

Introduction

About NCWRPC

The North Central Wisconsin Regional Planning Commission (NCWRPC) is a voluntary association of governments created in 1973 under Wisconsin State Statute 66.945, now 66.0309. NCWRPC provides assistance for ten counties in Wisconsin: Adams, Forest, Juneau, Langlade, Lincoln, Marathon, Oneida, Portage, Vilas, and Wood. The organization works in the areas of economic development, geographic information systems (GIS), intergovernmental cooperation, land use, and transportation. NCWRPC regularly provides professional planning services to communities, for projects of both local and regional significance.

The region stretches one hundred and eighty-five miles in a north-south direction, extending from Forest and Vilas Counties in the north to Adams and Juneau Counties in the south. The Region roughly follows the Upper Wisconsin River Valley and covers 9,328 square miles, or about 17 percent of the state's total land mass. The region includes 268 local units of government: 195 towns, 41 villages, 22 cities, and ten counties.

Comprehensive Planning

Under Wisconsin law ss. 66.0309(9), "The regional planning commission shall have the function and duty of making and adopting a master plan for the physical development of the region." This plan looks ahead 20 years and is a tool that local communities can use to demonstrate that there is regional support for addressing local issues, applying for grant programs, growing the local economy, and other activities. It replaces the 2015 Regional Livability Plan, the 2003 Regional Comprehensive Plan, and the 1981 Framework for Regional Development. In areas not addressed by this plan, previous plans are still in effect. The 2015 Regional Livability Plan (RLP) identified the following 11 goals:

- Promote a variety of safe and affordable housing options that meet the needs of all community members.
- Ensure the availability of a skilled and flexible workforce.
- Support and develop a diverse economic base ensuring economic resiliency and growth.
- Support infrastructure needed for economic development.
- Develop tourism and knowledge-based economy into leading economic sectors.
- Provide and improve access and transportation to people of all ages and abilities ensuring lifelong mobility and accessibility to the community.
- Fund the maintenance and expansion of the transportation system.
- Enhance the regional economy by reinforcing airports and freight rail.
- Preserve and protect the Region's landscape, environmental resources, and sensitive lands while encouraging healthy communities.
- Promote the reuse of vacant and underutilized buildings and land.
- Monitor and update the Regional Livability Plan.

Since these goals remain relevant today, they are carried forward into this updated regional comprehensive plan, and this comprehensive plan's adoption fulfills the final goal in this list. The 2015 RLP's 5-year evaluation recommended that five new topics be addressed in this updated comprehensive plan:

- Public Health Needs and Pandemic Response
- Economic Recovery
- Resiliency (Weather, Natural Hazards, and Climate Change)
- Fiscal Conditions of the Region
- Widening Equity Gap

These topics are discussed in detail in Chapter 1: Issues and Opportunities.

How to Use this Plan

NCWRPC prepared and adopted this Regional Comprehensive Plan following the process outlined in Wisconsin State Statutes 66.1001. Comprehensive Planning Law in Wisconsin enables cities, villages, towns, counties, and regional planning commissions to prepare an adopt a Comprehensive Plan that consists of nine elements: Issues and Opportunities (Demographics), Housing, Transportation, Utilities and Community Facilities, Agricultural/Natural/Cultural Resources, Economic Development, Intergovernmental Cooperation, Land Use, and Implementation. Each element includes issues, trends, maps, and data, followed by a list of grant programs, goals, objectives, and policies. The land use element is particularly important for communities with zoning ordinances as it is required to inform zoning decisions. Comprehensive Plans are required to be updated every 10 years to remain relevant and support policy decision-making.

While cities, villages, towns, and counties use comprehensive plans to inform and enforce local policies and strategies, this regional comprehensive plan functions differently. Because NCWRPC does is not directly involved in local decision-making like zoning, budgeting, and capital improvement planning, the regional comprehensive plan isn't as focused on these issues. Rather, the plan identifies issues and trends that affect the entire 10-county region, followed by a series of programs and strategies that can be used to address regional issues.

The intent of this plan is to provide data, trends, and goals that local comprehensive plans should reference and/or incorporate into their own comprehensive plan, since many regional challenges also affect local and county governments. Additionally, this plan's findings are also designed to be incorporated into other local and regional plans such as outdoor recreation plans, farmland preservation plans, land and water resource management plans, housing studies, transit plans, bicycle-pedestrian plans, and NCWRPC's Comprehensive Economic Development Strategy (CEDS). Therefore, this comprehensive plan is implemented through a variety of local and county-level plans.



Chapter 1: Issues and Opportunities

Background

Planning Process

Development of this plan occurred between April 2024 and July 2025. NCWRPC formed a comprehensive plan steering committee consisting of its commissioners and a few representatives from local governments within the Region. Meetings were held to review chapters that were drafted by NCWRPC staff, with a final draft recommendation to the full commission, which adopted the plan July 2025.

Data Sources

Data from the U.S. Census and the American Community Survey (ACS) is used throughout this Plan in addition to other sources such as the Wisconsin Department of Administration’s (DOA) population projections. The U.S. Census and the ACS are both produced by the U.S. Census Bureau; however, the Census is a count of the American population and housing units conducted every ten years while the American Community Survey is an estimate of the population and housing released on a yearly basis. Data is typically included from 1990, 2000, 2010, and 2022, and trends are generally analyzed for the twelve-year time frame from 2010 to 2022 in this report. Census and ACS data is self-reported and has some accuracy issues, but are the most widely used and detailed data sets used in plans, grants, decision-making tools, and other programs, so they are preferred over other data sources.

1. Demographics

Population

Overall, the region has grown steadily since 1990, but growth is uneven. Marathon, Oneida, Portage, and Vilas Counties grew since 2010 but likely for different reasons. Marathon and Portage Counties have a higher concentration of jobs and schools that may draw more families and students, while Oneida and Vilas Counties are known for their lakes and forests that draw retirees, remote workers, and seasonal residents. The region grew at a similar rate to the statewide growth rate in the 1990s, but this growth rate has slowed considerably since 2000. See Table 1, p. 9.



Table 1: Total Population

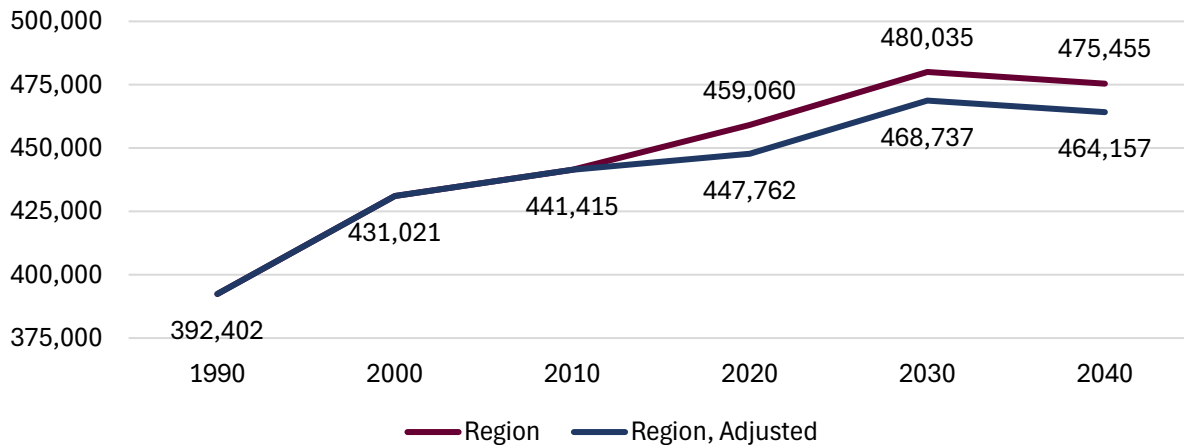
County	1990	2000	2010	2022	% Change 1990-2022	% Change 2010-2022
Adams	15,682	19,920	21,044	20,730	32.2%	-1.5%
Forest	8,776	10,024	9,534	9,239	5.3%	-3.1%
Juneau	21,650	24,316	26,733	26,695	23.3%	-0.1%
Langlade	19,505	20,740	20,218	19,512	0.0%	-3.5%
Lincoln	26,993	29,641	29,075	28,402	5.2%	-2.3%
Marathon	115,400	125,834	132,644	137,820	19.4%	3.9%
Oneida	31,679	36,776	36,379	37,799	19.3%	3.9%
Portage	61,405	67,182	69,437	70,281	14.5%	1.2%
Vilas	17,707	21,033	21,750	23,146	30.7%	6.4%
Wood	73,605	75,555	74,601	74,138	0.7%	-0.6%
Region	392,402	431,021	441,415	447,762	14.1%	1.4%
State	4,891,769	5,363,675	5,637,947	5,882,128	20.2%	4.3%
Nation	248,709,873	281,421,906	303,965,272	331,097,593	33.1%	8.9%

Source: U.S. Census 1990 and 2000; ACS 5-Year estimates 2010 and 2022

Population Projections

The Wisconsin Department of Administration’s (WDOA) latest population projections were published in 2013. The WDOA estimated that the region will continue to grow through 2030, with a projected population of 480,035, followed by a slight decrease through 2040. Table 2 shows all counties except Langlade and Wood are projected to grow. However, 2022 ACS estimates are lower than the original projections for 2020 by 11,298 people regionwide, so future projections will likely be lower. Figure 1 shows DOA’s original 2020-2040 projections alongside an adjusted set of projections that is adjusted downward by 11,298.

Figure 1: Historic and Projected Population



Source: U.S. Census 1990 & 2000; ACS 5-Year Estimates 2010 & 2022; WDOA 2020-2040

Table 2: Population Projections 2025-2040

County	2022 Estimate	2020 Projection	2030 Projection	2040 Projection	% Increase 2022-2040
Adams	20,730	22,035	23,830	23,315	12.5%
Forest	9,239	9,695	10,710	10,655	15.3%
Juneau	26,695	28,130	29,790	29,465	10.4%
Langlade	19,512	19,915	20,340	19,470	-0.2%
Lincoln	28,402	29,170	30,750	29,355	3.4%
Marathon	137,820	142,200	150,130	152,790	10.9%
Oneida	37,799	37,265	39,985	38,500	1.9%
Portage	70,281	73,680	76,175	76,865	9.4%
Vilas	23,146	22,535	24,395	23,890	3.2%
Wood	74,138	74,435	73,930	71,150	-4.0%
Region	447,762	459,060	480,035	475,455	6.2%
State	5,882,128	6,005,080	6,375,910	6,491,635	10.4%

Source: ACS 5-Year Estimates 2022; WDOA 2025-2040

Age Distribution

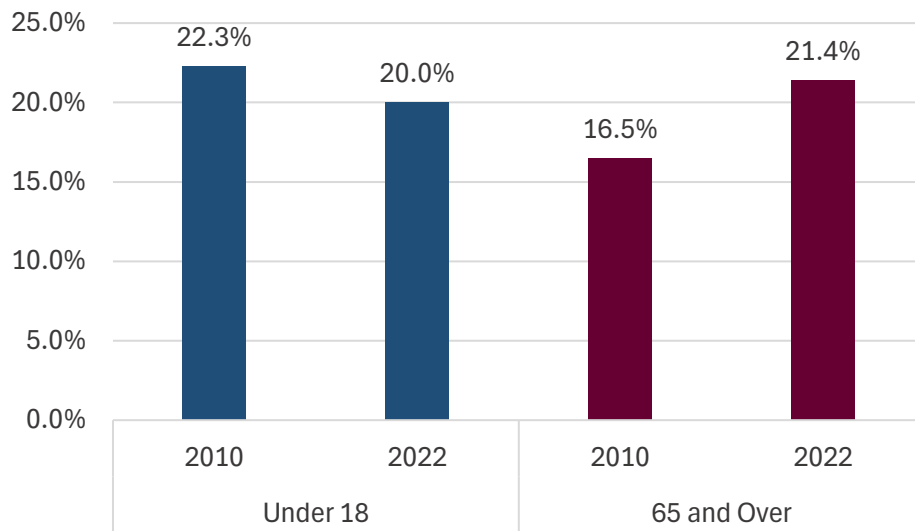
Like statewide and national trends, the region's share of individuals aged 65 and older is increasing, while the share of those under 18 is decreasing. These groups are known as dependent populations, since most of the workforce is between the two age groups. Individuals aged 65 and older increased by 4.9 percent and those under age 18 decreased by 2.3 percent since 2010 in the region. As this trend continues, the region's economy will change as senior-oriented services will be in demand with fewer people of working age to fill the region's needs. The region's affordability and access to healthcare make it an attractive place to retire, but students, young professionals, and families may consider relocating to the area due to its good schools, job opportunities, access to nature, and affordability as the cost of living in other regions of the country increases. See Figure 2.

Table 3 provides an overall summary of the region's age characteristics. Adams, Oneida, and Vilas had the largest share of residents aged 65 and older, while Juneau, Marathon, and Wood had the largest share of residents under age 18. While this is not always the case, urban areas tend to have a younger population due to their proximity to jobs, schools, and colleges, whereas retirees don't necessarily need to live near such services. Though an aging population will cause the economy to shift, those at or near retirement age have years of expertise they can contribute towards the future of the region, especially when it comes to entrepreneurship.

Median Age

Similar trends appear when looking at each County's median age (note that a regional median cannot be computed with available data). Adams, Oneida, and Vilas have the highest median age, and Marathon, Portage, and Wood Counties have the lowest median age. All Counties have a median age higher than the statewide and national median, except for Portage County, which is likely due to its high concentration of college students. See Figure 3.

