argonne | 50 | 257 | 12.9% | 19.9% | 207 |
| Armstrong Creek | 53 | 52 | 18.8% | 14.0% | -1 |
| Blackwell | 4 | 32 | 3.0% | 23.2% | 28 |
| Caswell | 0 | 8 | 0.0% | 13.8% | 8 |
| Crandon (Town) | 61 | 63 | 11.8% | 12.5% | 2 |
| Freedom | 36 | 70 | 13.7% | 22.2% | 34 |
| Hiles | 92 | 92 | 30.2% | 24.9% | 0 |
| Laona | 104 | 112 | 11.7% | 14.3% | 8 |
| Lincoln | 134 | 139 | 17.7% | 18.2% | 5 |
| Nashville | 85 | 79 | 10.9% | 9.4% | -6 |
| Popple River | 0 | 0 | 0.0% | 0.0% | 0 |
| Ross | 1 | 5 | 0.9% | 5.9% | 4 |
| Wabeno | 41 | 68 | 6.7% | 11.7% | 27 |
| City of Crandon | 125 | 169 | 9.0% | 14.2% | 44 |
| Forest County | 503 | 985 | 7.6% | 15.2% | 482 |
| Wisconsin | 1,121,773 | 1,226,547 | 30.0% | 30.8% | 104,774 |

Source: American Community Survey, 2010 & 2020

E. Employment

Labor force participation is defined as residents aged 16 and up who are either employed or looking for work. In 2020, Forest County's labor force participation rate was 52.6 percent, much lower than the State's rate of 66.1 percent. The age group with the highest participation rate was 30- to 34-year-olds at 89.2%, higher than the state's highest age group participation rate of 87% for 25- to 29-year-olds. However, residents aged 16-19 only have a participation rate of 32.4 percent compared to the state's rate of 51.9 percent, and 60- to 64-year-olds participate at a rate of 40.9 percent compared to the state's rate of 60.6 percent. Overall, the youngest and oldest age groups in Forest County participate in the labor force at a rate much lower than the state's rates.

Table 7 shows that in 2020, there were over 3,700 residents employed in Forest County. This reflects a 4.4 percent decrease in the number of people employed since 2010 and is well below the over 4,000 employees working in 2000. Nine of the local communities decreased in employment, but six communities increased. Employment is further discussed in the Economic Development Chapter.

Table 7: Total Employed Persons

| Community | 2010 | 2020 | 2010-2020 % Change | 2010-2020 Net Change |
|----------------------|--------------|--------------|-------------------------------|---------------------------------|
| Alvin | 37 | 82 | 121.6% | 45 |
| Argonne | 299 | 199 | -33.4% | -100 |
| Armstrong Creek | 173 | 178 | 2.9% | 5 |
| Blackwell | 68 | 83 | 22.1% | 15 |
| Caswell | 40 | 31 | -22.5% | -9 |
| Crandon (Town) | 413 | 369 | -10.7% | -44 |
| Freedom | 185 | 183 | -1.1% | -2 |
| Hiles | 121 | 115 | -5.0% | -6 |
| Laona | 590 | 473 | -19.8% | -117 |
| Lincoln | 390 | 419 | 7.4% | 29 |
| Nashville | 425 | 407 | -4.2% | -18 |
| Popple River | 12 | 22 | 83.3% | 10 |
| Ross | 58 | 51 | -12.1% | -7 |
| Wabeno | 368 | 273 | -25.8% | -95 |
| City of Crandon | 700 | 824 | 17.7% | 124 |
| Forest County | 3,879 | 3,709 | -4.4% | -170 |
| Wisconsin | 2,869,310 | 2,983,277 | 4.0% | 113,967 |

Source: American Community Survey, 2010 & 2020

F. Income levels

Median income and per capita income are the two major indicators of income. Table 8 shows that the county median household income rose 28.6 percent from 2010 to 2020, compared to the state increase of 22.7 percent. Meanwhile in Table 9, the county per capita income increased by 30.5 percent, compared to the state increase of 29.4 percent. Note that these changes have not been adjusted for inflation. All of Forest County's local communities had rising median household incomes and rising per capita incomes. Income levels are further discussed in the Economic Development Chapter.

Table 8: Median Household Income

| Community | 2010 | 2020 | 2010-2020 % Change | 2010-2020 Net Change |
|----------------------|-----------------|-----------------|-------------------------------|---------------------------------|
| Alvin | \$38,125 | \$48,333 | 26.8% | \$10,208 |
| Argonne | \$55,435 | \$57,422 | 3.6% | \$1,987 |
| Armstrong Creek | \$30,500 | \$44,125 | 44.7% | \$13,625 |
| Blackwell | \$44,583 | \$66,250 | 48.6% | \$21,667 |
| Caswell | \$38,750 | \$38,750 | 0.0% | \$0 |
| Crandon (Town) | \$51,544 | \$52,813 | 2.5% | \$1,269 |
| Freedom | \$41,406 | \$46,458 | 12.2% | \$5,052 |
| Hiles | \$38,854 | \$49,286 | 26.8% | \$10,432 |
| Laona | \$38,990 | \$45,761 | 17.4% | \$6,771 |
| Lincoln | \$43,950 | \$62,022 | 41.1% | \$18,072 |
| Nashville | \$34,031 | \$40,536 | 19.1% | \$6,505 |
| Popple River | \$24,500 | \$63,125 | 157.7% | \$38,625 |
| Ross | \$30,417 | \$39,792 | 30.8% | \$9,375 |
| Wabeno | \$29,000 | \$44,000 | 51.7% | \$15,000 |
| City of Crandon | \$33,026 | \$44,853 | 35.8% | \$11,827 |
| Forest County | \$37,627 | \$48,394 | 28.6% | \$10,767 |
| Wisconsin | \$51,598 | \$63,293 | 22.7% | \$11,695 |

Source: American Community Survey, 2010 & 2020

Table 9: Per Capita Income

| Community | 2010 | 2020 | 2010-2020 % Change | 2010-2020 Net Change |
|----------------------|-----------------|-----------------|-------------------------------|-------------------------------------|
| Alvin | \$25,055 | \$31,178 | 24.4% | \$6,123 |
| Argonne | \$26,943 | \$27,235 | 1.1% | \$292 |
| Armstrong Creek | \$18,372 | \$24,871 | 35.4% | \$6,499 |
| Blackwell | \$8,327 | \$16,436 | 97.4% | \$8,109 |
| Caswell | \$17,054 | \$26,314 | 54.3% | \$9,260 |
| Crandon (Town) | \$26,685 | \$30,157 | 13.0% | \$3,472 |
| Freedom | \$31,471 | \$30,804 | -2.1% | -\$667 |
| Hiles | \$27,445 | \$33,659 | 22.6% | \$6,214 |
| Laona | \$21,640 | \$26,304 | 21.6% | \$4,664 |
| Lincoln | \$21,236 | \$30,188 | 42.2% | \$8,952 |
| Nashville | \$22,705 | \$25,607 | 12.8% | \$2,902 |
| Popple River | \$16,323 | \$25,780 | 57.9% | \$9,457 |
| Ross | \$16,950 | \$20,835 | 22.9% | \$3,885 |
| Wabeno | \$16,981 | \$27,973 | 64.7% | \$10,992 |
| City of Crandon | \$15,835 | \$23,516 | 48.5% | \$7,681 |
| Forest County | \$20,578 | \$26,863 | 30.5% | \$6,285 |
| Wisconsin | \$26,624 | \$34,450 | 29.4% | \$7,826 |

Source: American Community Survey, 2010 & 2020

I.3 Issues and Opportunities

A. Planning Issues

A variety of issues were identified throughout the planning process. Many of these were brought up during the planning meetings, others were taken from existing documents, and some were taken from public meetings. These issues will be listed by topic in the following chapters of the plan.

B. Chapter Format

All the following chapters, except the last, are organized into three basic sections:

1. Background: This provides some general information and reviews previous plans and related information.
2. Inventory & Trends: This reviews a variety of historic, current, and future data, and includes maps.
3. Goals, Objectives and Policies: see below.

C. Goals, Objectives, and Policies

Each of the following comprehensive plan chapters will conclude with a set of goals, objectives and policies, which are used to guide the opportunity of future development in Forest County. For purposes of this planning process, goals, objectives and policies are defined as follows:

Goals: Broad statements that express general public priorities about how the community should approach development issues during the next 20 years. These goals are based on key issues, opportunities and problems that affect the community.

Objectives: More specific than goals and are usually attainable through planning and implementation activities. The accomplishment of an objective contributes to the fulfillment of a goal.

Policies: Rules or courses of action used to ensure plan implementation and to accomplish the goals and objectives. Policies are intended to be used by decision-makers on a regular basis.



Chapter 2: Natural, Agricultural, and Cultural Resources

2.1 Introduction

This is the second of nine chapters that comprise the Forest County Comprehensive Plan. This chapter is based on the statutory requirement for a “compilation of objectives, policies, goals, maps, and programs for the conservation, and promotion of the effective management, of natural resources such as groundwater, forests, productive agricultural areas, environmentally sensitive areas, threatened and endangered species, stream corridors, surface water, floodplains, wetlands, wildlife habitat, metallic and nonmetallic mineral resources, parks, open spaces, historical and cultural resources, community design, recreational resources and other natural resources.”

The chapter is organized into three main components: natural resources, agriculture, and cultural resources. Each component is then divided into the three basic sections:

- Background
- Inventory & Trends
- Goals, Objectives, and Policies

Although these components are separated, they are all interrelated. For example, the location of agricultural uses described in the “Agriculture” component of this chapter is based upon the soil and water information in the “Natural Resources” component. Similarly, this chapter relates to the other eight chapters as well. As a result, the information provided by this chapter will be referenced in other chapters.

2.2. Natural Resources

A. Background

Forest County in northeastern Wisconsin is bounded on the north by the Upper Peninsula of Michigan and the Brule River, which forms the Wisconsin-Michigan boundary; on the east by Florence and Marinette Counties; on the south by Oconto and Langlade Counties; and on the west by Oneida and Vilas Counties.

The county’s total area is about 669,507 acres (NCWRPC, 2022), with about 22,736 acres of which is surface water. The county contains 728 lakes, and 884 miles of rivers and streams. Forests cover over 91 percent of the county (612,298 acres) and provide raw materials, wildlife habitat, and recreational opportunities. About 78 percent of the county is publicly owned land, including 352,989 acres in the Chequamegon-Nicolet National Forest. Forest County's Forestry and Recreation Department manages 15,281 acres of county forestland in 2022. Management balances local needs through integration of forestry, wildlife, fisheries, endangered resources, water quality, soil conservation, and recreational recommendations and practices. Many trails are found in the county and national forests for snowmobiling, biking, and hiking with new miles of ATV trails being added annually. Agriculture exists in some parts of southern Forest County, mainly of forage crops and animal husbandry, with a total of 12,208 acres countywide.

B. Previous Planning Efforts

I. County Efforts:

Forest County Land and Water Resource Management Plan, 2017. This Plan provides a framework for local, state, and/or federal conservation program implementation efforts. Implementation of this plan will help protect and improve the valuable water and soil natural resources in Forest County. Some of the plan's recommendations include reversing lake eutrophication, slow the spread of invasive species, increasing the amount and quality of land and water management information, reducing nitrogen and phosphorus runoff, promoting well-planned development, and maintaining a healthy and vigorous forest. A copy is available in the Forest County Land Conservation Department or online at www.co.forest.wi.gov.

Forest County Forest Comprehensive Land Use Plan 2006-2020. The mission of the County Forest is to manage, conserve and protect the natural resources within the county forest on a sustainable basis for present and future generations. The Plan contains information about forest resource planning, outdoor recreation planning, silvicultural practices, aesthetic management zones, trails and access control, biological communities, and wildlife species that exist within the county forest. A copy is available in the Forest County Forestry Department or online at www.co.forest.wi.gov.

Forest County Comprehensive Plan 2011. The Comprehensive Plan that preceded this current plan recommended identifying and improving cultural sites, preserving open tracts of farmland and forest and encouraging farming as a viable economic activity by developing a farmland preservation plan, protecting sensitive natural features, protecting wetlands and floodplains to manage flooding, allowing for mining where appropriate, and implementing the County's Land & Water Resource Management and Forestry Plans.

Forest County Outdoor Recreation Plan 2022-2026. The purpose of this recreation plan is to provide continued direction in meeting the current and future recreation needs of County residents. Included is an inventory and analysis of outdoor recreational facilities followed by recommendations that meet identified needs. Adoption of this plan and its acceptance by the Wisconsin Department of Natural Resources (WDNR) allows for continued eligibility for financial assistance from the Land and Water Conservation Fund (LAWCON), the Stewardship Fund, and many other federal and state funding programs. Countywide recommendations of this plan include improving boat launches, improving ATV/UTV/dual sport motorbike facilities, improved trail maintenance and signage for all uses, relocated county fairgrounds, and upgraded camping and playground facilities in Veterans Memorial Park. The plan also recommends working with the Forest County Potawatomi Community to develop bicycle and pedestrian facilities and to restore the historic Otter Creek spring house.

County Ordinances. In addition to these planning efforts there are several county ordinances in place related to natural resources. These include the Non-Metallic Mining Reclamation Ordinance, Private Onsite Waste Treatment System Ordinance, land and water conservation standards for the Farmland Preservation Program, Nuisance Ordinance, Shoreland Zoning Ordinance, the General Zoning Ordinance, the Forest County Snowmobile-ATV Ordinance, County Park Ordinance, and the County Forest Ordinance.

2. State Efforts:

Headwaters (Upper Wisconsin) Integrated Basin Plan, 2002. The Headwaters Integrated Basin Plan (also called the "Headwaters State of the Basin Report") provides a snapshot of the current conditions of land and water resources in the basin. This effort inventoried and assessed the land and water resource conditions, identified major issues, priorities and objectives, and recommended action. Some of the recommendations of this plan include protection and restoration of shoreline, identification of critical habitats, wetland protection and restoration, monitor nonmetallic mining effects on water quality, and encourage wellhead protection plans. A copy is available in the NCWRPC, and in the DNR Rhinelander Service Center.

Statewide Forest Plan, 2020. Wisconsin's latest Statewide Forest Plan identifies a common vision for the state's forest resources and a framework for achieving that vision. It incorporates the full range of trends and issues affecting Wisconsin's forests and their ecological, economic and social implications, and developed a variety of standards. In addition to forestry standards, some others areas relate to water resources, minerals and fish & wildlife. The recommendations fall into several categories: forest characteristics, ecology, and management, wildfire management, forest health, climate change, forest socioeconomics, private forest lands, public forest lands, and urban & community forestry. The plan also is a call to all interested parties to address the challenges facing Wisconsin's forests both now and in the future. A copy is available from the WDNR Division of Forestry.

State Trails Network Plan. This 2003 document clarifies the Wisconsin Department of Natural Resources (WDNR) role and strategy in the provision of all types of trails. The plan identifies a series of potential trail corridors that would link existing trails, public lands, natural features, and communities. This statewide network of interconnected trails would be owned and maintained by municipalities, private entities, and partnerships of the two. Preserving transportation corridors, such as old rail lines, is specifically discussed as a very important strategy in the creation of recreational and alternative transportation corridors:

Segment 2—Forest Co. to Michigan, Nicolet State Trail (Northern Region)

The DNR has acquired the Nicolet State Trail corridor from Gillett north to the Michigan state border. The 32 mile long segment through Forest County has been completed in 2009 as a multiuse, multiseason trail including hiking, biking, snowmobiles and ATVs as approved trail uses.

Segment 13—Dresser to Michigan

This statewide 250-mile-long east-west corridor consists of rail line, and an optional highway right-of-way. In Forest County, this rail corridor runs through Argonne, Cavour, and Armstrong Creek between the communities of Rhinelander and Goodman. In late 2009 this rail corridor was discontinued. Segment 56, and Segment 2 both intersect with this rail corridor.

Segment 69—Tomahawk to Crandon

This abandoned corridor would link these two communities by an off-road connector. This corridor intersects the Langlade County to Michigan corridor at Pelican Lake and links the Argonne to Shawano corridor in the east with the Tomahawk to Wausau corridor in the west. This short linking corridor

provides an opportunity to access the very popular Hiawatha-Bearskin Trail from other corridors to the east. A copy is available from the WDNR Wisconsin State Parks.

Wisconsin Land Legacy Report 2006-2056. This report is a comprehensive inventory of the special places that will be critical to meet future conservation and outdoor recreation needs for the next fifty years. Some of the questions asked to guide creation of this report were: Which lands and waters remain unprotected that will be critical for conserving our plants and animals and their habitats? What gaps exist now (and will likely emerge in the future) in providing abundant and satisfying outdoor recreation? How can we most effectively build upon the state's existing investment in protected lands to fill conservation and recreation gaps? What special places will our children and grandchildren wish we had protected?

The Land Legacy report recommends protection of these lands by using federal, state, and local funding opportunities; along with creating new kinds of incentives for landowners, working to craft comprehensive plans, or offering different types of technical assistance. Each Forest County Legacy Area is summarized below with 5 stars representing the highest level for that category:

| | | | |
|--|-------------|----------------------------|-------------|
| CN Chequamegon-Nicolet | | PE Peshtigo River | |
| <u>National Forest</u> | | | |
| Size | Large | Size | Large |
| Protection Initiated | Substantial | Protection Initiated | Substantial |
| Protection Remaining | Limited | Protection Remaining | Moderate |
| Conservation Significance | ☆☆☆☆☆ | Conservation Significance | ☆☆☆ |
| Recreation Potential | ☆☆☆☆☆ | Recreation Potential | ☆☆☆☆☆ |
| | | | |
| LH Laona Hemlock Hardwoods | | UP Upper Wolf River | |
| Size | Small | Size | Large |
| Protection Initiated | Limited | Protection Initiated | Substantial |
| Protection Remaining | Substantial | Protection Remaining | Moderate |
| Conservation Significance | ☆☆☆☆☆ | Conservation Significance | ☆☆☆☆☆ |
| Recreation Potential | ☆☆☆ | Recreation Potential | ☆☆☆☆☆ |
| | | | |
| <u>Other Areas of Interest includes:</u> | | | |
| North Otter Creek | | Elvoy and Brule Creeks | |

The Laona Hemlock Hardwoods (LH) are locally known as the Connor Forest. It is interesting to note that the Connor Forest (Laona Hemlock Hardwoods) has been managed longer than the Nicolet side of the Chequamegon-Nicolet National Forest. A copy is available at WDNR Service Centers.

Chequamegon-Nicolet National Forest Land and Resource Management Plan, 2004. The Chequamegon and Nicolet National Forests were combined into one forest in 1998. This 2004 document revised inconsistent policies between the two forests and provides direction for resource management over the next 10 to 15 years. Four major revision topics were addressed: Access and Recreational Opportunities; Biological Diversity; Special Land Allocations; and Timber Production. Forest County should participate in all future planning efforts regarding National Forest lands by involving County planning staff.

It is recognized that no alternative could have been developed that would satisfy all of the interested publics, due to the diverse values and views on the highest and best use of these Forests. However, the selected alternative provides the best opportunity to improve ecological conditions while providing a broad spectrum of recreational opportunities and a realistic level of commodity production (USDA, 2004b). The 2004 Land and Resource Management Plan will serve as the guide for resource managers for next 10 to 15 years. Following the plan will generate jobs, provide many opportunities, maintain, or improve wildlife/plant habitat and improve forest health while continuing to let the forest mature.

C. Issues

Industrial Forest Fragmentation. Corporate forests are selling 40-acre parcels to individuals. Many new owners are avid motorized trail users, but they are closing public trail access to their newly purchased property.

Lack of Harvesting in National Forest. The Chequamegon-Nicolet National Forest created their 15-year forest management plan in 2004 that includes harvesting among other resource management objectives. Very little harvesting is occurring.

Headwaters Wilderness Habitat. There is concern that the Headwaters Wilderness Area takes a large share of the County's area and is not maintained as well as it could be to remove dying trees and invasive species and promote a healthier ecosystem and produce higher value timber.

D. Inventory and Trends

Understanding the natural resources of Forest 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 Forest County are comprised of many elements such as topography, soils, mineral deposits, ground and surface waters, woodlands, wetlands, and wildlife. These elements 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, and steep slopes may preclude the use of an area for certain agricultural pursuits.

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

I. Climate

Winters in Forest County are very cold, and the short summers are warm. The short frost-free period during the summer limits cropping mainly to forage crops, small grain, and adapted vegetables. Precipitation is distributed throughout the year but reaches a peak in summer. Snow covers the ground much of the time from late fall through early spring.

In winter, the average temperature is 14 degrees F and the average daily minimum temperature is 4 degrees. The lowest temperature on record, which occurred on January 17, 1982, is -39 degrees. In

summer, the average temperature is 63 degrees and the average daily maximum temperature is 76 degrees. The highest recorded temperature, which occurred on July 26, 1955, is 100 degrees.

The total annual precipitation is about 32 inches. Of this total, more than 21 inches, or about 70 percent, usually falls in April through September. The growing season for most crops falls within this period. The sun shines 65 percent of the time possible in summer and 45 percent in winter. The prevailing wind is from the northwest. Average wind speed is highest, 12 miles per hour, in spring. Thunderstorms occur on about 34 days each year.

The average seasonal snowfall is about 67 inches. The greatest snow depth at any one time during the period of record was 56 inches. On the average, 93 days of the year have at least 1 inch of snow on the ground. The number of such days varies greatly from year to year.

2. Landscape

Forest County is within the North Central Forest ecological landscape, the details of which can be viewed on the Wisconsin Department of Natural Resources website. The County is underlain by igneous & metamorphic bedrock that makes up the southern extension of the Canadian Shield. The bedrock surface is irregular throughout the county and slopes generally to the east and southeast. The extreme northwest part of the county near the Michigan border is underlain by metavolcanic and metasedimentary rock and an iron formation. A significant sulfide deposit of zinc and copper is also in the southwestern part of the county, north of Little Sand Lake. Underlying the southeast corner is the Hager porphyry rock and a quartzite and conglomerate rock upland, which includes the prominent relief feature of McCaslin Mountain protruding through the glacial deposits. Bedrock exposed in other areas is typically located in topographic lows surrounded by glaciofluvial deposits, such as the gneiss outcrop on the south shore of Pine Lake.

3. Soils

There are 39 different soil types in Forest County identified in the County Soil Survey. The Natural Resource Conservation Service (NRCS) is a federal agency that produced the Forest County 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 Forest County accompanies the survey. The survey also contains detailed descriptions of each soil type and includes tables to determine suitability and limitations. Detailed soils maps are available for Forest County online at: www.nrcs.usda.gov, or contact the Forest County Land and Water Conservation office.

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 steep slopes which hampers commercial and industrial uses more than residential.

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

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/industrial development unless sewer is available; requiring alternative systems to on-site absorption of septic; prohibiting the use of holding tanks requiring large lot sizes.

A generalized soil map is included in this plan that displays the broad soil associations. The parent material of the soils in Forest County varies greatly, sometimes within small areas, depending on how the material was deposited. The parent materials in Forest County are mainly glacial till or glacial mudflow sediment, glacial outwash, and lacustrine deposits, which in places are covered by a thin layer of silty or loamy windblown material. Most of the soils in the county formed under forest vegetation. See Map 2-2.

4. Metallic and Nonmetallic Resources

Forest County contains some significant non-metallic deposits, and as such, several quarries are in operation. The Crandon Mine deposit (owned by the Potawatomi and Mole Lake Communities) is a zinc-copper ore body near the City of Crandon.

There are at least 20 open and 11 closed non-metallic mining quarries that are greater than 1 acre in size in Forest County (see Map 2-1 Natural Resources). The Non-Metallic Mine Reclamation Ordinance assures that lands opened to mining are reclaimed to near pre-mine conditions, or to some other pre-determined final use. Any new mine would be subject to the reclamation standards under this ordinance.

5. Surface Water

According to WDNR, Forest County has 728 lakes covering 23,613 acres, and streams with a total length over 884 miles. Most of these streams are classified as trout waters. Surface water is used mainly for recreation, stock watering, and wildlife. See the Natural Resources Map.

The Eastern Continental Divide directs the flow of surface water in Forest County into two major bodies of water – Green Bay and the Mississippi River. Most of the surface water in Forest County flows to the east and southeast and eventually into Green Bay. Three major rivers – the Brule, the Pine, and the Popple – flow in that direction and are part of the Menominee River watershed. Both the Pine and Popple Rivers are designated as "wild" under the Wisconsin Wild River Act (Ch. 30.26 WI Stats.).

The Peshtigo River and its feeder streams encompass the largest watershed in the county. This river flows to the southeast and enters Green Bay in southeastern Marinette County. The Wolf River, whose headwaters originate at Pine Lake, flows southward into Lake Poygan in Winnebago County. Several small streams on the far western edge of the county flow to the west and are part of the Wisconsin River watershed. The secondary drainage system in Forest County consists mainly of surface runoff and hillside seepage into basins and depressions caused by the last glacial period. Some of these areas have drainage outlets, but most of this system tends to be poorly developed, which is a natural state.

Surface water is an important resource to Forest County; however, it is threatened by both point and non-point source pollution. Nonpoint source pollution, often the result of stormwater runoff and erosion, is pollution that cannot be traced to a single source, and can come from roadways, parking lots, farm fields and construction sites. The more of these impervious surfaces the greater the runoff that is carried into the waterways.

The Wisconsin State Legislature created the Wisconsin Nonpoint Source Water Pollution Abatement Program (NPS) in 1978 (§281.66, Wis. Stats.). The goal of the NPS Program is to improve and protect the water quality of streams, lakes, wetlands, and groundwater by reducing pollutants from agricultural and residential non-point sources. The WDNR and DATCP administer the program, which focuses on critical hydrologic units called priority watersheds. The program is implemented through priority watershed projects led by local units of government. Landowners, land renters, counties, cities, villages, towns, sewer districts, sanitary districts, lake districts, and regional planning commissions are eligible to participate.

The Wisconsin Department of Natural Resources (WDNR), per requirements of the U.S. 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 the "303(d) list," corresponding to the applicable subsection of the Clean Water Act. The WDNR is required to update the list every two years.

Forest County has eleven water bodies appearing on the 2022 303(d) list. The following lakes are on the list because of mercury contamination from atmospheric deposition: Abutus, Deep Hole, Julia, Kentuck, Little Rice, Little Sand, and Van Zine. The DNR issues fish consumption advisories based upon atmospheric mercury pollution. Bear Lake, Crane Lake, Pine Lake, and Range Pine Lake all face eutrophication from unknown pollutants, and the Lily River faces an unknown pollutant causing elevated temperatures. Finally, in addition to having mercury contamination, Kentuck Lake also has phosphorus contamination, causing eutrophication. Overall, with the removal of Arbutus Lake and the addition of several new bodies of water, the number of 303(d) list water bodies has more than doubled since 2008. See the Forest County Land and Water Resource Management Plan (LWMP) for strategies the County is using to address this issue.



Table 10: Forest County Lakes over 200 Acres

| Lake Name | Acreage | Township |
|----------------------|---------|-----------------|
| Birch Lake | 466 | Laona |
| Bishop Lake | 288 | Nashville |
| Bogbrook Impoundment | 490 | Freedom |
| Butternut Lake | 1246 | Hiles |
| Crane Lake | 355 | Nashville |
| Franklin Lake | 839 | Hiles |
| Hilbert Lake | 278 | Armstrong Creek |
| Hiles Millpond | 306 | Hiles |
| Julia Lake | 404 | Hiles |
| Kentuck Lake | 1001 | Hiles |
| Lily Lake | 217 | Nashville |
| Little Rice Lake | 1201 | Crandon |
| Little Sand Lake | 237 | Nashville |
| Long Lake | 353 | Popple River |
| Lucerne Lake (Stone) | 1039 | Lincoln |
| Metonga Lake | 2038 | Lincoln |
| Pickereel Lake | 1272 | Nashville |
| Pine Lake | 1673 | Hiles |
| Rice Lake | 201 | Nashville |
| Riley Lake | 220 | Laona |
| Roberts Lake | 435 | Freedom |
| Scattered Rice Lake | 428 | Laona |
| Sevenmile Lake | 518 | Hiles |
| Silver Lake | 317 | Laona |
| Stevens Lake | 290 | Alvin |
| Wabikon Lake | 513 | Laona |

Source: WDNR Find-a-Lake

The WDNR also maintains a list of Outstanding Resource Waters (ORWs) and Exceptional Resource Waters (ERWs). An outstanding resource water is defined as a lake or stream which has excellent water quality, high recreational and aesthetic value, and high-quality fishing and is free from point source or nonpoint source pollution. An exceptional resource water is defined as a stream which exhibits the same high quality resource values as outstanding waters, but which may be impacted by point source pollution or have the potential for future discharge from a small sewer community. See Table 11.

Table II: Forest County Outstanding and Exceptional Resource Waters

| Waterbody | Portion of waterbody classified as ORW or ERW | Classification |
|---------------------------|---|----------------|
| Allen Creek | All | ORW |
| Brule Creek | All | ORW |
| Brule River | Brule Lake to Florence Co. Line | ORW |
| Butternut Lake | All | ORW |
| Elvoy Creek | All | ORW |
| Franklin Lake | All | ORW |
| Jones Creek | All | ORW |
| Lucerne Lake (Stone) | All | ORW |
| Little Rice Flowage | All | ORW |
| Metonga Lake | All | ORW |
| North Branch Pine River | All | ORW |
| Otter Creek | All | ORW |
| Peshtigo River | All | ORW |
| Pine River | All | ORW |
| Pine River (South Branch) | All | ORW |
| Popple River | All | ORW |
| Rock Creek | All | ORW |
| South Branch Popple River | All | ORW |
| Swamp Creek | All | ORW |
| Pine River | All | ORW |
| Wolf River-Main Stem | All | ORW |
| Armstrong Creek | All | ERW |
| Bills Creek | All | ERW |
| Camp Eight Creek | All | ERW |
| Camp Twenty Creek | All | ERW |
| Gliske Creek | All | ERW |
| Gruman Creek | All | ERW |
| Huff Creek | USFS Road 2454 to County Line | ERW |
| Indian Creek | All | ERW |
| Johnson Creek | All | ERW |
| Knowles Creek | All | ERW |
| Lilypad Creek | USFS Road 2169 to Lilypad Lake | ERW |
| Little Popple River | USFS Road 2166 to Popple River | ERW |

| Waterbody | Portion of waterbody classified as ORW or ERW | Classification |
|------------------------------|---|----------------|
| Mcdonald Creek | USFS Road 2177 to S. Br. Pine River | ERW |
| Middle Branch Peshtigo River | All | ERW |
| Ninemile Creek | Headwaters to Upper Ninemile Creek | ERW |
| North Branch Oconto River | All | ERW |
| North Branch Peshtigo River | All | ERW |
| North Branch Popple River | All | ERW |
| Rock Creek | All | ERW |
| Rocky Siding Creek | All | ERW |
| Spencer Creek | All | ERW |
| Stoney Creek | All | ERW |
| Creek 7-14 (T38n, R15e) | All | ERW |
| Rock Creek | All | ERW |
| West Branch Armstrong Creek | All | ERW |
| Wilson Creek | All | ERW |

Source: Wisconsin DNR

6. Wetlands

Wetlands are important for groundwater aquifer recharge, wildlife habitat, and serving social functions such as open space, recreation, and aesthetics. 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.

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. 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. Historically, the greatest threats to wetlands in the County have been agricultural drainage and urban development.

The DNR identifies the location of wetlands on their Wisconsin Wetland Inventory maps and associated database. Using this data in GIS, Forest County has about 169,499 acres of wetlands, which also includes

wooded wetlands. Significant concentrations of wetlands in Forest County include areas in central Hiles, central Argonne, Town of Crandon, northern part of Lincoln, Armstrong Creek, Ross, and Caswell. Additional wetlands are associated with the floodplains, and smaller wetlands are scattered throughout the County.

7. 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. Forest County contains approximately 34,041 acres of floodplain, some of which are also wetlands. See the Natural Resources Map.

Floods are one of Wisconsin's the most common types of natural disasters. Each year Wisconsin communities suffer millions of dollars in flood damages. The Federal Emergency Management Agency (FEMA) designates floodplain areas in the state. These are areas predicted to be inundated with floodwaters in the 100-year storm event (e.g., a storm that has about a 1% chance of happening in any given year, or a 26% chance of happening over a 30-year period). 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.

Chapter NR 116 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 comply with NFIP requirements and have also completed a Flood Insurance Study. Currently, Forest County, and the City of Crandon 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). The Tribal lands are not covered by these maps.

8. Watersheds

Forest County is divided into 9 watersheds and two drainage basins. The Eastern Continental Divide directs the flow of surface water in Forest County into two major bodies of water: Green Bay and the Mississippi River. Most of the surface water in Forest County flows to the east and southeast and eventually into Green Bay. Three major rivers, the Brule, the Pine, and the Popple, flow in that direction and are part of the Menominee River watershed. See Section 5: Surface Water, for more analysis of the drainage system.

9. Groundwater Resources

Ground-water resources supply most of the water used in Forest County. It is readily available in quantities necessary to meet domestic, agricultural, municipal, and industrial needs. Glacial drift aquifers are the major source of ground water in most of the county. Large yields of ground water are available where the thickness of the saturated drift is at least 50 feet. The thickness of the glacial drift over most of the county ranges up to about 300 feet. The glacial drift produces well yields ranging from 5 to 1,000 gallons per minute. Yields of at least 500 gallons per minute are common. Most high-capacity wells are 30 to 300 feet deep.

Precambrian crystalline rock underlying the county is not considered a significant source of water. The availability of water from the bedrock is difficult to predict and is probably less than 5 gallons per minute. The glacial drift aquifer above the bedrock is the best source of ground water.

Groundwater generally discharges at streams, marshes, lakes, and springs or as underflow, which provides the continued base level flow for perennial streams during long dry periods. Urban groundwater uses in the County are over 78 million gallons (PSC online) annually from the three municipal water systems (Crandon, Laona, and Wabeno) combined. Additional water withdrawal systems are located on Tribal Lands. See the County's Land and Water Resource Management Plan and the WDNR Water Quantity Data Viewer online for more details regarding groundwater withdrawal.

The quality of ground water in Forest County is generally good. The water in the aquifers is principally a calcium magnesium bicarbonate type that is moderately hard or hard. A high content of iron is a problem in many wells, but it is not a health hazard. Local differences in the quality of ground water are a result of the composition, solubility, and surface area of soil and rock particles through which the water moves and the length of time the water is in contact with these materials.

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. Groundwater contaminants can affect the health of humans, livestock, and wildlife. Additionally, Per- and polyfluoroalkyl substances (PFAS) have been a growing concern in larger Wisconsin cities, which are a class of 5,000 "forever chemicals" that impact health. 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.

10. Forests

At one time, much of Wisconsin was covered with magnificent stands of pine, hemlock, and hardwoods on the highlands, and cedar, spruce, and balsam on its lowlands. From 1860 to about 1910, these forests provided raw material for a thriving lumber industry. The need to supply lumber for a growing nation, and the lack of sound forest management, resulted in over harvest of the forests and degradation of the landscape. Immigrants rushed to these newly cleared lands, hungry for a place to farm and build their lives. But in just a few years, the soils gave out, catastrophic fires occurred, and many people were forced to

seek their fortunes elsewhere. The land was left exhausted of timber and tax delinquent. The Chequamegon-Nicolet National Forest was created from tax delinquent land to receive the protection and reforestation necessary to return them to their original productiveness.

Woodlands covered approximately 564,100 acres of the county in 2006. By 2019, there were 612,298 acres of woodlands covering Forest County. According to WDNR, there is a total of 123,164 acres under Forest Crop Law (FCL) and Managed Forest Law (MFL) programs. 58,500 acres is open for hunting and fishing and 37,363 acres are closed altogether in both programs combined. This is nearly half of the 109,421 that were open to the public in 2006. According to WDNR, this is often a result of change in ownership such as children inheriting land from parents and not keeping it open. But altogether, the total of MFL and FCL acreage has increased since the 1980s. All MFL program participants can restrict access without penalty to the landowner to areas that are within 300 feet of any building or harvesting operation. Snowmobiles, ATVs, bicycles, and other motorized and non-motorized vehicles are prohibited on enrolled lands that are open to the public.

Designed to forward the objectives of the FCL program, the MFL program was enacted in 1985. To qualify for MFL enrollment, the forestland must be at least 20 contiguous acres (or 10 contiguous acres connected to another 10-acre parcel of the same ownership) and participating landowners must adopt a forest management plan. In exchange, their land is assessed for tax purposes at a rate below the state average. Table 12 displays information on the amount of forestland and type of ownership in Forest County.