Figure 2: Percentage of Population over Age 64 and Under Age 18



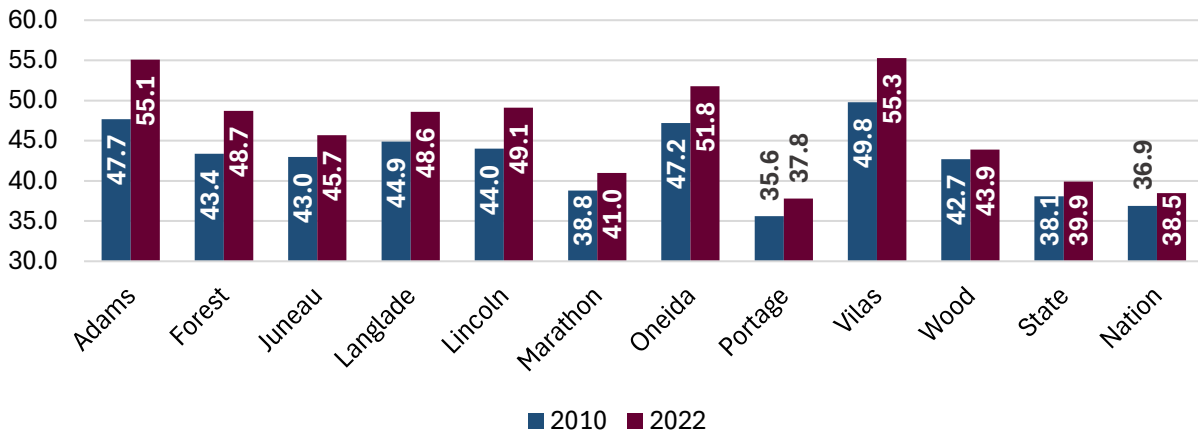
Source: ACS 5-Year Estimates 2022

Table 3: Age Characteristics

County	65 and Over 2010	65 and Over 2022	% Change	Under 18 2010	Under 18 2022	% Change
Adams	22.4%	30.5%	8.1%	17.2%	14.2%	-3.0%
Forest	20.1%	24.4%	4.3%	22.0%	19.4%	-2.6%
Juneau	17.3%	21.0%	3.7%	22.7%	19.8%	-2.9%
Langlade	19.6%	24.5%	4.9%	21.6%	19.4%	-2.2%
Lincoln	18.1%	22.7%	4.6%	22.3%	17.9%	-4.4%
Marathon	13.8%	18.3%	4.5%	24.9%	22.6%	-2.3%
Oneida	20.8%	26.9%	6.1%	18.9%	17.2%	-1.7%
Portage	12.3%	17.5%	5.2%	21.3%	18.9%	-2.4%
Vilas	24.9%	30.9%	6.0%	18.0%	16.7%	-1.3%
Wood	16.7%	21.1%	4.4%	23.1%	21.5%	-1.6%
Region	16.5%	21.4%	4.9%	22.3%	20.0%	-2.3%
State	13.4%	17.7%	4.3%	23.5%	21.6%	-1.9%
Nation	12.7%	16.5%	3.8%	24.4%	21.7%	-2.7%

Source: ACS 5-Year Estimates 2010 & 2022

Figure 3: Median Age

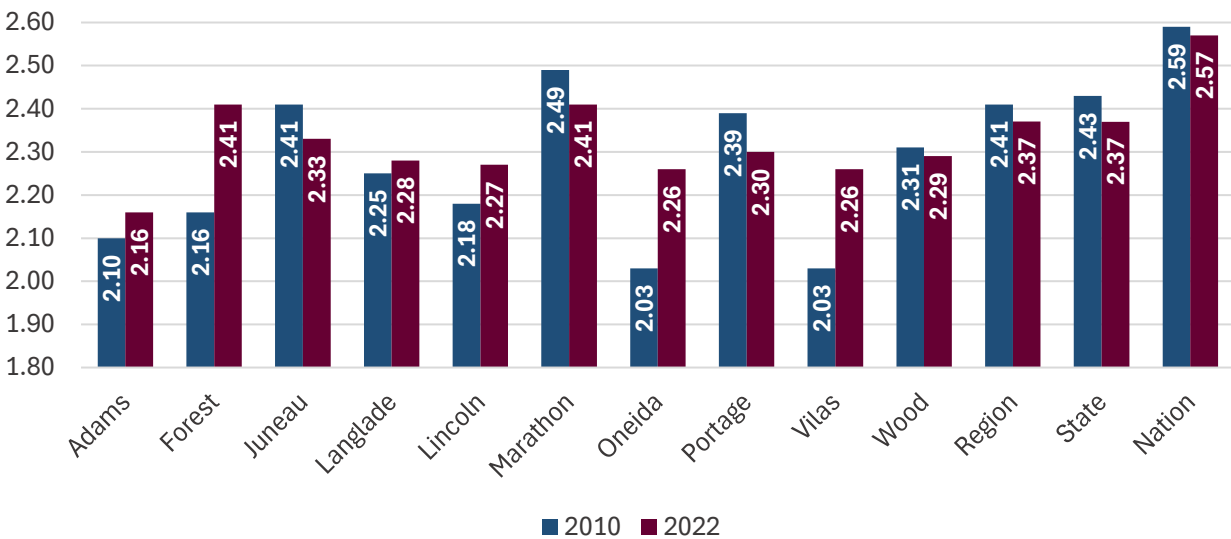


Source: ACS 5-Year Estimates 2010 & 2022

Households

There were 188,916 households in the region in 2022, a 1.2 percent increase since 2010. The change in median household size varied between Counties. Across the state and nation, household size is decreasing as seniors live longer and families have fewer children compared to the past. See Figure 4 and Table 4.

Figure 4: Average Household Size



Source: ACS 5-Year Estimates 2010 & 2022

Table 4: Total Households

County	2000	2010	2022	% Change 2000-2022	% Change 2010-2022
Adams	7,924	9,341	9,176	15.8%	-1.8%
Forest	4,028	4,182	3,723	-7.6%	-11.0%
Juneau	9,693	11,012	10,598	9.3%	-3.8%
Langlade	8,494	8,805	8,443	-0.6%	-4.1%
Lincoln	11,744	13,113	12,226	4.1%	-6.8%
Marathon	47,737	52,708	56,484	18.3%	7.2%
Oneida	15,332	17,475	16,417	7.1%	-6.1%
Portage	25,112	27,573	29,311	16.7%	6.3%
Vilas	9,084	10,560	10,651	17.3%	0.9%
Wood	30,131	31,979	31,887	5.8%	-0.3%
Region	169,279	186,748	188,916	11.6%	1.2%
State	2,084,544	2,274,611	2,425,488	16.4%	6.6%
Nation	105,539,122	114,235,996	125,736,353	19.1%	10.1%

Source: U.S. Census 2000; ACS 5-Year Estimates 2010 & 2022

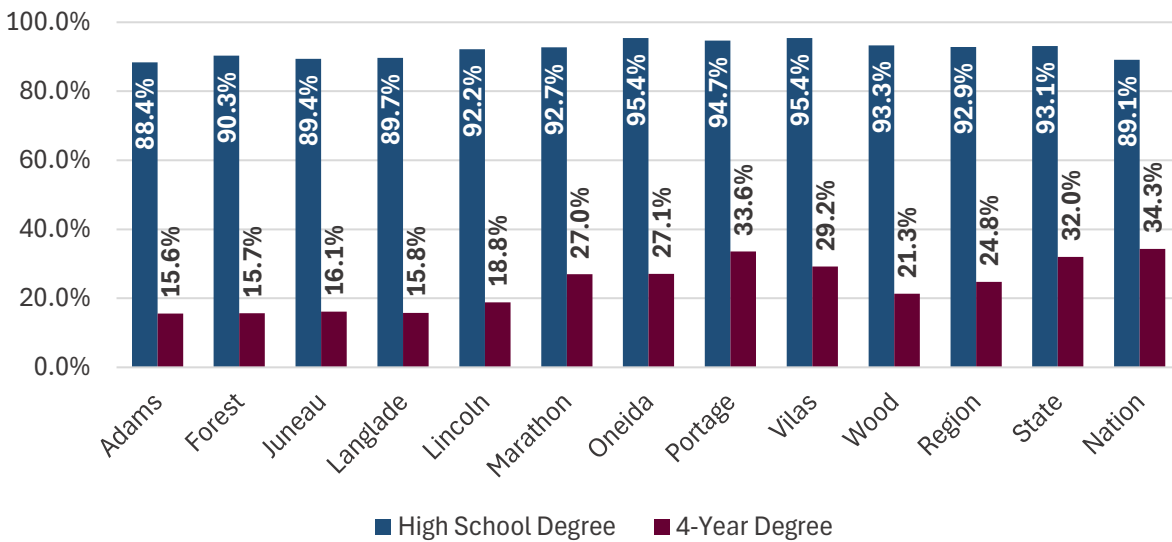
Changes in the number and size of households impacts transportation, education, housing, and healthcare needs in the future. It is possible to have a declining population in a community but still have growth in the total number of households, increasing housing demand, for example. An increase in households could also mean that there is increased enrollment at schools. A decrease in household size could suggest a higher share of seniors who may increase demand for healthcare services. Most of the region's Counties had a decrease in the total number of households, except for Marathon, Portage, and Vilas Counties.

Education

Educational attainment is similar to statewide figures, with all Counties having a similar or higher rate of individuals with a high school diploma. Although the percentage of individuals with a 4-year degree is lower in all Counties compared to the national average, several Counties aren't far behind the statewide percentage, with Portage County having a higher rate of 4-year degree recipients than the statewide percentage. In general, the rate of high school diploma and 4-year degree recipients has increased over time.

According to the Bureau of Labor Statistics, 27 percent of jobs in the United States require a college education. However, other experts believe the percentage to be much higher. Nationally, 37.8 percent of the workforce has an associate degree or higher, which is slightly higher than in Portage County and the State of Wisconsin. Maintaining an educated workforce ensures that local employers can fill jobs that require special skill sets. See Figure 5.

Figure 5: Educational Attainment for Individuals Aged 25 and Over



Source: ACS 5-Year Estimates 2010 & 2022

Employment

In 2022, there were 227,418 workers in the region, 218,915 of which were employed. Overall, the region’s unemployment rate was 3.7 percent, but this varied by County from 2.2 to 5.0 percent. A participation rate of 61.6 percent for those aged 16 and over reflects how many people of working age are working or seeking work. This has decreased from 65.9 percent in 2010 as a result of a rising median age and an increase in retirements. Those who are retired or staying home to care for children, for example, are not considered part of the workforce. Portage and Marathon were the only Counties with a higher participation rate than state and national averages, which is partially due to many of the Region’s Counties having a higher median age than the state and national median. The probability of being part of the workforce drops off significantly after age 55. See Table 5.

Income

Median household income and per capita income are displayed in Table 6. Marathon County had a higher median household income than the statewide median, and Oneida and Vilas Counties had a higher per capita household income than statewide and national averages. Marathon’s younger population might indicate a higher share of families in their prime working years, which results in a higher household income, whereas Oneida and Vilas’ older populations may indicate more retired households, where smaller household sizes result in a higher per capita income. Across the region, median household income rose 34.0 percent and 53.1 percent, and per capita income rose between 35.5 percent and 52.7 percent. According to the Bureau of Labor Statistics, inflation rose by 35.4 percent between December 2010 and December 2022. Increases in wages vary by occupation, but the Region’s lower cost of living helps make up for having lower wages than the national average.

Table 5: Employment Characteristics

County	Population over 16 years of age	Labor Force	Number Employed	Participation rate	Unemployment Rate
Adams	18,184	8,636	8,202	47.5%	5.0%
Forest	7,608	3,937	3,779	51.7%	4.0%
Juneau	22,049	12,851	12,186	58.3%	4.2%
Langlade	16,238	9,405	8,948	57.9%	4.9%
Lincoln	24,036	14,181	13,493	59.0%	4.8%
Marathon	110,583	74,139	71,774	67.0%	3.1%
Oneida	32,148	17,187	16,809	53.5%	2.2%
Portage	58,513	38,982	37,680	66.6%	3.3%
Vilas	19,823	10,674	10,186	53.8%	4.6%
Wood	59,915	37,426	35,858	62.5%	4.2%
Region	369,097	227,418	218,915	61.6%	3.7%
State	4,764,779	3,129,606	3,020,890	65.7%	3.4%
Nation	266,411,973	169,093,585	158,913,204	63.5%	5.3%

Source: ACS 5-Year Estimates 2022

Table 6: Income Characteristics

County	Median HH Income 2010	Median HH Income 2022	% Increase	Per Capita Income 2010	Per Capita Income 2022	% Increase
Adams	\$39,885	\$55,223	38.5%	\$21,917	\$32,223	47.0%
Forest	\$37,627	\$55,552	47.6%	\$20,578	\$30,310	47.3%
Juneau	\$45,664	\$63,455	39.0%	\$23,026	\$31,211	35.5%
Langlade	\$41,034	\$55,091	34.3%	\$22,025	\$32,989	49.8%
Lincoln	\$46,625	\$64,314	37.9%	\$23,793	\$35,558	49.4%
Marathon	\$53,471	\$73,248	37.0%	\$25,893	\$38,886	50.2%
Oneida	\$45,857	\$66,111	44.2%	\$28,085	\$40,086	42.7%
Portage	\$51,456	\$71,301	38.6%	\$24,873	\$37,990	52.7%
Vilas	\$41,631	\$63,726	53.1%	\$27,128	\$40,136	48.0%
Wood	\$47,204	\$63,273	34.0%	\$24,893	\$36,712	47.5%
State	\$51,598	\$72,458	40.4%	\$26,624	\$40,130	50.7%
Nation	\$51,914	\$75,149	44.8%	\$27,334	\$41,261	51.0%

Source: ACS 5-Year Estimates 2010 & 2022

NCWRPC's 2015 regional livability plan found that the region's median household income decreased between 2000 and 2010. While this trend appeared to reverse between 2010 and 2022, inflation has persisted since 2022, and many of the same issues are expected to continue. This includes less disposable income and a desire for smaller, more affordable housing options. Rural areas are particularly vulnerable as the population ages because many seniors live on fixed income and have higher transportation costs due to

living farther away from grocery stores, clinics, and other needs. Chapters later in this Plan address strategies to improve the regional economy, housing supply, transportation network, and other issues to ensure the region remains a high-quality place to live as demographics rapidly shift.

Summary

The region has grown since 1990 but at a slower rate than the State of Wisconsin and at a much slower rate than the nation overall. Growth has also been slower in recent decades, even declining in many of the region's municipalities. An aging population and smaller household sizes will affect the local economy and services, but an affordable cost of living, variety of urban and rural landscapes, and educational and career opportunities may attract those looking to relocate from higher cost areas. Evaluating this data in the chapter ensures that the planning process will accommodate changing demand for housing, schools, healthcare, and other aspects that contribute to the county's quality of life.

Issues

A variety of issues were identified throughout the planning process. Many of these were brought up during the series of planning meetings, others were taken from existing documents, and some were taken from other public meetings. The next seven chapters of this plan will list the issues that relate to those chapters.

2. Goals, Objectives, and Policies

Each of the following comprehensive plan chapters will conclude with a set of goals, objectives, and policies, which will be used to guide the development of local comprehensive plans. 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 region 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.

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Chapter 2: Agricultural, Natural, and Cultural Resources

Background

Planning must consider the region's landscape and resources that residents interact with. This chapter analyzes these characteristics that contribute to the region's identity, well-being, and land use decisions.

Previous State-wide and Regional Plans and Studies

Land Legacy Report, 2006 This Wisconsin Department of Natural Resources (WDNR) report identifies lands with significant value to the public and recommends their protection using various funding programs.

NCWRPC Regional Livability Plan, 2015 This former regional plan supports natural resources for enhancing the quality of life and attracting workers to the region, supporting economic development.

Recreation Opportunities Analysis (2018) and Statewide Comprehensive Outdoor Recreation Plan (2019) The Wisconsin Department of Natural Resources conducted these planning efforts to ensure high-quality recreation experiences meet the demands of the state's various regions.

The Wisconsin Historic Preservation Plan 2006-2015 This Wisconsin Historical Society administers this strategic plan, which provides goals and objectives for historic preservation in Wisconsin.

County-Level Plans like Farmland Preservation Plans qualify areas to use agricultural preservation zoning where agricultural landowners receive tax credits. Land and Water Conservation plans guide each county's conservation efforts in areas like invasive species management, water quality improvement, and more.

1. Issues

Climate Change

The increase of natural hazards like flooding and severe weather, as well as the unpredictability of weather patterns are expected to impact both rural and urban areas of the region.

Fragmentation of Land

Over time, development of open and wooded lands has resulted in the fragmentation of existing large, contiguous parcels. This has limited the supply of land available for agriculture and woodlands.

Water Quality

Land use impacts affect the quantity and quality of both ground and surface water throughout the region. PFAS, pharmaceuticals, manganese, microplastics, nitrates, and phosphorous are a few examples of emerging contaminants for ground and surface water.

2. Natural Resources Inventory and Trends

Geography, Geology, and Topography

The Wisconsin Department of Natural Resources (WDNR) places the region into six ecological landscapes: The Northern Highland, Northern Central Forest, Forest Transition, Central Sand Plains, Central Sand Hills, and Western Coulees and Ridges. Extensive lakes, wetlands, and woodlands underlain by igneous and metamorphic rock are more common in the northern portion of the region, which transitions to having more agriculture as well as sedimentary bedrock or outwash farther south. Glacial landscape features are common throughout the region as well as unique sandstone buttes the southern portion of the region.

Soils

The Natural Resource Conservation Service (NRCS) has online soil surveys for each county. The survey contains maps of soil characteristics' limitations and hazards related to development and farming.

Mineral Resources

Nonmetallic mining is found throughout the region where rock, sand, and other aggregates are extracted. Known metallic deposits in the region include the Crandon, Lynne, Reef Deposits and the Schoepke Site.

Climate

The region has a humid continental climate (Dfb) with four distinct seasons with varying temperatures throughout the year. Average temperatures range from approximately 41.4°F in the northernmost county (Vilas) and 47.8°F in the southernmost county (Adams), with longer growing seasons to the south. Northern counties receive more snowfall and the southern counties receive more rainfall. Most of the region is in hardiness Zone 4b (-25 to -20°F), with the northernmost areas being in Zone 4a (-30 to -25°F) and the southernmost areas being in Zone 5a (-20 to -15°F).

Surface Water, Watersheds, and Drainage Districts

The Wisconsin River is the most prominent waterway in the region, flowing through 8 of the region's 10 counties. Most of the region's precipitation flows southward through this river before joining the Mississippi River. Areas in the far northern and eastern portions of the region drain to Lake Superior and Lake Michigan, respectively. Surface inputs and impervious surfaces directly impact water quality in surface water, which is addressed by shoreland, wetland, floodplain, and stormwater ordinances.

Groundwater resources

Groundwater occupies spaces in soils and bedrock. Groundwater originates in three aquifers: the sand and gravel, sandstone and dolomite, and the crystalline bedrock aquifers. Their depth from the surface, vulnerability to contamination, and flow rates vary. Local geology impacts groundwater's chemical properties and vulnerability to contamination. Groundwater pollution that occurs today may not become evident for several years, and it is very difficult to remedy once contaminated. The DNR has developed a groundwater contamination susceptibility model as one tool to address this issue.

Floodplains, Shorelands, and Wetlands

Shorelands are lands within 1,000 feet of a lake or 300 feet of a stream. Wetlands are areas with high water tables, and floodplains are areas that can be submerged following heavy rainfall. These areas are protected by local ordinances since they filter runoff, reduce flooding, and provide wildlife habitat.

Air Quality

WDNR and the United States Environmental Protection Agency (EPA) define and monitor a series of contaminants known as criteria air pollutants. Each county meets all primary and secondary standards, which regulations used to evaluate the air quality. Therefore, the entire region is in an attainment zone, meaning there are no specific regulations needed to remedy air pollution issues at this time.

Forests

Forests in the region include a mix of oaks, maple, aspen, pine, birch, and hemlock. The Managed Forest Law (MFL) and its predecessor, the Forest Crop Law (FCL), are used extensively in the region and offer a lower tax rate for landowners managing their forestland in a way that meets WDNR standards. Woodlands protect environmentally sensitive areas like steep slopes, shorelands, wildlife habitat, wetlands, and floodplains. Threats to woodlands include development, diseases, and invasive species.

Environmentally Sensitive Areas and Endangered Species

Development can easily erode steep slopes or impact fragile ecosystems. WDNR's website contains lists of threatened and endangered species in its Natural Heritage Inventory (NHI) as well as maps of protected areas like State Natural Areas (SNAs). The Endangered Species Act (ESA) protects many of these species.

3. Agriculture Inventory and Trends

The region is home to a variety of farm products, including dairy, vegetables, cranberries, ginseng, and potatoes. Irrigation systems and farming technology have resulted in larger farms, higher crop yields, and fewer farm employees than in the past. Changes in climate, flooding, drought, insects, invasive vegetation, erosion, and soil nutrient depletion all impact agriculture. Pesticides, herbicides, fertilizers, and erosion all impact the natural environment if managed poorly. Although the growing season is shorter in the region than in much of the country, a lack of excessive heat minimizes droughts. Aside from soils, groundwater is the most important agricultural resource as many crops rely on irrigation systems.

4. Cultural Resources Inventory and Trends

North Central Wisconsin has a rich and varied history, having originally being inhabited by various Native American tribes, including the Menominee, Ojibwe (Chippewa), Ho-Chunk (Winnebago), and Potawatomi. French explorers were among the first Europeans to enter the region in the early 17th century setting up trading posts. The vast forests of north central Wisconsin also attracted loggers in the mid-1800s. Settlement in the early 19th century also brought agriculture and industry that used the Wisconsin River's power, such as logging, woodworking, and paper mills. Today, the region's economy is diverse.

Historic preservation ordinances are required in municipalities with property listed in the National or State Register of Historic Places. In addition to these registers, the Wisconsin Historical Society has an online database called the Architecture and History Inventory (AHI). This tool provides detailed historical and architectural information for approximately 120,000 properties in Wisconsin. Like the AHI, the Archaeological Site Inventory (ASI) lists 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 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, and each entry in the database varies widely and the information has not been verified in all cases. More information about the region’s history can be obtained in its many historical societies, museums, and other institutions.

5. Natural, Agricultural, and Cultural Resource Programs

United States Department of Agriculture (USDA) / National Resources Conservation Service (NRCS)

- Agricultural Conservation Easement Program (ACEP)
- Agricultural Management Assistance (AMA)
- Conservation Reserve Program (CRP) by USDA's Farm Service Agency
- Healthy Forests Reserve Program
- Regional Conservation Partnership Program
- Small, Limited, and Beginning Farmer Assistance
- Wetlands Reserve Program
- Working Lands for Wildlife

Wisconsin Department of Natural Resources (WDNR)

- Aquatic Habitat Protection Program
- Drinking Water and Groundwater Program
- Endangered Resources Program
- Fisheries Management Program
- Managed Forest Law
- Nonpoint Source Program
- Parks and Recreation Program
- Private Forestry
- Stewardship Grants for Nonprofit Conservation Organizations
- Wildlife Management Program

Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP)

- Farmland Preservation Program
- Producer-Led Watershed Protection Grants

University of Wisconsin – Extension (UWEX)

- Discovery Farms Program

Wisconsin Historical Society (WHS)

- State Historic Preservation Office (SHPO)

6. Agricultural, Natural, and Cultural Goals, Objectives, and Policies

Goals

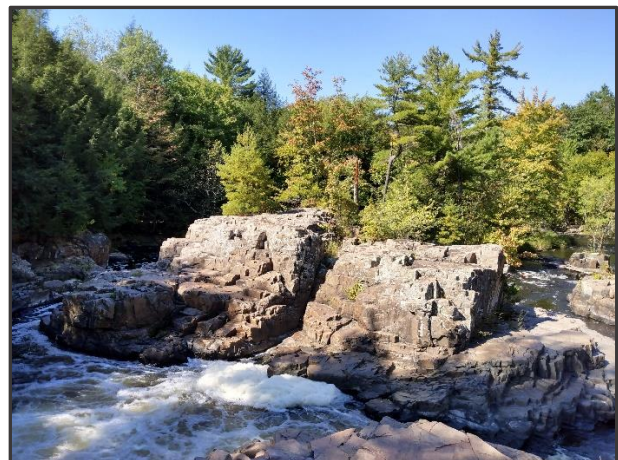
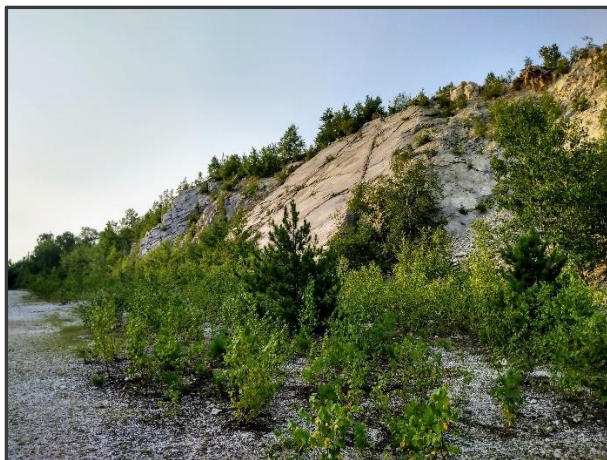
1. Preserve and protect the region’s landscape, environmental resources, and sensitive lands while encouraging healthy communities.

Objectives

1. Protect natural landscapes and ecosystems in the region by accurately mapping wetlands, forestlands, agricultural, and open space.
2. Protect sensitive lands from overdevelopment.

Policies

1. Maintain digital existing land use coverage.
2. Ensure that open space is accessible and appealing to people of all ages and abilities.
3. Target land conservation programs to locations with the highest priority for preserving community character.
4. Protect and restore riparian areas in high priority watersheds.
5. Encourage land donation or acquisition for conservation easements.
6. Encourage land use policies that minimize negative environmental impacts from developments.
7. Create controls to protect steep slopes from development.
8. Create policies for developments already existing on sensitive lands to lessen impacts on the environment and public safety.
9. Restore and redevelop historic properties and districts.
10. Integrate existing community character into the design of community improvements.
11. Encourage the registration of historical buildings on state and federal registers.
12. Inventory cultural assets, historical sites, and related assets and identify priority sites for preservation.



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Chapter 3: Housing

Background

This chapter evaluates opportunities for improved housing throughout the region, which benefits the economy by attracting working families. Included are programs and strategies for enhancing the housing market so seniors, people with disabilities, and people of all incomes can find housing.

Previous Planning Efforts

ALICE: A Study of Financial Hardship in Wisconsin, 2023: “ALICE” Households (Asset Limited, Income Constrained, Employed) are above the poverty level, but struggle financially. United Way reports that 34 percent of the region’s households are either below the poverty level or are ALICE households.

Regional Livability Plan, 2015: This previous Comprehensive Plan encourages improving the availability and affordability of housing by ensuring the location, condition, and type of housing meets demand.

Welcoming Wisconsin Home: A Statewide Action Plan for Homelessness 2021-2023: This report recommends addressing damage caused by lending practices and restrictive covenants in the 20th century, investing in affordable housing, programs, and services, improving housing access through counseling, repair assistance, and other strategies, and stabilizing existing housing by growing jobs.