Table 12: Areas of Forest Land (Public and Private Acreage)

| | 1983 | 1996 | 2004 | 2019 | 1983-2019 % Change | 1983-2019 Net Change |
|----------------------|----------------|----------------|----------------|----------------|---------------------------|-----------------------------|
| Forest County | 492,158 | 560,828 | 548,135 | 612,298 | 24.4% | 120,140 |
| Statewide | 15,351,300 | 15,964,800 | 16,037,233 | 16,445,382 | 7.1% | 1,094,082 |

Source: USDA Forest Service, 1983, 1995, & 2004; WDNR 2019

The change in forest cover over time can be an important indicator of how sustainable forestry activities are within the county. From 1983 to 2019, forested land within Forest County has increased by 120,140 acres or 24.4%. This increase in forested land follows a similar trend throughout the state of Wisconsin. Forest cover is typically quantified by a ground level forest inventory or by using satellite imagery data.

Currently in Forest County there are 352,989 acres of forestland owned by the federal government as part of the Chequamegon-Nicolet National Forest; 25,170 acres owned by the state of Wisconsin mainly as state natural, fishery, or wildlife areas; the county owns 15,447 acres, and local governments own 2,336 acres.

Woodland plays 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. Arguably, invasive exotic species like garlic mustard and multiflora rose present the greatest threat to the long-term health and integrity of the forests. Invasive plants present a problem for native plants as they invade natural systems, 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 native species. As of 2023, Emerald Ash Borer was detected in Forest County, as well as in neighboring Florence, Langlade, Marinette, and Oneida Counties. Although Elm trees are not common in Northern Wisconsin, Dutch Elm disease continues to be a threat since being first detected in the 1950s. As of 2022, Oak Wilt disease has been confirmed in Forest County in less than 6-by-6-mile blocks, which is a concern but not as widespread as in most Wisconsin counties.

Forest County Forest. The Forest County Forestry and Recreation Department manages 15,281 acres of county forest. This land is managed for multiple uses and is independently certified as sustainably managed and harvested. Some of the county forest is closed to motorized vehicles. Examples of permitted recreational activities are hunting, fishing, hiking, snowmobiling, camping, bough cutting (permit required), firewood collection (permit required), and wildlife observation.

School Forests. The Crandon School District owns and maintains several school forests that are listed below. Contact the Crandon School District for rules of use on school forest lands.

- Crandon School Forest, 10 acres, E1/2 NE1/4, S25 T36N R12E;
- Hovind Family School Forest, 40 acres, SE1/4 SE1/4, S28 T36N R12E;

The Laona School District owns and maintains two school forests listed below. Contact the Laona School District for rules of use on school forest lands.

- Newald School Forest, 40 acres, SW1/4 SE1/4, S1 T37E R14E;
- Laona School Forest, 63 acres, N1/2 NW1/4, S6 T35N R15E;

The Wabeno School District owns and maintains the school forest listed below. Contact the Wabeno School District for rules of use on school forest lands.

- Wabeno School Forest, 40 acres, SE1/4 SW1/4, S16 T34N R15E.

Town Forests. The Town of Armstrong Creek owns 395.2 acres of land and the Town of Wabeno owns 80 acres of land surrounded by National Forest.

National Forest. The Chequamegon-Nicolet National Forest covers about half of the land within Forest County (352,989 acres). This land is managed for multiple uses and is managed and harvested. Some of the Forest is closed to motorized vehicles. Extensive recreational opportunities within the Forest, for example: eleven campgrounds, fourteen non-motorized trails, snowmobile trails, and scenic driving opportunities.

State Forest. Two State of Wisconsin entities manage plots of land in Forest County: DNR and the Board of Commissioners of Public Lands. Combined, these agencies maintain 25,170 acres of forested land.

Wildlife & Natural Areas. The State of Wisconsin, primarily through the Department of Natural Resources, holds several tracts of land within Forest County. This land is open to the public for a variety of uses. Boundary signs posted near parking lots and along borders explain the uses on that parcel.

State Wildlife Areas (SWA). SWA were acquired to preserve habitat for wildlife. The following State wildlife area exists in Forest County:

- Little Rice Wildlife Area is located 6 miles northwest of Crandon, is a public hunting area that consists of 1,900 acres. Waterfowl, furbearers, deer, loons, bald eagles, and osprey inhabit the area which surrounds a 1,200-acre reservoir.

State Natural Areas (SNA). SNA were acquired to protect the state's natural diversity, provide sites for research and environmental education, and serve as benchmarks for assessing and guiding use of other lands in the state. Natural areas are defined as tracts of land or water, which have native biotic communities, unique natural features, or significant geological or archeological sites. Generally, natural areas are remnant areas that largely have escaped disturbances since settlement or which exhibit little recent disturbance so that recovery has occurred and presettlement conditions are approached.

Natural areas provide an important reservoir of our state's genetic or biologic diversity. They act as important reserves for native biotic communities and provide habitat for endangered, threatened, or critical species or other species of special concern to scientists. They often include areas with highly significant geological or archaeological features. They tend not to have much facility development, though there may be a designated trail or two on site. Some properties allow limited hunting.

Forest County has 18 state natural areas. They are:

- Atkins Lake SNA (No. 238) is 2,527 acres located in the Town of Hiles (T37N-R11E).
- Alvin Creek Headwaters (No. 443) is 1,048 acres located in the Town of Alvin (T40N-R13E).
- Anvil Lake Trail (No. 449) is 980 acres located in the Town of Hiles (T40N-R11E).
- Argonne Experimental Forest (No. 441) is 1,125 acres located in the Town of Hiles (T38N-R12E).
- Bastile Lake SNA (No. 302) is 156 acres located in the Town of Popple River.
- Camp 3 Lake (No. 450) is 1,214 acres located in the Town of Laona (T36N-R15E).
- Crandon Ribbed Fen (No. 590) is 96 acres located in the Town of Lincoln (T36N-R13E).
- Deer Mountain (No. 455) is 2,089 acres located in the Town of Wabeno (T35N-R16E).
- Echo Lake (No. 445) is 657 acres located in the Town of Hiles (T40N-R12E).
- Franklin and Butternut Lakes (No. 119) is 1,548 acres located in the Town of Hiles (T40N-R12E).

- Giant White Pine Grove SNA (No. 118) is 43 acres located in the Town of Hiles (T38N-R12E)
- Haymeadow Flowage (No. 482) is 1,935 acres located in the Town of Hiles and neighboring Oneida County (T39N-R12E and T40N-R12E).
- McCaslin Mountain SNA (No. 307) is 408 acres located in the Town of Wabeno (T34N-R16E).
- North Otter Creek (No. 448) is 724 acres located in the Town of Laona (T36N-R14E).
- Rat Lake Swamp and Popple River Headwaters (No. 444) is 2,517 acres located in the Town of Popple River (T39N-R14E).
- Scott Lake and Shelp Lake SNA (No. 117) is 1,674 acres located in the Town of Hiles (T38N-R12E).
- Wabikon Lake (No. 447) is 1,105 acres located in the Towns of Laona and Lincoln (T35N-R14E, T36N-R14E).

Federal Wilderness Area. Forest County has one wilderness area, which is the federal version of the state natural areas program:

- Headwaters Wilderness Area – Officially designated as a wilderness in 1984, this over 18,000-acre wilderness is located 16 miles southeast of Eagle River, Wis. in Forest County. Portions of this area contain some of the largest and oldest trees in the forest. Kimball Creek, Shelp Lake and the Headwaters of the Pine River are major features within this Wilderness. The terrain is generally flat and visitation rates are generally low for this site.

Threatened and Endangered Species. Forest County contains a wide range of plant and wildlife habitats. These 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.

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.

WDNR's Natural Heritage Inventory program maintains data on the general location and status of rare, threatened, or endangered plant and animal species in the state. This data is obtained through field inventory. According to that inventory, 26 of Forest County’s 30 survey townships (36 square mile blocks) have occurrences of aquatic and terrestrial plants, animals, and/or natural communities of endangered status as identified in the Wisconsin Natural Heritage Inventory. Each township identified may have several different species or just one species. Forest County has more rare species occurrences than other

surrounding counties. The County will follow DNR guidance to protect the long-eared bat. See the Wisconsin Department of Natural Resources' website for more information on endangered species.

Forest County has twenty species that are considered threatened or endangered by the State of Wisconsin. There are no Federally Endangered Species, but there are several Federal Species of Concern. The eight state endangered species are Little Goblin Moonwort (*Botrychium mormo*), Black Tern (*Chlidonias niger*), Northern Blue (*Lycaeides idas*), Dwarf Bilberry (*Vaccinium cespitosum*), Mountain Cranberry (*Vaccinium vitis-idaea* ssp. *Minus*), Extra-striped Snaketail (*Ophiogomphus anomalus*), American Marten (*Martes Americana*), and Heartleaf Foamflower (*Tiarella cordifolia*).

There are 12 threatened species listed in the state: Round-leaved Orchis (*Americorthis rotundifolia*), Red-shouldered Hawk (*Bueto lineatus*), Calypso Orchid (*Calypso bulbosa*), Michaux's Sedge (*Carex michauxiana*), Yellow Rail (*Coturnicops noveboracensis*), Spruce Grouse (*Falcapennis canadensis*), Wood Turtle (*Glyptemys insculpta*), Plains Ragwort (*Packera indecora*), Sweet Colt's-foot (*Petasites sagittatus*), Braun's Holly-fern (*Polystichum braunil*), Aglae-leaved Pondweed (*Potamogeton confervoides*), and Cerulean Warbler (*Setophaga cerulea*).

Several bird species that are fully protected under the Migratory Bird Act. The bald eagle is no longer listed but is now protected by the Bald and Golden Eagle Protection Act. Several other species of plants and animals are listed as rare species or species of concern, but there are no laws in place to protect them.

I 1: Environmentally Sensitive Areas/Ecological Landscapes

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.

Ecological Landscapes were created as a WDNR handbook for resource managers to assist with their ecological assessment of an area, and to help determine sustainable uses. Almost the entire county lies within the North Central Forest, while the Northern Highland and Forest Transition landscapes slightly cross over the west and south county boundaries, respectively.

I 2: Air Resources

Air quality in Forest County meets National Ambient Air Quality Standards (NAAQS) for the six principal pollutants monitored: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), and sulfur dioxide (SO₂).

Even so, there are sources of localized air pollution that are cause for concern, such as carbon monoxide from vehicle exhaust, volatile organic compounds (VOCs) located in paints and solvents that dry quickly, and wood burning. Incomplete combustion from outdoor wood boilers and wood furnaces create

particulate matter (PM10 and PM2.5), polycyclic aromatic hydrocarbons (PAHs), dioxins and furans, carbon monoxide, volatile organic compounds and metals into the air we breathe.

In 2008, the U.S. EPA granted the Forest County Potawatomi Community a "Class I" air redesignation for Reservation parcels located within the Towns of Wabeno, Blackwell, and Lincoln. The protected airshed extends in a 62-mile radius from Reservation parcels (FR Doc. E8-8970)."

E. Goals, Objectives & Policies

Goals:

1. Protect the County's natural features, including lakes, open space, wetlands, wildlife habitat, woodlands, and unique physical areas.
2. Protect large tract woodlands and enhance County Forests.
3. Reduce contamination of surface and groundwater resources in the County.
4. Encourage and support the preservation of natural areas that minimize flooding, such as grasslands, wetlands, and woodlands.
5. Allow for needed non-metallic mining while balancing the interests of adjacent landowners and the County.
6. Forest County should be a member of the U.S. Forest Service Land Management Planning Team on any land within Forest County's boundaries.

Objectives:

1. New development should not negatively impact natural resources.
2. Protect surface water, groundwater, and shoreline quality.
3. Identify the critical natural resources, such as lakes, streams, rivers, wetlands, steep slopes, and woodlands.
4. Promote opportunities that support both natural resource protection and economic development.
5. Encourage the development of a natural area network connecting open areas, wetlands, and woodlands.
6. Integrate and implement the County Forest Comprehensive Plan.
7. Balance access to natural areas with resource protection efforts.
8. Promote groundwater protection efforts to maintain and lower nitrate, pesticide, and volatile organic compound pollution.

9. Promote development that minimizes surface and groundwater impacts from on-site septic systems and other sources.
10. Promote proper reclamation techniques in the County for non-metallic mineral mining sites.
11. Minimize impacts to the County's natural resources from non-metallic mineral mining.

Policies:

1. Work cooperatively with the WDNR and other forestry agencies and organizations in sponsoring workshops and educational materials regarding sound forest management practices and programs.
2. Implement the policies as identified in the County's Comprehensive Forest Plan.
3. Work with federal, state, and local governments to manage natural resources throughout the county.

2.3 AGRICULTURE

A. Background

Farming in Forest County had its origin in the need for agricultural products by the lumber companies. In 1890, there were 47 farms in the county and the average farm size was 171 acres. By 1910, the number of farms had increased to 237 and the average farm size was 119 acres; by 1935, the county had 915 farms with an average size of 100 acres. After that period, the number of farms in Forest County began to decline dramatically. In 1950, the county had a total of 652 farms and the average size was 133 acres according to the Wisconsin Department of Agriculture, 1957. By 2017, Forest County had only 140 farms, and the average size was 272 acres according to the most recent U.S. Census of Agriculture.

I. Previous Planning Efforts

Forest County Farmland Preservation Plan. This plan was adopted in 2016. The Forest County Farmland Preservation Plan is intended to address the loss of productive farmland. The planning process identified agricultural problems for the purpose of formulating goals and policies. Included are maps of prime farmland areas and land use maps identifying areas for development, agriculture, and forestry.

The plan follows a 1983 Agricultural Preservation Plan that defined prime soils as those designated Group I or II by the Soil Conservation Service (NRCS) and feasibly irrigable. Prime soils are based upon the physical properties of the land, compared to prime farmland, which considers other factors such as type, size, and locality of agricultural operations in addition to soil quality. Objectives include preserving open crop farmland, protecting the economic viability of forest and open crop farmland, promoting small, local farm agriculture, promoting positive soil health, and ensuring the agricultural industry continues to drive the county's economy. A copy is available in the Forest County Land Conservation Department.

NRCS Soil Survey for Forest County, 2005. The Natural Resource Conservation Service (NRCS) is a federal agency that prepared the Forest 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 Forest County accompanies the survey. A copy is available online at: <https://www.nrcs.usda.gov/wps/portal/nrcs/main/wi/soils/surveys/>

County Ordinances. Some related county ordinances include the soil and water conservation standards for the Farmland Preservation Program, and the General Zoning Ordinance.

2. Issues

- Decline of large-scale farming in the county.
- Growth in hobby farms and specialty agriculture.

B. Inventory and Trends

I. Farm Size

Agricultural continues to be a major part of the county. Table 13 provides census data regarding the total amount of farmland and the size of farms in the county and state. Between 1997 and 2017, the county added over 11,900 acres of farmland, while average farm size declined slightly.

Table 13: Forest County Farmland (acres)

| Minor Civil Division | Farmlands (acres) | | | Average Size of Farm (acres) | | |
|----------------------|-------------------|---------------|---------------|------------------------------|------------|------------|
| | 1997 | 2007 | 2017 | 1997 | 2007 | 2017 |
| Forest County | 26,152 | 33,805 | 38,084 | 236 | 195 | 272 |
| Wisconsin | 15,463,551 | 15,741,552 | 14,318,630 | 228 | 204 | 221 |

Source: Census of Agriculture 1997, 2007, & 2017

Table 14 shows the number of farms by size in the county. Between 1997 and 2017, census data indicated that the total number of farms increased from 111 to 140, an increase of 29 or over 26 percent.

Table 14: Forest County Farms by Size

| Year | Acres | | | | | Total farms |
|----------------------|-------|--------|---------|---------|-----------|-------------|
| | 1-49 | 50-179 | 180-499 | 500-999 | 1000 plus | |
| 1997 | 19 | 34 | 49 | 6 | 3 | 111 |
| 2007 | 50 | 62 | 55 | 4 | 2 | 173 |
| 2017 | 35 | 31 | 58 | 12 | 4 | 140 |
| 1997-2017 % Change | 84.2% | -8.8% | 18.4% | 100.0% | 33.3% | 26.1% |
| 1997-2017 Net Change | 16 | -3 | 9 | 6 | 1 | 29 |

Source: Census of Agriculture 1997, 2007, & 2017

2. Row Crops

Crops grown are used mainly to feed livestock or residents within the county. Table 15 provides historical data on crop production in Forest County. Oats accounts for the largest share of cropland in Forest County. The most recent crop area data for 2019 and 2020 does not disclose figures for Forest County.

Table 15: Forest County Cropland by Crop Type (acres)

| Crop | 1997 | 2002 | 2007 | 1997-2007 % Change | 1997-2007 Net Change |
|------------------|------|------|------|-----------------------|-------------------------|
| Corn (for grain) | 112 | 245 | 193 | 72.3% | 81 |
| Oats | 287 | 385 | 333 | 16.0% | 46 |
| Total | 399 | 630 | 526 | N/A | 127 |

Source: Wisconsin Agricultural Statistics 1997, 2002, & 2007

3. Livestock

There may be some livestock in the County, but as of 2023, there were no dairy farms in operation.

4. Aquiculture

As of the 2017 Census of Agriculture, there was only one fish farm in Forest County, which raised sport/game fish.

5. Productive Agricultural Areas

The most productive agricultural areas may be found in the southern half of the county. These areas are mostly flat and therefore conducive to the use of large farm machinery and the efficient application of chemicals. Areas with high water tables, and steep slopes are less productive for row crop production, but many are suited well for forage and managed pasture. There are still many farms that can make use of small irregularly shaped parcels if they are in close proximity.

6. Farm Infrastructure

Farm-to-market roads, commodity storage and processing plants, and implement dealerships are significant farming infrastructure. Quality roads are necessary 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. The number and type of farms in the county support several businesses in adjacent Langlade County to service modern farm implements. Certain crops require irrigation, though this is uncommon in Forest County because most grow forage crops that do not need irrigation.

7. Agricultural Land Values

Agricultural land values throughout Wisconsin have changed since use-value assessment of farmland was implemented between 2000-2002. Use values for most farmland are grouped into four categories based

on relative soil productivity within the county. The Department of Revenue (DOR) determines actual values assigned to farmland in these categories each year for every municipality in the state. Land associated with the farmstead, road rights-of-way, ungrazed woodland and swampland, etc. is excluded from use value assessment.

Land and buildings in the farmstead area are assessed at full market value. If agricultural land is converted to another use, the county where the land is located will administer a penalty on the property tax. The DOR will determine the penalty within each county based on the difference between the average per-acre fair market value of agricultural land sold in the county in the previous year and the average per-acre equalized value of agricultural land in the county in the previous year.

The number of agricultural land sale transactions per year has generally remained constant at 2 or fewer per year from 2007 through 2020. Table 16 shows two sample years of farmland transactions. Generally, farmland prices are similar for land that will remain as farmland or be converted to other uses.

Table 16: Agricultural Land Sales (Land Without Buildings and Improvements)

| Number of Transactions (number) | | Agricultural land continuing in agricultural use (acres) | | Agricultural land being diverted to other uses (acres) | | Total of all agricultural land (acres) | |
|---------------------------------|------|--|---------------|--|------|--|---------------|
| 2007 | 2020 | 2007 | 2020 | 2007 | 2020 | 2007 | 2020 |
| 2 | 2 | 155 | 58 | 51 | 0 | 206 | 58 |
| | | (\$1,520/ac.) | (\$1,478/ac.) | (\$1,550/ac.) | N/A | (\$1,527/ac.) | (\$1,478/ac.) |

Source: Wisconsin Agricultural Statistics 2007 & 2020

C. Goals, Objectives & Policies

Goals:

1. Protect economically productive farmlands.
2. Eliminate negative impacts related to manure storage.

Objectives:

1. Work to preserve farming as a viable occupation within the County.
2. Limit the number of non-farm uses in agricultural areas.
3. Encourage retaining large, contiguous farmland tracts.

Policies:

1. See policies as identified in the County’s Land & Water Resource Management Plan.
2. Update Farmland Preservation Plan.

3. Work with local governments to protect agricultural resources.

2.4 CULTURAL RESOURCES

A. Background

Before the Civil War, Forest County was primarily inhabited by the Chippewa and other Native Americans, and was visited by traveling fur traders and trappers, most of whom were of French descent or mixed French and Indian heritage. These traders followed a centuries old route from Green Bay to the copper rich area of Lake Superior.

During the 1860s, the federal government started construction of what is known as the Military Road. This road connected Green Bay and Fort Wilkins at Copper Harbor on the tip of the Keweenaw Peninsula. Previously, rivers had served as the highways to this section of northeastern Wisconsin. Military Road made travel through Forest County easier, but marketing of its principal resource, hardwood timber, had to wait for improved markets for hardwood lumber and rail service to transport the lumber. Unlike the pine that was logged elsewhere, the heavier hardwood logs would not float in the rivers to sawmills downstate.

The Soo Line Railroad bisected Forest County in 1887, and provided rail service to areas adjacent to Argonne, Cavour, and Armstrong Creek, but it was still not profitable to move logs by horse-drawn sleigh for any distance to a railhead. Eventually, the Chicago & Northwestern Railroad, lured by land holdings given to them by the government, pushed rail service into the county. It created a north-south line on the eastern side of the county in the 1890s with a spur into Crandon just after the turn of the century. Sawmills soon sprang up and lumber was shipped to build America's cities. By the 1930s, the timber supply waned and the Great Depression shut down most of the big mills. It was then that residents of what came to be called the "cutover lands" realized the value of the many lakes and miles of streams located in Forest County. The tourist trade joined logging and saw milling as part of the economic mainstay of the North, and it remains so today.

The history information was taken from: A Capsule of Forest County History, posted in May 2008 at www.forestcountyhistory.org. The site has now moved to <https://www.crandonareahistory.org/>.

I. Previous Planning Efforts

Wisconsin Historic Preservation Plan 2006-2015. The Wisconsin's Historic Preservation Plan for 2006-2015 presents achievable goals and objectives to protect and enhance our state's cultural resources. 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. A copy is available on the Wisconsin Historical Society's website. The plan identifies five goals that should be addressed over the next several years:

1. Wisconsin must build a strong network of parties interested in historic preservation.
2. Wisconsin must have a strong educational structure for historic preservation.
3. Preservation must become a core value for Wisconsinites.

4. Wisconsin needs financial stability for preservation activities, ranging from the State Historic Preservation Office to property owners.
5. Citizens and local governments need tools to preserve the state’s most threatened cultural resources.

2. Issues

- Supporting a desire to improve upon the preservation and promotion of Forest County’s unique cultural heritage which encompasses two Native American tribes and various ethnic groups of immigrant settlers to the county.
- Obtaining funding to maintain historical and cultural places in the county.
- County and municipal public records, including military records, vital and school records, and maps, are at risk of decay, political instability, scheduled destruction, and face the risk of being destroyed in a natural disaster.

B. Inventory and Trends

I. Historical Structures

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.

There are 10 sites in Forest County on the Wisconsin and National Registers of Historic Places: Armstrong Creek Bridge ca. 1908 (Armstrong Creek), Butternut-Franklin Lakes Archaeological District ca. 7000 BC–1600 AD (Town of Hiles), Camp Five Farmstead ca. 1914 (Town of Laona), Connor Lumber and Land Company Story ca. 1914 (Town of Laona), Chicago and Northwestern Land Office ca. 1897 (Library in Wabeno), Dinesen-Motzfeldt-Hettinger Log House ca. 1870 (Sokaogon Chippewa Community), Franklin Lake Campground ca. 1936 (Town of Alvin), Minertown-Oneva ca. 1899 (Town of Wabeno), Otter Spring House ca. 1925 (Town of Lincoln), and John and Anna Wywialowski Farmstead ca. 1936 (Town of Armstrong Creek).

The City of Crandon and several towns have more structures listed onto the Architecture and History Inventory (AHI). The City currently has 26 architecturally significant buildings on the state AHI, most of which are homes. Many structures throughout the county are considered historic even though they are not listed on any historical registers. The following buildings are locally historic or are listed on the Architecture and History Inventory:

- Pine Acres Bar, Town of Alvin
- Sohr Cabin, Town of Alvin
- Jones Dam Bridge, Town of Argonne

- Wisconsin Central Depot, Town of Argonne
- John and Anna Wywialowski Farmstead: granary, outhouse, windmill, front-gabled house, ranch house, chicken coop, garage, and orchard (8680 Hwy STH 101), Town of Armstrong Creek
- Town Bridge, Old Hwy 101, S of USH 8, Town of Armstrong Creek
- Blackwell CCC Camp: Cedar, Duty, and Elm Halls (4155 County Highway H), Town of Blackwell
- Blackwell High School (3695 CTH W); Town of Blackwell
- Frank Michigan log house, Town of Blackwell
- Franklin Lake Campground, Water Fountain, Shelter and Bathhouse, Town of Hiles
- Dutton House (5362 Linden St); Town of Laona
- Camp Five Farmstead (5466 Connor Farm Rd); Town of Laona
- Connor Lumber and Land Company Store (4894 Mill St, now known as Maple Place), Town of Laona
- Laona Forest Lookout Tower (T36N R15E Sec 20), Town of Laona
- William Korth House (T36N R13E Sec 19); Town of Lincoln
- Barn (T36N R13E Sec 29); Town of Lincoln
- Laona Ranger dwelling (T36N R13E Sec 26); Town of Lincoln
- Otter Springs Springhouse (T36N R13E Sec 24), Town of Lincoln
- Dinesen-Motzfeldt-Hettinger Log House (T36N R12E Sec 27), Town of Nashville, Sokaogon Chippewa Community
- Chicago and Northwestern Land Office ca. 1897 (currently the library, 4556 W Branch St); Town of Wabeno
- Larry the Logroller (4500 N Branch St), Town of Wabeno
- Retail Building (4541 N Branch St), Town of Wabeno
- St. Ambrose Catholic Church and Parsonage (4265 Branch St), Town of Wabeno
- State Bank of Wabeno (4519 N Branch St), Town of Wabeno

- Wabeno High School (4325 Branch St), Town of Wabeno
- Wabeno Logging Museum (4500 N Branch St), Town of Wabeno
- Crandon Creamery (Ye Olde Auction Barn, SW corner of Boulevard Ave & Glen St); City of Crandon
- Crandon Grade School (203 E Glen St); City of Crandon
- Crandon Post Office (105 E Madison St); City of Crandon
- Crandon Ranger Station (401 N Lake); City of Crandon
- Crandon State Bank (Halcyon Ch. 178 O E S, NW corner of S Lake Ave & E Jackson St); City of Crandon
- Crandon Theater (103 E Madison St); City of Crandon
- Forest County Courthouse (200 E Madison Ave); City of Crandon
- Grand Plank Hotel ca. 1904 (4559 N Branch St); Town of Wabeno
- Himes Lumber Yard Warehouse Buildings 1-4 (406 N Lake Ave), City of Crandon
- Methodist Episcopal Church (Lakeland Baptist, 106 Hazeldell Ave); City of Crandon
- Page and Landeck Lumber (Bowles Foods, 101 E Madison St); City of Crandon
- Soo Line Depot (Moved to Cracker Box); City of Crandon
- A listing of 18 houses and cabins, mostly in the City of Crandon
- Several utility outbuildings throughout the county

2. Archaeological Places

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.

3. Community Design and Retaining Community Character

The shape and appearance of a community changes over time, as styles of buildings and development patterns 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.

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 therefore must change with the times. Community design is a balancing act that balances the past and the future; the modern and the traditional; and, most importantly, the diverse needs and aspirations of the people who call that community home.

C. Goal, Objectives & Policy

Goal:

1. Encourage the cooperation of county-wide local historical organizations with the Forest County Potawatomi Tribal Historical Preservation Officer, the Sokaogon Chippewa Tribal Historic Preservation Officer, and other stakeholders to preserve and enhance the cultural, historical and archaeological resources of Forest County.
2. Promote the unique cultural heritage of Forest County through the promotion of heritage tourism.

Objectives:

1. Continue identification and protection of key cultural, historic and archeological sites.
2. Encourage nomination of sites to the State Historical Society.
3. Continue identification and protection of archival documents relating to the origination of Forest County and its municipalities.
4. Support efforts of the Forest County Historical and Genealogical Society.
5. Encourage efforts to educate and inform the public about history and diversity in Forest County.

Policy:

1. Work with citizens and local governments to protect cultural resources.

Chapter 3: Housing

3.1 Background

This is the third of nine chapters that comprise the Forest County Comprehensive Plan. This housing chapter is based on the statutory requirement for a compilation of objectives, policies, goals, maps, and programs of the local governmental unit to provide an adequate housing supply that meets existing and forecasted housing demand in the local governmental unit. The chapter shall assess the age, structural, value and occupancy characteristics of the local governmental unit's housing stock. The chapter shall also identify specific policies and programs that promote the development of housing for residents of the local governmental unit and provide a range of housing choices that meet the needs of persons of all income levels and all age groups and persons with special needs, policies and programs that promote the availability of land for the development or redevelopment of low-income and moderate-income housing, and policies and programs to maintain or rehabilitate the local governmental unit's existing housing stock.

The availability of good housing is a central concern of any comprehensive plan as the housing needs of all segments of the population must be addressed. For low-income and special-needs populations, the disabled, homeless, and victims of domestic abuse, this can involve programs that make housing available at below market rates. But there is more to affordable housing than meeting the needs of segments of society. 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.

A. Previous Planning 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) website (www.hud.gov) 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 several 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 an individual in Wisconsin would need to earn \$12.38 per hour to afford the fair market rent unit at 30% of income for a one-bedroom apartment. Households in the low-income range have great difficulty finding adequate housing within their means and that accommodates their needs, which is also a growing statewide and national concern.

Regional Comprehensive Plan: A Framework for the Future, 2002-2020. The Regional Comprehensive Plan (RCP) titled “A Framework for the Future”, adopted by the North Central Wisconsin Regional Planning Commission in December of 2003, 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 Forest. It looks at general trends within the Region and recommends how county and local government can address their housing issues. Programs that assist with developing housing in this plan are listed at the end of this chapter. The plan notes that housing assistance falls into two categories: project-based and tenant-based. Project-based assistance results in the development or rehabilitation of low-income housing units, and tenant-based assistance allow tenants to find privately-owned housing and use a voucher to help pay for it if the landlord is willing to accept them.

Subsidized Housing in Forest County. According to affordablehousingonline.com and the Low-Income Housing Tax Credit (LIHTC) program, Forest County has 224 subsidized housing units. This equals one housing unit per 40 residents, which is an improvement of Forest County’s low rate of one unit per 47.5 persons reported in 2003. There are currently 89 housing units in Forest County that take advantage Low-Income Housing Tax Credits (LIHTC). This is privately owned housing that receives a tax credit in exchange for pledging to offer rental units at affordable prices to low- and moderate-income families. In addition to directly subsidized housing units and indirect subsidies, such as tenant-based Section 8 or LIHTC meant to reduce the cost of rental housing to low-income residents, there are also several programs focused on rehabilitation and reducing the cost of homeownership.

In general, an adequate supply of housing for all income levels means that affordability is more than subsidized housing units for low-income families, the disabled, or elderly. It means that working families, single people, retirees, and the more well-to-do should all be able to find housing that meets their needs in a suitable location. Several factors affect affordability, including the availability and cost of developable land, market demand, and the type and quality of housing. With inflation and appreciating real estate, housing affordability will continue to be a concern in Forest County. An aging population will also impact demand for senior-oriented housing of various styles.

B. Issues

- Affordable Housing
- Aging Housing Stock
- Growth in Seasonal Dwellings
- Elderly Housing Needs
- Subsidized and Special-needs Housing
- Waterfront Development
- Lack of units for workforce to buy or rent, making it hard to attract workers
- Crowded senior housing facilities

3.2 Inventory & Trends

Planning for housing considers if the housing needs of all Forest County residents are being met. Parts of the county have seen strong growth in the number of housing units constructed (Table 17), with much of this growth in seasonal and recreational properties (Table 25), and although the percentage of seasonal housing units is slightly lower, the total number of them increased by almost 500 units between 2010 and 2020. Much of the highest value housing property is in the Towns of Hiles, Lincoln, and Nashville (Table 20), possibly due to the presence of lakes. Forest County's year 2020 median age of over 47 years is higher than the state median of almost 40 years (Table 28).

Forest County has a high level of owner occupancy, over ten percent higher than the state (Table 26). Homeownership levels are lowest in the City of Crandon (Table 26), because the number of rental units is highest in the City (Table 22). Over half of all housing units in the county are seasonal (Table 25). Nearly every community saw an increase in seasonal dwellings since 2010 except the Towns of Alvin, Armstrong Creek, and Ross (Table 25). Overall, 32 percent of Forest County homeowners with a mortgage, 12.6 percent without a mortgage, and 33 percent of renters reported spending 30 percent or more of their income on housing (Table 21).

A. Existing Housing Stock

I. Housing Units

The total number of housing units in Forest County (9,238) rose by 11 percent between 2000 and 2020, which is lower than the state (16.7 percent) as a whole. This increase was not spread evenly across the county. In the Towns of Argonne, Blackwell, Lincoln, and Ross, there was an increase of housing units of over 20 percent between 2000 and 2020. Almost 500 housing units were constructed in Lincoln and Nashville, which is over half the units built countywide during this time. This housing increase is likely a reflection of seasonal and recreational unit construction.

Table 17: Total Housing Units

| Minor Civil Division | 2000 | 2010 | 2020 | 2000 - 2020 % Change | 2000 - 2020 Net Change |
|----------------------|--------------|--------------|--------------|----------------------|------------------------|
| C. Crandon | 961 | 996 | 945 | -1.7% | -16 |
| T. Alvin | 411 | 459 | 436 | 6.1% | 25 |
| T. Argonne | 314 | 419 | 388 | 23.6% | 74 |
| T. Armstrong Creek | 422 | 453 | 456 | 8.1% | 34 |
| T. Blackwell | 116 | 121 | 150 | 29.3% | 34 |
| T. Caswell | 156 | 140 | 165 | 5.8% | 9 |
| T. Crandon | 443 | 442 | 510 | 15.1% | 67 |
| T. Freedom | 435 | 454 | 497 | 14.3% | 62 |
| T. Hiles | 761 | 736 | 828 | 8.8% | 67 |
| T. Laona | 850 | 893 | 838 | -1.4% | -12 |
| T. Lincoln | 998 | 1,168 | 1,282 | 28.5% | 284 |
| T. Nashville | 1,264 | 1,366 | 1,476 | 16.8% | 212 |
| T. Popple River | 128 | 81 | 141 | 10.2% | 13 |
| T. Ross | 218 | 281 | 263 | 20.6% | 45 |
| T. Wabeno | 845 | 876 | 863 | 2.1% | 18 |
| Forest Co. | 8,322 | 8,322 | 9,238 | 11.0% | 916 |
| Wisconsin | 2,321,144 | 2,593,073 | 2,709,444 | 16.7% | 388,300 |

Source: U.S. Census, 2000 & American Community Survey, 2010 & 2020

2. Building Age

Forest County's housing stock has a smaller percentage of homes built before 1970 and a larger percentage of homes built between 1970 and 2009 compared to the state, but a slightly lower percentage of units built since 2010. This could be due to the 2008 recession's impact on recreational housing, but generally, the state and nation have a shortage of housing units built in the last 10-15 years. Table 18 shows the number of housing units built by age. Nearly one-third of the City of Crandon and the Town of Popple River have housing stock that was built before 1950, which could signal costly repairs and lack of modern features for those living in them. 1 in 5 houses in Argonne, Blackwell, Ross, and Wabeno and 1 in 4 houses in Laona was also built before 1950, with other townships having much newer housing stock. Although most of the housing in Forest County was built between 1970 and 2009, many of these homes could need new roofs, heating systems, or other costly replacements to keep them habitable.

Both Crandon and Wabeno have downtowns where most of their pre-1950 housing exists. Laona also has an original downtown, but sewer lake development next to their downtown has increased the number of houses constructed since 1980. Development around Lake Metonga is within the Town of Lincoln, so development in the Crandon area is like development in the Laona area.

Table 18: Year House was Built

| Minor Civil Division | Before 1950 | 1950-1969 | 1970-1989 | 1990-2009 | 2010-present |
|-----------------------------|--------------------|------------------|------------------|------------------|---------------------|
| C. Crandon | 297 | 168 | 313 | 160 | 7 |
| T. Alvin | 72 | 55 | 111 | 198 | 0 |
| T. Argonne | 87 | 103 | 115 | 73 | 10 |
| T. Armstrong Creek | 65 | 96 | 155 | 112 | 28 |
| T. Blackwell | 31 | 6 | 53 | 50 | 10 |
| T. Caswell | 14 | 35 | 53 | 55 | 8 |
| T. Crandon | 28 | 47 | 159 | 245 | 31 |
| T. Freedom | 61 | 91 | 172 | 168 | 5 |
| T. Hiles | 113 | 185 | 284 | 213 | 33 |
| T. Laona | 224 | 97 | 274 | 218 | 25 |
| T. Lincoln | 71 | 202 | 383 | 546 | 91 |
| T. Nashville | 147 | 202 | 525 | 534 | 68 |
| T. Popple River | 42 | 12 | 54 | 33 | 0 |
| T. Ross | 63 | 48 | 67 | 87 | 11 |
| T. Wabeno | 188 | 176 | 242 | 224 | 33 |
| Forest Co. | 1,503 | 1,523 | 2,960 | 2,916 | 360 |
| Wisconsin | 662,533 | 551,580 | 658,713 | 714,269 | 122,349 |

Source: American Community Survey, 2020

3. Housing Type

The most significant fact about housing types in Forest County is the predominance of single-family housing at 85.5 percent for the county as compared to 70.8 percent for the state as a whole. This is not unusual for a rural area. Also notable is the number of manufactured and mobile homes, which account for 10.4 percent of housing units, about triple the percentage for the state (3.4 percent). Table 19 shows the number and percentage of housing units of each type.

Table 19: Housing Type, 2020

| Minor Civil Division | Single-family | Two-family | 3-19 Units | Over 20 units | Mobile homes | Other |
|----------------------|---------------|------------|------------|---------------|--------------|----------|
| C. Crandon | 702 | 29 | 167 | 9 | 38 | 0 |
| T. Alvin | 374 | 0 | 0 | 0 | 62 | 0 |
| T. Argonne | 331 | 0 | 0 | 0 | 57 | 0 |
| T. Armstrong Creek | 375 | 7 | 0 | 0 | 68 | 0 |
| T. Blackwell | 113 | 0 | 0 | 1 | 36 | 0 |
| T. Caswell | 147 | 0 | 1 | 0 | 17 | 0 |
| T. Crandon | 439 | 2 | 10 | 0 | 59 | 0 |
| T. Freedom | 429 | 1 | 10 | 0 | 57 | 0 |
| T. Hiles | 761 | 4 | 0 | 0 | 63 | 0 |
| T. Laona | 769 | 11 | 10 | 0 | 48 | 0 |
| T. Lincoln | 1,191 | 0 | 11 | 0 | 80 | 0 |
| T. Nashville | 1,245 | 6 | 62 | 3 | 160 | 0 |
| T. Popple River | 103 | 0 | 0 | 0 | 38 | 0 |
| T. Ross | 172 | 0 | 0 | 0 | 91 | 0 |
| T. Wabeno | 745 | 0 | 31 | 2 | 85 | 0 |
| Forest Co. | 7,896 | 60 | 302 | 15 | 959 | 0 |
| Wisconsin | 1,918,556 | 171,960 | 322,795 | 204,374 | 90,973 | 786 |

Source: American Community Survey, 2020

Single-family residences are the largest class of housing type, ranging from over 65 percent of total housing units in the Town of Ross to almost 93 percent in Lincoln. In the Towns of Blackwell, Popple River, and Ross, more than 1 in 4 housing units are mobile homes. The Towns of Alvin, Argonne, Armstrong Creek, Caswell, Crandon, Nashville, and Wabeno have between 9 and 16 percent of housing stock in mobile homes.

B. Value Characteristics

I. Median Home Value

Table 20 shows each community's median home value. The highest median values in Forest County are in the Towns of Lincoln and Nashville, which are both under the state median. All towns saw an increase in value between 2010 and 2020, but only the Town of Crandon's median home value increased (\$77,300) more than that the state median (\$77,000). Overall, all the Towns appreciated in value at around double or triple the rate of the City of Crandon (\$24,100) between 2010 and 2020, except the Town of Ross, which had the lowest appreciation of \$21,700. The Town of Blackwell had the highest percent increase in value of 138.9 percent.

Table 20: Median Home Value of Owner-Occupied Housing

| Minor Civil Division | 2000 | 2010 | 2020 | 2000-2020 % Change | 2000-2020 Net Change |
|-----------------------------|-----------------|------------------|------------------|-------------------------------|---------------------------------|
| C. Crandon | \$72,000 | \$100,600 | \$96,100 | 33.5% | \$24,100 |
| T. Alvin | \$84,400 | \$139,300 | \$145,800 | 72.7% | \$61,400 |
| T. Argonne | \$66,700 | \$123,000 | \$115,300 | 72.9% | \$48,600 |
| T. Armstrong Creek | \$61,500 | \$115,300 | \$107,000 | 74.0% | \$45,500 |
| T. Blackwell | \$45,000 | \$104,200 | \$107,500 | 138.9% | \$62,500 |
| T. Caswell | \$86,300 | \$161,100 | \$137,500 | 59.3% | \$51,200 |
| T. Crandon | \$59,200 | \$136,200 | \$136,500 | 130.6% | \$77,300 |
| T. Freedom | \$91,100 | \$155,900 | \$158,000 | 73.4% | \$66,900 |
| T. Hiles | \$87,000 | \$175,000 | \$170,300 | 95.7% | \$83,300 |
| T. Laona | \$67,200 | \$96,500 | \$137,800 | 105.1% | \$70,600 |
| T. Lincoln | \$100,000 | \$142,200 | \$163,200 | 63.2% | \$63,200 |
| T. Nashville | \$103,100 | \$158,500 | \$166,800 | 61.8% | \$63,700 |
| T. Popple River | \$62,500 | \$105,000 | \$118,800 | 90.1% | \$56,300 |
| T. Ross | \$42,500 | \$75,500 | \$64,200 | 51.1% | \$21,700 |
| T. Wabeno | \$63,800 | \$81,600 | \$133,700 | 109.6% | \$69,900 |
| Forest Co. | \$77,400 | \$117,900 | \$131,600 | 70.0% | \$54,200 |
| Wisconsin | \$112,200 | \$169,000 | \$189,200 | 68.6% | \$77,000 |

Source: U.S. Census, 2000 & American Community Survey, 2010 & 2020

Although the median home value in Forest County grew slightly faster than it did for the entire state, it grew at a faster rate during the 1990s when a housing boom occurred mainly around the County's water bodies.

2. Monthly Owner Costs

There is a consensus that a family should not have to spend more than 30 percent of its income on housing, which is the accepted definition of housing affordability. Those spending more than 30 percent of their income on housing are considered cost burdened. Communities with the highest share of cost burdened homeowners with a mortgage are Caswell (55 percent), Laona (49 percent), and Nashville (40 percent), and communities with the highest share of cost burdened homeowners without a mortgage are Ross (34 percent), Popple River (30 percent), and Wabeno (29.8 percent). For renters, the most cost-burdened communities are Popple River (100%), Armstrong Creek (63.6 percent), and Laona (51.2 percent). Note that due to the County's low number of multifamily and rental units, there is a small sample size to determine the median rent from. Table 21 shows the percentage of homeowners and renters spending 30 percent or more of their income on housing.

Overall, 32 percent of Forest County homeowners with a mortgage, 12.6 percent without a mortgage, and 33.1 percent of renters reported spending 30 percent or more of their income on housing. This is similar to the state rate for owners with no mortgage, but lower than the state rate for renters and higher than the state rate for owners with a mortgage.

Table 21: Monthly Housing Cost 30% of Household Income or Greater, 2020

| Minor Civil Division | Owner (mortgage) | Owner (no mortgage) | Renter |
|-----------------------------|-------------------------|----------------------------|---------------|
| C. Crandon | 32.9% | 19.4% | 32.3% |
| T. Alvin | 14.6% | 2.5% | N/A |
| T. Argonne | 37.3% | 3.6% | 42.9% |
| T. Armstrong Creek | 36.7% | 11.5% | 63.6% |
| T. Blackwell | 12.5% | 0.0% | 0.0% |
| T. Caswell | 55.0% | 11.1% | 0.0% |
| T. Crandon | 21.0% | 3.4% | 33.3% |
| T. Freedom | 31.0% | 12.7% | 26.6% |
| T. Hiles | 24.6% | 14.1% | 50.0% |
| T. Laona | 49.0% | 13.0% | 51.2% |
| T. Lincoln | 18.4% | 5.3% | 16.0% |
| T. Nashville | 40.0% | 8.3% | 29.2% |
| T. Popple River | 0.0% | 30.0% | 100.0% |
| T. Ross | 8.0% | 34.0% | 0.0% |
| T. Wabeno | 23.9% | 29.8% | 37.7% |
| Forest Co. | 32.0% | 12.6% | 33.1% |
| Wisconsin | 22.2% | 12.9% | 43.2% |

Source: American Community Survey 2020

Availability of rental properties also impacts housing affordability. According to Table 22, it appears that Forest County has a much higher vacancy rate for rental than the state average. But according to Table 25 later in this chapter, over 89 percent of vacant housing units in Forest County are seasonal housing units. This means that the actual vacancy rate for rentals that year-round residents who work and live in the community is much lower. This affects the County’s ability to attract workers and limits choices for those who hope to save up to buy a house someday.

Table 22: Rental Units and Vacancy Rate, 2020

| Minor Civil Division | Total renter-occupied units | Rental vacancy rate |
|-----------------------------|------------------------------------|----------------------------|
| C. Crandon | 277 | 8.6% |
| T. Alvin | 1 | 88.9% |
| T. Argonne | 10 | 0.0% |
| T. Armstrong Creek | 11 | 26.7% |
| T. Blackwell | 12 | 0.0% |
| T. Caswell | 5 | 0.0% |
| T. Crandon | 10 | 60.0% |
| T. Freedom | 29 | 0.0% |
| T. Hiles | 57 | 0.0% |
| T. Laona | 110 | 15.4% |
| T. Lincoln | 66 | 21.8% |
| T. Nashville | 153 | 14.5% |
| T. Popple River | 1 | 0.0% |
| T. Ross | 16 | 0.0% |
| T. Wabeno | 98 | 7.5% |
| Forest Co. | 856 | 12.8% |
| Wisconsin | 781,435 | 4.9% |

Source: American Community Survey, 2020

3. Median Rent

Rents increased in Forest County much slower than in the state as a whole. Gross rent increased by \$159 or more during the 2010s statewide, but only by an average of \$27 in Forest County. Armstrong Creek and Freedom saw the largest increase in rent of over \$200 between 2010 and 2020, higher than the state average, but the remaining communities saw increases of less than \$100 and even a decline in rent prices for the City of Crandon and the Town of Blackwell. Communities with rent prices that are not available do not have enough housing units for the American Community Survey to determine a median rent for.

Table 23: Median Gross Rent

| Minor Civil Division | 2010 | 2020 | 2010-2020 % Change | 2010-2020 Net Change |
|----------------------|--------------|--------------|--------------------|----------------------|
| C. Crandon | \$597 | \$507 | -15.1% | -\$90 |
| T. Alvin | N/A | N/A | N/A | N/A |
| T. Argonne | N/A | N/A | N/A | N/A |
| T. Armstrong Creek | \$625 | \$839 | 34.2% | \$214 |
| T. Blackwell | \$563 | \$500 | -11.2% | -\$63 |
| T. Caswell | N/A | \$625 | N/A | N/A |
| T. Crandon | \$663 | \$695 | 4.8% | \$32 |
| T. Freedom | \$368 | \$578 | 57.1% | \$210 |
| T. Hiles | N/A | \$1,667 | N/A | N/A |
| T. Laona | \$469 | \$640 | 36.5% | \$171 |
| T. Lincoln | \$501 | \$556 | 11.0% | \$55 |
| T. Nashville | \$356 | \$446 | 25.3% | \$90 |
| T. Popple River | N/A | N/A | N/A | N/A |
| T. Ross | N/A | N/A | N/A | N/A |
| T. Wabeno | \$454 | \$478 | 5.3% | \$24 |
| Forest Co. | \$495 | \$522 | 5.5% | \$27 |
| Wisconsin | \$713 | \$872 | 22.3% | \$159 |

Source: American Community Survey, 2010 & 2020

Overall, the county's affordable housing situation appears to be about average for a rural county. According to NLIHC, a renter would need to make \$14.12 per hour to afford a 2-bedroom apartment without being cost-burdened (\$29,370 annually at 40 hours per week), compared to \$17.89 statewide (\$37,211 annually). While this signals that Forest County is more affordable than much of the state, the county's median income is only \$48,394 compared to \$63,293 statewide, resulting in a smaller difference between income and housing costs than the state average. Table 24 shows median gross rents in surrounding counties, with Forest County having both the lowest median rent and the slowest growing median rent.

Table 24: Median Gross Rent, Surrounding Counties

| Minor Civil Division | 2010 | 2020 | 2010-2020 % Change | 2010-2020 Net Change |
|-----------------------------|--------------|--------------|---------------------------|-----------------------------|
| Langlade | \$509 | \$642 | 26.1% | \$133 |
| Marinette | \$530 | \$686 | 29.4% | \$156 |
| Oconto | \$561 | \$695 | 23.9% | \$134 |
| Oneida | \$618 | \$789 | 27.7% | \$171 |
| Vilas | \$630 | \$685 | 8.7% | \$55 |
| Forest | \$495 | \$522 | 5.5% | \$27 |
| Wisconsin | \$713 | \$872 | 22.3% | \$159 |

Source: American Community Survey, 2010 & 2020

C. Occupancy Characteristics

I. Owner Occupied

Homeownership is more than ten percent higher in Forest County than in the state as a whole. At over 78 percent in 2020 this rate has remained relatively stable going as far back as 1990, with about a 15-point lower rate of homeownership in the 1980s. This is typical of rural areas, where there are few rental units.

The Towns of Alvin (98.8 percent), Crandon (96.3 percent), and Popple River (95.8 percent) had the highest levels of owner occupancy. The City of Crandon (63.2 percent) and Towns of Blackwell (68.4 percent) and Nashville (70.9 percent) had the lowest levels of owner occupancy, which are closer to the state average of 67.1 percent. Table 26 shows the percentage of owner-occupied units by decade since 2000. Homeowner vacancy rates are low in Forest County, which tends to increase equity for existing homeowners but makes is less affordable for new homeowners.

Table 25: Housing Vacancy Status

| Minor Civil Division | All Vacant Units, 2010 | | Seasonal Vacant Units, 2010 | | All Vacant Units, 2020 | | Seasonal Vacant Units, 2020 | |
|----------------------|------------------------|--------------|-----------------------------|--------------|------------------------|--------------|-----------------------------|--------------|
| | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| C. Crandon | 166 | 16.7% | 41 | 24.7% | 193 | 20.4% | 115 | 59.6% |
| T. Alvin | 381 | 83.0% | 360 | 94.5% | 354 | 81.2% | 325 | 91.8% |
| T. Argonne | 181 | 43.2% | 170 | 93.9% | 223 | 57.5% | 186 | 83.4% |
| T. Armstrong Creek | 279 | 61.6% | 274 | 98.2% | 281 | 61.6% | 257 | 91.5% |
| T. Blackwell | 92 | 76.0% | 73 | 79.3% | 112 | 74.7% | 110 | 98.2% |
| T. Caswell | 106 | 75.7% | 106 | 100.0% | 131 | 79.4% | 114 | 87.0% |
| T. Crandon | 115 | 26.0% | 94 | 81.7% | 239 | 46.9% | 186 | 77.8% |
| T. Freedom | 275 | 60.6% | 250 | 90.9% | 313 | 63.0% | 293 | 93.6% |
| T. Hiles | 539 | 73.2% | 528 | 98.0% | 598 | 72.2% | 578 | 96.7% |
| T. Laona | 318 | 35.6% | 290 | 91.2% | 354 | 42.2% | 299 | 84.5% |
| T. Lincoln | 681 | 58.3% | 650 | 95.4% | 799 | 62.3% | 694 | 86.9% |
| T. Nashville | 889 | 65.1% | 813 | 91.5% | 950 | 64.4% | 872 | 91.8% |
| T. Popple River | 61 | 75.3% | 55 | 90.2% | 117 | 83.0% | 111 | 94.9% |
| T. Ross | 206 | 73.3% | 206 | 100.0% | 190 | 72.2% | 181 | 95.3% |
| T. Wabeno | 414 | 47.3% | 308 | 74.4% | 455 | 52.7% | 385 | 84.6% |
| Forest Co. | 4,703 | 56.5% | 4,218 | 89.7% | 5,309 | 57.5% | 4,706 | 88.6% |
| Wisconsin | 318,462 | 12.3% | 162,070 | 50.9% | 331,509 | 12.2% | 191,920 | 57.9% |

Source: American Community Survey, 2010 & 2020

2. Vacant and Seasonally Vacant Housing

The vacancy rate of all housing units (houses and rentals) in Forest County (57.5 percent) is much higher than the rate for the entire state (12.2 percent). Visitors know Forest County as "Up North," so a large part of vacancy rates includes seasonally vacant units. Between 2010 and 2020, Forest County added almost 500 seasonal vacant housing units. The percentage given for all vacant units means a percent of the total housing units that are vacant; the percentage given for seasonal vacant units is for how many of the total vacant units are seasonal vacant units. Table 25 displays the vacancy rates for 2010 and 2020, and the seasonal component of those vacancies. The City of Crandon has a far lower share of seasonal housing units compared to the county as a whole since the other communities have more tourism-based housing that utilizes extensive lake frontage. But the City of Crandon is still tourism-oriented enough that the percent of vacant units that are seasonal is still higher than the state average.

Table 26: Owner Occupancy

| Minor Civil Division | 2000 | 2010 | 2020 | 2000 - 2020 % Change | Homeowner vacancy rate |
|-----------------------------|--------------|--------------|--------------|---------------------------------|-----------------------------------|
| C. Crandon | 62.8% | 65.4% | 63.2% | 0.6% | 1.9% |
| T. Alvin | 90.6% | 97.4% | 98.8% | 9.1% | 5.6% |
| T. Argonne | 92.8% | 88.7% | 93.9% | 1.2% | 2.4% |
| T. Armstrong Creek | 90.3% | 85.6% | 93.7% | 3.8% | 0.0% |
| T. Blackwell | 80.0% | 44.8% | 68.4% | -14.5% | 0.0% |
| T. Caswell | 87.8% | 64.7% | 85.3% | -2.8% | 0.0% |
| T. Crandon | 88.7% | 85.3% | 96.3% | 8.6% | 2.6% |
| T. Freedom | 91.1% | 86.6% | 84.2% | -7.6% | 5.5% |
| T. Hiles | 95.5% | 91.4% | 75.2% | -21.3% | 2.7% |
| T. Laona | 77.5% | 74.8% | 77.3% | -0.3% | 2.6% |
| T. Lincoln | 83.7% | 81.1% | 86.3% | 3.1% | 4.6% |
| T. Nashville | 73.0% | 65.4% | 70.9% | -2.9% | 0.5% |
| T. Popple River | 97.3% | 100.0% | 95.8% | -1.5% | 0.0% |
| T. Ross | 93.3% | 92.0% | 78.1% | -16.3% | 6.6% |
| T. Wabeno | 76.1% | 64.5% | 76.0% | -0.1% | 0.0% |
| Forest Co. | 78.9% | 75.4% | 78.2% | -0.9% | 2.4% |
| Wisconsin | 68.4% | 69.5% | 67.1% | -1.9% | 1.0% |

Source: U.S. Census, 2000 & American Community Survey, 2010 & 2020

Table 27 shows the total amount of seasonal units from 2000 to 2020. There has been continued growth in seasonal dwellings in Forest County over the last forty years, though this growth slowed considerably in the 2010s. Every community in Forest County saw growth in seasonal housing dwellings, with Argonne (86 percent) and Blackwell (71.9 percent) increasing several times faster than others. Overall, the growth rate for seasonal units of 22 percent in Forest County is still below the state average. According to UW-Extension, Marinette, Oneida, and Vilas Counties have some of the highest numbers of seasonal housing in the United States.

Table 27: Seasonal Housing Units

| Minor Civil Division | 2000 | 2010 | 2020 | 2000 - 2020 % Change | 2000 - 2020 Net Change |
|----------------------|--------------|--------------|--------------|-------------------------|---------------------------|
| C. Crandon | 100 | 41 | 115 | 15.0% | 15 |
| T. Alvin | 295 | 360 | 325 | 10.2% | 30 |
| T. Argonne | 100 | 170 | 186 | 86.0% | 86 |
| T. Armstrong Creek | 184 | 274 | 257 | 39.7% | 73 |
| T. Blackwell | 64 | 73 | 110 | 71.9% | 46 |
| T. Caswell | 105 | 106 | 114 | 8.6% | 9 |
| T. Crandon | 176 | 94 | 186 | 5.7% | 10 |
| T. Freedom | 266 | 250 | 293 | 10.2% | 27 |
| T. Hiles | 513 | 528 | 578 | 12.7% | 65 |
| T. Laona | 225 | 290 | 299 | 32.9% | 74 |
| T. Lincoln | 574 | 650 | 694 | 20.9% | 120 |
| T. Nashville | 727 | 813 | 872 | 19.9% | 145 |
| T. Popple River | 90 | 55 | 111 | 23.3% | 21 |
| T. Ross | 141 | 206 | 181 | 28.4% | 40 |
| T. Wabeno | 296 | 308 | 385 | 30.1% | 89 |
| Forest Co. | 3,856 | 4,218 | 4,706 | 22.0% | 850 |
| Wisconsin | 142,313 | 162,070 | 191,920 | 34.9% | 49,607 |

Source: U.S. Census, 2000 & American Community Survey, 2010 & 2020

D. Demand Characteristics

I. Median Age of Population

Forest County is aging, but all the communities are not aging at the same rate, with some communities having a lower median age in 2020 than in 2010 (City of Crandon and Towns of Alvin, Argonne, Freedom, Laona, and Ross. Part of the variance can be explained by local tribal populations, which tend to be much younger, due to the presence of the Potawatomi and Mole Lake tribes, as discussed in Chapter 1 of this plan. Additionally, the USDA Job Corp skewed the Blackwell average age in the past at 21.4 years old in 2010, because Job Corp dorms housed employees primarily between 18-24 years old. Table 28 shows how the median age has changed. Finally, Forest County's low cost of living and abundance of nature make it an attractive place for retirees to move to, driving up the median age considerably for many communities between 2010 and 2020.

This puts the county's average age of 47.2 years old substantially above the state mean of 39.6 years in 2020. Wisconsin also has an older population than the nation's average age of 38.2 years old, and the nation's population continues to age as baby boomers retire and younger generations have fewer children.

Table 28: Median Age

| Minor Civil Division | 2010 | 2020 | 2010 - 2020 % Change | 2010 - 2020 Net Change |
|-----------------------------|-------------|-------------|---------------------------------|-----------------------------------|
| C. Crandon | 43.2 | 36.6 | -15.3% | -6.6 |
| T. Alvin | 62.2 | 52.0 | -16.4% | -10.2 |
| T. Argonne | 41.9 | 38.8 | -7.4% | -3.1 |
| T. Armstrong Creek | 40.8 | 59.6 | 46.1% | 18.8 |
| T. Blackwell | 21.4 | 41.6 | 94.4% | 20.2 |
| T. Caswell | 25.0 | 52.5 | 110.0% | 27.5 |
| T. Crandon | 38.6 | 40.7 | 5.4% | 2.1 |
| T. Freedom | 54.7 | 52.9 | -3.3% | -1.8 |
| T. Hiles | 61.7 | 66.9 | 8.4% | 5.2 |
| T. Laona | 47.0 | 45.8 | -2.6% | -1.2 |
| T. Lincoln | 45.9 | 49.3 | 7.4% | 3.4 |
| T. Nashville | 41.1 | 49.5 | 20.4% | 8.4 |
| T. Popple River | 57.3 | 60.5 | 5.6% | 3.2 |
| T. Ross | 45.9 | 38.9 | -15.3% | -7 |
| T. Wabeno | 38.3 | 44.0 | 14.9% | 5.7 |
| Forest Co. | 43.4 | 47.2 | 8.8% | 3.8 |
| Wisconsin | 38.1 | 39.6 | 3.9% | 1.5 |

Source: American Community Survey, 2010 & 2020

Most municipalities in the county had a median age above the state level (39.6 years) in 2020. The City of Crandon, and Towns of Argonne and Ross had a slightly younger population than the state average. The Towns of Alvin, Armstrong Creek, Caswell, Freedom, Hiles, and Popple River have median ages over 50 years old.

2. Persons per Household

Unlike state and national trends, household size in Forest County increased by 2.3 percent between 2010 and 2020, though the Towns of Armstrong Creek, Caswell, Freedom, Nashville, and Wabeno saw a decline in household size. The overall increase in household size may be partly explained by the relatively young tribal population. Table 29 shows the average number of persons per household in each Forest County municipality.

Table 29: Average Household Size

| Minor Civil Division | 2010 | 2020 | 2010 - 2020 % Change | 2010 - 2020 Net Change |
|-----------------------------|-------------|-------------|---------------------------------|-----------------------------------|
| C. Crandon | 2.16 | 2.18 | 0.9% | 0.02 |
| T. Alvin | 1.69 | 2.34 | 38.5% | 0.65 |
| T. Argonne | 2.24 | 2.48 | 10.7% | 0.24 |
| T. Armstrong Creek | 2.39 | 2.21 | -7.5% | -0.18 |
| T. Blackwell | 1.66 | 2.61 | 57.2% | 0.95 |
| T. Caswell | 2.09 | 1.88 | -10.0% | -0.21 |
| T. Crandon | 2.28 | 2.47 | 8.3% | 0.19 |
| T. Freedom | 2.07 | 2.01 | -2.9% | -0.06 |
| T. Hiles | 1.79 | 1.83 | 2.2% | 0.04 |
| T. Laona | 2.11 | 2.36 | 11.8% | 0.25 |
| T. Lincoln | 2.19 | 2.28 | 4.1% | 0.09 |
| T. Nashville | 2.3 | 2.17 | -5.7% | -0.13 |
| T. Popple River | 1.55 | 1.92 | 23.9% | 0.37 |
| T. Ross | 1.91 | 2.12 | 11.0% | 0.21 |
| T. Wabeno | 2.2 | 2.07 | -5.9% | -0.13 |
| Forest Co. | 2.16 | 2.21 | 2.3% | 0.05 |
| Wisconsin | 2.41 | 2.38 | -1.2% | -0.03 |

Source: American Community Survey, 2010 & 2020

3.3 Government Housing Programs

A. Local Programs

Northeast Wisconsin Community Action Program (NEWCAP) is a non-profit organization headquartered in Oconto, but with a branch in Crandon. NEWCAP administers the Section 8 (housing voucher) program for the County, as well as WHEAP (energy assistance), and a weatherization program that performs roughly thirty energy-efficiency improvement projects for qualified homeowners every year in Forest County. NEWCAP also administers a homeownership and rehabilitation revolving loan program. Zero percent down-payment loans are available. The loans are repaid when the property is sold so the money can be loaned out again. Loans are also made for rehabilitation projects. NEWCAP has recently been accredited by HUD to provide foreclosure counseling, as well.

B. State Programs

I. Wisconsin Department of Administration

- Community Development Block Grant-Housing Revolving Loan Fund Program. Since 1982, over 270 communities in the State of Wisconsin have received Community Development Block Grant

(CDBG) funding for housing rehabilitation and homebuyer assistance through the State CDBG Small Cities Housing Program. CDBG housing funds are loaned to low and moderate-income (LMI) households, and to local landlords in exchange for an agreement to rent to LMI tenants at an affordable rate. Once CDBG housing loans are repaid to the community, they are identified as CDBG Housing Revolving Loan Funds (RLFs). Under the CDBG housing RLF, homeowners in owner-occupied dwellings and homebuyers receive 0 percent interest loans that are either deferred or low monthly payments. Rental rehabilitation loans are 0 to 3 percent monthly installment loans. Loans are due in full when the title changes or when the home ceases to be the homeowner's primary residence or when the property is sold. CDBG housing funds can only be used for CDBG eligible activities.

- Community Development Block Grant-Small Cities Housing Program. The Wisconsin Community Development Block Grant (CDBG) program, administered by the Wisconsin Department of Administration, Division of Housing (DOH), provides grants to general purpose units of local government for housing programs which principally benefit low and moderate income (LMI) households. These funds are primarily used for rehabilitation of housing units, homebuyer assistance, and small neighborhood public facility projects. CDBG dollars are flexible and responsive to local needs. In addition to addressing LMI housing needs, CDBG can be used to leverage other programs or serve as a local match. The grant also can be used as an incentive to involve the private sector in local community development efforts or to respond to area needs. The CDBG program often serves as a catalyst for other community development projects.
- Neighborhood Stabilization Program. The Neighborhood Stabilization Program provides assistance to acquire and redevelop foreclosed properties that might otherwise become sources of abandonment and blight within their communities.
- Homeless Programs. The Wisconsin Department of Administration administers the Emergency Solutions Grant (ESG), Housing Assistance Program (HAP), and Homelessness Prevention Program (HPP). Collectively, these three programs are referred to the EHH Program. The programs assist with costs associated with finding housing for the homeless. Additional funding sources can be found in local nonprofits and churches.
- HOME Homebuyer and Rehabilitation Program. The Division of Housing (DOH) has identified homeownership and the conservation of quality owner-occupied and rental housing as top priorities for allocating federal and state housing resources. A program was established to provide essential home purchase assistance and necessary home rehabilitation, and other vital improvements for dwelling units occupied by low- and moderate-income households. The source of funds is the U.S. Department of Housing and Urban Development (HUD) HOME Investment Partnerships Program (HOME). The Wisconsin Department of Administration, DOH awards these funds to local units of government and local housing organizations through a biennial funding cycle.
- Housing-Related Consumer Protection Services. The Bureau of Consumer Protection is responsible for the investigation of unfair and deceptive business practices and handles individual consumer complaints involving landlord/tenant complaints, and home improvement transactions.

The Bureau is housed in the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP).

2. Wisconsin Housing and Economic Development Authority (WHEDA)

- Low Income Housing Tax Credit (LIHTC). LIHTC provides funding for the construction of new buildings or the rehabilitation or conversion of existing structures. To qualify, a property must set aside a certain share of its units for low-income households. 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 89 housing units that utilize the LIHTC in the county.
- Home Improvement Advantage Loan. With this loan, a homeowner can borrow up to \$15,000 to improve the quality and value of their home. The borrower must have no late mortgage payments in the past six months, a credit score of 620 or better, total mortgage debt cannot exceed 110% of value, and household must meet WHEDA Home Improvement Advantage income limits.

C. Federal Programs

I. U.S. Department of Housing and Urban Development

Section 8 Housing Choice Vouchers are administered by locally by NEWCAP, which is identified at the end of this section. 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 their local housing authority, 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.

2. U.S. Department of Agriculture – Rural Development (USDA-RD) is focused on rural areas. Below is a partial listing of programs available to localities:

- Section 502 Homeownership Direct Loan program of the Rural Housing 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 523 Rural Housing Site Loans are designed to aid public non-profit and private organizations to acquire sites for affordable housing.
- 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.
- Single Family Home Loan Guarantees are designed to assist and encourage lenders to extend 100% loans to moderate- and low-income rural homebuyers by providing a 90% loan note guarantee to lenders to reduce the potential risk of extending full loans to these potential homebuyers.

3.4 Goals, Objectives & Policies

Goals:

1. Encourage an adequate supply of affordable housing for individuals of all income levels throughout the community.
2. Discourage residential development in unsuitable areas.
3. Encourage adequate affordable housing for all individuals consistent with the rural character of the community.
4. Promote the maintenance and renovation of the existing housing stock as a source of affordable housing.
5. Promote new senior and ADA-accessible housing development

Objectives:

1. Multi-family dwellings and subdivision facilities should be located to coincide with major throughways.

2. Single-family residences should be the preferred type of housing in rural areas, with no water and sewer systems.
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.
5. Prepare for the transition of many seasonal to year-round residences by fostering the level of service required by full-time residents.

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. 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.
3. Foster services that will help elderly residents remain in their homes, to the extent possible.
4. Steer more intensive residential development such as two-family, multi-family and senior housing to the City of Crandon, the downtown Laona area that is served by the Laona Sanitary District, or the downtown Wabeno area served by the Wabeno Sanitary District where the utilities and services exist to accommodate the development.
5. Reach out to potential developers who can build multifamily, senior, and ADA-accessible housing that is compatible with the County's rural character to help meet the shortage of senior, accessible, and workforce housing.

Chapter 4: Transportation

4.1 Background

This chapter—the fourth of nine chapters of the Forest County Comprehensive Plan—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.

This chapter compares the County’s objectives, policies, goals, and programs to state and regional transportation plans. The chapter also identifies highways within the County by function and incorporates state, regional and other applicable transportation plans, including transportation corridor plans, county highway functional and jurisdictional studies, urban area and rural area transportation plans, airport master plans and rail plans that apply in Forest County.

A. Previous Studies

I. State Transportation Plans

Corridors 2020. Corridors 2020 was designed to enhance economic development and meet Wisconsin’s mobility needs well into the future. The 3,200-mile state highway network is comprised of two main elements: a multilane backbone system and a two-lane connector system. All communities over 5,000 in population are to be connected to the backbone system via the connector network. Within Forest County, U.S. Highway (USH) 8 is designated as part of the Corridors 2020 system. USH 8 is a connector route that runs east and west through Crandon.

This focus on highways was altered in 1991 with the passage of the federal Intermodal Surface Transportation Efficiency Act (ISTEA), which mandated that states take a multi-modal approach to transportation planning. Now, bicycle, transit, rail, air, and other modes of travel would make up the multi-modal plan. The Wisconsin Department of Transportation’s (WisDOT) response to ISTEA was the two-year planning process that created TransLinks 21 in 1994.

TransLinks 21. WisDOT incorporated Corridors 2020 into TransLinks 21 and discussed the impacts of transportation policy decisions on land use. TransLinks 21 is a 25- year statewide multi-modal transportation plan that WisDOT completed in 1994. Within this needs-based plan are the following modal plans:

- Wisconsin State Highway Plan 2020
- Wisconsin State Airport System Plan 2020
- Bicycle Transportation Plan 2020
- Wisconsin Pedestrian Policy Plan 2020
- Wisconsin Rail Issues and Opportunities Report

Connections 2030. Connections 2030 served as a long-range, statewide multi-modal transportation plan, and it incorporated recommendations from the Corridors 2020 and Translinks 21 plans. Like Corridors 2020, Connections 2030 identifies a series of system-level priority corridors that are critical to Wisconsin's travel patterns and the state's economy. Within Forest County, U.S. Highway (USH) 8 is designated as part of the North Country (Minnesota to Michigan) Corridor. Information about this plan is available on WisDOT's website.

Connect 2050. Connect 2050 is Wisconsin's most recent statewide transportation plan, which has the goals of securing long-term, sustainable funding, establishing partnerships, making data-driven decisions, increasing mobility, embracing technology, enhancing safety, building resiliency and reliability, and accommodating natural and social resources.

2. Regional Transportation Plans

Regional Comprehensive Plan (2003)

The Regional Comprehensive Plan (RCP) titled "A Framework for the Future", adopted by the North Central Wisconsin Regional Planning Commission (NCWRPC) in December of 2003, is an update of a plan adopted by NCWRPC in 1981. The RCP looks at transportation in all ten counties of the North Central Wisconsin Region. It looks at general trends within the Region and recommends how county and local government can address transportation issues.

One trend identified in the RCP is the increase in drivers age 65 and over. Wisconsin's older population age 65 and over, which reached 16.9 percent of the total population in 2020 statewide. In Forest County, the percentage already exceeded 19 percent by the year 2000 and is currently about 23.3 percent. The aging of the baby boom generation will mean an increasing number of elderly drivers. This is the first generation to have been highly mobile throughout adulthood, and its members may continue to travel more as long as they are physically able to do so. Aging takes a toll on the physical and cognitive skills needed for driving. Older drivers are more likely to misjudge oncoming traffic speeds and distances or fail to see other drivers near them. The special needs of this population group will have to be addressed.

The RCP recommends a variety of strategies that might aid in dealing with these and other identified issues. Two such strategies include corridor planning and rural intelligent transportation systems. Corridor planning is one way to relieve some of the need for additional direct capacity expansion by comprehensively managing critical traffic corridors. Rural ITS applications have the potential to make major improvements in safety, mobility, and tourist information services. More information on the Regional Comprehensive Plan is available on NCWRPC's website.

Regional Livability Plan (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 carpooled, leaving less than ten percent for the nonautomobile

methods such as walking, biking, and using transit. The average commute time in the North Sub Region, which includes Forest County, was 20.2 minutes.

- Age of Drivers in the Region: The Region is seeing a change in the number of licensed drivers by age group. Between 2004 and 2013, the region saw a 20 percent decrease in the number of drivers age 17 to 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.