Wisconsin Realtors Association’s (WRA) Workforce Housing Report: Falling Behind, 2019: WRA found a shortage of workforce housing due to high construction costs and fewer new units, affecting affordability.

Wisconsin State Consolidated Housing Plan, 2020-2024: This Department of Housing and Urban Development (HUD) plan helps fund several state-administered housing programs.

Local Housing Studies: NCWRPC and other entities have conducted housing studies for several counties and municipalities in the region, identifying gaps in the market along with strategies for new development.

1. Issues

Affordability: Housing prices have risen faster than incomes because of a lack of inventory and high construction and infrastructure costs. Zoning and subdivision ordinance amendments, financial programs, and other strategies described may be used to reduce the cost of new housing and increase its availability. Due to economics, new housing is typically for higher incomes, with lower prices being less common.

Availability: A lack of inventory also increases prices and reduces the choices of available housing units.

Housing Condition: Inflation and increased housing prices have impacted savings, causing homeowners to delay major repairs that can lead to issues like mold, radon, and other maintenance problems.

Senior, Disability-friendly, and Low-Income Housing: The region’s median age reflects a need for smaller, lower-maintenance housing. Existing houses can be modified so seniors or those with disabilities can live in

them longer. A variety of new housing unit styles and prices are needed for those living on fixed or limited income. Nonprofits and financial programs can be used to repair and insulate existing homes.

Seasonal Housing: Wisconsin has one of the highest concentrations of seasonal housing units for recreational use, and there has been a nationwide increase in the popularity of vacation rentals. This enhances tourism opportunities but reduces housing options for year-round residents.

2. Inventory and Trends

Housing units include single family homes and individual units of multifamily buildings. Housing unit construction was strong between 1990 and 2010 overall but slowed after the 2000s housing market crash as builders closed. This results in a lack of inventory and a higher share of older housing units in need of repairs or upgrades. See Table 7. Several counties show a negative number of housing units from 2010 to 2022; this is because the U.S. Census bases these numbers on the number of households, which have decreased in those Counties. While some structures likely have been demolished due to age, damage, or other reasons, NCWRPC does not agree that the decrease has been that dramatic. But since Census numbers are widely recognized and useful for grant applications, they are used in this chapter.

Table 7: Total Housing Units

County	1990	2000	2010	2022	% Change 1990-2022	% Change 2010-2022
Adams	12,418	14,123	17,067	16,789	35.2%	-1.6%
Forest	7,203	8,322	8,885	8,661	20.2%	-2.5%
Juneau	11,422	12,370	14,457	14,540	27.3%	0.6%
Langlade	10,825	11,187	12,268	12,185	12.6%	-0.7%
Lincoln	13,256	14,681	16,488	16,151	21.8%	-2.0%
Marathon	43,774	50,360	57,017	59,980	37.0%	5.2%
Oneida	25,173	26,627	29,646	30,614	21.6%	3.3%
Portage	22,910	26,589	29,601	31,265	36.5%	5.6%
Vilas	20,225	22,397	23,922	24,661	21.9%	3.1%
Wood	28,839	31,691	33,838	34,558	19.8%	2.1%
Region	196,045	218,347	243,189	249,404	27.2%	2.6%
State	2,055,774	2,321,144	2,593,073	2,734,511	33.0%	5.5%
Nation	102,263,678	115,904,641	130,038,080	140,943,613	37.8%	8.4%

Source: U.S. Census 1990 & 2000; ACS 5-Year Estimates 2010 & 2022

The North Central Region features high levels of homeownership, a predominance of single-family homes, and an abundance of seasonal homes. This allows owner-occupied households to build wealth but may limit housing choices for those who prefer to rent or need to rent to be able to save a down payment for a future house. Most housing was built between 1970 and 2009, with few being built since 2010. Older homes are more affordable to purchase or rent, but often require expensive repairs. See Tables 8 and 9.

Table 8: Age and Structure Characteristics

County	Percent Single Family	Built Before 1950	Built 1950-1969	Built 1970-1989	Built 1990-2009	Built 2010-2022
Adams	74.2%	1,537	2,409	6,486	5,658	699
Forest	86.1%	1,540	1,260	2,853	2,492	516
Juneau	70.3%	2,872	2,140	3,978	4,597	953
Langlade	79.4%	3,220	2,063	3,210	3,015	677
Lincoln	80.4%	4,175	2,931	3,822	4,409	814
Marathon	75.3%	13,173	10,792	15,549	16,777	3,689
Oneida	84.2%	4,451	5,603	9,448	9,420	1,692
Portage	69.2%	6,203	4,319	9,288	9,276	2,179
Vilas	87.6%	3,292	4,634	7,772	7,607	1,356
Wood	75.1%	8,220	7,213	9,815	7,490	1,820
Region	77.4%	48,683	43,364	72,221	70,741	14,395
State	66.5%	652,352	550,190	658,030	698,139	175,800
Nation	61.4%	23,451,116	28,250,485	39,157,524	37,679,468	12,375,020

Source: ACS 5-Year Estimates 2022

Table 9: Value Characteristics

County	Median Home Value	Median Monthly Housing Costs - Owner Occupied		Median Rent	% Households spending over 30% of Income on Housing	
		Mortgage	No Mortgage		Owner-Occupied	Renter-Occupied
Adams	\$168,400	\$1,269	\$512	\$719	32.1%	40.3%
Forest	\$160,100	\$1,182	\$462	\$593	30.5%	33.1%
Juneau	\$153,700	\$1,340	\$542	\$820	25.8%	36.4%
Langlade	\$138,000	\$1,114	\$441	\$715	20.2%	33.5%
Lincoln	\$163,700	\$1,279	\$493	\$706	19.7%	53.0%
Marathon	\$194,500	\$1,404	\$557	\$898	17.0%	42.8%
Oneida	\$214,700	\$1,379	\$481	\$876	25.1%	46.2%
Portage	\$214,700	\$1,450	\$566	\$876	17.6%	41.4%
Vilas	\$255,700	\$1,382	\$463	\$766	31.8%	26.0%
Wood	\$156,600	\$1,215	\$499	\$830	20.1%	39.3%
Region	\$182,010*	\$1,301*	\$502*	\$780*	21.2%	41.1%
State	\$231,400	\$1,602	\$624	\$992	23.5%	45.5%
Nation	\$281,900	\$1,828	\$584	\$1,268	27.9%	51.9%

Source: ACS 5-Year Estimates 2022. *Note: A regional median cannot be calculated from Census Data, so the average of the 10 County medians is used instead.

Table 9 shows how the Region’s housing costs are lower than the state and national averages. But, as discussed in Chapter 1, household incomes are also lower, so there is still a need for housing that is affordable for a variety of incomes and household configurations. Table 10 shows how the median age has risen in every county, while household size remains smaller than state and national averages. This could indicate demand for not only smaller housing units, but also more housing units for seniors as the region’s low cost of living and high-quality healthcare, amenities, and recreation may continue to attract more “empty nest” households.



Additionally, young families often also must compete against this demographic for similar affordable, low-maintenance, entry-level housing. Unfortunately, the more affordable a housing unit is, the harder it is to construct without subsidies and/or other financial strategies from a municipality or county. Often, builders choose to construct higher-end, custom homes as a result. Multifamily housing can also be difficult to construct where high infrastructure costs and/or restrictive zoning makes the approval process lengthy and expensive.

Table 10: Existing Demand

County	Median Age 2010	Median Age 2022	Household Size 2010	Household Size 2022
Adams	47.7	55.1	2.1	2.2
Forest	43.4	48.7	2.2	2.4
Juneau	43.0	45.7	2.4	2.3
Langlade	44.9	48.6	2.3	2.3
Lincoln	44.0	49.1	2.2	2.3
Marathon	38.8	41.0	2.5	2.4
Oneida	47.2	51.8	2.0	2.3
Portage	35.6	37.8	2.4	2.3
Vilas	49.8	55.3	2.0	2.2
Wood	42.0	43.9	2.3	2.3
Region*	43.6	47.7	2.2	2.3
State	38.1	39.9	2.4	2.4
Nation	36.9	38.5	2.6	2.6

Source: ACS 5-Year Estimates 2022

The Region has a high rate of seasonal homes, except for Marathon, Portage, and Wood Counties. This enhances tourism opportunities but results in year-round residents having to compete for housing with those who are not year-round residents, limiting availability and increasing prices. See Table 11.

The Wisconsin Department of Administration (WDOA) produced household growth forecasts in 2013. By 2022, it was clear that most counties had not grown as much as initially projected. Therefore, Table 12 uses

WDOA’s projections, but adds or subtracts the difference from them between the 2020 projection and the number of households in 2022. Despite the reduced projections, household growth is still expected for every county through at least 2035, indicating an ongoing need for future housing units.

Table 11: Occupancy Characteristics

County	% Owner Occupied in 2010	% Owner Occupied in 2022	% Vacant in 2010	% Vacant in 2022	% Vacant that is seasonal in 2010	% Vacant that is seasonal in 2022
Adams	82.2%	84.8%	45.3%	45.3%	86.3%	86.1%
Forest	75.4%	81.3%	52.9%	57.0%	89.7%	90.2%
Juneau	79.1%	79.3%	23.8%	27.1%	70.8%	76.3%
Langlade	80.5%	77.0%	28.2%	30.7%	74.7%	71.6%
Lincoln	74.7%	78.5%	20.5%	24.3%	75.1%	82.2%
Marathon	75.5%	72.9%	7.6%	5.8%	26.3%	25.7%
Oneida	77.8%	82.6%	41.1%	46.4%	86.2%	89.9%
Portage	70.1%	69.7%	6.9%	6.2%	32.4%	30.7%
Vilas	79.4%	83.5%	55.9%	56.8%	87.6%	90.5%
Wood	76.4%	73.0%	5.5%	7.7%	16.6%	21.4%
Region	76.5%	76.8%	23.2%	24.2%	75.7%	78.5%
State	69.5%	67.7%	12.3%	11.3%	50.7%	57.8%
Nation	66.6%	64.8%	12.2%	10.8%	29.7%	32.6%

Source: ACS 5-Year Estimates 2022

Table 12: Projected Demand

County	2020 Projected	2022 Census	Difference	Projected Households			
				2025	2030	2035	2040
Adams	9,887	9,176	-711	9,888	10,379	10,533	10,508
Forest	4,180	3,723	-457	3,976	4,187	4,258	4,217
Juneau	11,774	10,598	-1,176	10,613	11,095	11,283	11,306
Langlade	8,913	8,443	-470	8,707	8,867	8,867	8,656
Lincoln	12,922	12,226	-696	12,861	13,350	13,430	12,997
Marathon	57,394	56,484	-910	58,701	60,614	62,048	62,820
Oneida	16,986	16,417	-569	17,227	17,775	17,777	17,323
Portage	29,817	29,311	-506	30,049	30,633	31,011	31,131
Vilas	10,469	10,651	182	11,251	11,694	11,757	11,699
Wood	32,486	31,887	-599	32,262	32,444	32,576	31,962
Region	194,828	188,916	-5,912	195,535	201,038	203,540	202,619

Source: WDOA, NCWRPC; Bold text indicates projected peak number of households.

Housing Strategies

Zoning and subdivision code amendments that improve affordability include reducing minimum lot sizes, reducing parking requirements, allowing mixed use buildings, allowing multifamily housing in more areas, and allowing accessory dwelling units. Strategies to improve housing stock include using land trusts, land banks, development bonuses, employer-sponsored housing, tax incremental financing, and others.

Housing Programs

Wisconsin Department of Administration (WDOA)

- Community Development Block Grant-Housing Revolving Loan Fund Program
- Emergency Solutions Grant (ESG)
- Homelessness Prevention Program (HPP)
- Housing Assistance Program (HAP)
- HOME Homebuyer and Rehabilitation Program
- Neighborhood Stabilization Program

Wisconsin Housing and Economic Development Authority (WHEDA)

- Housing Tax Credit (HTC, formerly LIHTC)
- Home Improvement Advantage Loan
- Home Rehab and Repair Loan
- Vacancy-to-Vitality Loan
- Restore Main Street Loan
- Infrastructure Access Loan

U.S. Department of Housing and Urban Development (HUD)

- Section 8 Housing Choice Vouchers

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

- Section 502 Homeownership Direct Loan
- Section 502 Mutual Self-Help Housing Loan
- Section 504 Very-Low-Income Housing Repair Program
- Section 515 Multi-Family Housing Loan Program
- Section 521 Rural Rental Assistance
- Section 523 Rural Housing Site Loans
- Section 533 Rural Housing Preservation Grants
- Single Family Home Loan Guarantees

Other Programs

- The Federal Housing Supply Action Plan.
- Emerging CDBG, LIHTC, HOME, Bipartisan Infrastructure Law (BIL) and other Department of Transportation (DOT) and Economic Development Authority (EDA) programs.
- Emerging WEDC and WHEDA housing programs.
- Focus on Energy (rebates on energy efficient upgrades)

3. Housing Goals, Objectives, and Policies

Goals:

1. Promote a variety of safe and affordable housing options that meet the needs of all community members.

Objectives:

1. Ensure a wide mix of housing is available to residents of all income levels.
2. Stabilize and upgrade existing housing stock.
3. Provide support for an aging population to successfully age at home in their communities.