Regional Bicycle Facilities Network Plan (2004)

North Central Wisconsin Regional Planning Commission created this Plan to guide the development of an interconnected bikeway system for the North Central Wisconsin Region. Potential routes and trails are identified, and an improvement description was created for each county that trails existed to facilitate how the plan can become reality in a cost-efficient manner.

Locally Developed, Coordinated Public Transit - Human Services Transportation Plan 2019-2023

This plan, updated in 2018, allows the county to receive Federal Transit Authority (FTA) funding under the SAFETEA-LU and FAST Act legislation for projects that enhance mobility for seniors and individuals with disabilities. The plan involves area stakeholders and provides goals and strategies to improve transportation alternatives for these groups of people. Requirements include deriving the plan from a locally developed, coordinated public transit-human services transportation plan. Careful planning minimizes the duplication of similar, overlapping services so funding can be more efficiently secured from various programs. The plan is also required to be developed through a process that includes representation of public, private and non-profit transportation and human services providers, and participation by the public. More information about this plan can be found on NCWRPC's website.

3. County Transportation Plans

Locally Developed, Coordinated Public Transit – Human Service Transportation Plan

In 2019, NCWRPC facilitated the creation of this plan which meets a federal requirement under the Fixing America's Surface Transportation (FAST) Act. The Coordinated Plan identifies transportation gaps faced by transportation-disadvantaged populations, establishes priorities for funding decisions, and focuses on a broad range of mobility services to improve coordination among public transit agencies and human services transportation providers.

Forest County Potawatomi Community Bicycle & Pedestrian Plan

In 2021, a collaborative project involving NCWRPC, KL Engineering, and several county, local, and state staff created this bicycle and pedestrian plan that encourages more walking and cycling in the Potawatomi community. The process included data analysis, conceptual planning, public outreach, development of a preferred routing, and detailed cost estimating. Next steps include improving USH 8 to become a backbone of the overall bicycle and pedestrian network, with future grant requests to fund the rest of the proposed trails.

B. Issues

Part of the planning process is the identification of issues. These are the things that need to be addressed in the plan.

Electric Vehicles

Since other U.S. states are planning to ban sales of gasoline engines by certain dates, there is a concern on what impact this will have to Forest County. Currently, it is difficult to find a charging station in the area that the public can use. To help those traveling through or to Forest County, and plan for future county resident needs, there is a desire to investigate funding opportunities and work with businesses to begin installing chargers around Forest County.

Roadway Use Conflicts / Capacity

Although an important component of the County's economy, tourism can have consequences on the transportation system. Recreational vehicles and vehicles pulling various trailers (campers, boats, ATV carriers, etc.) often compete with regular daily traffic for use of many public highways in the County, particularly in areas of access to recreational sites and facilities. This has become a significant concern within the County such that the County Traffic Safety Commission has called for WisDOT to consider safety improvements such as intersection improvements and passing lanes particularly on USH 8. A related roadway conflict issue is recreational vehicle (e.g. ATV, snowmobile, etc.) crossings of public roadways.

Transportation Costs

There is some concern regarding transportation costs taking a larger share of disposable income. With gas prices exceeding \$4 per gallon, it is easy to see a correlation. The average purchase price of new and used vehicles have grown significantly, and inflation certainly is a factor. However, vehicle registration fees and taxes in Wisconsin are the lowest in the Midwest, and ongoing dealer incentives and low financing rates make purchasing a new vehicle more attractive. Wisconsin ranks 42nd in the nation with respect to average auto insurance expenditures.

One way to address the issue of transportation affordability is the development of public transit and other alternative means of travel. This is of particular importance for people with restricted resources such as the disabled, seniors, youth, or low-income individuals.

Highway Improvements

A top transportation concern is often the need to upgrade or improve the safety of the current road system. The Forest County Traffic Safety Commission and Highway Committee have made recommendations to address several traffic safety concerns through the Forest County Comprehensive Plan. These recommendations include the following:

- Request of the State of Wisconsin, Department of Transportation, that a review be done and that a timeline be set to alleviate the line of site problems that currently exist at the intersection of County Highway “S” and U.S. Highway 8. This study to include the possible removal of guardrails on the north side of U.S. Highway 8 and/or any other feasible changes to minimize the current site problem.
- Request of the State of Wisconsin, Department of Transportation, that a review be done and timeline be set on constructing passing lanes on U.S. Highway 8 between Crandon and Laona. Passing lanes to commence at the intersection of County Highway “W” and proceed to the east to alleviate traffic congestion that currently occurs through the Potawatomi Community area, and that consideration be given to constructing additional passing lanes, as needed, to alleviate traffic congestion to and from the Laona area.
- That the Forest County Board of Supervisors request that the Wisconsin Department of Transportation commence the road repair and improvements on STH 52 between Wabeno and the Langlade County line as soon as possible.

There is concern that WisDOT’s final designs will reduce travel lanes and not meet the needs of County residents due to traffic and safety concerns. The County should work closely with WisDOT to discuss road design preferences.

Road Maintenance / Brushing / Plowing

Regular road maintenance including roadside brushing and mowing, and winter road maintenance is a common issue. Some local units do their own maintenance while others contract for services. Lack of adequate funding for maintenance is a major concern.

STH 52 is overdue for reconstruction. Though it has received some maintenance over the years, it has a very rough surface and needs to be fully rebuilt.

Weight Restrictions

With logging activities throughout the County, there are issues/concerns regarding weight limits on roads and the potential for damage. The recent change by the State allowing an extra axle and increasing allowable weight by 10,000 pounds to 90,000 has raised concern. This is especially true in spring when the ground unfreezes and shifts underneath roads.

In Forest County, a particular issue is the trend of trucking / delivery companies going to heavier trucks that exceed weight limits and result in not being able to all the way out to many local businesses and forcing them to arrange for pick-up.

4.2 Inventory & Trends

The transportation system in Forest County is comprised of a roadway network used by automobiles, trucks, taxis, buses, bicycles, and pedestrians where no sidewalks exist, a public airport, and several private landing areas. In this section the transportation system is described along with trends in usage and development. Specialized transit is also discussed.

A. Roadways

Forest County's roadway network is comprised of over 1,161 (2022 inventory) 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.

I. 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.

In addition to these main classifications, a road or segment of road may hold a variety of other designations including county forest road, rustic road, emergency route, or truck route. For example, there is one designated Rustic Road within Forest County. Rustic Road 34 is located in the Town of Alvin and is comprised of two town roads: Fishel Road and Carey Dam Road. Truck routes are discussed at the end of this chapter under Trucking.

Jurisdiction

Within a jurisdictional framework, the roads within Forest County fall into three major classifications: state (state trunk highways – "STH" and United States highways - "USH"), county (county trunk highways - "CTH") and city or town streets/roads (local roads). The Transportation System Map illustrates the jurisdictional classification of roadways within Forest County. Towns maintain jurisdiction over the greatest mileage of the County's road system with over 64 percent of the total mileage. County trunk highways make up about 9 percent of the system for 109.06 miles. There is one U.S. highway in the County—USH 8. The County contains portions of six state trunk highways: 32, 52, 55, 70, 101, and 139. Table 30 gives the mileage breakdown for the jurisdictional classification of roads within Forest County.

Table 30: Road Milage by Jurisdiction and Functional Class in Forest County, 2020

| Jurisdiction | Arterial | Collector | Local | Totals |
|----------------------|----------|-----------|-------|---------|
| U.S. and State | 87.9 | 62.9 | 0.0 | 152.6 |
| County | 0.0 | 92.0 | 17.1 | 109.1 |
| All Towns | 0.0 | 131.2 | 619.9 | 751.0 |
| City of Crandon | 0.0 | 2.8 | 22.5 | 25.3 |
| Federal Forest Roads | 0.0 | 0.0 | 16.0 | 16.0 |
| Private Roads | 0.0 | 0.0 | 86.0 | 86.0 |
| Tribal Roads | 0.0 | 0.0 | 21.0 | 21.0 |
| Totals | 87.9 | 288.8 | 782.5 | 1,161.0 |

Source: WisDOT & NCWRPC. *US Highways are under the jurisdiction of the State of Wisconsin DOT. Some roads (private, tribal, etc.) are not classified and are excluded from these totals).

Functional Classification

A functional classification system groups streets and highways into classes according to the character of service they provide. This character of service ranges from providing a high degree of travel mobility to providing land access functions.

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 in population, so the rural classifications apply throughout Forest County. Display I summarizes the rural functional classification system.

The Transportation System Map illustrates the functional classification of roadways within Forest County. The County has one principal arterial (USH 8); four minor arterials (STHs 32 and 55 south of Highway 8, 70 and 139); and various major and minor collectors. Table 30 also breaks down the mileage for the functional classification of roads within Forest County.

Display I: Rural Highway Functional Classification System (WisDOT)

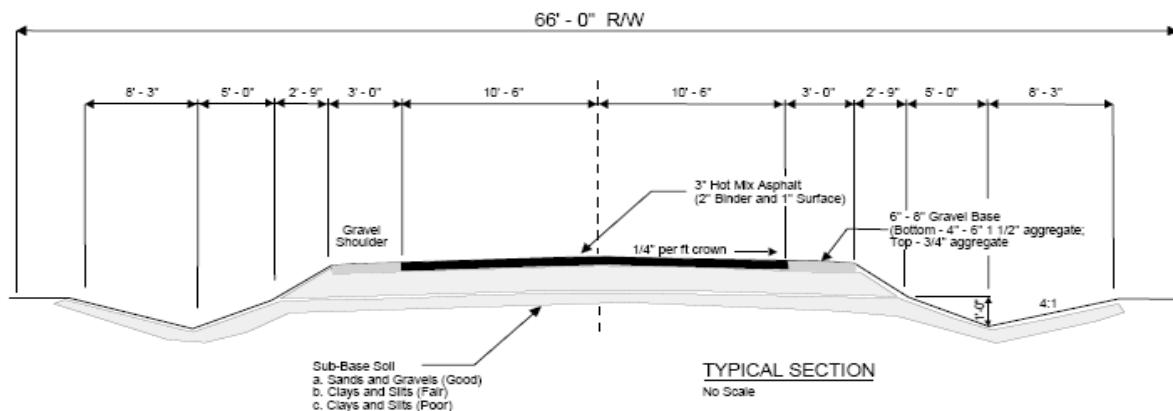
| | |
|----------------------------|---|
| Principal Arterials | Serve interstate and interregional trips. These routes generally serve all urban areas greater than 5,000 population. The rural principal arterials are further subdivided into 1) Interstate highways and 2) other principal arterials. |
| 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, locally 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

2. 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. An understanding of road design can be taken from a typical cross-section of a county highway found in Wisconsin, as shown in Display 2.

Display 2: Typical County Road Cross-Section



Source: WisDOT

WisDOT administrative code establishes minimum standards for construction or improvement of county and town roads. For rural county highways, the code provides for use of alternative to the minimum standards known as "3R" or Design Criteria for Resurfacing, Restoration, and Rehabilitation Projects. Forest County typically uses these alternative standards. For county trunk highways, design standards are set by rural functional classifications as shown in Displays 3 through 5. For town roads, minimum standards by improvement level, such as reconstruction or resurfacing and reconditioning, are shown in Display 6.

Display 3: County Highway Standards “3R” - Arterials

| Traffic Volume | | | Roadway Width Dimensions in Feet | | |
|----------------|------------|------------------|----------------------------------|----------|---------|
| Design Class | Design ADT | Design Speed MPH | Traveled Way | Shoulder | Roadway |
| 3RA1 | Under 750 | 55 | 22 | 3 | 28 |
| 3RA2 | 750-2000 | 55 | 24 | 4 | 32 |
| 3RA3 | Over 2000 | 55 | 24 | 6 | 36 |

Source: WisDOT

Display 4: County Highway Standards “3R” – Collectors & Local Roads

| Traffic Volume | | | Roadway Width Dimensions in Feet | | |
|----------------|------------|------------------|----------------------------------|----------|---------|
| Design Class | Design ADT | Design Speed MPH | Traveled Way | Shoulder | Roadway |
| 3RC1 | Under 750 | 55 | 20 | 3 | 26 |
| 3RC2 | 750-2000 | 55 | 22 | 4 | 30 |
| 3RC3 | Over 2000 | 55 | 22 | 6 | 34 |

Source: WisDOT

Display 5: County Highway Standards “3R” - Bridges

| Design ADT | Usable Bridge Width in Feet |
|------------|-----------------------------|
| 0-750 | Traveled way |
| 751-2000 | Traveled way plus 2 feet |
| 2001-4000 | Traveled way plus 4 feet |
| Over 4000 | Traveled way plus 6 feet |

Source: WisDOT

Display 6: Town Road Standards: Reconstruction

| Traffic Volume | | | Roadway Width Dimensions in Feet | | |
|----------------|-------------|--------------|----------------------------------|----------|---------|
| Design Class | Current ADT | Design Speed | Traveled Way | Shoulder | Roadway |
| T1 | Under 250 | 40 | 20 | 3 | 26 |
| T2 | 250-750 | 50 | 22 | 4 | 30 |
| T3 | Over 750 | 55 | 24 | 6 | 36 |
| TR1 | Under 250 | - | 18 | 2 | 22 |
| TR2 | 250-400 | 40 | 20 | 2 | 24 |
| TR3 | 401-750 | 50 | 22 | 2 | 26 |
| TR4 | Over 750 | 55 | 22 | 4 | 30 |

Source: WisDOT

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.

3. Surface Conditions

Forest 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, seal coated, gravel, and unimproved roads, they are generally based on a scale ranging between "1" (very poor condition) to "10" (excellent condition).

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. WisDOT uses this information in the development of its long-range highway improvement program, which is shown in Table 31.

4. Proposed Highway Improvements

WisDOT’s current State Transportation Improvement Program (STIP) that identifies improvement projects for state trunk highways and federal highways within Forest County between 2022 and 2025. The County Highway Department prepares its own roadway management plan identifying needed improvements on county highways. 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. Proposed improvements on the County’s highway system are shown in Table 31.

Table 31: Forest County's Highway Improvement Program

| Year | Highway | From | To | Mileage | Type of Improvement |
|-----------|---------|---------------------|---------------------|---------|---------------------------------|
| 2022 | STH 032 | Crandon RR Overhead | Railroad Ave | 5.795 | Overlay |
| 2022 | STH 032 | Crandon RR Overhead | Three Lakes | 0.065 | Culvert Replacements |
| 2022 | STH 032 | Crandon RR Overhead | Argonne | 0.063 | Culvert Replacements |
| 2022 | USH 008 | Oneida Co. Line | Boulevard Ave | 6.575 | 2" Mill and Overlay |
| 2022 | USH 008 | Monico | Laona | 0.193 | Bridge Rehabilitation |
| 2023 | STH 032 | Oconto Co. Line | CTH C | 4.079 | Mill and Overlay |
| 2023 | STH 055 | STH 70 | MI State Line | 5.79 | Cold-in-Place Recycle, 2.5" cap |
| 2025 | STH 032 | CTH C | Forest Ave | 1.123 | Remove/Replace Overlay |
| 2025 | STH 032 | U.S. 8 | Crandon RR Overhead | 0.57 | Remove/Replace Overlay |
| 2025 | USH 008 | Glen St. | Pioneer St. | 0.49 | Mill and Overlay |
| 2025 | USH 008 | STH 55 S. | Otter Creek Rd. | 5.05 | 4"+ Mill and Overlay |
| 2025 | USH 008 | Boulevard Ave. | Lake Ave. | 0.24 | Mill and Overlay |
| 2025 | USH 008 | Monico | Laona | 0 | Multimodal Tunnel |
| 2026-2027 | USH 008 | Otter Creek Rd. | STH 32 S. | 6.32 | 4"+ Mill and Overlay |
| 2026-2027 | STH 055 | Argonne | Nelma | 0 | Bridge Rehabilitation |

Source: WisDOT

Other projects include bridge work on County Highway C in Wabeno and West Pine Lake Road in Hiles in 2023, and a new Transportation Alternatives Program (TAP) funded shared use path on USH 8 between Firekeeper Road and Love Knot Lane. Additionally, the Forest County Potawatomi Tribe has a Transportation Plan adopted in 2016. The plan lists several projects and focuses on land use, livability, and placemaking projects that contribute to the area's quality of life.

5. Trucking

There are two types of WisDOT designated truck routes within Forest County—1) Designated Long, and 2) 65 foot Restricted. The Designated Long Truck Routes are USH 8, STH 32 south of Highway 8, STH 70 and STH 139. The 65' Restricted Truck Routes are STH 32 north of Highway 8, STH 52, and STH 55.

These routes provide Forest 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.

County Trunk Highways (CTH) connect the County's rural areas with the designated state truck routes. County trunk highways serve an important role in linking the County's ag and forestry resources to the Region's major highways and economic centers. All county roads are generally open to trucks. The County uses seasonal weight limits to minimize damage.

6. Traffic

Annual Average Daily Traffic (AADT) counts for selected locations in Forest County are show on the Transportation Map. The counts come from WisDOT's regular traffic counting program selected to give a general feeling for the traffic levels through out the County. The selected counts do not necessarily reflect the peak traffic location of a given road.

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. Traffic in Forest County ranges from a few cars a day on remote town roads to more than 5,900 on USH 8 in Crandon.

7. Commuting Patterns

County-to-County Worker Flow data compiled by the US Census is a convenient way to analyze commuting patterns, see Table 32. Forest County is a net exporter of workers. Nearly 1,657 workers leave the County for work on a regular basis, while about 1,230 enter the County for work. This creates a net loss of about 427 workers. About 2,044 workers live and work in Forest County.

8. Scenic Byway

In 2017, WisDOT designated the Nicolet-Wolf River Scenic Byway as the state's fifth scenic byway, which consists of a 145-mile route that utilizes state highways 32, 52, 55, and 70 across Forest, Langlade, Oneida, and Vilas Counties. Scenic byways are tourism-oriented, rather than commuter- or trucker-oriented, but they drive the economy by promoting tourism and are important to consider when evaluating transportation facilities.

Table 32: Forest County Commuting Patterns (2019)

| | Living in listed county and working in Forest County | Living in Forest County and working in listed county | Net gain or loss of workers |
|-----------|--|--|-----------------------------|
| Forest | 2044 | 2044 | 0 |
| Oneida | 224 | 241 | -17 |
| Oconto | 209 | 60 | 149 |
| Langlade | 169 | 101 | 68 |
| Marinette | 83 | 89 | -6 |
| Milwaukee | 57 | 72 | -15 |
| Lincoln | 32 | 29 | 3 |
| Waukesha | 27 | 41 | -14 |
| Marathon | 24 | 108 | -84 |
| Florence | 23 | 16 | 7 |
| Elsewhere | 382 | 900 | -518 |
| Total | 3274 | 3701 | -427 |

Source: 2019 ACS “Census on the Map” Tool

The primary beneficiary of this exchange is Oneida County which gains 241 workers. Although Forest is basically a net exporter of labor to surrounding counties, it does have a positive exchange with Oconto, Langlade, Lincoln, and Florence Counties where it gains a total of 227 workers, respectively.

9. Park and Ride

With increasing cost of vehicle use, people are attempting to reduce those expenses by sharing rides, particularly for employment related commuting. Park and ride lots are one tool being promoted by WisDOT. The nearest designated park and ride facility is located at USH 51 and CTH S south of Tomahawk in Lincoln County. There are also lots in Shawano and Oconto Counties. Unofficial park and ride sites exist within Forest County such as at the Mays establishment near Crandon, and on several private sites along USH 8 in Armstrong Creek.

B. Alternative Forms of Transportation

I. Transit & Transportation Systems for Persons with Disabilities

The Forest County Commission on Aging provides 10 bus routes per month with stops in Alvin, Armstrong Creek, Crandon, Hiles, Laona, Pickerel and Wabeno, as well as Rhinelander and Iron Mountain, Michigan by request. There is also the New Freedom program where drivers transport residents by request for a fee. Forest County also works with adjacent counties to provide service in the most cost-effective manner. Headwaters Inc. provides transportation for residents of Forest County that work at their Rhinelander workshop facility. The Mole Lake and Potawatomi reservations provide transit services to their residents and work with Forest County to open service to non-tribal members. For example, the Mole Lake provides a fixed transit route between Crandon and Carter that includes Laona and Wabeno.

The Locally Developed, Coordinated Public Transit Human Service Transportation Plan (2019 – 2023) created for Forest County can be found at NCWRPC’s website. Currently, there is no scheduled long distance intercity bus service available in Forest County. Private charter bus companies can be contracted for service.

In the past, Forest County worked with Headwaters Inc, the Tribes and Oneida and Vilas counties on coordination and expansion of transportation services. In 2008, the group completed a coordination plan that recommended a tri-county mobility manager position and development of projects that fit available funding programs such as the Mole Lake-Crandon-Rhineland route to evaluate the potential for a tri-county transit system (Forest, Oneida, and Vilas Counties). In 2015, Forest County decided to focus more on its existing transit services and withdrew from the tri-county Transit Commission.

2. Bicycle And Pedestrian Facilities

All roads except freeways are available for bicycle and pedestrian travel. Forest County and its local units have slowly expanded designated bike routes on highways and off-road trails over time. Sidewalks exist in Crandon, Laona, Mole Lake, and Wabeno.

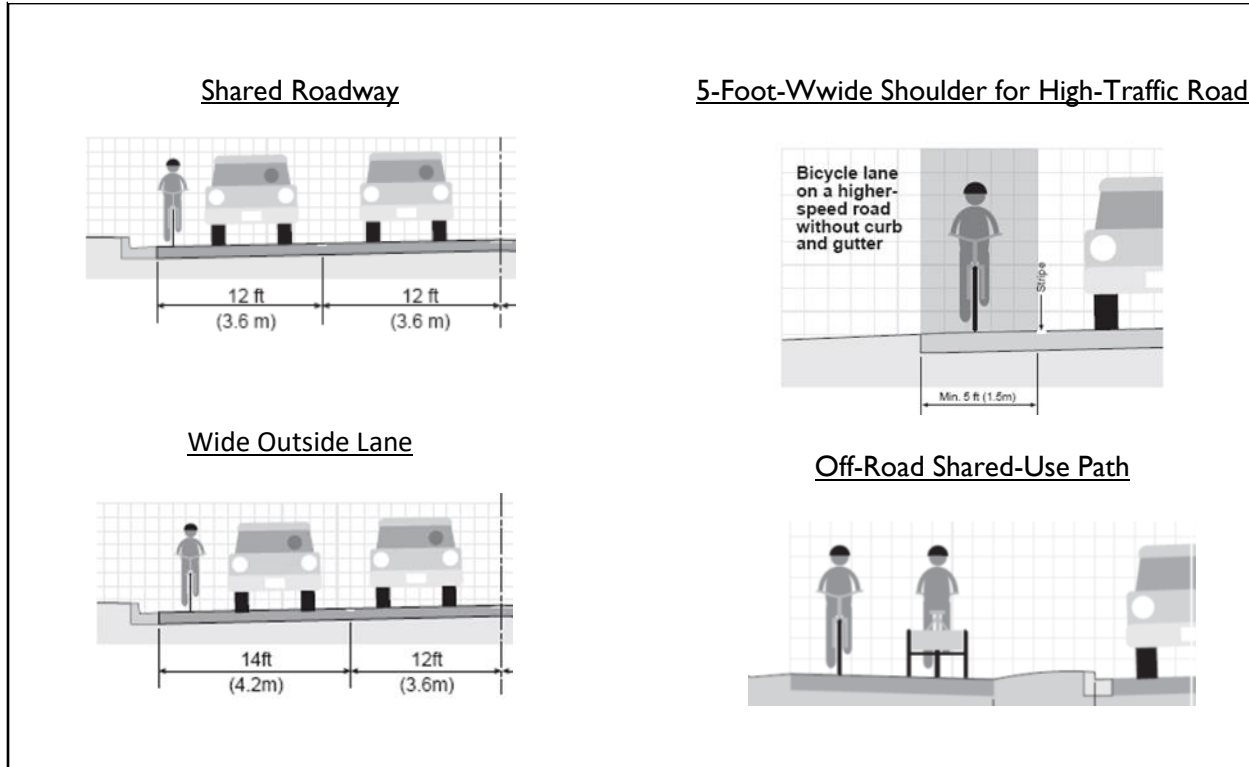
The Nicolet State trail enters Forest County from the south. There are a number of closed-circuit biking trails within the National Forest, and scenic forest roads may make interesting bike routes. In fact, the well-attended, annual Nicolet Wheel-A-Way event brings a significant number of bikers from Three Lakes in Oneida County onto various forest roads in Forest County.

CTH W has 15-foot lanes with 3-foot paved shoulders from Perry to Keith Siding Road which could be used by bikes. This highway runs past Lake Lucerne and is scenic. There have been complaints about biking conditions on STH 32 between Wabeno and Laona; the Nicolet State Trail runs parallel to STH 32 as an alternative route. A former abandoned rail line between Crandon and White Lake was recently redeveloped as a multi-use trail in cooperation with the WDNR and Langlade County, known as the Wolf River Trail.

Basic types of bicycle facilities include shared roadways, improved shoulders (bike lanes), and off-road shared use paths. See Display 7.

On a shared roadway, bicyclists and motorists are accommodated in the same travel lane, where motorists may sometimes find it necessary to overtake bicyclists by switching into the oncoming travel lane. Most of the cycling in rural areas currently occurs on paved roadways with no special accommodations for bikes. On lower speed roadways, bicycle lane widths of 4 feet may suffice. But where motor vehicle speeds exceed 35mph, or where there are high motor vehicle volumes, a minimum width of 5 feet is recommended. Shoulder rumble strips provide an unsafe surface for bicycling and should not be used where bicyclists are allowed unless additional paved width is provided for bicycle use. Electric personal assistive mobility devices such as wheelchairs, scooters and Segways can utilize many of the same trails and roadways as cyclists and pedestrians.

Display 7: Bicycle Facilities Cross-Sections



Above: Example of an off-road shared-use path in Forest County

3. Rail

Fox Valley and Lake Superior track traverses Forest County through Cavour, Laona Junction and Argonne, but there is currently no local access to rail service in Forest County. Both the main line and a rail spur in Argonne that linked to the Crandon industrial park have been taken out of service indefinitely. Shipments needing rail service would have to be trucked to nearby cities with rail access such as Goodman, Rhinelander, Tomahawk or Wausau.

4. Airports

The Crandon Municipal Airport, which lies 3 miles southwest of the city, is Small General Aviation class (formerly basic utility, BU-A) airport. Small General Aviation airports primarily support single engine aircraft but may also accommodate small twin-engine aircraft and occasionally business aircraft activity.

As of 2020, there were an average of 12 aircraft operations per day, or about 4,400 for the year. Updated data has not been encountered, but it is likely that air traffic is considerably lower in 2022. The airport includes a 3,550-foot asphalt runway, apron, connecting taxiway and hangar area. In 2017, the airport was awarded funding to construct a new six-bay hangar, repair runway cracks, and relocate a wind cone. The airport facilities offer an opportunity to act as a base for warehousing and distribution of goods and services.

The closest scheduled air passenger service available to Forest County residents is at the Rhinelander - Oneida County Airport in Rhinelander, and the Central Wisconsin Airport (CWA) near Wausau. There is one known private landing strip within the county, located in the Town of Laona.

5. Water Transportation

There are no harbors or ports within Forest County, so there is no significant water transport of passengers or freight. Today, tubing, boating, and sailing are popular forms of recreational transportation in and around Forest County. Forest has more than 700 miles of navigable streams and rivers.

6. Other Modes of Travel

There is significant use of a variety of miscellaneous other vehicles within Forest 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 element. 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 snowmobile trail may compete against a bike trail for the same right-of-way. Although snowmobile and bicycle trails can easily coexist, fundamental differences often keep the interests at odds.

4.3. Funding Programs

A. Federal Transportation Programs

The Bipartisan Infrastructure Law (BIL)

Also known as the Infrastructure Investment and Jobs Act, this current federal transportation program authorizes up to \$108 billion to support federal public transportation programs over the next five years, including \$91 billion in guaranteed funding. It also reauthorizes surface transportation programs for FY 2022-2026 and provides advance appropriations for certain programs. Major goals include improving safety, modernizing aging transit infrastructure and fleets, investing in cleaner transportation, and improving equity in communities with limited transportation access. Specific improvements under the program include lead pipe removal, expanded high speed internet access, better roads and bridges, public transportation investments, upgraded airports and ports, passenger rail investments, an expanded electric vehicle charger network, upgraded power infrastructure, better infrastructure resilience during weather events, and environmental cleanup.

Other federal legislation that frames transportation planning includes the National Environmental Protection Act (NEPA); the Americans with Disabilities Act (ADA); and the Clean Air Act. Environmental Justice is an applicable executive order that attempts to ensure that transportation planning and programming includes underrepresented groups such as minority and low-income populations.

B. State Transportation Programs

WisDOT administers a list of programs for a variety of projects, including, but not limited to local roads, highways, recreation trails, forest roads, transit, rail, airport, and harbor infrastructure. Among the most common include:

- Surface Transportation Program (STP). This program pays up to 80 percent of project costs for eligible major and minor collectors as well as local roads. Tribal roads may also be eligible for this program.
- Local Bridge Improvement Assistance Program. Under this program, the county highway commissioner submits a list of potential bridges which are evaluated for funding by the state.
- Transportation Alternatives Program (TAP). The TAP program pays up to 80 percent of project costs for planning, design, and construction of non-vehicular transportation, such as Safe Routes to School projects or bicycle and pedestrian facilities.

These programs utilize funding from the BIL. A continuously updated list of these programs can be found on WisDOT's website.

4.4 Goals, Objectives & Policies

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.

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 (e.g., 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 and enhance the existing rail lines in the County.
5. Minimize the negative impacts of proposed transportation facility expansions.
6. Ensure the county has access to electric vehicle charging stations as electric vehicles become more common.

Policies:

1. Work with the Department of Transportation (WisDOT) and the North Central Wisconsin Regional Planning Commission (NCWRCP) 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 on corridor preservation for all federal and state highways.
3. Encourage WisDOT to alleviate line of site problems that currently exist at the intersection of USH 8 and CTH S.
4. Encourage WisDOT to review USH 8 between Crandon and Laona and set timelines on constructing passing lanes as necessary to alleviate traffic congestion through the Potawatomi Community area as well as to and from the Laona area.
5. Encourage WisDOT to reconstruct 11.4 miles of STH 52 between Wabeno and the Forest County Line.
6. Preserve scenic views by limiting off-premise advertising along selected highways.

7. 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.
8. Consider future road locations, extensions, or connections when reviewing development plans and proposals.
9. Work with local governmental units to plan for a network of interconnected roads in planned development areas to control highway access, preserve rural character, and improve access to these areas.
10. Space roadway access according to minimum standards to increase safety and preserve capacity.
11. 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.
12. Work with the towns to update and implement Town Roadway Management Plans to provide for the appropriate maintenance of town roads.
13. Encourage traditional neighborhood designs (TND) to support a range of transportation choices.
14. Support coordination and consolidation of specialized transit by the community coalition of agencies that serve the County's elderly and handicapped residents.
15. Explore the creation of a Railroad Commission to promote the use of rail.
16. Investigate incentives or strategies to minimize damage to roads from heavy vehicles.
17. Pursue grant funding and work with area businesses to install a network of electric vehicle chargers.
18. Support the expansion of east-west bicycle facilities along the USH 8 corridor when feasible.

Chapter 5: Utilities and Community Facilities

5.1 Background

This chapter is based on the statutory requirement for a “compilation of objectives, policies, goals, maps and programs to guide the future development of utilities and community facilities in the local government unit such as sanitary sewer service, storm water management, water supply, solid waste disposal, on-site wastewater treatment technologies, recycling facilities, parks, telecommunications facilities, power-generating plants and 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.” This chapter will focus on describing these public services and facilities in detail and identify the goals and policies intended to protect and utilize these resources in a responsible and efficient manner.

A. Previous Studies

1. Groundwater Coordinating Council 2022 Report

The residents of Forest County have a heavy reliance on groundwater for drinking water and agricultural uses. This demand makes it especially important to implement policies that will ensure the quality and quantity of water resources. Statewide, minimal changes to Wisconsin’s groundwater laws have been allowed, despite emerging pollutants like nitrates, pesticides, per- and polyfluoroalkyl substances (PFAS), metals, volatile organic compounds (VOCs) and bacteria. This report recommends adjusting groundwater rules in response to changes to state standards, evaluating, and monitoring geology and soils to develop management practices that prevent water from being contaminated, and educating the public about health and contamination concerns.

2. Regional Livability Plan (2015)

The Regional Livability Plan (RLP) is the most updated version of NCWRPC’s comprehensive plan. The RLP discusses utility and community facility issues throughout the ten-county North Central Region. The RLP focuses on a range of trends in public facilities and makes general recommendations on how local governments throughout the ten-county region can manage them.

3. Forest County All-Hazard Mitigation Plan (2021)

This document was produced in response to the federal Disaster Mitigation Act of 2000, which requires local governments to adopt such a plan to be eligible for certain disaster mitigation programs. The report looks at general conditions in Forest 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 the reason for the All-Hazards Mitigation program. To mitigate the risks, it’s necessary to assess their relative importance. The report reviews mostly natural disasters and how they have affected the county in the past. Examples of hazards include floods, tornadoes, winter storms, drought, and fire. Hazardous materials accidents are included too. The likelihood of any given hazard occurring is evaluated

based upon historical data and the impact of these hazards. The plan recommends how the County government should respond to such occurrences and suggests mitigation measures to reduce the risk caused by identified hazards.

Forest County created an Emergency Operations Plan (EOP) to coordinate the County and local units of government during times of response and recovery. The EOP provides a general guide for county and municipal emergency response personnel when responding to disasters and links the County and municipal emergency operations plans.

4. Statewide Comprehensive Outdoor Recreation Plan (SCORP), 2019-2023

This plan classifies, measures, and provides for the preferences and needs of a statewide recreating public. An estimated 95 percent of Wisconsin residents participate in outdoor recreation, and as a result, it is an important part of the state's economy. Demand in the Northwoods portion of the state where Forest County is located includes ATV/UTV riding, road bicycling, mountain biking, developed and primitive camping. Canoeing, kayaking, fishing, hiking, walking, trail running, backpacking, hunting, off-highway motorcycle riding, participating in nature-based education programs, and snowmobiling.

5. State Trails Network Plan

This 2003 document clarifies the Wisconsin Department of Natural Resources (WDNR) role and strategy in the provision of all types of trails. The plan identifies a series of potential trail corridors that would link existing trails, public lands, natural features, and communities. This statewide network of interconnected trails would be owned and maintained by municipalities, private entities, and partnerships of the two. Preserving transportation corridors, such as old rail lines, is specifically discussed as an important strategy in the creation of recreational and alternative transportation corridors. A copy is available from the WDNR Wisconsin State Parks online. Future trails include:

Segment 2: Forest Co. to Michigan, Nicolet State Trail (Northern Region)

The DNR has acquired the Nicolet State Trail corridor from Gillett north to the Michigan state border. In Forest County, this former rail corridor runs through the communities of Carter, Wabeno, Laona, Cavour, and Newald. In 2009, tracks were removed, and gravel was added to the trail corridor, and a trail now extends the entire north-south distance across the County, and goes through Laona.

Segment 13: Dresser to Michigan

This statewide 250-mile-long east-west corridor consists of rail line, and an optional highway right-of-way. In Forest County, this rail corridor runs through Argonne, Cavour, and Armstrong Creek between the communities of Rhinelander and Goodman. In late 2009 this rail corridor was "red lined." Segment 56 and Segment 2 both intersect with this rail corridor.

Segment 69: Tomahawk to Crandon

This abandoned corridor would link these two communities by an off-road connector. This corridor intersects the Langlade County to Michigan corridor at Pelican Lake and links the Argonne to Shawano corridor in the east with the Tomahawk to Wausau corridor in the west. This short linking corridor

provides an opportunity to access the very popular Hiawatha-Bearskin Trail from other corridors to the east.

6. North Central Wisconsin Regional Bicycle Facilities Network Plan, 2004

This 2004 document is intended to guide the development of an interconnected bikeway system for the North Central Wisconsin Region. Potential trails are identified and an improvement description, created by each county that trails existed in, to facilitate how the plan can become reality cost effectively. Forest County trails within this regional plan come from the 1999 Citizen Bike Route Initiative Plan. Two abandoned rail corridors listed in this plan are trails today: the Nicolet State Trail, and the Wolf River State Trail.

7. Forest County Outdoor Recreation Plan 2022-2026

The primary purpose of this recreation plan is to provide continued direction in meeting the current and future recreation needs of the County. This direction takes the form of an inventory and analysis of outdoor recreational facilities followed by establishing recommendations to meet identified needs. Adoption of this plan and its subsequent acceptance by the Wisconsin Department of Natural Resources (WisDNR) allows for continued eligibility for financial assistance from the Land and Water Conservation Fund (LAWCON), the Stewardship Fund, and many other federal and state funding programs. The North Central Wisconsin Regional Planning Commission prepared the plan for the Forest County Forestry Department.

Recommendations include improving boat launches countywide, enhancing ATV/UTV trails, developing biking and hiking trails, relocating the County Fairgrounds, improving school district forests, improving shooting ranges, and restoring the Otter Springs log house. A list of specific capital improvements for 2022-2026 is included with the plan, which involve enhancing at revitalizing County- and Town-owned public parks.

8. Status of Investments in Advanced Telecommunication Infrastructure in Wisconsin, 2006

This is the sixth biennial report to the Legislature as required under Wis. Stat. §196.196(5)(f). The report contains updated information and reviews new services and technologies related to the deployment of and investment in telecommunications infrastructure throughout the state. This report also comments on the use of advanced telecommunications infrastructure for distance learning, libraries, and access to health care. A new section has been added that outlines Wireless E911 grant activities.

The Commission's evidence suggests that the telecommunications network is no longer a significant limiting factor for the improvement of distance learning, interconnection of libraries, access to health care, and services to persons with disabilities. Although there are some areas of the state where broadband for these purposes is still limited, the most significant limiting factors are the ability of customers to pay for services, the ability of advanced service providers to recover costs for providing service and the development of equipment that will allow individuals in the home to use the telecommunications infrastructure.

The Internet has become the medium of choice for distance education programs for higher education so there is less reliance on dedicated high-speed networks. Nearly all libraries have access to the Internet and growth continues in the number of libraries with high-speed dedicated access.

For individuals with disabilities, the focus remains on the development of assistive technologies that enable the more effective use of telecommunications infrastructure by improving access to computers, web pages and Internet connections.

9. American Transmission Company: 10 Year Transmission System Assessment 2003-2012

The American Transmission Company (ATC) was created in 1998 by a consortium of Wisconsin electric utility companies to own and manage transmission infrastructure in the state. Forest County is in ATC's Zone 2, which consists of mainly the Upper Peninsula of Michigan and a few counties in Wisconsin.

Needs and limitations in ATC's transmission network are assessed and grouped into "umbrella plans" by zone. The Northern Zones Umbrella Plan is divided into two phases. Phase 1 projects are ATC's most effective means to address needs and issues from both system performance and cost perspectives. The conceptual Phase 2 projects are what ATC believes will meet the long-term needs in the area but will require further analyses.

The key issues that this umbrella plan was developed to address are:

1. Inadequate transfer capability between Wisconsin and the Upper Peninsula;
2. Elimination of other transmission service constraints;
3. Long-term load serving needs in the Rhinelander Loop and throughout the Upper Peninsula;
4. Replacement of aging infrastructure in poor conditions;
5. Elimination of operating guides, remedial action schemes and special protection schemes; and
6. Accommodation of potential future generation.

Phase 1 project in Forest County:

In 2008, a new 138 kV line was completed between Cranberry and Conover, and a 69 kV line between Conover and Plains was rebuilt and converted from 69 kV to 138 kV.

Phase 2 projects in Forest County:

Construct a new 345 kV transmission line between power plants in Wausau and Presque Isle. The potential path through Forest County could parallel USH 8. Rebuild or construct a new 69 kV or 138 kV line between Goodman and Laona.

B. Issues

- Timber harvesting to clear right-of-way for electric transmission lines
- Tourism Infrastructure. There is a desire to expand outdoor recreation options by ensuring boat landings are maintained, upgraded, or added in a way that does not concentrate them in one area of the county but spreads them out among the different communities. There is also a desire to improve bicycle and ATV trails, though even if a grant is awarded, coming up with the County’s share of funding a project is a concern as well as long-term maintenance costs. Finally, there is interest in the DNR’s new grant program for shooting ranges.
- Access to Broadband
- Emergency Preparedness
- Growing concern of PFAS in water supply statewide and how to meet new DNR water quality standards
- Although the County has been awarded match grants in the past, the ability of the County to match the funding requirements is cost-prohibitive and prevents the County from obtaining and executing grant programs.

5.2 Inventory & Trends

A. Water-Related Facilities

I. Drinking water

Groundwater quality in Forest County is generally good. No private well samples have tested unsafe for levels of nitrate, atrazine, or arsenic. See the Natural Resources Chapter of this Plan for a description of the groundwater quality and quantity available.

The City of Crandon, the towns of Laona and Wabeno, the Blackwell Job Corps (USDA), the Sokaogon Chippewa Community, and the Potawatomi Community in Carter provide water supplies for domestic and commercial use.

- The City of Crandon maintains a water tower downtown that is filled by two high-capacity wells. The City does not have a wellhead protection plan or ordinance.
- The Town of Laona has one water tower and one high capacity well that serve most of the downtown, the golf course, and residential development along the western and eastern sides of Silver Lake. A wellhead protection plan or ordinance does not exist. The existing high-capacity well needs to be replaced or an additional well needs to be added to maintain capacity.
- The Sokaogon Chippewa Community on Mole Lake operates a well and water tower to serve the whole community.

- The Town of Wabeno has a water tower and two high-capacity wells that serve most of the downtown. Both of Wabeno's municipal wells have wellhead protection plans and ordinances to protect the recharge areas from pollution. In the Carter area of Wabeno, the Potawatomi Community operates a water supply system that serves the casino and surrounding development.
- The Blackwell Job Corps, operated by the Forest Service (USDA), has a water tower and two wells on site to provide water for the campus living and instructional buildings. A wellhead protection plan or ordinance does not exist.

There are 11 active high-capacity wells in Forest County:

- 5 are used for municipal water supply;
- 2 are used by the Highway Department in Crandon;
- 2 are used for irrigation in Nashville; and
- 2 are used for irrigation and non-dairy farming in Freedom.

There are no concentrated animal feeding operations (CAFOs) in Forest County, so no animal waste management ordinance is needed. CAFOs have greater than 1000 animal units. CAFOs are required under their Wisconsin Pollutant Discharge Elimination System (WPDES) permits to practice proper manure management and ensure that adverse impacts to water quality do not occur.

Per- and polyfluoroalkyl substances (PFAS) are a class of 5,000 “forever chemicals” that are increasingly being detected in Wisconsin and are showing to have health consequences. New DNR standards limit PFAS concentration to 70 parts per trillion, making many municipal wells in the state out of compliance. Other standards also apply to surface waters. Depending on test results in Forest County, expensive remediation would be a concern if PFAS levels are too high.



2. Wastewater

Municipal wastewater treatment facilities serve most of the City of Crandon, and the downtowns of Laona, Wabeno, Mole Lake, Blackwell Job Corp, and the Carter development. All six treatment plants discharge treated effluent to the groundwater through absorption lagoons.

In Forest County, a combination of County and state regulations control the installation and maintenance of privately owned wastewater treatment 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.

In 1999 the Department of Administration proposed a revision of the plumbing standards under which POWTS were regulated (COMM 83). Unlike the old code, the new rules prescribed criteria for end results, or the required degree of purity for water discharged from the system, in addition to the specific characteristics regarding installation. Several newer technologies that were not as dependent on soil depth and percolation characteristics were approved for use as part of this revision. Although these technologies had been in use in other states they were not permitted in Wisconsin.

Soil suitability characteristics in Forest County vary widely for installation of POWTS. Much of the county has adequate soils for on-site systems. Some areas in the county are listed as "more susceptible," which means that moderate to severe limitations exist for these systems exist. There are also some areas in the county that have a severe rating, which indicates soils not desirable for the operation of a soil absorption system, because of at least one of the following conditions: poor soil permeability, high water tables, periodic flooding, shallow depth to bedrock, or steep slopes. The Department of Safety and Professional Service (DSPS) Wisconsin Fund offers financial assistance to homeowners who meet financial criteria to replace failed septic systems. It is recommended that the County and its municipalities continue to monitor changing state and federal laws and guidance to address PFAS and pursue grant funding as needed to meet changing requirements without burdening county taxpayers.

3. Stormwater

Storm sewer systems exist down the main streets in Crandon, Laona, Mole Lake, and Wabeno. The City of Crandon's system along Main Street was rebuilt in 2002. Wabeno's system was constructed in 1972.

4. Dams

There are 37 dams in Forest County; 2 of which are listed as having a large or significant hazard potential if they broke; 9 of the dams are abandoned; and the remainder have a low hazard potential. Hiles and Laona both have significant hazard dams. The 2021 Forest County All Hazard Mitigation Plan describes how to assess hazard potential for a dam, and how to mitigate its risk.

B. Solid Waste & Recycling Related Facilities

The City of Crandon contracts with a private hauler, for weekly pickup. There has been interest in maintaining a transfer/recycling center in the City. Most towns maintain waste and recycling transfer sites since no active landfills exist in Forest County.

In 1990, the state passed a Solid Waste Reduction, Recovery, and Recycling Law. One of the primary purposes of the law was to encourage recycling. Unlike solid waste that is land filled, recycled material has an economic market value, and will continue to be sold when markets exist.

C. Public Works

1. Town Halls & Garages

Each town and the City of Crandon have a public building used for government meetings and other public gatherings. Adjacent to most of these buildings are garages for the storage of road maintenance equipment as well as firefighting equipment in several cases. Not all towns have government buildings, garages, and waste & recycling transfer sites next to each other. Some municipalities in the County are in need of updated community facilities, salt sheds, and Town department garages.

2. Cemeteries

Cemeteries serve as unique and tangible links to our past. There are twelve cemeteries located throughout the county. Many of the existing cemeteries have substantial capacity, and there are many undeveloped areas throughout the County suitable for new cemeteries.

D. Public Safety

1. Sheriff/Police

The County Sheriff Deputy provides general law enforcement services throughout the County. In addition, the Wisconsin State Patrol, the Forest County Sheriff's Department, the Laona Police Department, and the City of Crandon Police Department operate within Forest 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. Crandon's police serve the city, and Laona's police serve the town. The Sheriff department also operates the County Jail and provides Enhanced 911 dispatch services throughout the county.

2. Fire

Fire protection services in Forest County are provided by volunteer fire departments in most towns and Crandon, the Forest Service, and the DNR, along with a complex pattern of mutual aid assistance agreements between towns.

Insurance Services Office's (ISO's) Public Protection Classification (PPCTM) program is used by fire insurance companies to assess the fire risk in a community. ISO's PPCTM is rated on a class scale of 1 to 10, with Class 1 representing the best protection and Class 10 representing an essentially unprotected community.

3. Jail

The Forest County Jail was built in 1996-1997 and is located behind the County Courthouse in Crandon, and it contains 80 beds. The jail and courthouse are not connected. All prisoners for the County Sheriff's

Department as well as those from the City of Crandon are held in the jail. A staff of full-time jailers/dispatchers administers the jail.

4. Emergency Medical Service (EMS)

There are four EMS squads within the County, including: Goodman/Armstrong Rescue, Laona Area Rescue, Pickerel Area Rescue, and Crandon Area Rescue. Many towns contract with these and other adjoining rescue service providers as shown on the Emergency Services Map.

E. Health Care

Forest County residents access health care in clinics and hospitals that are within and adjoining Forest County. The most frequently used hospitals that provide 24-hour emergency service and critical care are:

- Aspirus Eagle River Hospital in Eagle River;
- Aspirus Rhinelander Hospital in Rhinelander;
- Aspirus Iron River Hospital in Iron River, Michigan;
- Dickinson County Hospital in Iron Mountain, Michigan; and
- Aspirus Langlade Hospital in Antigo.

Forest County residents use the following medical clinics:

- Marshfield Clinics in Rhinelander, Minocqua
- Aspirus Clinic in Crandon
- Florence Medical Center in Florence
- Dickinson Clinic in Iron Mountain
- VA Clinic Rhinelander
- VA Clinic Iron Mountain
- Aspirus Clinics in Elcho, Antigo, and Rhinelander
- Potawatomi Health and Wellness Center in Crandon
- Sokaogon Mole Lake Clinic in Crandon

Nu Roc Community Healthcare is a privately run facility in Blackwell for 50 elderly residents. With the closure of AGI Healthcare of Crandon nursing home (60 beds) and Hoffman's Paradise assisted living facility in Armstrong Creek, along with state maximums on number of beds per facility, the availability of senior facilities is a growing concern. Forest County residents use home health services from VNA Home

Health Wausau and Ministry Home Health Rhinelander. There is also a VA nursing home in Iron Mountain, MI.

F. Education, Recreation & Culture

I. Libraries

There are three public libraries in the county: Crandon Public Library, Edith Evans Community Library in Laona, and Wabeno Public Library. The Cultural Resource Center & Library, east of Crandon, is owned and operated by the Potawatomi Community for the public to enjoy. Each public library provides library services to all residents of the county, and residents of all Wisconsin Valley Library Service counties by means of the intersystem loan agreement. Across the three public libraries in Forest County, there were a total of 38,072 materials circulated in 2020.

Forest County benefits from Wisconsin Valley Library Service (WVLS) membership in several ways. Interlibrary loan (ILL) provides local access to the resources of all WVLS libraries in the following additional counties: Clark, Langlade, Lincoln, Marathon, Oneida, and Taylor. In 2019, Forest County libraries sent 5,513 items from their collections on interloan for patrons at other non-Forest County libraries, and Forest County residents borrowed 6,677 items on interloan from other libraries. Valley Catalog (V-Cat) enables patrons at one member library to see the collections of all member libraries online.

In 2022, three Forest County public libraries were members of V-Cat. V-Cat is accessible from any internet connected computer. Collection Enrichment is a program that assembles deposit collections of large print books, audio cassettes, CDs, and playaways. Member libraries, nursing homes, and apartments for the elderly may check out a deposit collection for three-months. These collections help keep local collections fresh and stretch local library budgets. Online Resources include several annual database subscriptions (HeritageQuest, NetLibrary, Novelist, Gale LegalForms, Opposing Viewpoints Resource Center, p4a Antiques Reference, and others) that are available for library patrons. Courier Services are supported by WVLS to enable public libraries to send and receive library materials (postage free) to and from most libraries throughout the State of Wisconsin. Libraries that participate in V-Cat receive an additional courier stop each week. TEACH high speed internet lines are part of the BadgerNet Conversion Network (BCN) configuration, which goes to WVLS rather than through a commercial internet service provider (ISP).

2. Parks and Trails

Parks

Public Access sites on Forest County's lakes and streams are catalogued in the Forest County Visitors Guide under lakes and streams. Forest County and the City of Crandon each have one access point on Lake Metonga. All other access points in Forest County are maintained by the towns or USDA Forest Service. By providing access to water-based recreational opportunities these facilities broaden the range of options available to residents and visitors alike.



School grounds, including playgrounds, ball diamonds, tennis courts, soccer fields, school forests, and basketball hoops are also available to the public during non-school hours; see the School District & Boundaries Map for locations. School District, County State, and Federally owned Forests are described in detail in Chapter 2: Natural Resources. Although open to the public, certain areas are closed to motorized and non-motorized vehicles. These areas are shown on the Ownership & Recreation Facilities Map.

The City of Crandon, and the Towns of Alvin, Laona, Wabeno, Blackwell, Armstrong Creek, Caswell, and Ross provide neighborhood and community level parks. These facilities provide opportunities for active and passive recreation experiences. Forest County maintains Memorial Park on the south end of Lake Metonga. The Department of Natural Resources (DNR) manages wildlife and natural areas for public enjoyment as described in Chapter 2. The DNR and the Commissioner of Public Lands have extensive holdings in the county that are mainly interspersed with national forestlands. All public lands are described in the Natural Resources Chapter of this Plan and in the Forest County Outdoor Recreation Plan. See the Ownership & Recreation Facilities Map for land and facility locations and the Forest County Outdoor Recreation Plan to view public and private outdoor recreation locations.

Extensive federal, state, county, municipal, and school district forested lands have raised concerns in Forest County due to its tax-exempt status and impact on those looking for property to purchase for residential or commercial development. This limits the amount of revenue the County can use to pay for services. Additionally, the 22,000-acre Headwaters Wilderness, designated in 1984 by Congress, has a reputation for poorly managed forests that are not suitable for either outdoor recreation or commercial logging. This is a result of overgrown trees falling over and newer growth not being properly thinned. The County is interested in working with the Federal Government to enhance this area and consider alternative management practices or uses for this land that could benefit the County.

Scenic Byway

In 2017, WisDOT designated the Nicolet-Wolf River Scenic Byway as the state's fifth scenic byway, which consists of a 145-mile route that connects Forest, Langlade, Oneida, and Vilas Counties. It is named after the Chequamegon-Nicolet National Forest and the Wolf River, two natural features that dominate the landscape. It utilizes state highways 32, 52, 55, and 70

Trails

The Nicolet State Trail stretches 32 miles through Forest County in the same corridor built by railroad companies in the late 19th century to open Wisconsin's pine and hardwood forests for the timber industry. Both ends of the trail connect into adjacent Florence and Oconto counties. The trail is surfaced with highway-grade compacted gravel. Walking, mountain biking, snowmobiling, and All-Terrain Vehicle (ATV) uses are permitted on the trail. Two new trailheads are planned. The northern trailhead will be off County Highway O, about one mile west of Highway 139, and the southern trailhead will be in Wabeno, between the town park and logging museum. The Nicolet State Trail and the Wolf River State Trail are shown on the Ownership & Recreation Facilities Map.

The Wolf River State Trail was completed in 2010. The Forest County segment runs 14.4 miles from Crandon south to the Forest/Langlade County line and continues into Langlade County all the way south to White Lake. When completed, the trail will be open to walking, bicycling, ATVs (year-round), and snowmobiles. Other bicycle facilities are described in the Transportation Chapter.

Forest County snowmobile trails cross every town and connect every community to each other and to adjacent counties. Over 405 miles of state funded trails are groomed and maintained by five active snowmobile clubs. Each snowmobile trail is named: 100 Mile Snow Safari, Black Bear, Lumberjack Memorial, Three Lakes, and Tombstone-Pickerel.

The County's 2022-2026 Outdoor Recreation Plan contains a full inventory of snowshoe, cross country, and water trails. The Forest County Potawatomi Community Bicycle-Pedestrian Plan (2021) envisions USH 8 as the County's "backbone" for future bicycle-pedestrian infrastructure separate from the highway.

The County has a long history with off road vehicles, including all-terrain vehicles. For over 55 years the Crandon International Off-Road Raceway has hosted the Brush Run Races and World Championship Races. The Crandon International Off-Road Raceway annually attracts thousands of motorized recreational enthusiasts to Forest County.

3. Schools

Three of the five school districts that serve Forest County residents have schools in Forest County. Crandon, Laona, and Wabeno school districts each have a grade-, middle-, and high school as shown on the School & District Boundaries Map. Goodman-Armstrong Creek and Three Lakes school districts have schools next to Forest County.

Enrollment is declining in all three school districts and the trend is projected to continue. Over the coming years, the major issue for these school districts will be to compensate for a shrinking student population while maintaining high-quality education. To combat declining enrollment, the Crandon, Laona, and Wabeno school districts cooperatively create distance learning classes between the school districts to provide additional classes that would not otherwise be taught.

Most of the county is in the Nicolet Technical College district, except for parts of Armstrong Creek and Caswell that are in the Northeastern Wisconsin Technical College district.

4. Museums

Museums exist in the City of Crandon, the Potawatomi Community, the Town of Laona, and the Town of Wabeno. On the courthouse grounds is a decommissioned tank, a historical museum, and a deer enclosure. The Forest County Historical Museum in Crandon is in what is known locally as the “Old Carter House.” The Potawatomi Community maintains the Cultural Center Library & Museum along USH 8, just east of downtown Crandon. Wabeno Neighborhood Park in downtown Wabeno has an outdoor replica of an old logging camp, and the Wabeno Logging Museum. A non-profit group in downtown Laona operates Camp Five Museum and Lumberjack Steam Train.

5. Day Care

The Department of Children & Families list of licensed child-care providers available in Forest County shows nine licensed providers. Four of the providers are group (over nine children) facilities, and the other five are family (less than eight) facilities.

Licensed child-care provider locations as of 2010:

- City of Crandon: 2 group and 1 family providers;
- Wabeno: 1 group and 1 public school provider;
- Laona: 1 public school provider;
- Forest County Potawatomi Community: 1 group provider; and
- Mole Lake Community: 1 group provider.

G. Energy & Telecommunication

1. Electric

The Wisconsin Public Service serves the largest part of the county. WE Energies serves part of the Towns of Alvin and Hiles. Two high-voltage transmission lines traverse the county. A 138 kV transmission line crosses the Town of Alvin, north of State Highway 70; and the second is a 115 kV line that enters the City of Crandon from Monico along USH 8. Both lines are shown on the Community Facilities Map.

2. Gas

Natural gas transmission across Forest County generally follows USH 8 from the Town of Crandon through the Town of Armstrong Creek. This gas line is tapped by Wisconsin Public Service to provide local delivery in another pipeline that generally serves the City of Crandon, the downtowns of Laona and Wabeno, and a 32-mile pipeline from Argonne to Hiles. The local delivery pipeline is shown on the Utilities & Community Facilities map. The remainder of the county depends upon bottled gas from local suppliers.

3. Telecommunication

According to the Wisconsin Broadband Map, the following companies provide internet service to Forest County: Astrea, Bertram, CenturyLink/Lumen, Charter-Spectrum, Cirrinity, Fast-Air Internet, Inc., Frontier Communications, HughesNet, Northwoods Connect, SonicNet, Inc., TMobile, United States Cellular Corporation, Viasat, Inc., and VSAT Systems, LLC. Several of these companies provide telephone service as well.

High-speed internet access is available throughout the southern half of Forest County. Most of Forest County's developed areas where cable TV exists also has access to high-speed internet over the cable TV network. Digital subscriber line (DSL) is broadband over existing copper wire phone lines. Delivery of DSL service has a maximum distance of 18,000 feet from a digital switch, of which, several exist in Forest County.

Depending upon which cellular communication network used, most of Forest County has cellular phone coverage. As of 2022, AT&T, Cellcom, and Verizon advertised coverage in parts of Forest County. Fourteen telecommunications towers, which may have cellular phone antennas on them, exist in the county, and more are projected for construction in the future. The County should monitor and pursue grant programs as broadband continues to expand.

H. Utility & Community Facility Programs

Providing public infrastructure—roads, sewer and water service, schools, police, and fire protection—is one of the major functions of local government. In addition to these public services, both public and private entities provide electricity and telephone service as well as such specialized services as child-care, healthcare, and solid-waste disposal. Taken together these constitute the utilities and community facilities that represent much of the backbone of modern life. Beyond what these facilities do for us, they also represent a huge investment of public and private resources.

The efficient utilization of these resources is one of the basic principles of comprehensive planning. Already in-place infrastructure is a public asset that must be safeguarded for the future, both to conserve and protect environmental values and to maximize the benefits of economic growth. Development that bypasses or ignores existing infrastructure resources is wasteful of the public investment that they represent. Development patterns that require the extension of utilities and the expansion of public facilities while existing facilities go unused at other locations is probably not the best use of scarce public resources. Both the state and federal governments offer programs that assist communities with the development of critical infrastructure and facilities. These programs are listed in more detail in the Economic Development chapter of this plan. For Parks and Outdoor Recreation, see the 2022-2026 Forest County Outdoor Recreation Plan for a full list of funding opportunities. Additional programs for community facilities are available through the United States Department of Agriculture (USDA) Rural Partners Network (RPN).

5.3 Goals, Objectives, & Policies

Goal

1. Strive to provide the best quality public services, such as schools and libraries, law enforcement, fire and EMS, to all the citizens of the County.
2. Maintain and enhance year-round recreational opportunities and facilities within the county while minimizing user conflicts.
3. Prepare and minimize natural hazard events.

Objectives:

1. Direct more intensive development to areas where a full array of utilities, community facilities, and public services are available, using funding opportunities as they arise.
2. Provide law enforcement, ambulance, volunteer fire and first responder services to residents, whether by the county or by local units of government.
3. Support high quality educational opportunities for all residents.
4. Support implementation of the Forest County Outdoor Recreation Plan and its list of capital improvements.
5. Review Forest County Subdivision Ordinance to promote recreational access to land and water.
6. Support implementation of mitigation strategies from the Forest County All Hazard Mitigation Plan.
7. Cooperate with utilities, local governments, tribal communities, DNR, Forest Service, and the local American Red Cross Chapter to co-locate communication systems and equipment across the county.
8. Support tourism infrastructure by maintaining and developing boat ramps, bicycle trails, ATV trails, public parks, school forests, shooting ranges, and other infrastructure to enhance Outdoor Recreation.
9. Protect the County's property tax base, much of which is tax-exempt land.
10. Monitor and pursue emerging grant programs as broadband continues to expand.
11. Explore the Rural Partnership Network (RPN) for funding opportunities for community facilities.

Policies:

1. Ensure that community facilities (e.g., schools, public safety buildings, health care, etc.) have the space requirements and supplies that are necessary to serve Forest County residents.
2. Make more extensive use of the Wisconsin Fund to upgrade failing Private Onsite Wastewater Treatment Systems (POWTS) on qualifying properties.
3. Encourage Crandon and Laona to create wellhead protection plans and wellhead protection ordinances for their municipal water supplies.
4. Encourage Wabeno to enroll in Valley Catalog (V-Cat) and Internet Central Site Service for the library.
5. Work with and support clubs and organizations related to the maintenance and development of recreational facilities and activities.
6. Continually evaluate the need, conditions, and maintenance requirements of public access to waterways.
7. Encourage land acquisition and development strategies for parks, as outlined in the County Outdoor Recreation Plan.
8. Promote increased use of NOAA Weather Radios.
9. Require new communication towers to provide co-location areas for potential sheriff and highway department radio antennas.
10. Support dam/drainage way repair and removal where appropriate to minimize flooding in the County.
11. Implement the other recommendations from the All-Hazard Mitigation Plan.
12. Identify and pursue funding opportunities for boat ramps, bicycle trails, ATV trails, public parks, shooting ranges, school forests and other tourism-based infrastructure when possible.
13. Monitor changing state and federal laws and guidance to address PFAS and pursue grant funding as needed to meet changing requirements without burdening county taxpayers.
14. Work with the Federal Government to address the extensive tax-exempt forest acreage which impacts the County's budget and causes forest management concerns by identifying alternative revenue sources in lieu of taxes, improving land, or selling land.

Chapter 6: Economic Development

6.1 Background

This is the sixth of nine chapters that comprise the Forest County Comprehensive Plan. This chapter is based on the statutory requirement for a “compilation of objectives, policies, goals, maps, and programs to promote the stabilization, retention, or expansion of the economic base and quality employment opportunities”. This chapter includes an analysis of the economic base and labor force of Forest County as well as the development programs available at the local, regional, state, and federal levels.

A. Previous Plans:

Below is a review of recent economic development-planning efforts.

Forest County Economic Development Strategy, 2005

This project was undertaken because of the interest in the creation of some type of county-wide cooperative approach towards economic development. This strategic plan was prepared with that goal in mind. The Joint City-County Economic Development Committee held a series of meetings to develop the plan utilizing the assistance of the NCWRPC planning staff to facilitate the planning process and for the publication of the written plan. Following several planning meetings, the 2005 Forest County Economic Development Strategy was created.

An inventory of the basic economic situation in Forest County may be found in this document, including an assessment of strengths and weaknesses. Current issues are identified by way of committee discussions. Several organizational options for the creation of an economic development entity or corporation are discussed as well. Finally, strategies and recommendations are provided to assist decision makers in prioritizing needs before proceeding to implementation. Much of the economic analysis information is drawn from that planning effort. An updated plan would provide the County with more up-to-date data and strategies.

Comprehensive Economic Development Strategy (CEDS)

Forest County is one of ten counties included in the North Central Wisconsin Economic Development District as designated by the U.S. Department of Administration, Economic Development Administration (EDA). The North Central Wisconsin Regional Planning Commission (NCWRPC) is the agency that is 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 development activities of the past year and present new and modified program strategies for the upcoming year. In addition, this report identifies potential public works projects for funding within the region.

Key findings from this regional level plan involve an inventory of the physical geography of the Region and its resident population. Labor, income, and employment data are covered with analysis of the economic status of the Region. Construction, wholesale trade, retail, transportation, and manufacturing all have grown rapidly since 1980. Finance, insurance, real estate, and services have lagged compared to national

averages. Strategies in the CEDS include expanding business park infrastructure and partnering with schools to ensure land and workers for businesses expanding in the region.

Regional Livability Plan (RLP), 2015

The Regional Livability Plan is a comprehensive plan for the ten-county Region prepared by the North Central Wisconsin Regional Planning Commission. The RLP identified ways to address the region's opportunities and weaknesses to increase the region's livability 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.

B. Issues:

The planning process includes the identification of issues. These are the things that need to be addressed in the plan.

Commercial and Industrial Development

Not all available sites can offer the wide range of services necessary to appeal to all types of industrial development. Access to a major interstate highway is unavailable and the county has limited rail service. Forest County also suffers from lack of diversification in its industrial economy leading to a heavy reliance on relatively 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. Continued economic diversification is a key to the community's growth.

Income and Employment Levels

Although the county has made progress toward closing the gap over the last thirty years, income levels still are below state and federal levels and the unemployment rate exceeds both state and federal levels. A focus should be placed on living wage jobs. Those looking for employees struggle to attract them to Forest County due to a lack of housing and other factors.

Commuting Patterns

There are about 427 more people leaving the County for employment opportunities, than there are persons coming into the County. Most of those leaving are going to Oneida County, followed by Oconto and Langlade Counties. These 427 people represent an available workforce based on 2019 Census on-the-map information. The goal should be to balance the flow in and out of the county.

Lack of Investment and Working Capital

Forest County lacks the investment and working capital necessary for entrepreneurial start-ups and expansions. In addition, local banks and other lending institutions are unwilling to take much risk on these types of business ventures. Entrepreneurs and existing business owners looking to expand are prevented from starting businesses or expanding unless they already have significant company value or personal wealth. This limits new business activity to a select few in Forest County while most potential businesses look for locations with readily available investors.

Lack of Countywide Economic Development Information

Entrepreneurs and business owners do not have a central point of contact for finding economic development assistance in Forest County. Organizations like InWisconsin, the Wisconsin Department of Administration, and independent site selectors also have difficulty in obtaining the necessary information to evaluate potential projects. Historically, most communities within the county handled their own economic development activities but cannot assemble the resources necessary to provide comprehensive service to potential employers. A “single point of contact” benefits economic development efforts, and the Forest County Economic Development Partnership helps fill this role.

Limited Taxable Land

Although Forest County is relatively large in land area, the government owns a majority of the land, or the land is otherwise tax exempt. Federal lands qualify for the National Forest Income program which provides monies to the local government and state lands provide similar monies through the Payment In Lieu of Taxes (PILT) Program, however, this funding is not equivalent to the amount of taxes the local government would receive from private land in the same use. The Nicolet National Forest comprises the entire north and east parts of the county; additional land is comprised of county forestlands as well. Forest County also has two tribal nations with tax-exempt property. Consequently, County government must provide countywide services with a limited amount of taxable revenue. Basic services such as road maintenance, law enforcement, and fire protection are very difficult to pay for while still keeping taxes at a level commensurate with Forest County’s relative standard of living. As Forest County’s density increases, government operations will become more expensive as well. This dilemma has been exacerbated by an increasing number of property owners choosing to put their land into the Forest Crop Program (which effectively takes the land off the local tax rolls).

With the presence of tourism and increase in vacation rentals, Forest County could consider adding a room tax above the rate that is generated for local Chambers of Commerce to help pay for County services.

Conflict with State and Federal Government

Forest County is subject to a variety of state and federal laws intended to regulate the use of forestland and water bodies. These regulations, while intended to serve the interests of the state and/or national public, can sometimes overwhelm the needs or desires of the local population. Forest County's natural resources are often prevented from being used to benefit the development of the local economy by restrictions and regulations. Local businesses that are dependent upon the existence of the forest are subject to limitations by US Forest Service (USFS) restrictions. These restrictions often inhibit businesses from realizing their full potential. The USFS heavily regulates all forestry practices in the national forest and restricts access to forest roads. Both restrictions affect the forestry and tourist industries respectively.

Workforce Experience and Employment Levels

Although the county has made progress toward closing the gap over the last thirty years, income levels are still below state and federal levels, and the unemployment rate exceeds both state and federal levels. Housing costs are lower than state and federal levels, but housing is less affordable relative to incomes. Recruiting skilled workers to the area is difficult due to the lack of major market amenities and lack of multiple job opportunities. Skilled and professional workers earn higher incomes and can therefore raise the per capita income level of the County. Many businesses require skilled and professional workers to operate and will seek labor markets where these people reside in adequate numbers.

Economic Patterns of the Tourist Economy

Recreation and tourism comprise a large component of Forest County's economy. The tourist economy is highly dependent upon the seasonal weather and therefore highly unpredictable. An uncharacteristically cool summer or warm winter can impact businesses that depend upon this income. Tourist-based businesses that are exclusively dependent upon either winter or summer activities also face a difficult challenge as they strive to generate income in the off-season to sustain them until the next season. In 2021 tourism spending in Forest County was estimated to be over \$13.8 million, up from \$11.3 million in 2020 according to Travel Wisconsin.

Retaining Youth Employment/Qualified Workers

Like many rural areas, Forest County has difficulty in retaining its young people. High school graduates often move to larger cities for more opportunities, higher pay, or to further education. Meanwhile, local workers lose a generation of new employees that are necessary to maintain existing business operations. This low supply of available workers results in firms hiring workers that may be less than qualified for their duties or that may be mismatched between capabilities and expectations.

Intergovernmental Communication

County government, the City of Crandon, Town governments, and Tribal governments all affect one another with their decisions. Historically, Forest County has not benefited from a great degree of communication between these entities. Poor relationships between government entities can lead to internal competition and redundant economic development efforts. Forest County needs a venue in which governments can work cooperatively to the benefit of the County as a whole.

Electric Vehicles

Electric Vehicles (EVs) are an emerging shift in transportation that could impact businesses in Forest County. If they continue to increase in popularity, the County should work with businesses to identify locations for chargers and pursue grant funding to install a network of them.

6.2 Inventory & Trends

Analyzing the County's economy and identifying economic trends in this element answers the following 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 determine the strengths and weaknesses of each industry sector in the County thereby identifying potential strategies for economic development. The information presented in this analysis has been collected from the U.S. Census Bureau and Lightcast (formerly EMSI).



A. Economic Sectors

Overall, in 2020, there were 3,709 persons employed in Forest County, a change of -4.4 percent since 2010. Employment statistics are broken down by each industry in Table 33.

Between 2010 and 2020, the three fastest growing industries were other services except public administration (63.1 percent), professional, scientific, and management, and waste management services (24.1 percent), and manufacturing (11.6 percent). Except for wholesale trade (4.0 percent) and transportation, warehousing, and utilities (1.4 percent), the remaining industries all saw a decline in total employment between 2010 and 2020. See Table 33.

A few decades ago, a large shift in the arts entertainment & recreation sector was due to the Native American gaming in Forest County. The State of Wisconsin entered into gaming compacts with the Forest County Potawatomi and the Mole Lake, which led the construction of two casinos in the early 1990s.

Table 2 shows that the Northern Lights Casino and the Mole Lake Casino are two of the largest employers in Forest County.

Table 33: Change in Employment by Industry

| Industry | 2010 | 2020 | 2010 to 2020 Net Change | 2010 to 2020 % change |
|--|--------------|--------------|-------------------------|-----------------------|
| Agriculture, forestry, fishing and hunting, and mining | 251 | 219 | -32 | -12.7% |
| Construction | 309 | 288 | -21 | -6.8% |
| Manufacturing | 405 | 452 | 47 | 11.6% |
| Wholesale trade | 50 | 52 | 2 | 4.0% |
| Retail trade | 420 | 418 | -2 | -0.5% |
| Transportation and warehousing, and utilities | 209 | 212 | 3 | 1.4% |
| Information | 23 | 17 | -6 | -26.1% |
| Finance and insurance, and real estate and rental and leasing | 158 | 118 | -40 | -25.3% |
| Professional, scientific, and management, and administrative and waste management services | 166 | 206 | 40 | 24.1% |
| Educational services, and health care and social assistance | 811 | 731 | -80 | -9.9% |
| Arts, entertainment, and recreation, and accommodation and food services | 653 | 519 | -134 | -20.5% |
| Other services, except public administration | 122 | 199 | 77 | 63.1% |
| Public administration | 302 | 278 | -24 | -7.9% |
| Total: | 3,879 | 3,709 | -170 | -4.4% |

Source: American Community Survey, 2010 and 2020

1. Agriculture, forestry, fishing and hunting, and mining: Since 2010, this industry has declined over 10 percent statewide but has grown just over 1 percent nationwide. Non-metallic mining activity within the county typically involves sand and gravel (aggregates) extraction for local use.
2. Construction: This industry declined in Forest County but grew at a steady rate both statewide and nationwide since 2010.
3. Manufacturing: This industry grew much more quickly in Forest County compared to statewide (0.1 percent) and nationwide (0.2 percent).