Policies:

1. Promote increasing the number of housing units using a variety of housing styles and prices, including smaller homes to accommodate smaller household sizes.
2. Promote mixed-income housing developments and a broad range of housing choice throughout the region, including affordable assisted living and long-term care.
3. Locate new affordable housing near jobs, transportation, services, and healthcare facilities.
4. Identify high priority sites located close to existing town and job centers and promote the development of workforce and affordable housing in these locations.
5. Encourage the public, private, and non-profit sectors to work together to increase the number of affordable homes near job centers, recreation opportunities, and community facilities.
6. Consider changing ordinances that make it more costly to develop multifamily housing.
7. Increase the number of multifamily housing units in the region.
8. Provide incentives to homebuilders and developers for developing affordable market rate housing.
9. Invest in housing preservation, rehabilitation, and energy efficiency.
10. Support aging-in-place and ADA-accessible design, education, and advocacy for both new construction and existing building renovations.
11. Provide reliable broadband infrastructure.



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Chapter 4: Utilities and Community Facilities

Background

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

Previous Planning Efforts

American Transmission Company: 10 Year Transmission System Assessment, 2022: This assessment is routinely updated, and it contains a list of future projects for the region's transmission system.

Broadband Equity Access and Deployment (BEAD) Planning: Counties within the region have developed their own broadband plans under this program to expand economic opportunity, especially in rural areas.

Existing County and Municipal Plans: These include comprehensive plans, all-hazard mitigation plans, outdoor recreation plans, transportation plans, bicycle and pedestrian plans, sewer service area plans, and more, which guide the development of infrastructure in the region.

Statewide Comprehensive Outdoor Recreation Plan: This plan includes trends and recommendations for outdoor recreation facilities in the Northwoods and Western Sands areas, which the Region is a part of.

1. Issues

Access to Broadband: Broadband expansion is promoted as an economic development tool, and there is a desire to use it to attract younger families back into smaller, more rural communities. Although the Federal Communications Commission (FCC) standard speed of 100 Mbps (upload) and 20 Mbps (download) may not be feasible everywhere, there is an opportunity to expand infrastructure and improve internet service.

Aging Population: Hospitals, nursing homes, social institutions, nutrition programs, EMS facilities, etc. ensure seniors can continue to live in the Region. As school enrollment declines, school districts must manage facilities and student transportation in response.

Childcare: A lack of affordable and available childcare in the Region means employers may be unable to fill open jobs. The State of Wisconsin regulates childcare and NCWRPC's website has a dashboard that tracks childcare demand and availability.

Water Quality: Concerns over water quality discussed in Chapter 2 ultimately affect water utilities.

Emergency Services: Ongoing retirements and a shrinking workforce require strategies to recruit and maintain personnel for police, fire, emergency medical services, and other services. Departments that formerly relied on volunteer labor also must increase budgets to hire paid staff, impacting budgets.

Renewable Energy: Solar arrays and wind turbines have emerged in the Region, and although many support these projects, there are concerns over the size and location of them and how they impact the landscape. Electric Vehicles (EVs) may also increase demand for charging stations.

2. Inventory and Trends

Below is a summary of existing utilities and community facilities in the Region, along with related facts and descriptions.



County Government

Many of the Region’s services are provided by its ten county governments: Adams, Forest, Juneau, Langlade, Lincoln, Marathon, Oneida, Portage, Wood, and Vilas.

Water-related Facilities

Dams and Drainage Districts: The Wisconsin River, which flows through the Region, is known for its many hydroelectric dams and reservoirs. Dams are also used to control flooding, assist with irrigation, create lake-based recreation areas, and provide wildlife habitat. WDNR has an up-to-date inventory of these structures. County all-hazard mitigation plans identify dams that are hazardous and in need of repair or replacement. County-level drainage boards administer drainage districts in Adams, Juneau, and Portage Counties, which may use dams and other structures to control flooding and irrigation.

Drinking Water, Wastewater, and Well Water: It is common for incorporated areas to provide drinking water, sanitary sewer, and water treatment facilities. Wellhead protection ordinances can be used to protect drinking water quality. Sometimes, these utilities are provided in unincorporated Towns or are extended from a Village or City into a neighboring Town. Water and sewer facilities support a greater variety of uses and densities. Where public water and sewer do not exist, a private well and private onsite wastewater treatment system (POWTS) is typically used, though they often cannot handle the higher volumes that industrial, commercial, and multifamily uses require. Well and septic systems are regulated by the State and administered by counties. High-capacity wells and surface withdrawals are those that draw more than 100,000 gallons per day, and they are also regulated by the state.

Stormwater: Stormwater management systems mitigate heavy rainfall and prevent flooding and erosion, especially in urban areas with impervious surfaces like roofs and pavement. In low-density areas, ponds, ditches, and culverts are common to keep water off roads and other infrastructure. Municipal and county ordinances regulate stormwater management, and additional local, state, and federal regulations may apply related to erosion control and discharge of water into waterways. See the WDNR’s website.

Solid Waste and Recycling Facilities

Counties often administer landfills, recycling facilities, and transfer sites across the region. Many of them contract with individual municipalities, privately owned disposal companies, and/or other Counties to maximize efficiency.

Public Works

Cemeteries: Nearly every Town, Village, and City have cemeteries, which are operated locally.

Town Halls and Garages: Typically, each Town, Village, and City has a primary public building to house government functions and other public meetings. Many communities also have other buildings to store equipment for road maintenance, firefighting, etc. Road maintenance is discussed in Chapter 5.

Public Safety

Emergency Medical Service (EMS): EMS is typically provided by municipalities, hospitals, or through a contract between a municipality and a provider. EMS can utilize paid staff and/or volunteers.

Fire: The Region is served by a variety of municipal fire departments, some of which have volunteer staff. Most, if not all of them have mutual aid agreements that allow them to assist each other if needed.

Law Enforcement, Jails, and Prisons: The Wisconsin State Patrol serves the entire region's public roads, operating mainly on State and U.S. highways. A typical county has a Sheriff's Department, which usually operates local jails and 911 programs. Many municipalities have police departments as well, and the County Sheriff usually patrols municipalities without a police department. Law enforcement agencies in a given area often contract to assist one another when needed. The Wisconsin Department of Corrections (DOC) also operates state correctional facilities in Juneau, Lincoln, Marathon, and Oneida Counties. The Federal Bureau of Prisons (BOP) operates one facility in the region, FCI Oxford in Adams County.

Healthcare

The Region is home to several medical facilities, including Marshfield Clinic based in Marshfield and Aspirus Health Care based in Wausau. These two providers serve eight of the Region's Counties, while Juneau County is served by Mile Bluff Medical Center and Adams County is served by Gundersen Health.

Education, Recreation, and Culture

Childcare: The Wisconsin Department of Children and Families maintains an up-to-date list of licensed daycare providers along with a search tool.

Libraries: Four library systems serve the region: South Central, Winding Rivers, Wisconsin Valley, and Northern Waters. Other libraries can be found at schools and colleges.

Museums and Cultural Institutions: These facilities are described in Chapter 2.

Parks, Trails, & Natural Areas: The State of Wisconsin operates Council Grounds, Mill Bluff, Roche-a-Cri, Rocky Arbor, and Rib Mountain State Parks, Northern Highland - American Legion State Forest, Willow Flowage Scenic Waters Area, and Bearskin, Mountain-Bay, Tomorrow River, and Wolf River State Trails. Federal properties include Chequamegon-Nicolet National Forest, Necedah National Wildlife Refuge, and the Ice Age Trail. There are also many additional state, federal, county, and local public facilities, including the 27-mile Green Circle Trail in Portage County.

Schools, Colleges, and Universities: The Wisconsin Department of Public Instruction (DPI) updates its inventory of school districts, their boundaries, enrollment totals, and other data each year. The region is served by the Madison Area, Fox Valley, Mid-State, Nicolet Area, Northcentral, and Western Technical College Systems. The University of Wisconsin-Stevens Point is the only four-year university in the Region.

Energy and Telecommunications

The Public Service Commission and American Transmission Company have maps of electric, natural gas, telephone, and broadband service territories online, as well as pipeline locations and transmission lines.

Summary

Utilities and Community Facilities enhance the region's quality of life, provide economic development opportunities, educate and train workers, and more. NCWRPC can support counties and municipalities as they pursue programs and strategies to maintain, enhance, and expand these facilities.

3. Utilities and Community Facilities Goals, Objectives, and Policies

Goals

1. Support infrastructure that ensures the future availability of a skilled and flexible workforce.
2. Support the infrastructure, public services, and facilities needed for economic development

Objectives

1. Enhance education and workforce readiness, ensuring residents have the education and skills needed to reach their full potential.
2. Connect workers with institutions that provide education, training, mentorship, and apprenticeship opportunities.
3. Provide quality Broadband options to all communities while improving download/upload speeds.
4. Assist communities in the development and maintenance of police, fire, emergency services, water, sewer, schools, libraries, parks, utilities and other similar services and facilities.

Policies

1. Provide reliable broadband infrastructure in all communities allowing residents to participate in online courses and programs.
2. Support local school districts, universities, medical colleges, and technical schools to ensure a skilled workforce as younger generations comprise a smaller share of the overall population.
3. Increase cellphone coverage to 100% of area.
4. Collaborate as a region to create co-op broadband programs.
5. Continue to negotiate with major broadband companies to provide service to rural areas.
6. Monitor emerging water contaminants and programs that help address them.
7. Assist with planning efforts and/or grant applications for enhancing public facilities and services.

Chapter 5: Transportation

Background

Previous Planning Efforts

The Bipartisan Infrastructure Law (Infrastructure Investment and Jobs Act), 2021 is the current federal transportation program that authorizes up to \$108 billion to support federal public transportation programs, including \$91 billion in guaranteed funding. It also reauthorizes surface transportation programs for FY 2022-2026. Goals include safety, fleet and transit modernization, and equity.

Connect 2050: Let's Connect Wisconsin, 2022 is the Wisconsin Department of Transportation's (WisDOT) long-range transportation plan for the state. Adopted in 2022, the plan addresses all forms of transportation over a 20-year planning horizon.

Regional Bicycle and Pedestrian Plan, 2018 assesses bicycling and walking conditions, identifies potential trails and route user groups, and describes policies and programs to assist local governments with bicycling and walking to promote connectivity throughout North Central Wisconsin. Goals include mobility, functionality, safety, and connectivity.

Regional Livability Plan, 2015 addresses three issues: modes of transportation to work, driver age, and maintenance costs. The Plan's goals are providing transportation access to all ages and abilities, funding transportation maintenance and expansion, and enhancing the economy with airports and freight rail.

State Trails Network Plan, 2003 identifies potential trail corridors that link existing trails, public lands, natural features, and communities. Former rail corridors are especially useful for completing these trails.

County-Level Public Transit Plans are updated by NCRPC for each County in the Region every 5 years.

1. Issues

- A need for bicycle and pedestrian improvements
- Dispersed population in rural areas
- Weight limits on roads
- Rail and roadway conflicts
- Funding transportation maintenance and improvements
- An aging population's ability to continue depending on driving
- Transporting students as school enrollment declines and school facilities consolidate



2. Inventory and Trends

The Region's transportation system is comprised of a road network, rail lines and yards, airports, and private landing strips. See Map 5.

Road Network

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.

Functional Classification

At the regional level, the functional classification system is divided into four main categories as follows:

Principal Arterials (1,037 miles) serve interstate and interregional trips. The function of a principal arterial is to provide efficient mobility for through traffic trips, with no or limited land use access.

Minor Arterials (902 miles) serve moderate-sized communities and other major traffic generators, providing intra-regional and inter-area traffic movements. Minor arterials also provide mobility for through traffic, but typically have lower traffic volumes with fewer restrictions access to the system.

Collectors (3,713 miles) collect traffic from local roads and provide links to all remaining smaller communities, locally important traffic generators and higher function roads.

Local Roads (11,311 total miles) provide access to adjacent land and provide for travel over relatively short distances. All roads not classified as arterials or collectors are local roads.

Jurisdictional Classification

The Region's roads fall into three jurisdictional classifications: interstate/U.S./state, county, and city, village, or town local roads. The Region's approximately 17,000-mile road network is comprised of 1,889 miles of interstate, U.S., and state highways, 2,858 miles of county highways, and 12,173 of miles of local roads. There are also around 265 miles of other roads, such as forest roads, fire lanes, and other roads not used for general travel purposes. Where road jurisdictions overlap, the mileage is counted toward the higher class to avoid overstating the total miles of pavement within the system.

Interstate, U.S., and State Highways are three types of highways that are managed by WisDOT. Interstate Highways (ISH) 39 and 90/94 and U.S. Highways (USH) 51, 45, 10, and 8 serve as principal arterial roads along with USH 12, a minor arterial. State Trunk Highways (STHs) are primarily two-lane routes with some four-lane sections in urban areas. East-west state highways that are principal arterials include STH 29, 54, 70, 64, 21, and 82, and north-south highways include STH 13, 34, 55, 80, and 97. There are many additional state highways that are minor arterials with two- and three-digit names. Interstate, U.S., and State Highways are particularly useful for transporting freight.

County trunk highways (CTH) are primarily collector roads that link communities to each other while distributing traffic to the arterial system. They also serve agricultural and forestry areas.

Local Roads are maintained by towns, villages and cities, and they provide access to local land uses including residential, commercial/industrial and recreational areas.

Roadway Conditions and Design Standards

NCWRPC utilizes the Pavement Surface Evaluation and Rating System (PASER) system, which ranks surfaces from "1" (very poor condition) to "10" (excellent condition). Roads and bridges are inspected every two years and submitted to the Wisconsin Information System for Local Roads (WISLR). WisDOT’s state highway plan projects traffic congestion levels, providing additional data for project planning.

Counties prepare six-year highway improvement plans to address conditions and design standards. Recommended design standards vary based on their functional classification, and proper access management improves safety and traffic flow. WisDOT manages access to all state trunk highways, while counties and municipalities can adopt standards using subdivision and driveway ordinances.