4. Wholesale Trade: This industry grew in Forest County despite declining by just over 8 percent statewide and nationwide.
5. Retail Trade: This industry grew by 5.5 percent nationwide but declined by less than 1 percent both in Forest County and across Wisconsin since 2010.
6. Transportation and warehousing, and utilities: Jobs in this industry expanded in Forest County (1.4 percent) but at a slower rate compared to Wisconsin (6.4 percent) and nationally (19.4 percent).
7. Information: This industry saw considerable declines at the county, state, and national level.
8. Finance, Insurance, and Real Estate: This industry declined by over 25 percent in Forest County despite plateauing statewide and growing by 3.9 percent nationally.
9. Professional, scientific, and management, and administrative and waste management services: These jobs grew similarly when comparing County, Statewide, and National figures.
10. Educational Services, and health care and social assistance: Jobs in these fields declined considerably in Forest County (9.9 percent) when compared to Wisconsin (10.4 percent) and nationally (16.1 percent), perhaps partially due to Forest County's aging population.
11. Arts, Entertainment & Recreation: Between 1990 and 2009, this sector grew by an astounding 7083 percent. The growth in the sector can be directly attributed to the construction of the Northern Lights Casino and the Mole Lake Casino. However, employment has decreased by 20.5 percent since 2010, compared to an increase of 3.1 percent statewide and 16.6 percent nationally.
12. Other services, except public administration: Jobs in these fields grew the most as a percent and altogether in Forest County since 2010, and at a much higher rate than statewide and nationwide, which were both just under 9 percent.
13. Public Administration: Between 1990 and 2009, this sector grew by 135 percent, which was greater than the state and national growth rates of 22 percent and 27 percent respectively. However, it declined by 7.9 percent since 2010, compared to increases of 4.7 percent statewide and 5.9 percent nationally.

B. Major Employers

According to EMSI, in 2016, Forest County's largest employers were Potawatomi Bingo Northern, Potawatomi Carter Casino Hotel, Mole Lake Casino Lodge, and Shaefer's IGA. Additional top employers include Tribal and County governments and school districts.

C. Economic Analysis

The primary technique used to analyze the county’s economic base is called the “Location Quotient.” The technique is commonly used to provide detailed economic information about the local economy and industry sectors within the economy.

I. 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.

Those employers providing goods and services that are purchased or consumed by customers outside the study (the County in this case) are basic employers. Conversely, goods and services consumed by the local community are considered non-basic. Thus, the 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 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, Forest County has more basic employees than non-basic, however, if existing industries are not retained and new opportunities are not created in basic industries such as manufacturing, this status could change in the future.

The location quotient can be described by the following equation:

$$LQ_i = (e_i / e^t_T) / (E_i / E^t_T)$$

where:

e_i = regional (county) employment in industry i in year t

e^t_T = total regional (county) employment in year t

E_i = 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 34 provides a summary of the location quotient analysis results of those categories that exceed 1.00.

The data analyzed is from the U.S. Census, County Business Patterns. That data set examines only the private sector, since that is where most economic growth is desired. The information presented is broken into detailed categories like the industry composites utilized by the North American Industry Classification Standard (NAICS).

Table 34: Location Quotient Analysis

| Industry | 2021 Jobs | Location Quotient | Number of Businesses |
|--|------------------|--------------------------|-----------------------------|
| Government (Includes schools, hospitals) | 1,604 | 3.72 | 46 |
| Utilities | 24 | 2.13 | 1 |
| Agriculture, Forestry, Fishing and Hunting | 31 | 1.23 | 19 |
| Manufacturing | 285 | 1.13 | 17 |

Source: Lightcast (formerly EMSI)

Government

Given that much of Forest County consists of federal lands, and the County and local school districts employ a considerable share of the population, government has the highest location quotient in Forest County of 3.72.

Utilities

Utilities have the second highest location quotient of 2.13, which could be partially due to Forest County's low density and need for an extensive network of infrastructure to serve a dispersed population.

Agriculture, Forestry, Fishing and Hunting

The abundance of forests, lakes, and open lands in Forest County contributes towards this category having the third highest location quotient of 1.23.

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 1.13.

D. 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 4 displays a variety of information related to the county labor force.

I. Labor Force

Overall, the labor force was reduced from 4,257 in 2010 to 3,902 in 2020. That represents a reduction of over 8.3 percent, compared to an increase of 0.6 percent statewide. The labor force is defined simply as the number of persons, sixteen and over, employed or looking to be employment. Persons over sixteen who are students, homemakers, retired, institutionalized, or unable/unwilling to seek employment are not considered part of the labor force. In 2010, 3,879 of those were employed and that declined to 3,709 in 2020, which is a decrease of 4.4 percent. Part of this is due to the large baby boomer generation transitioning to retirement.

Table 35: Labor Force Indicators

| Indicator | 2010 | 2020 | County Change 2010-2020 | State Change 2010-2020 |
|--------------------|-------------|-------------|------------------------------------|-----------------------------------|
| Labor Force | 4,257 | 3,902 | -8.3% | 0.6% |
| Employed | 3,879 | 3,709 | -4.4% | 4.0% |
| Unemployed | 378 | 193 | -48.9% | -46.3% |
| Unemployment Rate | 8.9% | 4.9% | -44.9% | -46.3% |
| Participation Rate | 54.7% | 52.6% | -3.8% | -4.2% |

Source: American Community Survey, 2010 and 2020

2. Unemployment

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”. In 2010 the county had 8.9 percent unemployment, compared to the state rate of 6.7 percent. By 2020, the county improved to a 4.9 percent unemployment rate, compared to the state rate of 3.6 percent. Over the last twenty years, Forest County has generally had higher unemployment rates than the state average.

3. Workforce Participation

Much of the decline in the county’s labor force has been due to the decrease in participation rates. In 2010, about 54.7 percent of the population over 16 was in the labor force. By 2020, that rate decreased to 52.6 percent. The national participation rate in 2020 was 63.4 percent, and the state rate was 66.1 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.

4. Education & Training

Worker productivity has often been cited as one important reason for the strength of Wisconsin's economy. Both education and training are 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 educational attainment rates are higher statewide than in Forest County.

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 Nicolet Technical College often direct their programs to the training needs of local workers and businesses. Training services for dislocated workers are provided at the Northern Advantage Job Center located in the City of Rhinelander. The job centers in Antigo and Niagara are other job centers that could assist Forest County Residents. The center is 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.

E. 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 Chapter of this plan, the Median Household income in 2020 was \$48,394 and the Per Capita income was \$26,863. Both Median Household Income and Per Capita Incomes have risen over the last decade, by 28.6 and 30.5 percent respectively. Both rates exceed the state growth rates during the same time.

According to the American Community Survey, workers in Wisconsin made an estimated median of \$36,540 in wages over the past 12 months, compared to only \$29,805 for Forest County, further suggesting that the County's wages are consistently lower than the state's.

F. Economic Development Infrastructure

Overall, Forest County's economic development infrastructure is concentrated in the City of Crandon. This infrastructure investment provides a wider range of opportunities for the prospective entrepreneur or expanding business, and greatly increases the county's chances of developing and maintaining a stable employment base for its workforce in the future.

Forest County's variety of infrastructure amenities include:

- A serviced industrial park in the City of Crandon consisting of 2 available and 35 total acres with municipal water and sewer, gas, and electric service.
- A small number of existing commercial/industrial buildings available for immediate use.

- Over 150 miles of US/State highway, including US Highway 8 and State Highways 32, 52, 55, 101 and 139.
- Nearly 110 miles of County maintained highways.
- A Public-use airport suitable for business, charter, recreational and agricultural flying. The airport at Crandon is classified as a Small General Aviation Airport. The main runway is 3,550' long as well as a secondary turf runway measuring 2,742'.

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. Currently, only the Crandon Industrial Park is developed. The Towns of Laona and Wabeno have planned for an industrial park in the past but have not constructed any. 80 acres south of Laona near the water treatment lagoons is owned by the Town and is available for this type of development.

G. Economic Development Programs

I. Local:

Forest County Economic Development Partnership

Forest County and several other area entities have created the Forest County Economic Development Partnership to promote economic development throughout the county. This group will promote overall economic development and work with new and existing businesses in Forest County.

2. Regional:

Grow North Regional Economic Development

Grow North is a non-profit organization whose mission is to assist area counties and communities in their efforts to recruit and retain businesses, stimulate new job creation and to foster an environment conducive to entrepreneurial growth. Grow North was created in 2004 to foster cooperation among economic development partners and foster economic growth efforts in Forest, Langlade, Lincoln, Oneida, and Vilas counties among others.

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.

Northwest Wisconsin Manufacturing Outreach Center (NWMOC)

The Northwest Wisconsin Manufacturing Outreach Center provides operations assessments, technology training, and on-site assistance to help firms in southern Wisconsin modernize and streamline manufacturing processes.

Northwoods Nijjii Enterprise Community

This organization administers the Northwoods Nijjii Empowerment Zone, which consists of three Indian Reservations and three non-Indian developable sites. Forest County hosts one of the developable sites in the Town of Nashville bordering the Mole Lake Reservation. The organization has performed strategic planning to help balance economic and community development within these communities. The Enterprise Community has formed partnerships with 3 tribal governments and 3 non-Indian partners, local colleges, non-profits, and other organizations at the local level to capitalize on existing resources and expertise thereby reducing administrative costs.

3. State:

Wisconsin Economic Development Corporation

WEDC provides a variety of assistance and programs to promote business development. They provide tax credits, grants, and loans.

Wisconsin Small Cities Program

The Wisconsin Department of Administration provides federal Community Development Block Grant (CDBG) funds to eligible municipalities for approved housing and/or public facility improvements and for economic development projects. Economic Development grants provide loans to businesses for such things as: acquisition of real estate, buildings, or equipment; construction, expansion or remodeling; and working capital for inventory and direct labor.

University of Wisconsin Extension Office

The Center for Community Economic Development, University of Wisconsin Extension, creates, applies and transfers multidisciplinary knowledge to help people understand community change and identify opportunities.

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.

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.

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.

4. 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.

6.3 Goals, Objectives & Policies

This section identifies the goals, objectives and policies of the county as related to 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 efforts with the city, tribal government and towns, as well as other organizations.
4. Develop and Maintain a Countywide Economic Development Point of Contact.
5. Create new Industries to Diversify the Economy
6. Explore the use of renewable resources, especially wood biomass.
7. Develop and maintain seed money grants for startup businesses in Forest County
8. Explore the Rural Partners Network (RPN) for funding opportunities.

Objectives:

1. Promote the retention and expansion of the current economic base.
2. Encourage the creation of new businesses.
3. Promote the relocation of compatible businesses to the county.
4. Work with area schools and technical college to develop and maintain a well-trained workforce.
5. Maintain and enhance public facilities and services.
6. Pursue increased funding from both public and private sources.
7. Encourage the wood mills and wood product manufacturers to explore Renewable energy opportunities with wood waste.
8. Explore expansion of recreational opportunities in the county in context of the natural resource assets of the county.
9. Work with businesses to accommodate electric vehicles as they become more popular.

Policies:

1. Continue relationships with Wisconsin Small Business Development Center for assistance with starting or growing a business.
2. Encourage involvement in the Northwoods Inventors & Entrepreneurs Club.
3. Evaluate, maintain, and enhance infrastructure as necessary to facilitate economic growth, such as an industrial park.
4. Determine current employment characteristics and identify existing and future employment needs.

5. Encourage educational institutions to develop training programs needed by the area's businesses to meet identified needs.
6. Support and work with local school officials on expanding the school to work program.
7. Direct industrial development to areas with the infrastructure and services to support the development.
8. Plan for an adequate supply of land for commercial and industrial needs.
9. Promote telecommunications infrastructure and other technology related to development and expansion.
10. Promote the use of revolving loan funds to assist local economic development efforts.
11. Pursue U.S. Economic Development Administration and USDA – Rural Development funds, among other federal sources.
12. Pursue Wisconsin Economic Development Corporation and Wisconsin Department of Administration and other state sources.
13. Support an update to the Forest County Economic Development Strategy, which was last updated in 2005.
14. Identify locations and funding sources for electric vehicle charging stations.

Chapter 7: Intergovernmental Cooperation

7.1 Background

This is the seventh of nine chapters that comprise the Forest County Comprehensive Plan. This chapter is based on the statutory requirement for a compilation of goals, objectives, maps, and recommendations to guide the future physical development of the County. This chapter brings together many of the previous chapters to provide a general framework for planning throughout the county. It encourages opportunities 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. This promotes future growth, avoids inefficient or conflicting development patterns, and promotes intergovernmental agreements.

A. Previous Studies

I. Regional Efforts

Regional Livability Plan, 2015

The Regional Livability Plan is a comprehensive plan for the ten-county Region prepared by the North Central Wisconsin Regional Planning Commission. The RLP identifies ways to address the region's opportunities and weaknesses to increase the region's livability for all residents. The plan addresses four specific areas: housing, economic development, transportation, and land use. This regional effort was created, in part, to provide a framework for county and local unit plans within the region.

2. County Plans

Forest County Farmland Preservation Plan 2016

This plan identifies areas in the county that are prime agricultural land that should be preserved for those uses. Those designated areas allow active farming operations to apply for state tax credits. As part of this planning effort, the Farmland Preservation Plan is being incorporated into this plan.

Forest County All Hazard Mitigation Plan 2008

This plan is required under the Disaster Mitigation Act of 2000 to be eligible for disaster mitigation grant programs. It assesses the county's vulnerabilities and risks and provides strategies regarding preparing for and responding to natural disasters.

Forest County Outdoor Recreation Plan 2022-2026

This plan's primary purpose is to identify existing recreational facilities and identify needed facilities for a five-year period. A variety of information is included in that plan, such as trail information, park inventory and future needs.

Forest County Land & Water Resource Management Plan 2018-2027

The primary intent of this plan is to identify strategies to protect the quality and quantity of the county's soil and water resources.

3. Local Comprehensive Plan Efforts

Many communities in Forest County have their own comprehensive plan, most of which are “first generation” plans that date back to the late 2000s and early 2010s around the first deadline for Wisconsin's smart growth requirements. These include the Towns of Alvin, Argonne, Armstrong Creek, Blackwell, Freedom, Laona, and Nashville, and the Sokaogon Chippewa and Potawatomi Communities. Forest County's most recent countywide comprehensive plan was also completed in 2011. Newer efforts include the Towns of Hiles (2017), Lincoln (2020), and Wabeno (2021), and the City of Crandon (in progress). These plans provide an extensive inventory of the community, identifies issues, and sets forth direction for future growth. Currently, the Towns of Caswell, Crandon, Popple River, and Ross do not have comprehensive plans.

B. Benefits & Trends

There are many reasons intergovernmental cooperation makes sense. Some examples include:

- **Trust:** Cooperation can lead to positive experiences and results that build trust between jurisdictions. As jurisdictions communicate and collaborate on issues of mutual interest, they become more aware of one another's needs and priorities. They can better anticipate problems and work to avoid them.
- **Cost Savings:** Cooperation can save money by increasing efficiency and avoiding unnecessary duplication. Cooperation can enable some communities to provide their residents with services that would otherwise be too costly.
- **Consistency:** Cooperation can lead to consistency of the goals, objectives, plans, policies, and actions of neighboring communities and other jurisdictions.
- **Addressing Regional Issues:** Communicating and coordinating their actions, and working with regional and state jurisdictions, local communities are able to address and resolve issues, which are regional in nature.

The major beneficiary of intergovernmental cooperation is the local resident. They may not understand, or even care about, the details of a particular intergovernmental issue, but residents can appreciate their benefits, such as cost savings, provision of needed services, a healthy environment, and a strong economy.

A variety of factors, some long-standing and others more recent have brought the issue of governmental cooperation to the forefront. Some of these factors include:

- Local governments financial situation;
- Opportunity to reduce costs by working together;

- Elimination of duplication of services;
- Population settlement patterns and population mobility; and
- Economic and environmental interdependence.

In addition, as more jurisdictions create comprehensive plans and share them with surrounding communities, new opportunities for intergovernmental cooperation will be identified.

C. Intergovernmental Issues

I. Shared Services

Forest 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 several jurisdictions can benefit all by reducing cost and at the same time improving the quality of services received. Rural Fire Control is a good example of how services are being provided to several jurisdictions to improve service and reduce costs to all.

2. 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.

School districts within the county offer a particularly clear illustration of how functional boundaries do not always coincide with established units of government. In Forest County there are three primary school districts, but some other districts do reach into the county from surrounding counties.

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 these overlapping jurisdictions must be taken into consideration when considering how best to effectuate intergovernmental agreements and how best to deliver services to citizens.

3. Plan Consistency

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 can 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 other.



7.2 Overview of Current & Potential Efforts

A. Current Levels of Cooperation

This section looks at the existing inter-governmental cooperation agreements in effect in Forest County.

I. Surrounding Towns and Counties

Following the structure of county government in the State of Wisconsin, there are many relationships established between the County and State as well as the County and towns. The County assists the state in many ways. The county sheriff enforces state laws throughout the county, which includes the local towns. County Highway Departments maintain county and state trunk highways and under agreement some town roads. The county also works with cities and villages on various issues. Generally, these are longstanding relationships. Sometimes, intergovernmental cooperation does not necessarily take the form of written agreements or contracts. Often it is more about informal arrangements and practices.

There are numerous agreements in place related to ambulance and fire protection throughout the county as well as with adjoining counties. There are also agreements in place for emergency responses, such as communication interoperability and search and rescue.

The County maintains Shoreland Zoning throughout the entire county, except within tribal lands. Some towns have adopted County General Zoning, which means these towns have zoning throughout their entire township, while the others have only shoreland zoning.

Forest County has several trails in cooperation with the towns, city, tribes, as well as state and federal agencies. Snowmobile trails, cross-country ski trails, horse trails, off-road motorcycle and ATV trails, and hiking trails transect the county. Trails also increase the opportunity to expand the county's appeal as a visitor destination. The predominance of older persons in the population and their need for exercise and non-automobile transportation options also supports the need for trails. The local Chamber of Commerce promotes the county's trail networks. The goal of such an approach is the development of a plan for on-road and off-road bike and hiking/running trails which connect existing cultural, economic, and natural resources throughout Forest County.

The effort to create a countywide trail system and link it to other resources within and outside of the county will necessarily involve cooperation between the County and City as well as the Towns, surrounding Counties (including into Michigan), and various government agencies. 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.

2. School Districts

There are three primary school districts in Forest County; these are Crandon, Laona, and Wabeno. The Goodman – Armstrong and Three Lakes districts also reach into the county. Schools are a crucial factor attracting families to the community and are a major factor in creating a competitive workforce. These factors require 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. In rural communities, schools are often the focus of community and provide many recreational facilities for residents.

3. Regional Efforts

Grow North

Grow North Regional Economic Development Corporation was created in 2004 to foster cooperation among economic development partners and foster economic growth efforts in Forest, Forest, Lincoln, Oneida and Vilas counties recognizing the value of collaborative efforts to grow and diversify the north woods economy.

Grow North Regional Economic Development Corporation is a non-profit organization whose mission is to assist the counties and communities throughout our region in their efforts to recruit and retain businesses, stimulate new job creation and to foster an environment conducive to entrepreneurial growth and new company formations. Grow North's partners include private-sector businesses, regional service providers, educational institutions, local economic development organizations and others who are

interested in supporting our mission. Members recognize the importance and value of collaboration to ensure that the Grow North region remains competitive in the global economy.

The Grow North vision is a vibrant, unified Northern Wisconsin regional economy that retains and attracts thriving businesses and a high-quality workforce, fosters entrepreneurial activity, and inspires continuous improvement in the region's quality of life. Recently Grow North has focused on how by emphasizing the region's natural resources and improving the quality of education among the workforce the Grow North area can become more integrated into the New Economy.

Forest County Economic Development Partnership

This is a newly created non-profit corporation with the goal of promoting business development throughout the county. Several organizations have been involved in the establishment and funding of this organization, including Forest County, Mole Lake (Sokaogon Chippewa), Forest County Potawatomi, City of Crandon, Forest County Chamber of Commerce, Wabeno Area Chamber of Commerce, and the Forest County Tourism.

County/Tribal Relations

Over the past few years there has been a growing relationship between the county and the tribal communities of the Mole Lake (Sokaogon Chippewa) and Forest County Potawatomi. Several initiatives have been discussed and some have developed in recent years. Additional opportunities are possible in the future.

Northeastern Wisconsin Community Action Program (NEWCAP)

NEWCAP has served the County for over 50 years with the mission to move people out of poverty and into new opportunities and economic security while enhancing community development in the area. Forest County's low-income residents benefit from NEWCAP's programs related to housing and healthcare.

B. Potential areas of Cooperation

This section looks at the areas where there is the potential for additional cooperation. There are several opportunities for cross-jurisdictional service delivery arrangements in the county. One area where such arrangements can be successful is road maintenance and snowplowing. By making agreements to share the expense of equipment or by contracting out this kind of work substantial cost savings are possible for towns. Some arrangements already exist between many Towns in relation to fire and EMS service. Applying these same considerations to such basic Town services as snowplowing and road maintenance could yield considerable savings.

The development and implementation of land use maps by towns that do not subscribe to county zoning has created a de facto layer of use zoning. The county intends to implement, as fully as possible, the land use categories as depicted. Intergovernmental agreements and cooperative practices will be pursued to facilitate a timely flow of information for land use approvals from the property owner, the town and on to the county and state.

C. Existing / Potential Intergovernmental Conflicts

No potential intergovernmental conflicts were identified in this process. The process for resolving some of these conflicts will in part be achieved by meeting with the surrounding towns when significant issues of mutual concern arise, including across the state border to Michigan.

D. Planning Efforts in Surrounding Counties

Six Wisconsin counties surround Forest County: Florence, Langlade, Marinette, Oconto, Oneida, and Vilas. All six counties enacted comprehensive plans as of 2013, with updates being since adopted for Langlade (2019), Florence (2020), and Oconto (2015).

E. Intergovernmental Cooperation Tool

The primary tool used for intergovernmental cooperation is the shared service agreement. Wisconsin Statute s.66.0301, formerly 66.30, entitled "Intergovernmental Cooperation"; does enable local governments to jointly do together whatever one can do alone. Typically, intergovernmental cooperation and coordination refers to the management and delivery of public services and facilities. It is also dependent upon a defined geographic area within which cooperation and coordination may be feasible.

Intergovernmental agreements prepared using this statute are the most common form of agreement and have been used by communities for years, often in the context of sharing public services such as police, fire, rescue, or zoning. This type of agreement can also be used to provide for revenue sharing, determine future land use within a subject area, and to set temporary municipal boundaries. However, the statute does not require planning as a component of any agreement and boundary changes must be accomplished through the normal annexation process. Shared service agreements are utilized to allow this type of cooperation.

7.3 Goals, Objectives & Policies

Goals:

1. Encourage coordination and cooperation among all 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 Forest County.

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. Encourage the sharing of information between departments, local governments, organizations, and citizens.
4. Encourage regularly scheduled meetings and on-going communications between County departments, local governments, state agencies, and surrounding governments.
5. Engage in and support processes to resolve conflicts between the plans of governments with overlapping jurisdictions.

Policies:

1. Pursue dialogue with and between the Towns, City, and Tribes 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. Involve all school districts that serve the county in the planning process, to assist them with facility planning and site selection.
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. Encourage coordination with surrounding counties, regional, state, and federal agencies to address issues that cross-jurisdictional boundaries or involve the larger region.

Chapter 8: Land Use

8.1 Background

This is the eighth of nine chapters that comprise the Forest County Comprehensive Plan. This chapter is based on the statutory requirement for a compilation of goals, objectives, maps, and recommendations to guide the future development of the County.

A. Previous Planning Efforts

A list and description of planning efforts for Forest County and its municipalities is described in Chapter 7: Intergovernmental Cooperation. Regional plans are also found in that section, but of particular interest is NCWRPC's 2015 Regional Livability Plan as it contains several land use-specific objectives:

1. Protect natural landscapes and ecosystems in the region and increase the percentage of land cover labeled wetlands, forestlands, agricultural, and open space;
2. Protect sensitive lands from overdevelopment;
3. Manage and reduce vacant land and structures; and
4. Reuse vacant land and structures in innovative ways.

These objectives support the goals of maintaining the region's landscape, environmental resources, and sensitive lands, while encouraging healthy communities, and managing and reducing vacant land and structures. This is typically done by encouraging development and redevelopment in areas already served by infrastructure. Overall, the approach is to balance demand for new development, private property rights, and sound land use planning.

B. Land Use Planning Tools

I. Zoning Regulations

General Zoning has been a tool used by units of government since the 1920s 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. Only four of the fourteen towns utilize general county zoning. These are Argonne, Crandon, Nashville, and Wabeno. The town of Lincoln has its own zoning ordinance, and some zoning ordinances like shoreland zoning or sanitary ordinances apply countywide. All other towns are unzoned.

Shoreland Zoning is mandated by state law and is administered at 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 1000 feet of a lake or pond and 300 feet of a stream or river and all floodplains. The county has jurisdiction throughout all 14 towns for shoreland zoning, regardless of if

they have county zoning, local town zoning or no zoning. Shoreland zoning does not apply to incorporated areas. All unincorporated areas fall under shoreland zoning.

2. Subdivision 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 (e.g., stormwater detention, public and private sewage, land dedication).

The Forest County Subdivision Ordinance outlines procedures for land division, technical requirements, design standards for plats and certified survey maps, and outlines required improvements (e.g., 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.

C. Land Use Programs

The principal land use programs include the County Zoning and Land Division ordinances. Two other related programs that may impact land use within the Town are listed below:

1. Wisconsin Comprehensive Planning Program:

§66.1001 Wis. Stats. requires all jurisdictions within the state that exercise control over land-use to prepare a comprehensive plan by 2010. It lays out the nine required chapters of the plan and requires a public participation process. Jurisdictions that do not have a comprehensive plan in place by the deadline may not engage in actions that impact land use. Comprehensive Plans must be updated every 10 years to comply with state statute.

2. Farmland Preservation/Working Land Initiative:

The Wisconsin Working Lands Initiative was passed as a part of the state's 2009—2011 biennial budget process. The goal of the Working Lands Initiative is to achieve preservation of areas significant for current and future agricultural uses through successful implementation of these components. The main components include:

- Expanding and modernizing the state's existing farmland preservation program;
- Establishing agricultural enterprise areas (AEAs); and
- Developing a purchase of agricultural conservation easement matching grant program (PACE).

As of the 2017 Census of Agriculture, there were two dairy farms and one fish farm in Forest County. The Wisconsin Working Lands Initiative will require that each county update its Farmland Preservation Plans over the next few years.

D. Land Use Planning Issues

I. Lack of Privately Owned Land

Almost 82 percent of Forest County is non-taxable according to the 2022 Forest County Treasurer’s Report. Most of this is federal land, but there are some state and tribal holdings as well. Although this is down slightly from 2011, the amount of tax-exempt land over the past decade has only been reduced by less than half of a percent. This makes it difficult for Forest County to develop economically and generate revenue to cover County expenses. See Map 5-2 and Figure 1.

Figure 1: Non-Taxable Lands in Forest County

| YEAR | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| US FOREST SERVICE | 358,726 | 359,027 | 359,583 | 359,909 | 359,917 | 362,095 | 363,123 | 363,367 | 363,676 | 363,885 | 363,885 |
| STATE OF WISCONSIN | 25,098 | 25,065 | 26,462 | 25,931 | 29,018 | 27,226 | 26,676 | 26,647 | 26,608 | 26,688 | 26,757 |
| FOREST COUNTY | 11,948 | 17,825 | 19,197 | 24,340 | 25,520 | 1,998 | 1,972 | 1,927 | 2,423 | 2,424 | 2,807 |
| SCHOOL LANDS | 173 | 176 | 254 | 294 | 294 | 293 | 290 | 294 | 294 | 294 | 294 |
| TOWN LANDS | 2,835 | 2,549 | 2,203 | 2,358 | 2,312 | 2,323 | 2,346 | 2,341 | 2,329 | 2,329 | 2,367 |
| PVT FOREST CROP | 14,470 | 14,943 | 14,986 | 4,078 | 4,079 | 4,019 | 3,980 | 3,978 | 2,672 | 2,472 | 2,472 |
| MANAGED FOREST LANDS | 127,429 | 146,507 | 127,171 | 123,720 | 119,794 | 119,614 | 119,479 | 120,460 | 121,770 | 121,926 | 121,190 |
| OTHER | 16,162 | 2,720 | 3,247 | 3,465 | 3,443 | 2,484 | 2,366 | 2,367 | 2,381 | 2,366 | 2,305 |
| COUNTY FOREST CROP | | | | 10,839 | 11,871 | 12,481 | 12,910 | 12,910 | 13,186 | 13,186 | 13,186 |
| TOTAL NON-TAXABLE LANDS | 556,842 | 568,812 | 553,102 | 554,934 | 556,248 | 532,533 | 533,142 | 534,290 | 535,340 | 535,570 | 535,263 |
| NON-TAXABLE ACRES | 556,842 | 568,812 | 553,102 | 554,934 | 556,248 | 532,533 | 533,142 | 534,290 | 535,340 | 535,570 | 535,263 |
| FOREST COUNTY TAXABLE ACRES | 121,980 | 119,134 | 105,598 | 120,700 | 121,216 | 122,066 | 121,473 | 120,300 | 119,222 | 118,951 | 119,363 |
| TOTAL ACRES | 678,822 | 687,945 | 658,700 | 675,634 | 677,464 | 654,599 | 654,615 | 654,590 | 654,561 | 654,522 | 654,626 |
| NON-TAXABLE ACRES | 82.03% | 82.68% | 83.97% | 82.14% | 82.11% | 81.35% | 81.44% | 81.62% | 81.79% | 81.83% | 81.77% |
| FOREST COUNTY TAXABLE ACRES | 17.97% | 17.32% | 16.03% | 17.86% | 17.89% | 18.65% | 18.56% | 18.38% | 18.21% | 18.17% | 18.23% |
| TOTAL PERCENT | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

Source: 2022 Forest County Treasurer’s Report

2. 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 barriers such as highways, fences, structures, etc. Species may also become extinct if they are isolated within small “islands” of forest that lack the appropriate genetic diversity to ensure healthy procreation. 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. The Forest County Forestry Department has a 15-year Comprehensive Land Use Plan updated in 2021 that contains a more detailed overview of forestry practices in the county.

3. Community Revitalization

Cities 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.

4. 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 uses like 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.

5. Environmentally Sensitive Areas

Wetlands, rivers, streams, lakes, 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.

6. Support Development

The County, which has an abundance of public lands, encourages development on the available private and lands within the county. The County supports development throughout the county, as identified in local plans, especially in the forest products and related clusters.

To maximize economic development potential on limited land, the County should continue to work with economic development partners such as Grow North and identify ways to market available land. An example would be to compile a countywide inventory of properties that are available for development. Additionally, the county should continue to work with the U.S. Forest Service to encourage alternative uses for tax-exempt land to increase the County's tax base. Finally, the County should continue to collaborate with the Forest County Economic Development Partnership to identify ways to attract development to the county, especially for needed housing.

8.2 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.

A. Overview of the Natural Landscape

Natural resources were reviewed in detail in the Natural Resource, Agriculture and Cultural Resources Chapter; however, they are the foundation upon which all land use exists. Many of these natural features have an impact on where development can and cannot occur and need to be reviewed to create the future land use plan.

Environmentally sensitive areas include water, wetlands, and floodplains. These are areas that often fall under the county shoreland regulations. The county has an abundance of water, including the Wolf River, numerous lakes, as well as many streams. However, as waterfront development continues additional pressure is placed on the existing water bodies and the surrounding natural communities. Steep slopes are another natural feature that should be considered in the development of a future land use plan, since 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 in the county.

In terms of land area, the County covers nearly 636,700 acres. The City of Crandon is the only incorporated community in the county with about 4,000 acres. The Town of Hiles is the largest town with over 90,000 acres and the Town of Crandon is the smallest with less than 23,000 acres. See Table 36.

Table 36: Area of Jurisdictions in Forest County

| Community | Acres | % of County |
|-------------------------|----------------|--------------------|
| Town of Alvin | 73,647 | 11.0% |
| Town of Hiles | 90,591 | 13.5% |
| Town of Popple River | 32,521 | 4.9% |
| Town of Argonne* | 69,076 | 10.3% |
| Town of Ross | 24,703 | 3.6% |
| Town of Armstrong Creek | 33,014 | 4.9% |
| Town of Caswell | 28,819 | 4.3% |
| Town of Laona | 68,821 | 10.2% |
| Town of Lincoln* | 40,324 | 6.0% |
| Town of Crandon* | 22,980 | 3.4% |
| Town of Blackwell* | 42,400 | 6.3% |
| City of Crandon | 3,955 | 0.6% |
| Town of Nashville* | 46,308 | 6.9% |
| Town of Wabeno* | 69,285 | 10.3% |
| Town of Freedom | 22,991 | 3.4% |
| Total | 669,435 | 100.0% |

Source: NCWRPC

*Town includes Tribal Lands

B. Generalized Existing Land Use

To identify and quantify existing land uses a two-step process was completed. The first was an air photo interpretation using 2020 air photos. Land uses were identified and categorized into several broad general land use classifications to create a map. The categories used are Agriculture, Commercial, Industrial, Woodlands, Residential, Transportation, Open Lands, Outdoor Recreation, Government-Public-Institutional, and Water.

An Existing Land Use Map provides a “birds eye view” of existing development patterns in the county. Easily observed in the county are the vast woodlands, including wetlands. Residential development is concentrated around many of the larger lakes and scattered along town and county roads throughout the county. See Map 8-1: Generalized Existing Land Use.

The second step used the map and calculations were made with a geographic information system (GIS) to determine acreage calculations. Note that these are generalized and are not intended to be exact, but

rather provide an overview of what the land is being used for now. The information is displayed below in Table 2.

Woodlands are currently the largest land use in the county. Over 90 percent of the land is used for forestry. The second largest land use is water with about 3.4 percent, and agriculture, industry, and residential uses are just under 2 percent each. Note that “Outdoor Recreation” typically includes developed recreation like golf courses and playgrounds, though much of the extensive woodlands in the county can be considered a form of outdoor recreation since they are open for public use. Table 37 keeps all woodlands in one category, regardless of if they are open for recreation or not. Additionally, “open lands” refer to areas that are not actively producing crops or timber.

Table 37: Countywide Land Use Acres and Percent of Total

| Land Use Category | Acres | Percent |
|----------------------------|----------------|----------------|
| Agriculture | 12,208 | 1.8% |
| Commercial | 603 | 0.1% |
| Governmental/Institutional | 569 | 0.1% |
| Industrial | 436 | 1.8% |
| Open Lands | 3,141 | 0.5% |
| Outdoor Recreation | 923 | 0.1% |
| Quarry | 311 | 0.0% |
| Residential | 10,434 | 1.6% |
| Transportation | 5,822 | 0.9% |
| Utility | 26 | 0.0% |
| Water | 22,736 | 3.4% |
| Woodlands | 612,298 | 91.5% |
| Total | 669,507 | 100.0% |

Source: Air photo interpretation, Local Plans & NCWRPC GIS

C. Demographics Affecting Land Use

Population, housing, and employment are the three most critical demographic factors that influence land use patterns. To determine future land use needs, a series of projections were completed using 2000 and 2020 population, housing units and employment information. By continuing the trends of the last twenty years into the future, we determine the number of additional persons, housing units and jobs that will need a place somewhere in the county.

The population of the County grew from 1980 to 2000, but between 2000 and 2020, it declined slightly. In 2000, there were 10,024 people living in the County. Between 2000 and 2020, the population declined by 8.4 percent, with an estimated 9,179 people in 2020. Over that same period, total housing units increased by over 11 percent, but employment decreased by 4.4 percent.

I. Population

The Wisconsin Department of Administration (DOA) projects population estimates through 2040 for every municipality and county in the state. These estimates project that Forest County will grow to 10,855 people in 2035, and then fall to 10,655 by 2040. Based on the estimated 9,179 2020 population, this is a growth rate of 16.1 percent between 2020 and 2040, compared to a decline of 8.4 percent between 2000 and 2020. Table 38 depicts population projections using a 16 percent growth rate, an 8.4 percent decline rate, and a 3.85 percent growth rate that is midway between these two projections. Table 38 lists population projections by 5-year increments according to these estimated growth rates.