Traffic Characteristics

Daily Traffic: Table 13 summarizes vehicle miles traveled (VMT), which is the estimated total of all mileage driven by all cars in each county. VMT has increased by since 2003 (10.9 percent), but at much slower pace since 2012 (3.0 percent). This is partially due to an increase in median age as older drivers drive less.

Table 13: Vehicle Miles Traveled (VMT), Crashes, and Fatalities by County

County	Average Crashes per Year	Average Fatalities per Year	VMT 2003	VMT 2012	VMT 2022	% Change 2003-2022	% Change 2012-2022
Adams	427	5	246,000,000	322,505,970	232,336,735	-5.6%	-28.0%
Forest	190	1	125,000,000	212,551,545	154,041,170	23.2%	-27.5%
Juneau	790	4	752,000,000	725,308,290	785,184,715	4.4%	8.3%
Langlade	464	3	228,000,000	271,739,215	224,475,365	-1.5%	-17.4%
Lincoln	755	6	462,000,000	443,427,550	592,282,945	28.2%	33.6%
Marathon	3,077	12	1,561,000,000	1,649,954,395	1,778,381,105	13.9%	7.8%
Oneida	940	5	475,000,000	585,785,945	533,436,550	12.3%	-8.9%
Portage	1,424	6	811,000,000	878,907,955	965,115,480	19.0%	9.8%
Vilas	526	2	342,000,000	388,497,970	337,203,425	-1.4%	-13.2%
Wood	1,268	9	683,000,000	638,756,935	700,893,805	2.6%	9.7%
Region	9,861	35	5,685,000,000	6,117,435,770	6,303,351,295	10.9%	3.0%

Source: WisDOT

Crashes & Safety: Table 13 also summarizes the average crashes per year (data from 2015-2020) and average fatalities per year (data from 2019-2023) using the most recent data available from WisDOT. There was a decrease in both crashes and fatalities for most counties and the region as a whole over these periods.

Commuting Patterns: Table 14 summarizes the direction people commute to work. Typical of a rural area, many residents commute outside of their county of residence for work, with more people leaving the region each day than entering. Marathon and Wood Counties see more inbound commuters than outbound commuters.

Commuting Modes: The share of each mode of transportation is similar among the Region’s counties and similar to regional and statewide figures. In 2022, 78.6 percent of the Region’s residents drove alone, 7.6 percent carpooled, 0.2 percent used public transportation, 2.4 percent walked, 0.5 percent cycled, 9.8 percent worked from home, and 0.9 percent used other forms of transportation. The share of workers working from home more than doubled since 2012 (4.02 percent).

Table 14: Commute Characteristics

	Adams	Forest	Juneau	Langlade	Lincoln	Marathon	Oneida	Portage	Vilas	Wood	Region
Live and Work in County	2,040	1,959	4,484	4,233	5,376	43,395	8,063	17,135	4,225	18,164	149,101
Live in County, Work Outside	5,641	1,885	6,509	5,016	9,029	24,549	9,367	16,288	4,728	17,379	60,364
Work in County, Live Outside	2,393	999	4,205	2,856	4,621	27,109	6,400	15,535	3,352	19,385	46,828
Net Gain/Loss of Workers	-3,248	-886	-2,304	-2,160	-4,408	2,560	-2,967	-753	-1,376	2,006	-13,536
Workers per Car	1.05	1.06	1.05	1.03	1.04	1.06	1.06	1.05	1.04	1.05	1.05
Average commute (min.)	29.1	24.0	24.4	22.6	22.2	19.1	21.8	20.8	18.8	22.1	21.2
% of workers with no access to a car	1.5%	1.8%	1.3%	1.1%	1.6%	1.4%	1.1%	1.6%	1.8%	1.9%	1.5%

Source: ACS 5-Year Estimates 2022

Network Users

Trucking: WisDOT designates truck routes based on their ability to accommodate different truck lengths and keep trucks out of quiet residential areas. Regional maps are available on WisDOT’s website.

Long Distance Intercity Bus Service: Lamers Bus Lines connects Wausau and Stevens Point to the Fox Cities, and there are WisDOT-supported potential routes region to Madison, Eau Claire, and Green Bay.

Bicycle and Pedestrian Facilities: The Wisconsin State Bicycle Map classifies state and county roads by how suitable their configuration and conditions are for cycling. Additionally, NCWRPC’s 2018 Regional Bicycle & Pedestrian Plan recommends bicycle connections that improve connectivity between communities. WDNR manages the Hillsboro, Elroy-Sparta, 400, Tomorrow River, Mountain-Bay, Wolf River, Nicolet, and Bearskin State Trails, while local infrastructure is implemented by Counties and municipalities. Finally, the statewide Ice Age National Scenic Hiking Trail crosses the region.

Transit & Transportation Systems: Municipalities, Counties, and Metropolitan Planning Organizations (MPOs) administer several transportation options such as fixed bus routes, taxis, senior transportation, and

ADA-accessible transportation. Table 15 displays ridership by transit system, with 2018 having peak ridership in the Region. Recently, ridership has declined significantly except for in the Village of Plover and City of Mauston. This is due to more people retiring, working from home, decreasing population in some areas, and impacts from COVID-19.

Table 15: Transit Ridership

Transit System	1980	1990	2000	2012	2018	2022	% Change 2018-2022
Forest County Potawatomi	-	-	-	-	1,267	968	-23.6%
Lac du Flambeau	-	-	-	-	33,520	16,678	-50.2%
Marshfield	30,747	98,807	89,126	84,870	93,904	88,868	-5.4%
Mauston	-	14,081	26,708	19,385	21,542	22,199	3.0%
Merrill	80,692	67,923	69,818	73,209	61,158	45,121	-26.2%
Oneida-Vilas Transit	-	-	-	-	35,132	27,518	-21.7%
Plover	-	1,946	10,569	21,688	24,597	58,760	138.9%
Rhinelanders	38,907	47,012	29,768	71,338	83,028	23,051	-72.2%
Stevens Point	152,706	138,916	97,224	283,096	238,472	129,214	-45.8%
Wausau	1,093,053	731,955	749,025	633,638	507,200	341,157	-32.7%
Wisconsin Rapids	30,323	59,494	74,856	104,072	94,452	77,259	-18.2%
Region	1,426,428	1,160,134	1,147,094	1,291,296	1,194,272	830,793	-30.4%

Source: National Transit Database. Note that some cities only use shared-ride taxi systems.

Other Transportation Modes

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

Rail: Fox Valley & Lake Superior, Canadian National, Union Pacific, and Canadian Pacific Kansas City operate rail lines in the region. NCWRPC is a member of the Northwoods Rail Transit Commission, an organization dedicated to improving rail service for northern Wisconsin and upper Michigan.

Water Transportation: No commercial water transportation is available within the region. In 2023, the Great Pinery Heritage Waterway opened as a water-based recreational corridor on the Wisconsin, Eau Claire, and Big Rib Rivers in Oneida, Lincoln, Marathon, and Portage Counties.

Airports: General Aviation Airports in the region are in Marshfield, Wisconsin Rapids, Adams-Friendship, Wausau, Stevens Point, New Lisbon, Necedah, Merrill, Tomahawk, Three Lakes, Eagle River, Minocqua-Woodruff, Boulder Junction, and Manitowish Waters. Rhinelanders-Oneida County Airport (RHI) and Central Wisconsin Airport (CWA) in Marathon County are the Region's two commercial airports. Data for these airports is found in Table 16. Note that COVID-19 significantly impacted figures for 2021.

Table 16: Commercial Airport Statistics

Airport	Air Carrier Enplanements			Aircraft Operations			Emplaned Freight (lbs.)		
	2012	2019	2021	2012	2019	2021	2012	2019	2021
CWA	120,637	141,123	57,163	15,236	13,574	13,592	521,788	619,262	1,763,711
RHI	11,353	27,203	13,654	736	793	925	871,615	1,420,686	861,321

Source: WisDOT

Other Modes of Travel: Other modes within the Region include snowmobiles, all-terrain vehicles (ATVs), horses, cross-country skis, and others. Though they are not addressed in this plan, trail locations and crossings must be considered when planning other transportation facilities.

3. Transportation Goals, Objectives, and Policies

Goals

1. Provide and improve transportation access to people of all ages and abilities to ensure lifelong mobility and accessibility.
2. Fund the maintenance and expansion of the transportation system.
3. Enhance the regional economy by supporting airports, freight rail, and intermodal freight opportunities.

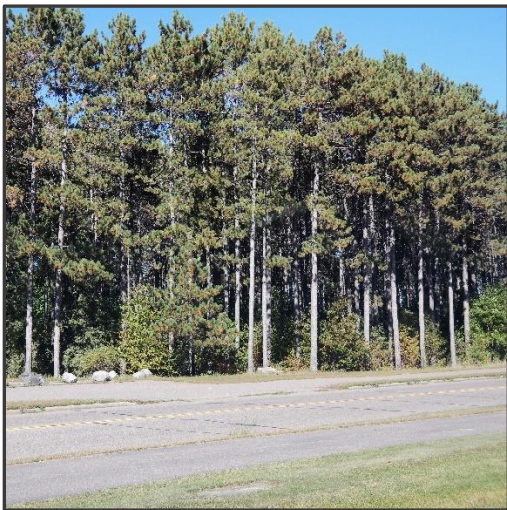
Objectives

1. Assess and improve the infrastructure, feasibility, and safety of a regional multimodal transportation system that includes alternatives to driving such as carpooling, public transit, walking, cycling, and ride sharing (Uber, Lyft, etc.).
2. Continue maintaining, upgrading, and modernizing existing streets, bridges, rail, freight, and air infrastructure to ensure safety and reliability while exploring alternative funding sources for transportation.

Policies

1. Create more bicycle and pedestrian routes and connections between destinations.
2. Enhance the safety and user-friendliness of bicycle and pedestrian infrastructure.
3. Support bike share programs, bicycle parking, and programs that improve bicycle access for low-income households.
4. Support opportunities for improved education and enforcement regarding traffic and parking laws for motorists, bicyclists, and pedestrians. This includes emerging technology such as e-bikes, autonomous cars, and other new modes of transportation.
5. Assess existing demand and plan for alternative forms of transportation that serve seniors, children, and other populations who cannot drive.

6. Support innovations in transportation such as ride sharing (Uber, Lyft, etc.), park-and-ride lots, Compressed Natural Gas (CNG) fuel stations, and electric vehicle (EV) charging stations.
7. Promote multimodal streets that safely accommodate buses, bicycles, parking, pedestrians, transit, and vehicles.
8. Incorporate streetscaping, traffic calming, and safety features such as green infrastructure, ADA-accessibility, landscaping, signage, and lane reconfigurations where appropriate.
9. Explore alternative funding sources (gas tax, registration fees, etc.) and road surface materials (concrete, gravel, pavers, etc.) to ensure the long-term sustainability of maintaining, repairing, and funding the Region’s roads.
10. Support the use and expansion of CWA and RHI airports for passengers and freight by encouraging additional connections and destinations.
11. Support the expansion of rail for freight in the Region while assessing the feasibility of passenger rail use.
12. Locate industrial parks near airports and rail lines and identify locations for multimodal, intermodal, and/or transloading facilities.



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Chapter 6: Economic Development

Background

This chapter examines the Region’s economy and compares it to statewide and national trends, followed by a series of economic development recommendations and local, regional, state, and federal programs.

Previous Plans and Studies

North Central Wisconsin Regional Entrepreneurship Assessment & Strategy, 2023 This project includes a Regional business survey, an analysis of existing conditions for entrepreneurs, and a series of recommendations that led to the creation of [NCWRPC’s online Entrepreneurship Portal](#).

North Central Wisconsin Regional Recovery Plan, 2022 This plan guides economic stabilization, recovery, and resiliency efforts in the Region following the COVID-19 Pandemic and future economic shocks that could occur. It identifies best-practice strategies that help economic stabilization and recovery, improving the region’s economic resilience.

North Central Region Industrial Park Inventory, Absorption, and Needs Study, 2022 This study tracks the rate of industrial park space development in the Region and provides projections for industrial land demand over the next decades. Included are maps of each industrial park.

Comprehensive Economic Development Strategy (CEDS), 2021 The Region is designated by the U.S. Department of Commerce, Economic Development Administration (EDA) as an Economic Development District (EDD). As part of the designation, NCWRPC prepares a CEDS that summarizes past efforts and provides goals and a list of potential EDA-funded projects by County and for the Region.

Regional Livability Plan (RLP), 2015 The Region’s former comprehensive plan addresses three economic development issues: labor force availability, wages, and broadband.

ALICE: A Study of Financial Hardship in Wisconsin, 2023 “ALICE” Households (Asset Limited, Income Constrained, Employed) are above the poverty level, but struggle financially. United Way reports that 34 percent of the region’s households are either below the poverty level or are ALICE households.

1. Issues

- An aging workforce, retirements, and the need for a skilled and flexible workforce
- Unpredictable weather impacts to agriculture, outdoor recreation, and financial resiliency
- The need for broadband expansion
- Childcare availability and affordability
- Unknown future of the forest products industry
- Limited access to active rail lines
- Artificial Intelligence (AI), automation, and their unknown future impact on the economy
- The increase in flexible, hybrid, and remote work and its impact on commercial real estate, local businesses, community facilities, and job recruitment strategies

- Inflation’s impact on businesses, County and municipal budgets, household finances, and growing wealth gaps between households of different income levels

2. Inventory and Trends

Chapter 1 discussed how the Region is growing, but at a much slower rate than the State of Wisconsin and the nation, and WDOA anticipates that its population will peak in 2035. However, many of the nation’s fastest growing areas are facing water shortages, natural hazards, high living costs, and other factors that reduce quality of life. North Central Wisconsin’s abundance of good schools, proximity to hospitals, natural resources, and relatively affordable living could result in future population growth.

Economic Analysis

This section uses Location Quotient (LQ), estimated and projected number of jobs, and average earnings to provide detailed information on the Region’s economy.

Location Quotient identifies which industries exist at a higher or lower concentration compared to state and national averages. LQ divides the economy into two sectors: The “basic” (or non-local) sector and the “non-basic” (or local) sector. The stronger the basic sector is, the more the Region is exporting, and the less it is experiencing “leakage”, or dependency on importing goods and services. When the basic sector of the economy is strong, revenue is generated and circulated within the local economy. Therefore, attracting and retaining businesses and employees is essential to the Region’s economic well-being.

Economic sectors with an LQ greater than 1.00 are exporting sectors which contribute to the basic sector of the economy. If LQ is below one, it is an importing sector. Exports bring money from outside the Region into the local economy and imports represent local dollars flowing outside the county. See Table 17 for a list of the Region’s LQ by industry; those with bold font have an LQ greater than 1.00. Data in this table are from Lightcast (formerly EMSI), a private company that specializes in global labor market analytics. It measures all jobs within the region, whereas the U.S. Census and American Community Survey measure the jobs that the region’s residents have, regardless of if they work in the Region or not.

Income contributes to the region’s competitiveness for workers and allows residents’ consumer habits to contribute to the Regional economy. According to Lightcast, the Region has a Cost-of-Living Index of 99.3, meaning that salaries in Table 17 have 7 percent greater purchasing power relative to the cost-of-living compared to the nation as a whole. The Region’s highest paying industries are Utilities (\$142,651), Finance and Insurance (\$102,292), and Management of Companies and Enterprises (\$85,639). See Chapter 1: Demographics for more information about household and per capita income in the Region.

Job growth is only expected to increase by 1.7 percent between 2022 and 2032, with manufacturing (973), construction (862), and professional, scientific, and technical services (823) adding the most jobs. Mining, quarrying, and oil and gas extraction (56.9 percent), Arts, Entertainment, and Recreation (23.0 percent), and Management of Companies and Enterprises (21.8 percent) are expected to grow the fastest as a percent. See Table 17.

Table 17: Industry Characteristics

Industry	LQ	Avg. Earnings Per Job	Estimated 2022 Jobs	Projected 2032 Jobs	Net Change	% Change
All Industries	N/A	\$64,759	223,626	227,332	3,706	1.7%
Agriculture, Forestry, Fishing and Hunting	3.21	\$50,871	8,508	7,873	-635	-7.5%
Manufacturing	2.18	\$77,499	37,335	38,308	973	2.6%
Finance and Insurance	1.28	\$102,292	13,039	11,735	-1,304	-10.0%
Retail Trade	1.19	\$39,555	24,661	24,569	-92	-0.4%
Transportation and Warehousing	1.14	\$67,995	11,589	11,232	-357	-3.1%
Health Care and Social Assistance	0.99	\$79,297	29,368	29,668	300	1.0%
Management of Companies and Enterprises	0.98	\$85,639	3,049	3,713	664	21.8%
Accommodation and Food Services	0.97	\$24,044	17,269	18,009	740	4.3%
Government	0.92	\$72,853	29,321	29,241	-80	-0.3%
Wholesale Trade	0.91	\$79,590	7,250	7,512	262	3.6%
Utilities	0.9	\$142,651	663	667	4	0.6%
Construction	0.88	\$70,498	10,943	11,805	862	7.9%
Other Services (except Public Administration)	0.87	\$36,865	9,538	9,564	26	0.3%
Arts, Entertainment, and Recreation	0.85	\$25,837	3,147	3,871	724	23.0%
Information	0.56	\$77,802	2,380	2,315	-65	-2.7%
Real Estate and Rental and Leasing	0.5	\$61,708	1,939	2,243	304	15.7%
Administrative and Support and Waste Management and Remediation Services	0.49	\$45,600	6,690	7,053	363	5.4%
Professional, Scientific, and Technical Services	0.37	\$85,496	5,496	6,319	823	15.0%
Mining, Quarrying, and Oil and Gas Extraction	0.24	\$83,735	130	204	74	56.9%
Educational Services	0.24	\$26,668	1,311	1,431	120	9.2%

Source: Lightcast (Formerly EMSI), 2022 & 2024

Labor Force Analysis

Labor Force is the number of those who are aged sixteen and over that are employed or looking to be employed. Persons over sixteen who are students, stay-at-home parents, retired, institutionalized, or unable or unwilling to seek employment are not considered part of the labor force. Between 2000 and 2022, the size of the region’s labor force increased by only 0.9 percent, compared to 9.0 percent statewide. Note this is the number of people who live in the County, not the number of jobs in the County, and some workers work in other counties. See Table 18.

Unemployment Rate reflects the number of people in the labor force who are not employed but would like to be. Between 2000 and 2022, the Region’s unemployment rate decreased by 1.6 percent compared to a 0.2 percent increase statewide. While a falling unemployment rate means people can find jobs more easily, it also indicates that employers may have a harder time finding employees. See Table 18.

Participation Rate measures the percentage of all people over age 16 who are in the labor force. Between 2000 and 2022, the Region’s participation rate decreased by 5.4 percent, compared to a statewide decrease of 3.4 percent. The decrease is mostly a result of the Region’s lack of childcare along with the rising median age and large number of retirees living longer than past generations. See Table 18.

Table 18: Labor Force Indicators

Indicator	2000	2010	2022	2000-2022 % Change Region	2000-2022 % Change State
Labor Force	225,369	236,873	227,418	0.9%	9.0%
Employed	213,508	220,364	218,915	2.5%	10.5%
Unemployed	11,728	16,050	8,280	-29.4%	-21.8%
Unemployment Rate	5.2%	6.8%	3.6%	-1.6%	0.2%
Participation Rate	67.0%	66.4%	61.6%	-5.4%	-3.4%

Source: U.S. Census, 2000; ACS 5-Year Estimates, 2010 & 2021

Worker Education and Training contributes to Wisconsin’s economic competitiveness and productivity. Chapter 1 discusses educational attainment and Chapter 4 lists educational facilities in the Region. In general, Wisconsin has historically had high quality schools, technical colleges, and universities. Training is another labor force indicator, which involves partnerships between businesses, governments, and educational institutions to develop the Region’s economy. Included in this Chapter is a list of programs.

Economic Development Infrastructure

Redevelopment Areas are those that are underutilized or vacant and there is existing infrastructure and public services in place. These can be called blighted, deteriorated, or even condemned. Redeveloping these sites improves the tax base without requiring more infrastructure.

Brownfields are sites contaminated by former uses. WDNR identifies these sites through the Wisconsin Bureau for Remediation and Redevelopment Tracking System (BRRTS) and assists with the reuse and cleanup of brownfield lands.

Tax Increment Financing (TIF) involves creating a Tax Increment District (TID) where the property’s baseline taxes continue to fund all taxing jurisdictions at its current rate. As improvements are built and the property’s taxable value increases, the “increment,” or additional property tax revenue generated, goes directly towards projects within the TID. This can be used to finance infrastructure serving the site, environmental cleanup, and/or other projects needed to make a project happen. When TID-related costs are paid by the increment, the TID closes and the TID’s entire property taxes go towards all taxing jurisdictions, adding to the tax base. The state regulates TID creation and administration, requiring a “but-for” test that demonstrates the project would not be feasible without the creation of a TID.

Industrial and Business Parks enable communities to attract new businesses or to relocate existing businesses for expansion. An industrial park is designed to ensure compatibility between industrial operations and its surrounding uses through its zoning, utilities, and other characteristics that are needed to support these uses. They are further enhanced by being located near rail, airport, and highway facilities.

Economic Development Programs

State

Wisconsin Economic Development Corporation (WEDC)

- Brownfield Program
- Capacity Building Grants (CB)
- Certified Sites
- Historic Preservation Tax Credit
- Business Opportunity Loan Fund
- Workforce Training Grants
- Idle Sites Redevelopment Program
- Community Development Investment (CDI) Grant Program
- Fast Forward Program (see below)
- Wisconsin Investment Fund
- The Industrial Revenue Bond (IRB) Program
- Technology Development Loan Program

Additional Statewide Programs and Agencies

- Hmong Wisconsin Chamber of Commerce
- Transportation Economic Assistance (TEA)
- The Wisconsin Innovation Service Center (WISC)
- Wisconsin Department of Children and Families (DCF)
- Wisconsin Fast Forward
- Wisconsin Housing and Economic Development Authority (WHEDA)
- Wisconsin Office of Rural Prosperity (ORP)
- Wisconsin Small Business Development Center (SBDC)
- Wisconsin Small Cities Program
- Wisconsin Women’s Business Initiative Corporation (WWBIC)

Regional

- Centergy, Inc.
- Grow North
- Central Wisconsin Economic Development (CWED) Fund
- North Central Wisconsin Regional Planning Commission (See NCWRPC’s [online Entrepreneurship Portal](#) for a list of programs and resources).

Federal

- Small Business Administration (SBA)
- Economic Development Administration (EDA)
- U.S. Department of Agriculture – Rural Development (USDA – RD)

3. Economic Development Goals, Objectives, and Policies

Goals

1. Ensure the future availability of a skilled and flexible workforce
2. Support and develop a diverse economic base ensuring economic growth and resiliency
3. Support infrastructure needed for economic development
4. Develop tourism and the knowledge-based economy into leading economic sectors

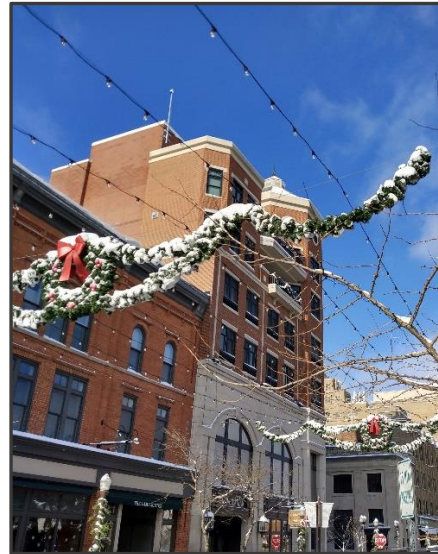
Objectives

1. Ensure an educated and skilled workforce for the region
2. Promote, attract, expand, and retain emerging and existing businesses while supporting local entrepreneurs.
3. Support development in both downtowns and industrial sites by providing an adequate supply of developable land and redeveloping existing underutilized sites.
4. Strengthen the Region’s tourism and natural resources to enhance the economy and quality of life.
5. Implement and maintain a Comprehensive Economic Development Strategy (CEDS) to support new economic development projects in the Region

Policies

1. Work with businesses, schools, and communities to ensure the future workforce is equipped with the necessary knowledge, skills, and abilities and assist with workforce development grants.
2. Develop and market the Region’s amenities, activities, opportunities, and wages while actively recruiting workers to fill jobs and grow the workforce population.
3. Work with angel investors, venture capital investors, businesses, and industry data to foster innovation and new business startups.
4. Develop business incubators, seed accelerators, maker spaces, coworking spaces.
5. Support start-up and small businesses with training, market research, financial assistance, strategic planning, and other assistance.
6. Assist with Counties, municipalities, and businesses navigating expansion, retention, and successional planning programs as well as grant and funding opportunities.
7. Improve connections between restaurants, stores, and farms to enhance access to local produce.
8. Assist the Region and its businesses by identifying emerging clusters, trends, markets, and export opportunities.
9. Assist communities with preparing “shovel-ready” industrial sites, retail/market analyses, and marketing materials for available sites.

10. Maintain the NCWRPC Industrial Park Inventory and Entrepreneurial Portal to ensure an adequate supply of industrially zoned land with access to transportation, utilities, workers, and programs.
11. Promote redevelopment of idle and/or vacant sites by planning and zoning for a mix of employment, residential, and recreational activities while utilizing remediation programs.
12. Review business and property tax policies and development processes to create a more development friendly environment.
13. Incentivize job attraction and retention as well as planning and redevelopment in downtown areas.
14. Conduct planning efforts, studies, and collaborative activities related to promoting outdoor recreation, tourism, festivals, hospitality, placemaking, cultural events, arts, and historic preservation throughout the Region.
15. Work with Counties to implement the Comprehensive Economic Development Strategy (CEDS) action plan and update the CEDS as required by the EDA.



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Chapter 7: Land Use

Background

Land use analysis determines which areas are most suitable for development and where growth is desired based on infrastructure, topography, and other characteristics. Included are land value estimates as well as projections for demand by land use type.

Previous Plans and Studies

The NCWRPC Regional Livability Plan, adopted in 2015, has a Land Use Assessment Report, which looks in detail at the land uses throughout the ten-county region. Trends identified in this plan include the loss of the number of farms and total farmland, and the increase in residential and vacant land over the last several decades. The two land use goals of the former plan are to 1. Manage and reduce vacant land and structures; and 2. To preserve and protect the Region's landscape, environmental resources and sensitive lands while encouraging healthy communities.

Comprehensive Planning Efforts generally include County and municipal Comprehensive Planning. All ten Counties have adopted plans, as well as many towns, cities, and villages. However, many of them are older than the 10-year update requirement per state statute. See Map 7 for more information.

Other County Plans typically include Land & Water Resource Management Plans, All-Hazard Mitigation Plans, Outdoor Recreation Plans, Farmland Preservation Plans, and more. These plans address the quality of the natural environment, agricultural environment, outdoor recreation, and hazard management.

1. Issues

Dispersed Land Use Patterns. As the region continues to age, a dispersed population will impact the ability of residents to access services. There are also concerns about continuing to fund infrastructure as a result.