Table 38: Population Projections 2020-2040

| Population Change | Based on... | 2020 | 2025 | 2030 | 2035 | 2040 |
|--------------------------|---------------------------------------|-------------|-------------|-------------|-------------|-------------|
| 16.10% | DOA Projections 2020-2040 | 9,179 | 10,245 | 10,710 | 10,855 | 10,655 |
| -8.40% | Estimated population change 2000-2020 | 9,179 | 8,986 | 8,793 | 8,601 | 8,408 |
| 3.85% | Average of two growth rates above | 9,179 | 9,267 | 9,356 | 9,444 | 9,532 |

Sources: ACS 2020, Wisconsin DOA, and NCWRPC

2. Housing

Over the last twenty years, housing units have increased by 11 percent from 8,322 in 2000 to 9,238 in 2020. Housing availability is a growing concern as employers struggle to retain workers. Even if the population stagnates, older structures eventually need to be replaced, and an aging population might not be able to live as easily in a place that requires a car or is far from medical resources.

Based on their population projections from 2020 to 2040, the Wisconsin DOA predicts that there will be 4,674 households by 2040. Although there were 9,238 housing units in 2020, 4,706 were seasonal vacant units, leaving only 4,532 housing units remaining for year-round residents, some of which are currently also vacant. In 2020, there were 3,929 households in Forest County, meaning that housing must be built to accommodate the future year-round population. Since the DOA projection of 18.96 percent growth in households is considerably higher than the actual growth in households between 2000 and 2020 of negative 6 percent, a midway projection between the two results in a 6.48 percent increase in households between 2020 and 2040, or 4,184 total households. See Table 39 for calculations.

Even though there are currently more housing units than residents, availability and affordability are a concern, and by 2040, some units could be demolished due to age or condition, and others could be converted to seasonal or tourism-oriented housing. Therefore, it is important to continue encouraging new housing construction in Forest County.

Table 39: Household and Employment Projections 2020-2040

| Households Change | Based on... | 2020 | 2025 | 2030 | 2035 | 2040 |
|--------------------------|--------------------------------------|-------------|-------------|-------------|-------------|-------------|
| 18.96% | ACS 2020 & DOA 2025-'40 Estimates | 3,929 | 4,433 | 4,644 | 4,715 | 4,674 |
| -6.00% | Estimated household change 2000-2020 | 3,929 | 3,870 | 3,811 | 3,752 | 3,693 |
| 6.48% | Average of other two growth rates | 3,929 | 3,993 | 4,056 | 4,120 | 4,184 |
| Employment Change | | | | | | |
| Employment Change | Based on... | 2020 | 2025 | 2030 | 2035 | 2040 |
| -4.40% | Rate of change between 2000 and 2020 | 3,709 | 3,668 | 3,627 | 3,587 | 3,546 |

Sources: ACS 2020, Wisconsin DOA, and NCWRPC

3. Employment

Employment in the County has declined by 4.4 percent from 2000 to 2020 and is expected to continue as the County’s population ages and retires. Though a decrease in employment is likely, it doesn’t automatically reflect a decrease in housing, as retired households may find Forest County’s lower cost of living and scenery ideal for retirement. See Table 39.

D. Land Demand

As the County’s population changes there is likely demand for more housing. Even if the population decreases, household size has decreased nationally, meaning more housing units relative to the population are needed. For the purposes of projecting demand, acreage calculations will be based on the “midway” population projection of 3.85 percent between 2020 and 2040, and future demand is based on the current density of 1.13 residential acres per person, 0.065 commercial acres per person, and 0.048 industrial acres per person. Table 40 displays the future land use demands in five-year increments for these land uses. Note that these are cumulative totals between 2022 and 2040, rather than totals for each five-year period.

Table 40: Projected Land Use Demand Through 2040

| Land Use | 2025 | 2030 | 2035 | 2040 |
|---|-------------|-------------|-------------|-------------|
| Projected additional residents (cumulative) | 88 | 177 | 265 | 353 |
| Residential Acres (1.14 acres per person) | 100 | 201 | 301 | 401 |
| Commercial (0.07 acres per person) | 6 | 12 | 17 | 23 |
| Industrial (0.05 acres per person) | 4 | 8 | 13 | 17 |

Source: NCWRPC

E. Land Values

Overall county equalized land values have increased over 86 percent over the last nine years; however, not all types of land increased equally. Residential property values increased by 110 percent and commercial values increased by 90 percent, manufacturing by 95 percent, and agricultural values declined

43 percent. Meanwhile, undeveloped lands increased by over 69 percent. Agricultural (AG) Forest was not a category used in 2000. See Table 41.

Table 41: Forest County Change in Land Values 2000 and 2022

| Type of Property | 2000 | 2022 | % Change |
|--------------------|----------------------|----------------------|---------------|
| Residential | \$196,697,900 | \$504,089,900 | 156.3% |
| Commercial | \$6,599,000 | \$12,697,400 | 92.4% |
| Manufacturing | \$375,500 | \$723,900 | 92.8% |
| Agricultural | \$4,395,100 | \$2,685,000 | -38.9% |
| Undeveloped | \$4,113,500 | \$9,596,200 | 133.3% |
| Ag. Forest | N/A | \$5,382,300 | N/A |
| Forest | \$86,702,900 | \$85,560,200 | -1.3% |
| Other | \$787,000 | \$1,243,100 | 58.0% |
| Total Value | \$299,670,900 | \$621,978,000 | 107.6% |

Source: Wisconsin DOR Statement of Changes in Equalized Values 2000 & 2022

F. 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. Although the map is advisory and does not have the authority of zoning, it is intended to reflect community desires and serve as a guide for local officials to coordinate and manage future development. The local maps were developed after reviewing the natural and built environments and after examining population, housing, employment, and land demand trends. Finally, local maps were merged to create the countywide future land use plan.

The primary future land use concern in Forest County is the decline in quality of forest habitat for economic or recreational use on public lands as large tracts of forest are poorly maintained. With over 18,000 acres of wilderness, there is a desire to stop future wilderness designations and encourage alternative uses for existing wilderness areas. The Land Information-Land Conservation-GIS Committee should continue to monitor the number of acres of tax-exempt land as well as zoning changes to identify trends in land ownership and the potential for increased tax base.

Developing the county plan was simple since it takes all the future land use maps from the locally developed comprehensive plans and combines them together into one county future land use map. However, the towns of Caswell, Crandon, Popple River, and Ross did not participate in the planning process, so those towns were mapped differently. To do so, several generalized land use categories were established to identify future land uses in those towns. These are like the land use categories used in the other towns and the city.

I. Land Use Categories

Much like the existing land use process several future land use categories were established. Nine categories are defined below:

Agricultural Areas

Identifies areas to be preserved for the purpose of general crop farming or the raising of livestock.

Commercial

Identifies areas recommended for commercial development, as well as existing commercial establishments located throughout the county.

Forestry Areas

Identifies areas of large woodlands within the county.

Governmental/Public/Institutional

Identifies existing or planned governmental/public/institutional facilities within the county, including recreational facilities.

Industrial

Identifies areas recommended for industrial development, as well as existing industrial areas located throughout the county.

Mixed Use

These are areas with a variety of uses, such as a small community or village with retail, commercial, and residential uses in close proximity.

Preservation & Open Space

Contains sensitive environmental areas, such as floodplains, wetlands, and open water. This does not include agricultural land unless it has been taken out of production.

Outdoor Recreation

This category differs from forestry and preservation/open space in that it is used for active, developed recreational facilities such as a baseball diamond or golf course.

Residential

Identifies areas recommended for residential development typically consisting of smaller lot sizes, often lakeshore development.

Rural Residential

Identifies areas that are recommended for less dense residential development, consisting of larger minimum lot sizes than the residential category and it also includes other scattered mixed uses.

Shoreland Development

Shoreland Development consists of residential development which is compatible with the County's shoreland zoning program.

Transportation

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.

Tribal

See Tribal Plans for details.

Note that it is possible for multiple county zoning districts to be consistent within the generalized land use categories defined above. A variety of factors need to be considered in any rezoning decision.

2. Future Land Use Map

The Future Land Use map is not the same as the Existing Land Use map. The Existing Land Use map categorizes land the way it is being used today, while the intent of the Future Land Use map is to identify general areas for future development. Often, there is some overlap, but the purpose of each map is very different. Individual towns with comprehensive plans may have their own maps as well, but towns without comprehensive plans follow the County's comprehensive plan.

The identification of desired future land use types through the map does not imply that an area is immediately appropriate for zoning or 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. An essential characteristic of any planning is that it be ongoing and flexible. Periodic updates to this comprehensive plan are needed to reflect current trends. See Map 8-2: Future Land Use.

The Future Land Use map developed reflects no major changes in land use over the next twenty years. Forestry will continue to be the major land use in the county because of the dominance of public land ownership and scattered throughout the county will be a variety of other mixed uses.

G. Redevelopment Opportunities

The most efficient development utilizes existing public services and infrastructure; these areas are referred to as "smart growth" areas. Currently, most existing services are located in the City of Crandon, the Towns of Laona and Wabeno, and the Mole Lake and Potawatomi tribal nations. 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. Areas where sewer, water, other infrastructure, and services are not available should have minimal industrial or commercial development and only scattered residential development where appropriate.

H. Adjoining Planning Efforts

All six Wisconsin counties surrounding Forest County have an adopted comprehensive plan (Florence, Langlade, Marinette, Oconto, Oneida, and Vilas). Many municipalities within these counties also have individual comprehensive plans.

8.3 Goals, Objectives & Policies

The following section identifies the goals, objectives, and policies of the county related to land use.

Goals:

1. Encouragement of land uses, densities, and regulations that promote efficient development patterns.
2. Planning and development of land uses that create or preserve varied and unique urban and rural communities.
3. Provide adequate infrastructure & public services, and an adequate supply of developable land to meet existing and future demand for residential, commercial, industrial, and agricultural uses.
4. Promotion of the redevelopment of lands with existing infrastructure and public services and the maintenance and rehabilitation of existing residential, commercial, and industrial structures.
5. Balance individual property rights with community interests and goals.
6. Retain a flexible approach to development as economic conditions change.

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 infrastructure and services.
2. Assure that the pace of development does not exceed the capacity of utilities, roads, and community facilities and services.
3. Discourage new development that adversely affects the property value or livability of neighboring properties.

4. Conserve and revitalize older neighborhoods, commercial, and industrial areas.
5. All comprehensive plans should strive to be consistent with and seek to minimize conflicts with other levels of government, and implementation tools.
6. Promote new land development that is compatible with local government comprehensive plans and related plans.
7. Expand the tax base and encourage alternative uses for tax exempt lands.

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. The County will maintain the Comprehensive Plan, which will serve as a guide for future land use and zoning decisions.
4. The location of new development should be restricted from areas in the county known to be unsafe or unsuitable for development.
5. Manage public lands in a manner compatible with land use goals, objectives, policies, and plans.
6. The county may allow higher density and mixed development where it is compatible with existing development patterns.
7. Where appropriate, vary mixed uses on larger parcels.
8. Encourage towns, tribes, and the city to develop and maintain local comprehensive plans.
9. All comprehensive plans should strive to maximize public input in their planning efforts.
10. Coordinate planning efforts with surrounding counties, especially for adjoining facilities such as roads and ATV trails.
11. Work with the U.S. Forest Service to explore options for opening tax-exempt land for alternative uses.
12. Review land ownership and zoning changes on a yearly basis to limit the conversion of lands to tax-exempt uses.

Chapter 9: Implementation

9.1 Background

This is the final chapter of the Forest County Comprehensive Plan. This chapter outlines the plan adoption process, monitoring, amendment, and update procedures, and overviews the primary plan implementation tools. This chapter concludes with the overall recommendations to implement this plan. The County Board and its various committees, boards, and commissions, along with county staff, as well as landowners and developers, will use this Comprehensive Plan to guide the physical development of the County in the years to come.

9.2 Plan Adoption

The adoption process requires that the Plan Commission, which is the Land Conservation-Land Information-GIS Committee, reviews the Comprehensive Plan and pass a resolution (by a majority vote) to recommend the adoption of the plan to the County Board. That recommendation is forwarded to the County Board who must adopt the Comprehensive Plan by “ordinance”. Prior to the adoption of the Comprehensive Plan, a public hearing is required to be held to solicit public comment. That public hearing must be advertised with at least 30 days’ notice.

Adoption formalizes the plan document as the framework to guide local development decisions over the next 10 years. The adopted plan should also be recognized as a tool for communicating the county’s land use policy related to growth and development. State statute 66.1001 overviews the adoption process.

9.3 Plan Evaluation

Members of the County Board, Land Conservation-Land Information-GIS Committee, county staff, and other local decision-making bodies should periodically review the plan and identify areas that might need to be updated. At least annually the Future Land Use Plan Map should be reviewed and amended if necessary to keep the map current. While at a minimum, the entire plan should be formally reviewed at least every five years and updated at least every 10 years.

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.

When implemented these are intended to provide direction to county staff and their 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 of measuring 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.

9.4 Plan Amendments

The plan may be amended at any time upon the recommendation of the Land Conservation-Land Information-GIS Committee and approval from the County Board following the same statutory process described for initial plan adoption. Amendment procedures are the same regardless of how minor the proposed change. Amendments may be appropriate throughout the lifecycle of the plan, particularly if new issues emerge or trends change and will typically consist of changes to the plan text or maps. Large-scale change or frequent amendments to meet individual development proposals should be avoided or the plan will lose integrity.

A list of general criteria to consider when reviewing proposed amendments to the comprehensive plan, including:

- The plan amendment corrects an error made in the original plan.
- The amendment is consistent with a town plan updates and the goals, objectives, and policies of the Forest County Comprehensive Plan.
- The amendment does not create an adverse impact on public facilities and services that cannot be mitigated.
- The change does not have a significant adverse impact on the natural environment including surface water quality and groundwater, or the impact can be mitigated by improvements on the site or in the same vicinity.
- The change does not adversely impact any landmarks or other historically significant structures or properties unless mitigated through relocation, commemoration, or dedication.
- The change allows a more appropriate transition or buffer to the planned uses on adjacent properties than the current land use.
- The resulting new development would be compatible with the existing land uses and physical character of the surrounding neighborhood or would upgrade and improve the area.
- The change incorporates a locally adopted town plan, especially related to future land use.
- There is a significant change in the area’s characteristics that would justify a plan amendment.

The Land Conservation-Land Information-GIS Committee, prior to the public hearing and adoption by the County Board, must review proposed amendments. The public should be notified of proposed plan changes and allowed an opportunity for review and comment. For significant changes, it may be desirable to solicit public opinion through surveys and/or community meetings prior to the public hearing.

In the future, as plan amendments occur, it is important that county staff conduct consistency reviews. These reviews will ensure that the plan is up to date. It is also critical that the plan and/or maps are changed that these changes are made they do not conflict with other sections of the plan or other maps.

9.5 Plan Updates

According to the State's comprehensive planning law, comprehensive plans must be updated at least once every ten years. As opposed to the more routine amendments described above, plan updates will probably involve re-writing entire chapters of the plan document. A plan update should include a thorough examination of the community's goals and objectives, based upon 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.

It is important that the public be involved in the update process. To ensure that the public is engaged in plan amendments, the same procedure used for initial plan adoption must be followed. (See State Statute 66.1001). Upon Land Conservation-Land Information-GIS Committee review and resolution to make recommended changes to the plan, the County Board shall call a public hearing to allow property owners and citizens time to review and comment on recommended plan changes. The public hearing shall be advertised with a 30-day Class I notice.

9.6 Consistency Among Plan Chapters

The State planning law requires that by January 1, 2010, land use decisions must be consistent with the locally adopted comprehensive plan. Therefore, to meet this deadline, the county should review and update related ordinances, such as zoning (both general and shoreland), land division, and official mapping.

In addition, the planning law 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 Forest 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 Forest County Comprehensive Plan. This will ensure that the Land Records & Regulations Department is using the most current information available.

9.7 Implementation Tools

There are two primary types of implementation tools: Nonregulatory and Regulatory. Nonregulatory 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.

A. Nonregulatory Tools

There are two common types of nonregulatory tools – the annual budget and the capital improvements budget. Another major policy effort that may be undertaken by the county is the Strategic Plan. In addition, each county department, as well as agencies funded by the County, develop objectives, and prepare work plans.

I. Annual Operating Budget

Forest 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.

2 Capital Improvement Plan

A Capital Improvement Program (CIP) is simply a method of planning for and scheduling expenditures for public improvements over a period of several years to maximize the use of limited public funds. Typically, improvements or expenditures considered in the CIP process include:

- Public buildings (such as courthouse renovations)
- Roads and highways (maintenance and new construction/paving)
- Long-term major equipment
- Park and trail acquisition and development

Counties can create, review, and extend by one year a CIP 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.

B. Regulatory Tools

Regulatory tools apply to different degrees in different areas of the county. General zoning applies only to towns that have adopted county zoning, while shoreland zoning applies to the entire county. 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.

1. General County Zoning:

Currently, four of the fourteen towns in the county are included in general county zoning. The County Zoning Ordinance is a detailed, locally adopted law that is used to regulate and control how land is used and developed. The zoning ordinance contains rules for building setbacks, the density of development, the height and size of building and other structures, and the type of land uses that are allowed on all lands in the County. The zoning ordinance consists of a written text and a map. The general purpose of zoning is to protect public health, safety, and general welfare.

Zoning provides a reasonable protection of property rights of landowners by minimizing incompatible uses. 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. See the County Zoning Office for more information.

The towns of Argonne, Crandon, Nashville, and Wabeno have been zoned through the County. Alvin, Armstrong Creek, Blackwell, Caswell, Freedom, Hiles, Laona, Popple River and Ross have been unzoned, except for areas where the shoreland ordinance is administered by the county. The Town of Lincoln administers their own zoning ordinance, except for the shoreland areas described above, where double jurisdiction exists with the county.

2. Shoreland Zoning:

Shoreland Zoning is mandated by state law and is administered at the county. 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 or to the landward side of the floodplain and 1000 feet of a lake, flowage, or pond. The county enforces shoreland zoning throughout all towns for shoreland zoning, regardless of if they have county zoning, local town zoning or no zoning.

3. Subdivision Regulations

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 future.

4. Official Mapping

Counties have limited official mapping powers; however, they may adopt highway-width maps indicating location and width of proposed highways and any highways being expanded.

9.8 Recommendations

The Forest County Comprehensive Plan and the locally adopted comprehensive plans are 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:

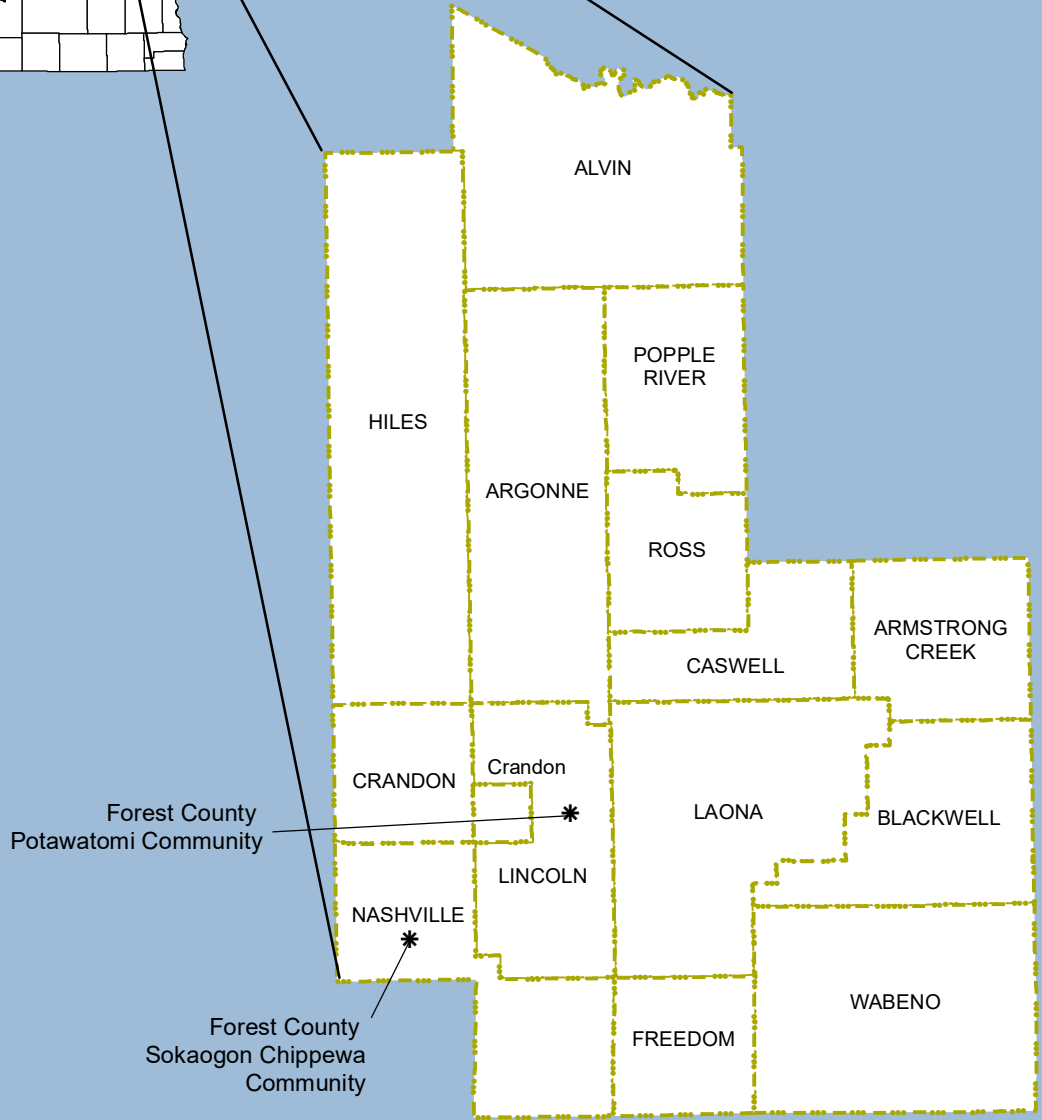
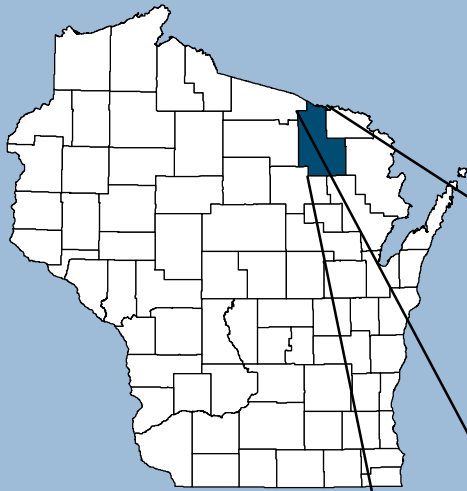
- The development and implementation of programs and support systems that further the goals and objectives set forth in this plan.
- The implementation of specific actions as identified in this plan.
- The implementation and enforcement of regulatory ordinances based on the goals and objectives identified in this plan.
- The establishment of a continued planning process providing for periodic review and updates to this plan.

The following are some recommendations to implement the goals, objectives, and policies that are contained in the comprehensive plan. These recommendations are:

1. The Land Use-Land Information/GIS Committee should pass a resolution recommending adoption of the Comprehensive Plan.
2. The County Board should hold a public hearing, adopt the plan by ordinance, and use it as a guide for decision-making.
3. Forest County should consider changes to its zoning ordinance and maps, land division ordinance, and other implementation tools to establish consistency.
4. The Land Use-Land Information/GIS Committee should become knowledgeable of the plan and use it to justify recommendations to the County Board on development and other issues.
5. Forest County's staff should incorporate the goals, objectives, and policies of the plan into annual work plans and budgets.
6. Forest County should encourage citizen awareness of the plan by having the document hosted on the county website.
7. Forest County should provide a link for the plan to all communities within the county.
8. The Land Use-Land Information/GIS Committee should review the Future Land Use Map at least annually and make necessary amendment recommendations to the County Board.
9. Forest County should formally review the plan every five years and update the plan at least every ten years.

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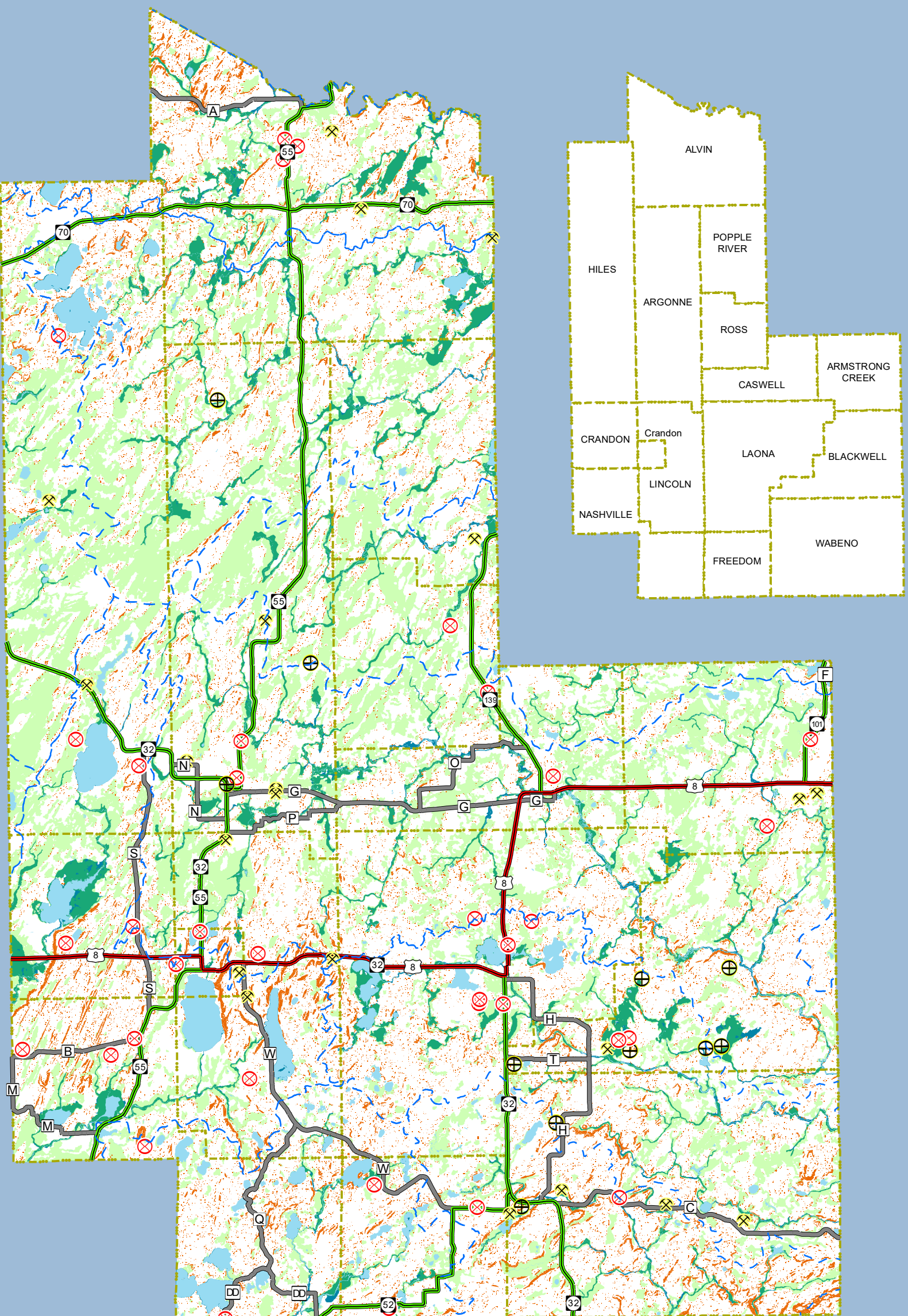
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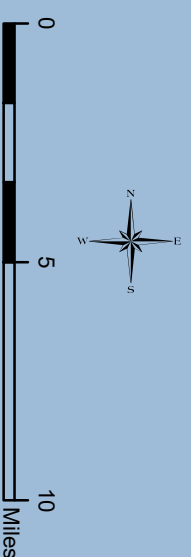
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Legend

- - - Minor Civil Divisions
- US Highway
- State Highways
- County Highways
- Watershed
- - - Boundaries
- ⊗ Abandoned Landfill
- ⊕ Abandoned Non-Metallic Mines
- ⊗ Non-Metallic Mines (Not all Shown)
- Water
- Steep Slopes
- Wetlands
- Floodplain



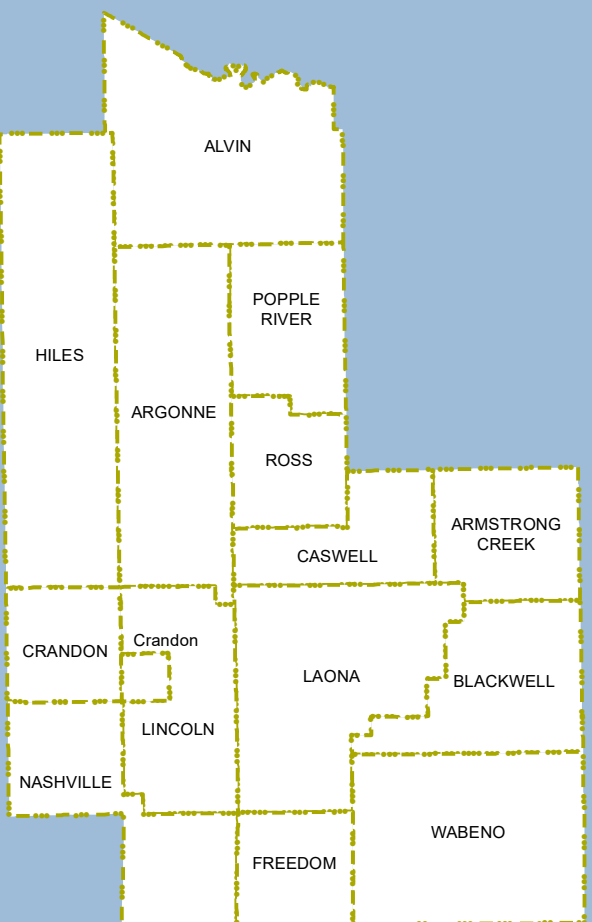
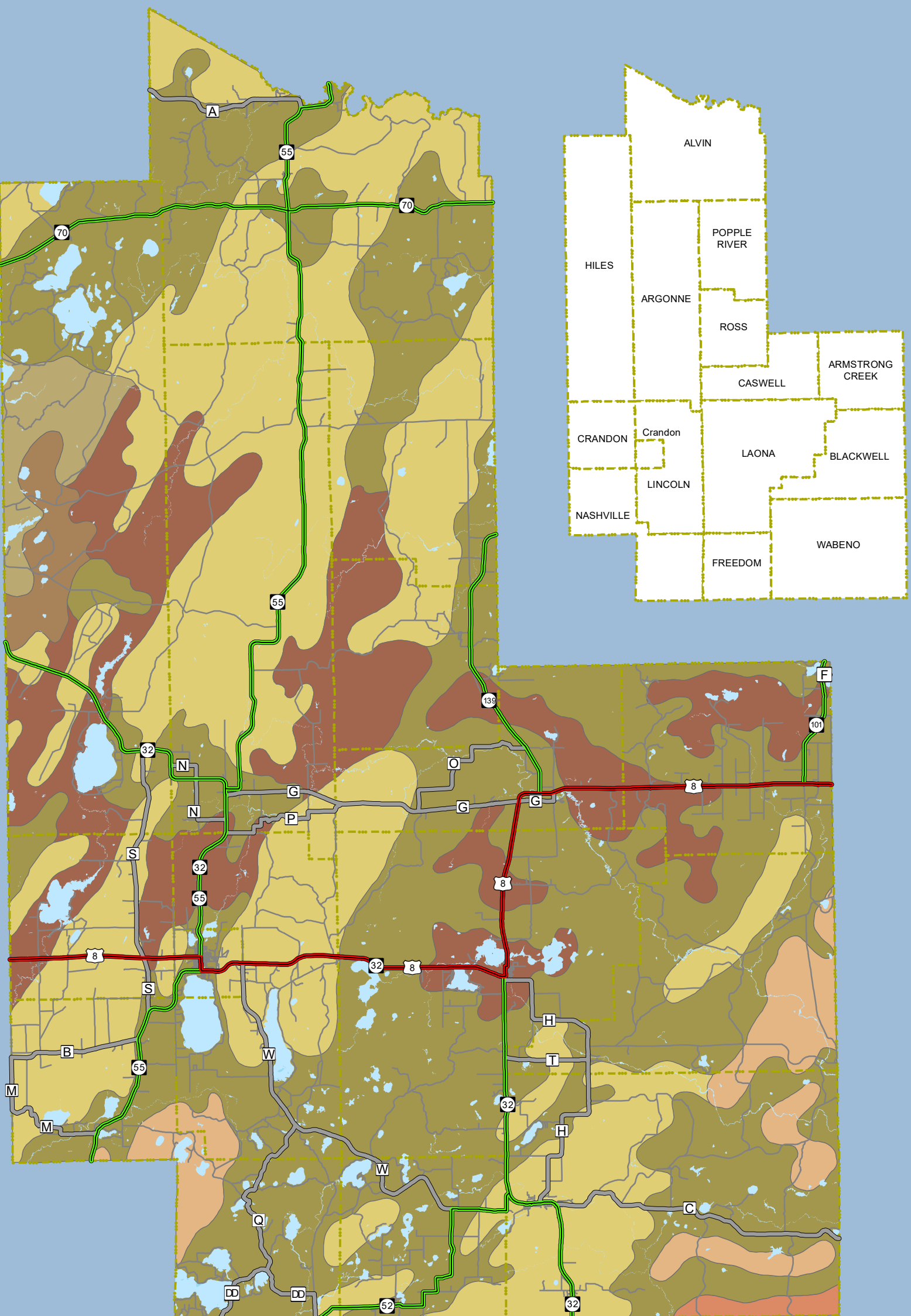
Source: WI DNR, NCRWPC, FEMA
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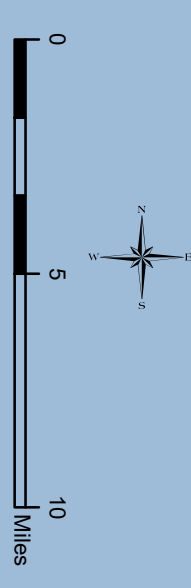


Legend

- Minor Civil Divisions
- US Highway
- State Highways
- County Highways
- Local Roads

General Soil Associations

- AU GRES-CROSWELL-KINROSS (W1009)
- CHAMPION-WABENO-MONICO (W1017)
- ISHPENING-MICHIGAMME-MENAHGA (W1030)
- KEWEENAW-SARONA-KARLIN (W1016)
- PADUS-PENCE-GREENWOOD (W1006)
- RIFLE-LOXLEY-CATHRO (W1003)
- SAYNER-RUBICON-OMEGA (W1005)
- Water



Source: WI DNR, NCRWPC, USDA - SCS, 1979

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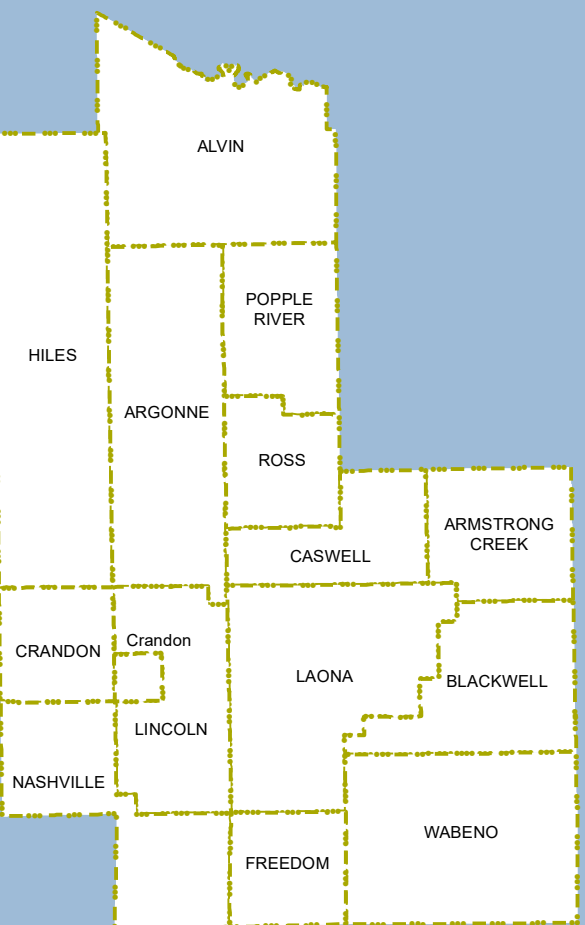
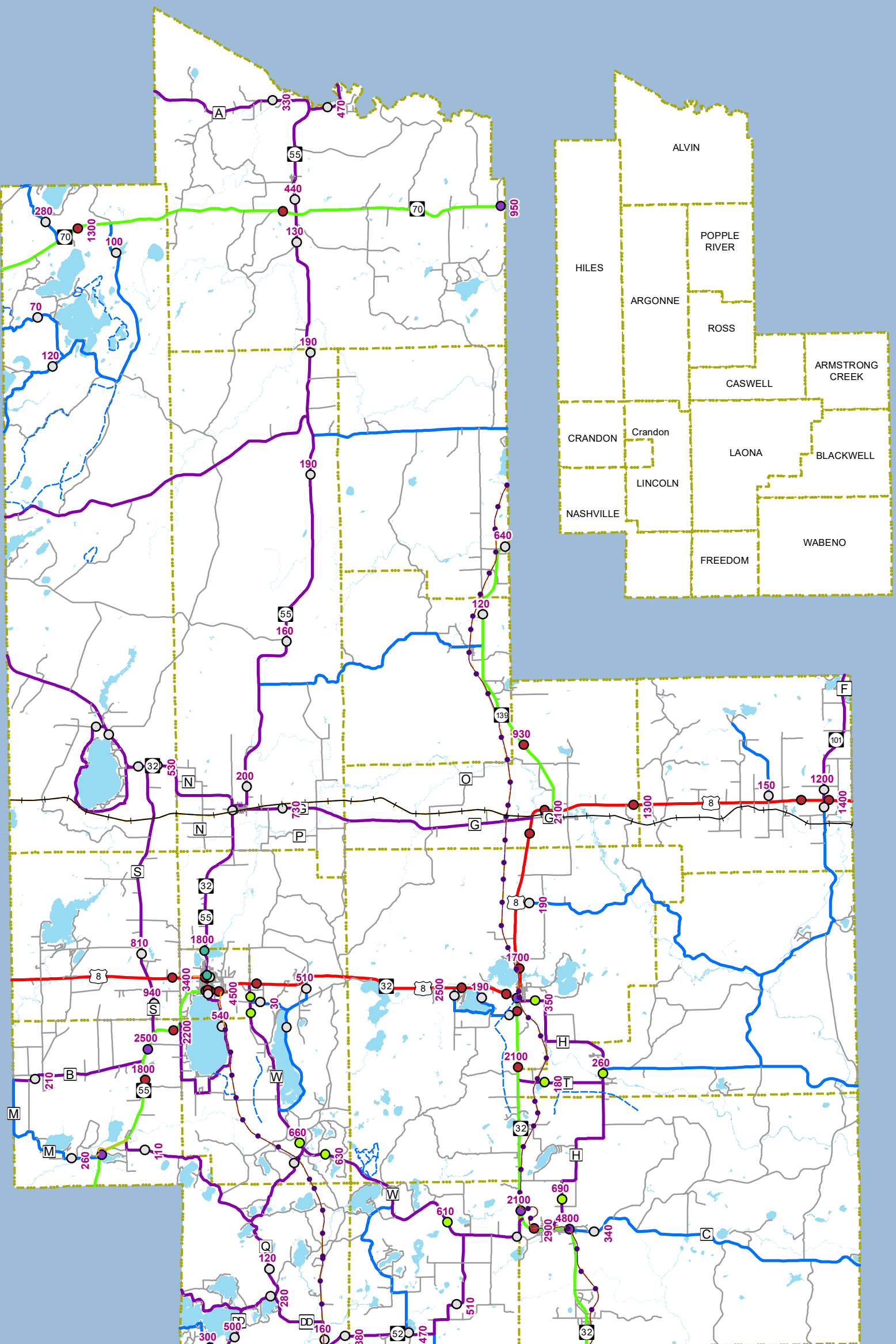
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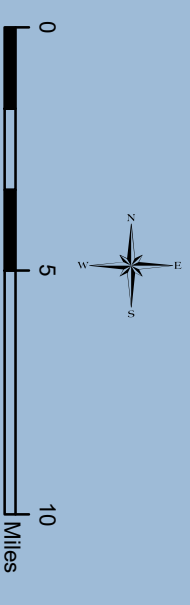
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- ✚ Airport
- ✚ Air Strip
- Abandoned Railroad
- Hiking / Biking Trail
- Hiking Trails

Traffic Counts

- 2009
- 2015
- 2018
- 2019
- 2021

- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local Roads
- Minor Civil Divisions
- Water



Source: WI DNR, NCVRPC, WISDOT, Forest County
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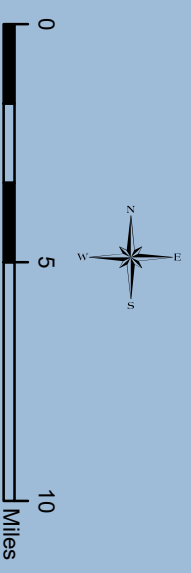
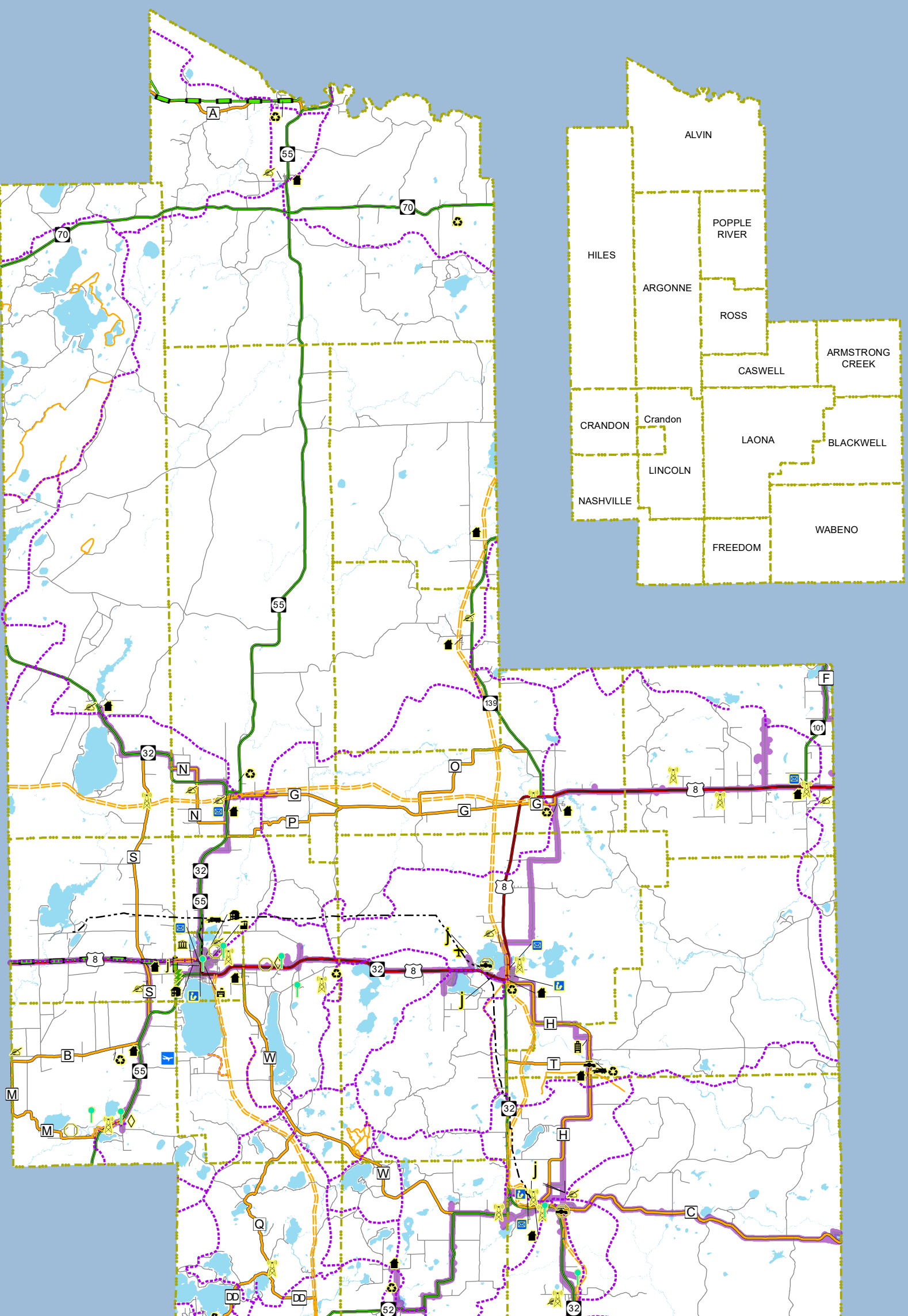


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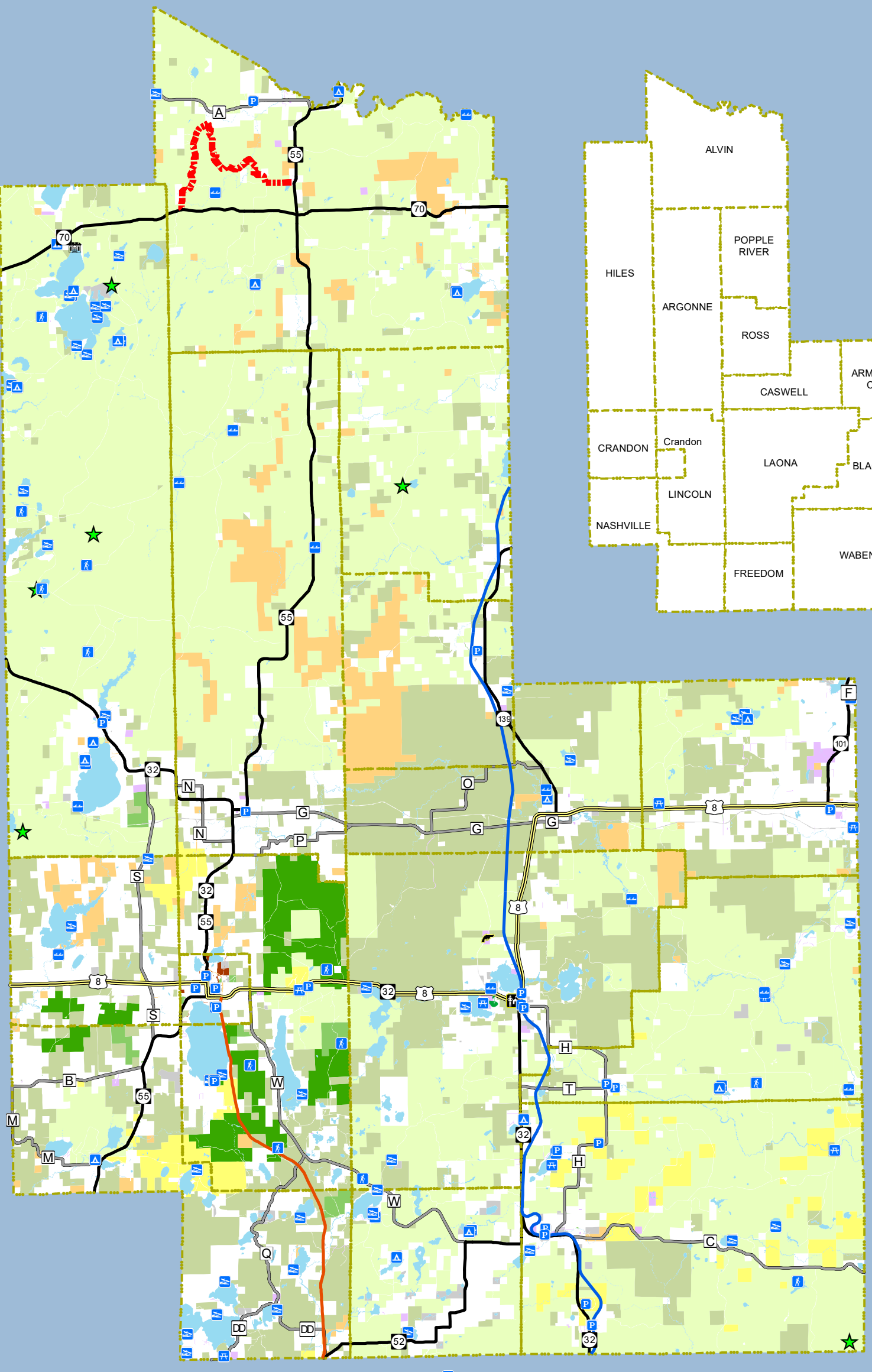
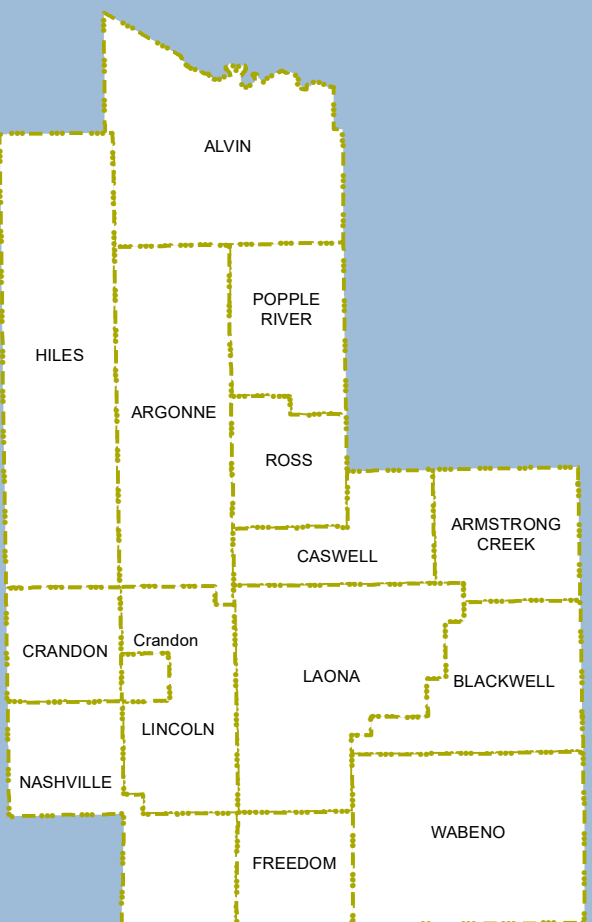


Source: WI DNR, NCRRPC, Forest Co, ATC
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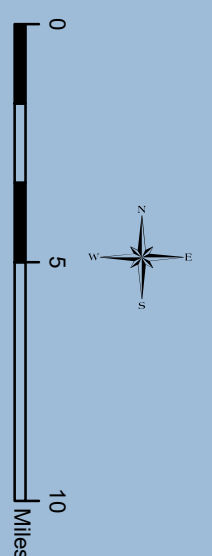


Legend

| | | | |
|--|------------------------|--|---------------------|
| | Minor Civil Divisions | | Park |
| | US Highway | | Picnic Area |
| | State Highways | | Canoe Access |
| | County Highways | | Campgrounds |
| | Rustic Roads | | Boat Launch |
| | Tribal Lands | | Trail Head |
| | Federal Lands | | State Natural Areas |
| | State Lands | | BSA Summer Camp |
| | County Lands | | Golf Course |
| | County Forest Lands | | Ranger Station |
| | City of Crandon Lands | | Shooting Range |
| | Town Lands | | Youth Camp |
| | Managed Forest Lands | | |
| | Other Tax Exempt Lands | | |
| | Water | | |

Trails

| | |
|--|------------------------|
| | Nicolet State Trail |
| | Wolf River State Trail |



Source: WI DNR, NCMWRPC, Forest Co

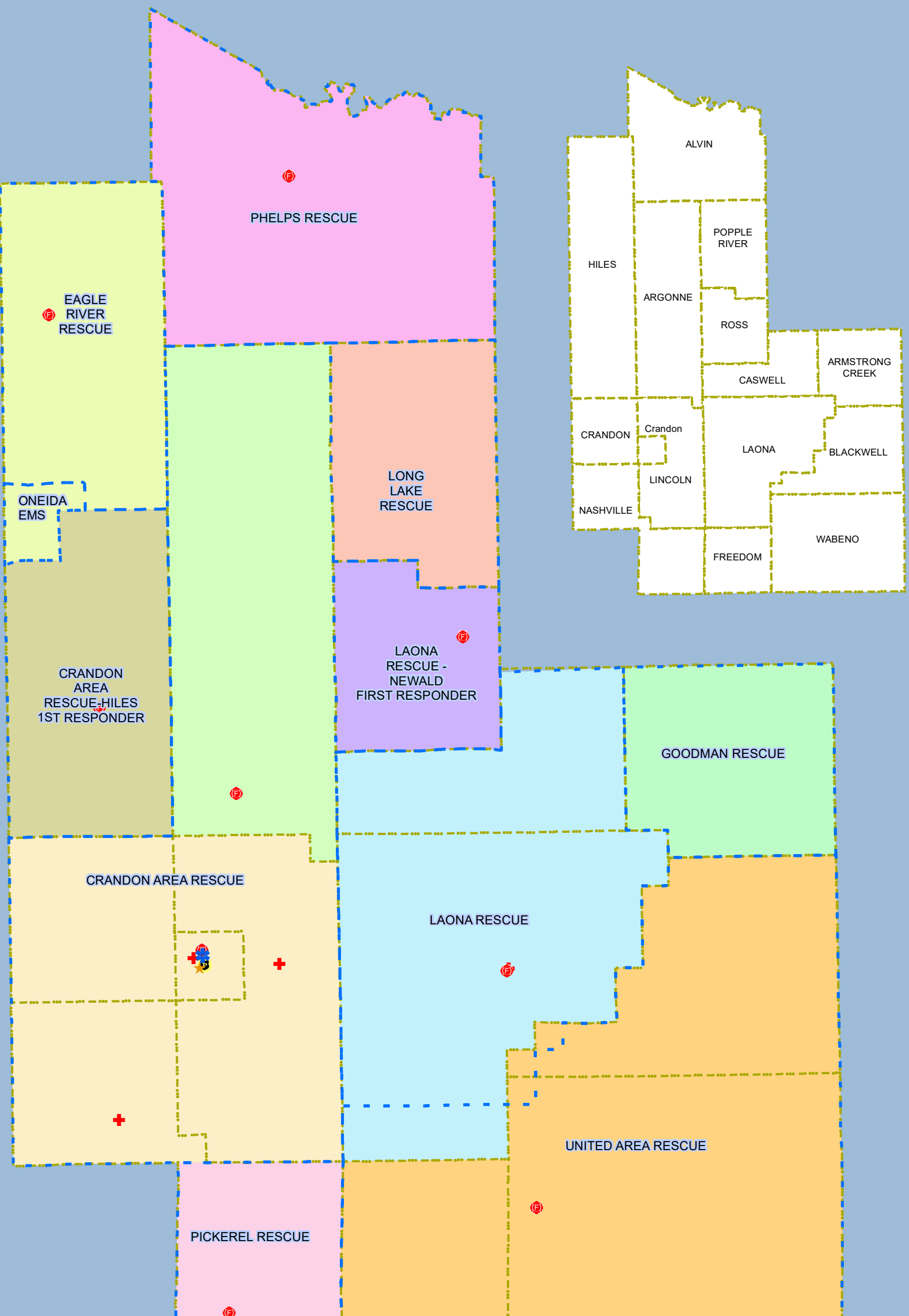
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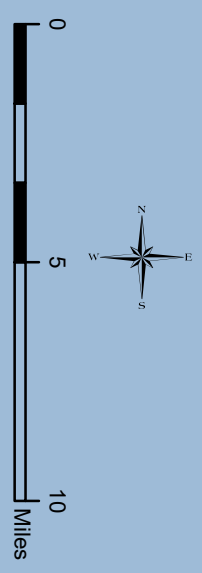


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Legend

| | | | |
|--|-----------------------|--|--------------------|
| | Minor Civil Divisions | | City Police |
| | Ambulance Service | | Fire Stations |
| | Health Services | | Hospital |
| | Rescue Squad | | Sheriff Department |
| | ALVIN FIRE | | |
| | ARGONNE FIRE | | |
| | CRANDON FIRE | | |
| | GOODMAN FIRE | | |
| | HILES A FIRE | | |
| | HILES B FIRE | | |
| | LAONA FIRE | | |
| | LONG LAKE FIRE | | |
| | NEWALD FIRE | | |
| | PICKEREL FIRE | | |
| | WABENO FIRE | | |



Source: WI DNR, NCWRPC, Forest Co

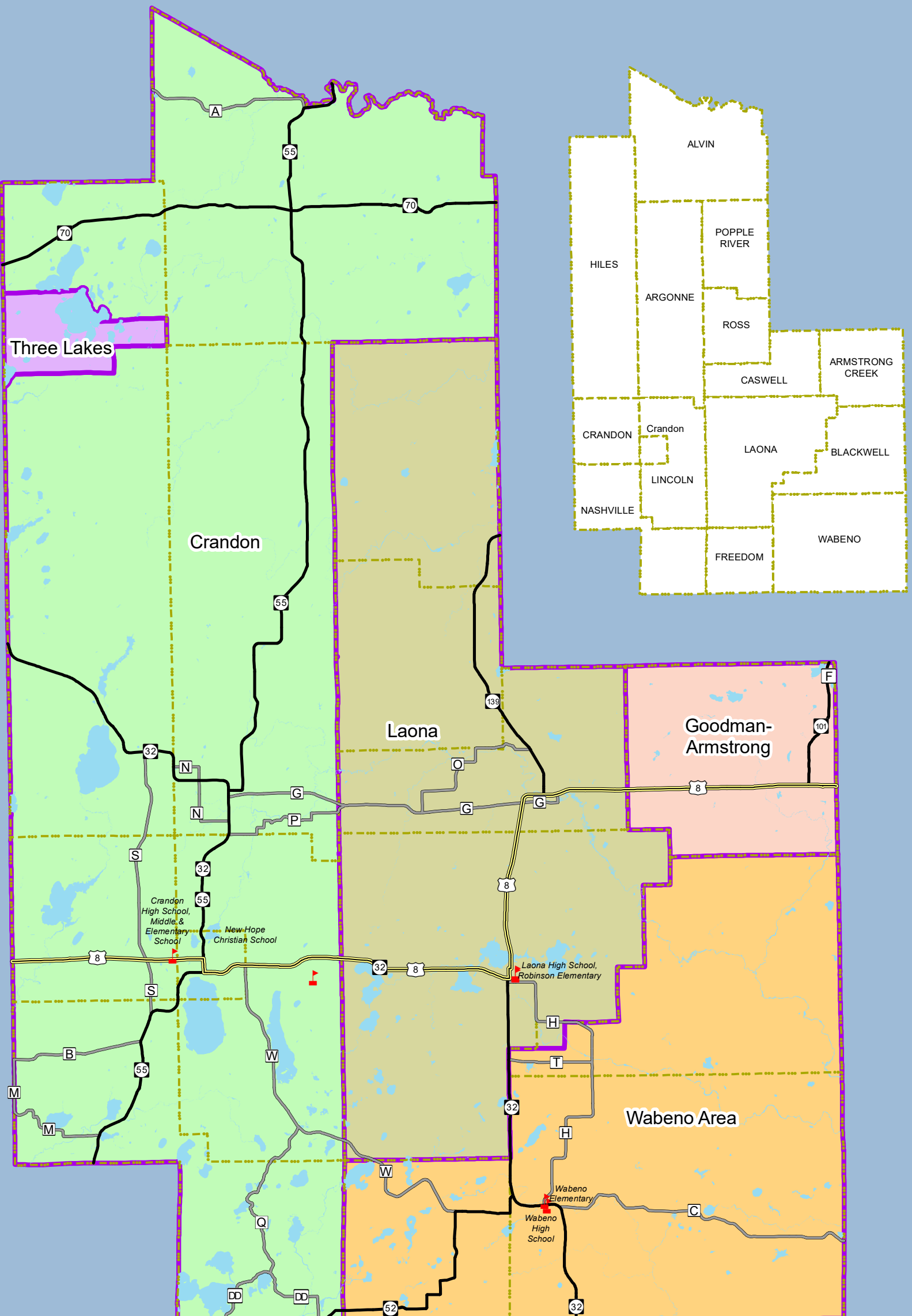
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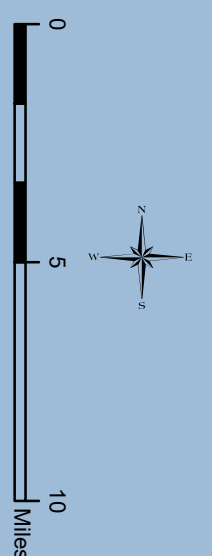


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Legend

| | |
|-----------------------|-------------------|
| School | Crandon |
| US Highway | Goodman-Armstrong |
| State Highways | Laona |
| County Highways | Three Lakes |
| Minor Civil Divisions | Wabeno Area |
| Water | |



Source: WI DNR, NCWRPC, Forest Co

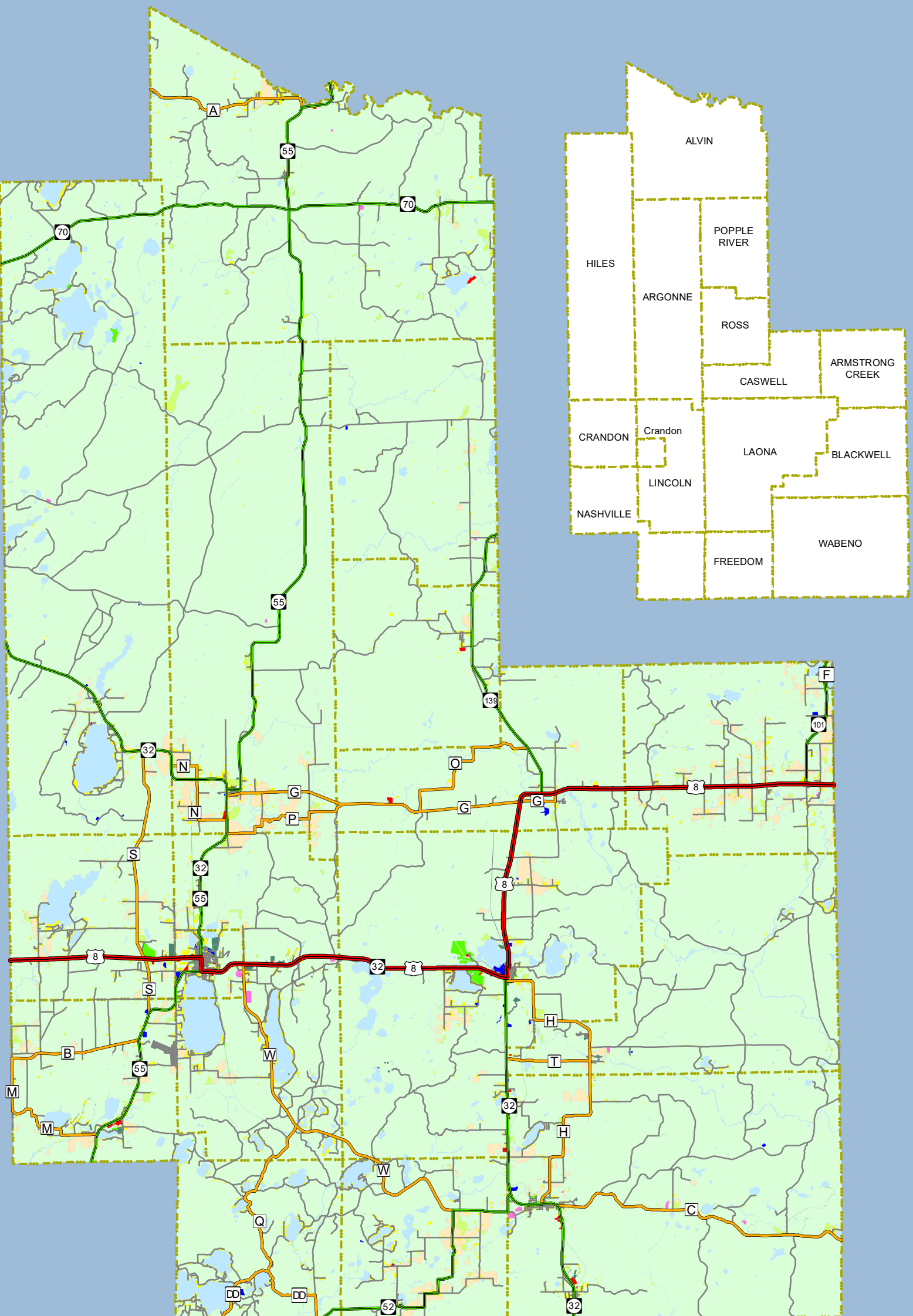
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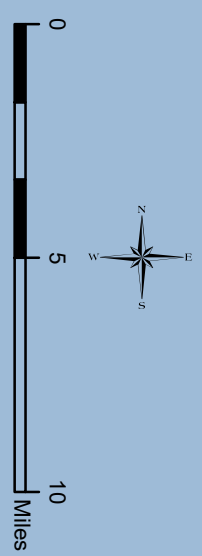


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Legend

- US Highway
- State Highways
- County Highways
- Local Roads
- Minor Civil Divisions
- Agriculture
- Commercial
- Governmental
- Utility / Governmental / Institutional
- Industrial
- Open Lands
- Outdoor Recreation
- Quarry
- Residential
- Transportation
- Water
- Woodlands



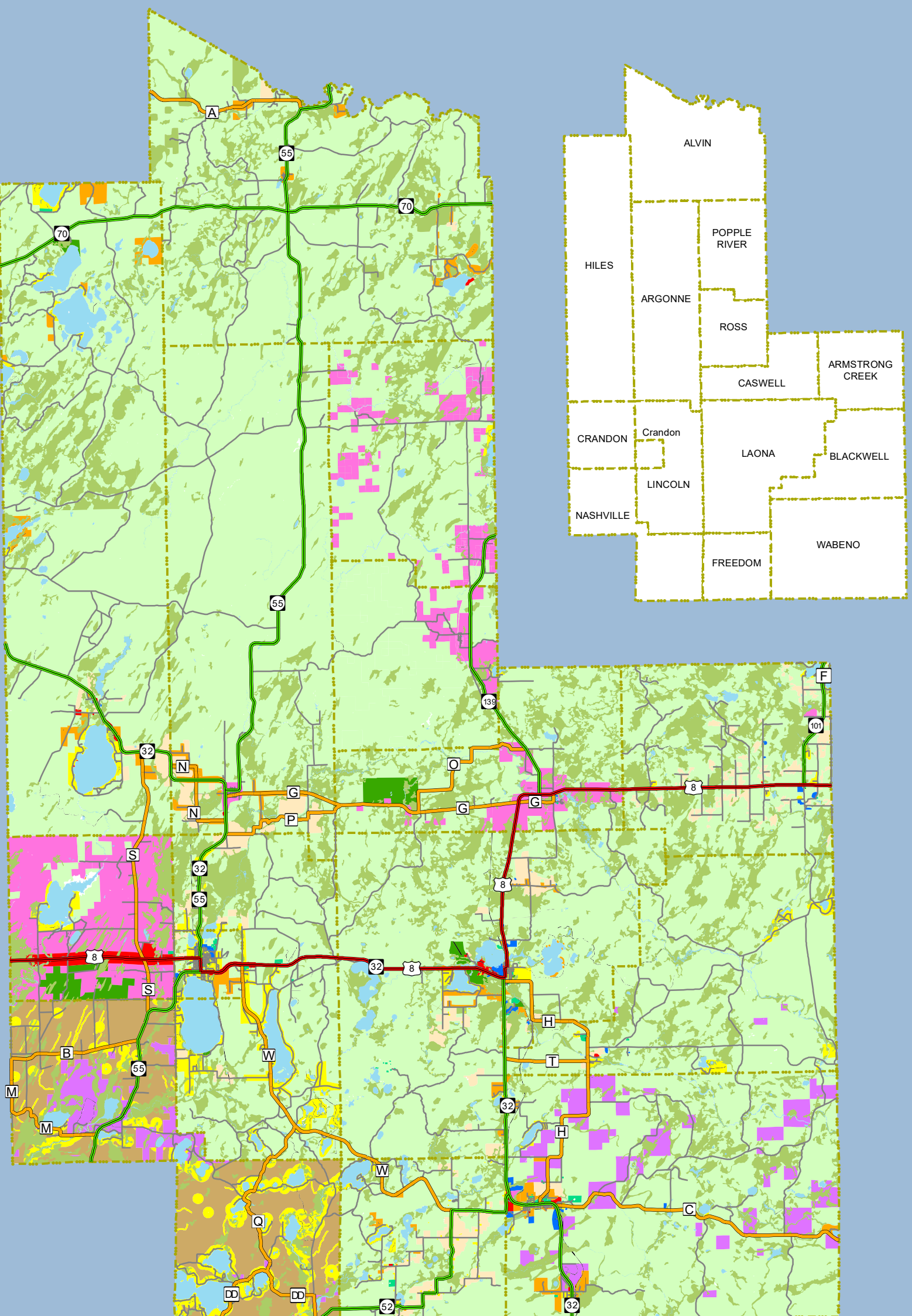
Source: WI DNR, NCWRPC, 2005 Aerialphoto Interpretation
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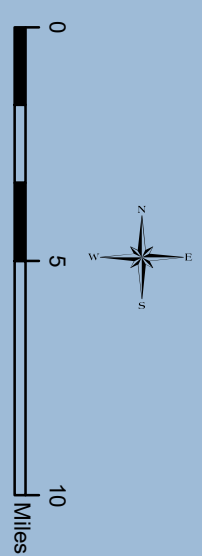
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Legend

| | | | |
|--|-----------------------|--|-----------------------------------|
| | US Highway | | Agricultural / Forestry |
| | State Highways | | Agricultural Areas |
| | County Highways | | Commercial |
| | Local Roads | | Forestry Areas |
| | Minor Civil Divisions | | Governmental/Public/Institutional |
| | | | Industrial |
| | | | Mixed Use |
| | | | Preservation and Open Space |
| | | | Outdoor Recreation |
| | | | Residential |
| | | | Rural Residential |
| | | | Shoreland Development |
| | | | Transportation |
| | | | Tribal (See Tribal Plans) |

See Town Comprehensive Plans for detailed information.
 Note that the Towns of Caswell, Crandon, Popple River, and Ross did not complete a plan.



Source: WI DNR, NCWRPC, Forest Co

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Attachment A: Public Participation Plan

34-2022
**Resolution for the Adoption of a
 PUBLIC PARTICIPATION PLAN (PPP)**

FOREST COUNTY DOES HEREBY RESOLVE AS FOLLOWS:

WHEREAS, the County is updating its Comprehensive Plan as outlined in Wisconsin Statutes; and

WHEREAS, public participation is critical for the development of a plan; and

WHEREAS, it is necessary for the County Board to approve a process to involve the public in the planning effort; and

NOW, THEREFORE, BE IT RESOLVED, that the County Board does approve and authorize the Public Participation Plan as attached to this resolution.

I, Nora Matuszewski, Clerk, do hereby certify that the foregoing resolution was duly adopted at a County Board meeting, held at the Forest County Courthouse on the 19th day of July, 2022, at 6:00 p.m.


 Nora Matuszewski, County Clerk


 Cindy Gretzinger, County Board Chair

| ROLL CALL SHEET COUNTY BOARD | | | |
|---------------------------------|--|-----------------|--------|
| Date <u>7/19/2022</u> | | | |
| No. <u>34-2022</u> | Resolution <input checked="" type="checkbox"/> | Ordinance _____ | |
| Motion: | | Adopted _____ | |
| 1st <u>Dehart</u> | | Lost _____ | |
| 2nd <u>Piasini</u> | | Tabled _____ | |
| | Aye | No | Absent |
| Anderson | ✓ | | |
| Berg | ✓ | | |
| Black | ✓ | | |
| Campbell | ✓ | | |
| Chaney | ✓ | | |
| Dailey | | | ✓ |
| Dehart | ✓ | | |
| Fulcer | ✓ | | |
| Goode | ✓ | | |
| Gretzinger | ✓ | | |
| Karl | ✓ | | |
| Landru | ✓ | | |
| Lukas | ✓ | | |
| Miller | ✓ | | |
| Peterson | ✓ | | |
| Piasini | ✓ | | |
| Tallier | ✓ | | |
| Weber | ✓ | | |
| Dist#3 - Vacant | | | |
| Dist#12 - Vacant | | | |
| Dist#20 - Vacant | | | |
| TOTAL | 17 | | 1 |

Attachment B: Resolution

(Insert after adoption)

Attachment C: Public Hearing Notice

(Insert after adoption)

Attachment D: Ordinance

(Insert after adoption)