Contamination and Blight. Older neighborhoods in the region may have sites contaminated by former industry and structures that have fallen into disrepair. There is an opportunity to rehabilitate these properties to save infrastructure costs compared to new construction.

Environmental Features. Development pressures can fragment woodlands and other wildlife habitat, increase runoff into waterways, impact aesthetics, and contribute to erosion if not designed properly.

Land Use Demand. Work-from-home may increase the number of people living in certain areas, and decrease demand for commercial space, influencing land use patterns and infrastructure needs.

Renewable Energy. While renewable energy provides environmental and economic opportunities, large scale solar and wind power is approved at the state level, with few tools for municipal and county government to manage its location, screening, and other impacts.

2. Inventory and Trends

Natural Features

Table 19 summarizes land use totals, with 92.2 percent of the Region’s land area consisting of agriculture or woodlands. These areas are developable when steep slopes, wetlands, and floodplains are not present. Surface water, wetlands, and floodplains cover 36.4 percent of the Region. Note that floodplains and wetlands are not considered land uses, and they overlap the land uses in Table 19. Map 4 at the end of this plan provides a visual overview of these features.

Table 19: Acreage Totals by County

County	Total Acres	Land	Water	Residential	Commercial	Industrial	Agriculture	Woodland
Adams	440,234	412,303	27,931	19,683	1,840	429	98,035	255,427
Forest	669,507	646,771	22,736	10,434	603	436	12,208	612,298
Juneau	514,280	486,758	27,522	10,907	1,743	533	106,822	282,267
Langlade	567,824	556,703	11,121	12,403	1,393	336	82,234	435,312
Lincoln	580,173	562,803	17,370	12,808	1,050	1,258	52,833	469,494
Marathon	1,008,158	979,570	28,588	49,164	6,080	6,003	409,585	400,236
Oneida	790,834	716,144	74,690	29,310	2,663	1,697	15,895	640,933
Portage	526,473	513,571	12,902	38,131	2,883	3,229	201,103	234,478
Vilas	650,886	554,173	96,713	37,518	3,974	215	4,626	495,393
Wood	517,394	502,314	15,080	21,595	2,617	2,185	132,742	246,243
Region	Percent of Total			Percent of Land Area*				
Acres	6,265,763	5,931,110	334,653	241,953	24,847	16,322	1,116,082	4,072,081
Percent	100.0%	94.7%	5.3%	3.9%	0.4%	0.3%	17.8%	65.0%

Source: NCWRPC. *These five categories account for 87.3 percent of the Region’s land area. Other land use types not depicted in Table 19 include uses such as government, utilities, and transportation, etc.

Developed Land

Only 4.5 percent of the region’s land area is developed as residential, commercial, or industrial land, but other land uses not in Table 19 are also present, such as government facilities, transportation, and outdoor recreation. Overall, the Region’s varied landscape features provide abundant developable land along with wildlife habitat, economic value, recreational opportunities, and aesthetic benefits.

Population and Housing Unit Density

Acreage totals in Table 19 are used to calculate population density and housing density in Table 20. Between 2000 and 2022, all Counties increased in housing unit density but some decreased in population density due to smaller households and more seasonal housing.

Although countywide density estimates provide a snapshot of how dispersed each county’s population is, population and housing unit densities vary widely within Counties, with urban areas having much higher

densities than rural areas. Generally, the denser a community’s population and housing units are, the less its residents must travel long distance to access employment, education, healthcare, and services. As aging and dispersed populations continue to grow, demand will likely increase for alternative transportation options and services for those who can no longer drive, impacting County and municipal budgets.

Table 20: Population Per Square Mile

County	Population Per Square Mile					Housing Units Per Square Mile				
	2000	2010	2022	% Change 2000-2022	Net Change 2000-2022	2000	2010	2022	% Change 2000-2022	Net Change 2000-2022
Adams	30.7	32.3	32.2	4.8%	1.5	21.8	27.0	26.1	19.5%	4.3
Forest	9.9	9.2	9.1	-7.7%	-0.8	8.2	8.8	8.6	4.5%	0.4
Juneau	31.7	34.8	35.1	10.7%	3.4	16.1	19.1	19.1	18.7%	3.0
Langlade	23.8	22.9	22.4	-5.8%	-1.4	12.8	14.2	14.0	9.4%	1.2
Lincoln	33.6	32.7	32.3	-3.9%	-1.3	16.6	19.1	18.4	10.6%	1.8
Marathon	81.4	86.8	90.0	10.6%	8.6	32.6	37.4	39.2	20.2%	6.6
Oneida	32.7	32.3	33.8	3.3%	1.1	23.7	27.1	27.4	15.4%	3.7
Portage	83.3	87.4	87.6	5.1%	4.3	33.0	37.5	39.0	18.1%	6.0
Vilas	24.1	25.0	26.7	10.9%	2.6	25.6	29.3	28.5	11.3%	2.9
Wood	95.3	94.2	94.5	-0.9%	-0.8	40.0	43.0	44.0	10.1%	4.0
Region	46.1	47.6	48.3	4.8%	2.2	23.4	26.6	26.9	15.0%	3.5

Source: ACS 2022 5-Year Estimates, NCWRPC

Equalized Real Estate Values and Fiscal Capacity

To assess the financial capacity each County has, Table 21 tracks the change in equalized real estate valuations over time and measures the values on a per-capita basis based on data from the Wisconsin Department of Administration (WDOA). All counties saw a considerable increase in equalized real estate values between 2000 and 2024, with a Regional increase of 214.8 percent, which was well above the inflation rate of 82.8 percent during this time.

Fiscal Capacity describes a County’s equalized real estate value divided by its population. Counties with extensive lakefront properties, such as Adams, Oneida, and Vilas, have the highest equalized real estate valuations per capita. This is due to lakefront properties being valued more highly along with the abundance of seasonal homes relative to the number of year-round residents. Juneau County, which also has considerable lakefront real estate, had the highest increase in equalized real estate valuations since 2000, followed by Adams, Oneida, and Vilas Counties. Overall, the Region’s fiscal capacity is about \$15,000 per capita higher than the statewide average, compared to a difference of \$13,000 in 2010. This suggests that the Region’s fiscal capacity is growing at a rate that is slightly faster than statewide growth, despite a slightly lower overall rate of equalized real estate valuation growth between 2000 and 2024.

Table 21: Equalized Real Estate Valuations

County	2000	2010	2024	% Change 2000-2024	Net Change 2000-2024	2024 Per Capita
Adams	\$1,235,812,700	\$2,589,942,600	\$4,904,516,000	296.9%	\$3,668,703,300	\$236,590
Forest	\$656,528,100	\$1,142,327,800	\$1,858,225,800	183.0%	\$1,201,697,700	\$201,128
Juneau	\$967,745,200	\$2,031,748,400	\$3,953,151,600	308.5%	\$2,985,406,400	\$148,086
Langlade	\$1,038,495,300	\$1,703,583,600	\$2,644,803,900	154.7%	\$1,606,308,600	\$135,548
Lincoln	\$1,457,462,700	\$2,358,251,600	\$3,965,249,400	172.1%	\$2,507,786,700	\$139,612
Marathon	\$5,545,444,100	\$9,321,354,200	\$17,264,936,400	211.3%	\$11,719,492,300	\$125,272
Oneida	\$3,604,966,400	\$7,322,297,600	\$12,049,967,300	234.3%	\$8,445,000,900	\$318,791
Portage	\$2,926,368,900	\$4,847,237,700	\$9,323,941,500	218.6%	\$6,397,572,600	\$132,667
Vilas	\$3,663,040,100	\$7,454,097,100	\$11,930,475,800	225.7%	\$8,267,435,700	\$515,444
Wood	\$3,000,148,100	\$4,596,721,050	\$7,955,395,200	165.2%	\$4,955,247,100	\$107,305
Region	\$24,096,011,600	\$43,367,561,650	\$75,850,662,900	214.8%	\$51,754,651,300	\$169,400
State	\$286,321,491,800	\$495,904,192,300	\$907,414,717,000	216.9%	\$621,093,225,200	\$154,266

Source: WDOA, NCWRPC

Redevelopment and Growth Opportunities

Ideally, growth should utilize existing infrastructure and public services to minimize both up-front infrastructure costs and long-term maintenance and service costs, keeping taxes low. Communities with public water and sewer service can support a greater variety of land uses compared to areas that rely on wells and septic systems. City, Town, Village, and County Plans should consider proximity to infrastructure when updating local comprehensive plans, particularly when creating future land use maps. Areas with natural features like steep slopes, floodplains, and wetlands should be avoided since developing them increases construction costs while causing issues with water quality, erosion, and wildlife habitat.

Revitalizing existing structures and/or redeveloping contaminated sites known as brownfields is an opportunity to increase a community’s tax base while minimizing the need to expand infrastructure. This also results in new construction in walkable neighborhoods near existing amenities like waterfronts and downtowns. According to WDNR’s Remediation and Redevelopment Map, there are 92 open sites in the Region. Refer to WDNR and other state agencies for an updated list of sites, regulations, and funding programs that assist in the revitalization of these sites, such as WEDC’s Idle Sites and Brownfields Programs. These programs may also be available for non-contaminated sites that reuse an existing structure, such as schools converted into housing. Programs are listed in Chapters 2 and 6 of this Plan.

Land Use Demand

Population Projections (See Chapter 1) and Projected Job Growth (See Chapter 6) can be used to estimate demand for land for residential, commercial, and industrial development. These calculations are included in local comprehensive plans. Regionally, there is abundant developable land to meet future demand through at least 2040, with no foreseeable long-term shortage of land.

Future Land Use

Counties and municipalities adopt Future Land Use maps which guide development in locations where it is most suitable. They contain a map with text describing what the long-term intent is regarding how an area should develop. While they resemble a zoning map, they have no zoning authority and are only used as an advisory tool. Therefore, areas identified for development on these maps should not be assumed to automatically be ready for rezoning and development. Other factors like municipal boundaries and proximity to utilities determine which properties are most likely to develop in the short-term. Future land use maps should also consider maps for surrounding and overlapping jurisdictions to minimize conflicts.

Additionally, the goal of the future land use map is to provide a long-term vision, even though development occurs slowly over time as proposals are brought forward. Therefore, in some cases, an immediate rezoning may be appropriate to prepare for a land use change even if it is several years away. Finally, there are likely many instances where zoning and future land use categories align appropriately, but additional barriers exist. In some cases, amendments to zoning ordinance text may be appropriate to enable the type of development that is desired for a particular site.

Land Use Tools

The principal land use program in Wisconsin is the comprehensive planning program. The primary land use tools are zoning ordinances, subdivision ordinances, and official mapping.

Zoning Ordinances use a map to identify zones such as agriculture, residential, commercial, or industrial. Zoning text includes permitted land uses, buildings, yard, or lot dimensions, and other requirements. The goal of zoning is to keep similar and related uses together and separate dissimilar, unrelated, incompatible uses, particularly in relationship to transportation facilities, utilities and public services and facilities.

Land Division or subdivision regulation relates to the way in which land is divided and accessed. A community can control the subdivision of land by requiring a developer to meet certain conditions when recording a plat. This ensures growth patterns that can accommodate necessary lot sizes, utilities, and access. Cities and Villages have authority to review subdivisions proposed within a certain radius of its boundaries, known as the extraterritorial jurisdiction, as described in detail in Chapter 9: Implementation.

Shoreland Zoning is required for all counties, and they are optional for cities and villages. They regulate development in shoreland and floodplain areas to maintain aesthetic and environmental benefits.

Farmland Preservation Zoning is a voluntary zoning classification that is intended to minimize fragmentation of farmland by imposing development limitations consistent with or more restrictive than the provisions listed in Chapter 91 of WI Statutes. To adopt farmland preservation zoning, a municipality must be enrolled in the Farmland Preservation Program.

Wellhead Protection Ordinances restrict the land use activities that take place within a certain radius of public wells to protect what is known as the “recharge” area. This ensures that contaminants like chemicals will not easily travel into groundwater and contaminate sources of drinking water.

Official Maps are a map adopted by a county or municipality that specifies locations of future roads and other utilities or public facilities, along with right-of-way widths and other specifications. When a land division is approved, it must accommodate dimensions for future facilities according to the Official Map.

Other Tools include land acquisition, easements, deed restrictions, land dedication, and ordinances or programs regulating activities such as impact fees, land division, building permits, and erosion control.

3. Land Use Goals, Objectives, and Policies

Goals

1. Manage and reduce vacant land and structures.
2. Implement this Plan’s natural resource protection Goals, Objectives, and Policies in Chapter 2.



Objectives

1. Focus development in existing downtowns and infill sites, and reuse historic buildings.
2. Reuse vacant land and structures in innovative ways.
3. Monitor and respond to changes in land use demand and support opportunities to reposition obsolete uses and structures.
4. Work with the State of Wisconsin to mitigate land use concerns regarding renewable energy.

Policies

1. Work with regional, state, and federal agencies to rehabilitate parcels to “shovel ready” status.
2. Consolidate parcels where applicable for redevelopment.
3. Collaborate with regional economic development organizations to establish a single point of contact for developers.
4. Create incentives and policies that encourage mixed-use developments to expand potential uses of sites.
5. Promote the reuse of vacant buildings for creative, mixed-use development.
6. Explore creative ways to repurpose commercial space for housing.
7. Work with the State of Wisconsin Public Service Commission to promote and utilize tools and policies that mitigate land use concerns associated with wind, solar, and other renewable energy sources.
8. Support expansion of services and infrastructure that enables remote workers to live in the region, particularly in communities with declining populations.
9. Give priority to property proposals that incorporate high-performance building practices.
10. Support the use of land to extend parks and recreation opportunities.
11. Utilize employment, housing, and population projections to identify future land uses.
12. Support waterfront redevelopment that enhances the economy and environment.